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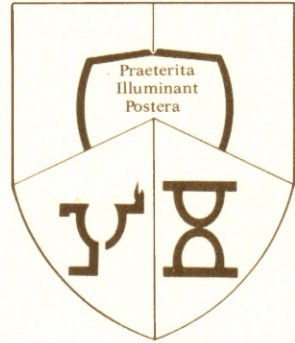
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Volume 19, Number 1

Research on the Evolution of Accounting Thought and
Accounting Practice

The Accounting Historians Journal

June 1992

Volume 19, Number 1

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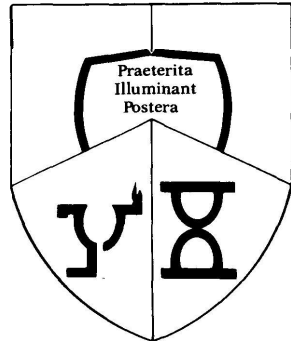
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THE DEVELOPMENT OF "THE BIG EIGHT" ACCOUNTING FIRMS IN THE UNITED STATES, 1900 TO 1990

Abstract: This paper examines the growth and changing role of the accounting profession in the United States from 1900 to 1990 with special emphasis on "Big Eight" accounting firms. Major political, economic, and social events of the period and their influence on the accounting profession are analyzed. Each decade is examined in turn, and the historical consequences of the decade on "Big Eight" accounting firms in total and individually are presented.

The beginning of the Twentieth Century marked the beginning of public accounting as a profession for several reasons. In 1896, the State of New York passed a law restricting the use of the title "Certified Public Accountant" to those passing a state examination. This law was soon followed by similar laws in other states. The establishment of a required examination provided accountants with a more professional image, similar to the one provided lawyers by the bar examination. Furthermore, these laws helped ensure a market for the services of those passing the examination. The responsibility of many accounting firms expanded beyond merely handling bankruptcies and liquidations to auditing client financial statements. By 1900, six of the firms that would become "The Big Eight" had been founded. The establishment, survival and growth of these CPA firms, as well as the profession as a whole, was due to the rapid industrialization at the beginning of the Twentieth Century. During this time, the corporate form of ownership began its rise to prominence, along with a corresponding separation of management and ownership. Previts and Merino [1979, p. 129] emphasize the importance of these changes in *A History of Accounting in America*: "Perhaps the most important development, in retrospect, for the emergence of the public accounting profession, was the rise of financial capitalism."

In many respects, the accounting profession was relatively stable, conservative, and slow-growing during the first half of this century. Yet, at the same time, it faced major social and economic events that would drastically change its scope and direction. Two World Wars, the imposition of an income tax, world-wide depression, and major new social legislation all served to expand the role and responsibility of the public accountant. The second half of the century presented perhaps even greater challenges. Specifically, "Big Eight" accounting firms had to adapt to the internationalization of American business [Hall, 1987], an expanding service economy, the rapid growth of nonaudit services, an explosive growth in size, and the rise of a competitive environment for CPA services [Bernstein, 1978].

This paper serves to examine the growth and changing role of the public accounting profession in the United States from 1900 to 1990 with special emphasis on "Big Eight" accounting firms. Major political, economic, and social events of the period and their influence on the profession are analyzed. Each decade is examined in turn, and the historical consequences of the decade on "Big Eight" accounting firms in total and individually are presented.

1900 - 1910

RECOGNITION OF A PROFESSION

The early 1900s saw a continuation of a corporate merger pattern that began around 1895. From 1895 to 1905, many mergers occurred that required experienced auditors to examine the books and financial statements of the companies involved [Littleton, 1962]. The role of the auditor in these mergers can be illustrated by an examination of the audit records of Jones, Caesar & Co., an agent for Price Waterhouse & Co. (and later a part of Price Waterhouse). In June 1899, J. P. Morgan & Co. combined several independent tube companies to form the National Tube Company. Jones, Caesar & Co. was engaged to audit the records of the component companies for ten years, prepare financial statements for these years, and prepare a system that would put all components on a comparable accounting basis. In the same year, Jones, Caesar & Co. was engaged to examine the merger of four companies that formed the Chicago Pneumatic Tool Company, and twenty-seven companies that formed the American Hide and Leather Company. To audit the companies

involved, Jones, Caesar & Co. rapidly increased its staff. Fees grew at a corresponding rate, resulting in the firm having the best operating year since its founding in 1890 [DeMond, 1951].

As the corporate merger wave continued over the next few years, additional auditors were needed. Since the companies involved were often geographically diverse, accounting firms began to open branch offices. Haskins & Sells opened offices in Chicago (1900), London (1901), Cleveland and St. Louis (1902), Pittsburgh (1903), and Baltimore (1910) [*Haskins & Sells*, 1947]. Lybrand, Ross Brothers & Montgomery, founded in Philadelphia, had offices in New York, Pittsburgh, and Chicago by 1910 [Edwards, 1960]. Arthur Young & Co. had offices in Chicago, Kansas City, New York City, and Milwaukee by the end of the decade [*The Arthur Young Journal*, 1969].

Another change created by the corporate merger movement was an increased responsibility to third parties. In most merger situations, the accounting firm was not engaged directly by the audited company but by a bank or holding company overseeing the merger. For routine financial statement audits, auditors had traditionally been selected by the officers or directors of the company. However, United States Steel was the first major company to forgo this tradition. On February 17, 1902, the stockholders of the United States Steel Corporation elected Price Waterhouse & Co. as auditor for the firm. This change expanded auditor responsibility beyond or the corporate officers to the stockholders [DeMond, 1951]. Election of auditors by the stockholders quickly expanded to most major corporations in the United States.

In 1909, the United States took the first step toward an income tax. As recently as 1896, the Supreme Court of the United States had ruled that an income tax was unconstitutional. In order to evade this ruling, Congress passed a franchise tax — not an income tax — on corporations. However, the franchise tax was based on corporate income as measured by cash receipts. With passage of this law, corporations found it necessary to set up accounting systems that would determine their revenues and expenses. Although most corporations had kept minimal accounting records, many had never set up a system to determine actual income. Therefore, corporations were often forced to rely on their auditors to set up the necessary system [Edwards, 1960].

The early 1900s was a period of notable change for two of the "Big Eight" firms. In 1900, John B. Niven left Price

Waterhouse & Co. to form a partnership with George A. Touche (of George A. Touche & Co., London), under the name of Touche, Niven, & Co. for the purpose of public accounting in the United States [Swanson, 1972]. Three years later, two brothers Alwin C. and Theodore C. Ernst formed the accounting partnership of Ernst & Ernst in Cleveland, Ohio. One of its first clients was Thompson Ramo Wooldridge (TRW) and the charge for its first audit was \$25 [Ernst & Ernst, 1960].

1910 - 1920

THE GROWTH OF A PROFESSION

The years between 1910 and 1920 were very important in the history of public accounting in the United States. It was in this decade that the first federal income tax was passed. When the franchise tax was enacted in 1909, the rate was set at one percent of net income. Probably due to this low rate there was minimal opposition. Because of the lack of opposition to the tax, the government's need to raise additional revenue, and the Supreme Court's previous rulings that an income tax was unconstitutional, Congress proposed the Sixteenth Amendment to the Constitution. This Amendment was quickly ratified by the states, and became effective March 1, 1913 [Carey, 1969]. This Amendment permitted the enactment of "direct" taxes such as the federal income tax which Congress passed quickly in 1913. Although the initial tax rate was low (1 percent of income in excess of \$3,000 increasing progressively to 7 percent of net income beyond \$500,000), the law affected corporations as well as individuals who now had to measure their incomes, many for the first time. With the entrance of the United States into World War I, the low tax rates of 1913 and the complexities of the tax laws quickly increased. Perhaps the "Excess Profits Tax", imposed on business in 1917, stimulated the demand for tax services from accounting firms to a greater extent than the 1913 Income Tax. This increased the need for CPAs was because "excess profits" had to be measured as well as the capital invested, and given the high tax rate on excess profits, the calculation was important.

One of the first accounting firms to develop a tax service was Arthur Andersen & Co. The firm's founder, Arthur Andersen, had been a professor of accounting at Northwestern University. It was his association with the University that led him to develop one of the first courses in Federal Taxation to be of-

fered at the college-level. The course was offered during the academic year 1917-1918, and it attracted judges, bankers, lawyers, accountants, and business executives. Partially because of these courses, Arthur Andersen & Co. attracted new clients and became known for its expertise in the income tax field. The history of Arthur Andersen & Co., *The First Fifty Years: 1913-1963* [Higgins *et al.*, 1963] states:

Our tax work for new clients often led to other engagements in the fields of auditing, systems work and business counseling. No small part of the increase in our fees to \$188,000 in 1919 and \$322,000 in 1920 was due to our early preparation and vigorous effort in the field of federal taxes. [pp. 23-24]

World War I had another major impact on the accounting profession. As a result of the War, the accounting firm became an advisor for financial affairs. During the war years, it was often the responsibility of the auditor to determine the cost of goods manufactured for the government and/or for other firms. In addition to these cost studies, accounting firms were engaged as efficiency experts with the responsibility of increasing the capacity and efficiency of war manufacturers. One of the most active firms in the expansion of services beyond the traditional auditing role was Arthur Young & Co. Arthur Young was engaged by the British government to determine the costs of manufacturing the new Enfield rifles. Furthermore, when the United States entered the war, the government called on Arthur Young & Co. to conduct many of the special investigations of companies owned by foreign nationals [Edwards, 1960].

The decade of the 1910s was the first period in which a federal agency became involved in the establishment of accounting standards or procedures in the United States. In Britain, the government had played a fairly active role in the development of accounting through the passage of the Companies Acts. Accounting in the United States — although based largely on the British system — had not been guided or regulated by the government. In 1913, Congress established the Federal Reserve System and one year later the Federal Trade Commission. The Federal Reserve System had its first major influence on the public accounting profession in 1918 when it issued the pamphlet, *Approved Methods for the Preparation of Balance Sheet Statements*. This pamphlet presented the minimum auditing procedures that should be followed in any audit [Carey, 1969]. Although these

procedures were only recommendations by the Federal Reserve, they hastened the establishment of minimum auditing standards by many accounting firms.

During this decade, three of the "Big Eight" firms underwent significant reformation. In 1913, Arthur Andersen and Clarence M. Delany purchased the net assets of a small Chicago accounting firm, The Audit Company of Illinois, for \$4,000 and the firm that became Arthur Andersen & Co. was founded [Louis, 1970]. In 1911, William Peat met James Marwick on a voyage to Europe, and by the time the ship arrived, they had agreed to merge the accounting firm of Marwick, Mitchell & Co. with the firm of W. B. Peat & Co. to form Marwick, Mitchell, Peat & Co. (later to become Peat, Marwick, Mitchell & Co.) [Wise, 1966]. In 1919, Ernst & Ernst decided it needed an overseas representative and a working relationship was established with Whinney, Smith & Whinney of London [Ernst & Ernst, 1960]. Fifty years later these two firms would merge to form Ernst & Whinney.

After World War I, many "Big Eight" firms experienced an increased demand for their services overseas and opened offices there. Of course, firms such as Price Waterhouse & Co. had been founded in Europe and already had offices throughout the Continent. However, other firms now felt the need to expand their operations beyond the United States in order to be competitive. The internationalization of numerous clients added impetus to this expansion. One of the first American firms to open a European branch was Haskins & Sells who opened an office in London in April, 1900. In 1919, Haskins & Sells opened a second overseas office in Shanghai, and in the following year, it opened offices in Paris and Havana [Haskins & Sells, 1947].

1920 - 1930

NEW SERVICES AND RESPONSIBILITIES

The decade of the 1920s was described by John Carey in *The Rise of the Accounting Profession: 1896-1936* [1969]:

The U. S. emerged from the War a creditor nation for the first time in its history. Then began a period of unparalleled growth and prosperity, characterized by industrial expansion, mergers, holding company empires and unfortunately, some unsound financial practices. This period ended abruptly in 1930. [p. 144]

For "Big Eight" accounting firms, much of this growth came from an expansion of the advisory services they offered clients. In addition to traditional auditing service, they began to move beyond tax return preparation by starting to offer tax advice and to help companies implement accounting systems necessary for proper generation of tax information. By the 1920s, most large accounting firms had a tax department or tax service. Aiding the expansion of advisory services was the growth of industrial companies and the merger of several smaller companies into larger ones. Much of the capital for expansion or merger came from investment bankers. These bankers often sought an independent firm to investigate corporate financial condition before they committed their funds. Importantly, many bankers wanted more than just an audit of financial records. They wanted an investigation of all phases of the business. In order to meet these needs, accounting firms had to expand their operating methods. In *The First Fifty Years: 1913-1963* [Higgins *et al.*, 1963], Arthur Andersen & Co. related the changes it made:

The firm developed financial investigation reports which went into many phases of a business other than financial and accounting, including labor relations, availability of raw materials, plants, products, markets, effectiveness of the organization and future prospects. The methods which were used in developing these reports involved a study of company policies and their effectiveness, and the performance of management in carrying them out. [p. 32]

Ernst & Ernst had an early entry into the management service area. Within five years after it was founded in 1903, it created a separate management service area known as its Service Division. In the early years of the company, the Service Division dealt mostly with accounting and financial matters, such as cost accounting procedures or the prospective results of a merger. However, in the mid-1920s, the emphasis changed. The new approach became: If we can identify a problem, why not offer a solution? Ernst & Ernst referred to this new emphasis as "constructive accounting." Armed with this outlook, Ernst & Ernst began to assist management in analyses of the entire business operation. It examined the organizational structure, delegation of duties, physical layout, departmental relationships, and many other areas. In addition to being an accounting firm, it was also now a management consultant.

Regarding “constructive accounting,” A. C. Ernst, co-founder of Ernst & Ernst, [McAnly, no date] wrote:

The service of the able modern accountant does not stop with the development of a system or the making of an audit. His work, giving him in most cases an intimate knowledge of the operations and condition of a concern, makes him feel the natural responsibility on matters of organization, method and policy. [p. 294]

Along with the expansion of the scope of services offered, the accounting firm had to expand its employment practices. In addition to accounting personnel, it needed industrial engineers, market-research specialists, production and personnel experts. With this entry into management consulting and the expansion of its staff, the accounting firm entered a new era of opportunity and responsibility.

The 1920s brought a tremendous increase in the size of the accounting firms and their billings. One “Big Eight” firm that had particularly impressive growth was Arthur Andersen & Co. In 1920, Arthur Andersen & Co. had two partners and fifty-four employees; however, by 1930 the number of partners had increased to seven and the number of employees to three hundred and seventy-eight. Furthermore, in 1920 it had billings of \$322,000, and by 1929 its billings had increased to \$2,023,000 [Higgins *et al.*, 1963], representing a growth in revenue of over 500 percent for the decade.

As in the previous two decades, the major accounting firms continued to increase the number of branch offices. In the 1920s, Lybrand, Ross Bros. & Montgomery opened offices in Chicago and Seattle (1920), Cleveland and Cincinnati (1923), and Baltimore, San Francisco and Los Angeles (1924) [*L.R.B. & M. Journal*, 1958]. In the same period, Arthur Young & Co. opened branches in Los Angeles (1920), Pittsburgh (1921), London, Paris, and Dallas (1923), and Tulsa (1929) [*The Arthur Young Journal*, 1969].

In addition to growth, this period was one of legal challenge to accounting firms. In 1926, the highest court of New York, the New York Court of Appeals, effectively ruled in *Craig vs. Anyon* that an auditor’s legal liability was extremely limited as long as an auditor exercised “reasonable care” in performing the audit. The case involved Barrow, Wade, Guthrie & Co. (later to merge with Peat, Marwick, Mitchell) which had failed to discover a defalcation of an employee of its client over a period of nearly

five years. In this decision, which predates today's burgeoning awards in tort actions for negligence, the court awarded the plaintiff client only the restitutionary measure of damages, that is, the amount the client had paid for the accounting services, \$2,000 [Chatfield, 1977].

However, the year 1925 also brought the *Ultramares* case. The Stern Company, audited by Touche, Niven, & Co. was declared bankrupt, and in the following year, the Ultramares Corporation filed suit against the auditors charging them with negligence; later a charge of fraud was added. Over the next six years, this suit went through several appeals, before the Court of Appeals of the State of New York ordered a new trial in the case. Before the new trial could be held, there was an out-of-court settlement. It was not the trial itself that would be remembered, but the descriptive writing of Judge Cardozo of the Court of Appeals on the responsibility of the public accountant. In his decision, Judge Cardozo stated that third parties can recover damages from an accountant where fraud can be proved, and gross negligence is sufficient evidence from which one can infer fraud. This statement (strengthened by the Securities Acts in the next decade) brought forth a new principle: the liability and responsibility of an auditor to third parties [Edwards, 1960].

1930 - 1940

DEPRESSION AND REGULATION

During the preceding decade, most accounting firms had enjoyed rapid growth due to the increased importance of the federal income tax and the expansion of services they offered. By 1930, though, the Great Depression had started in the United States and accounting firms were not immune to its effect. As corporate profits and sales decreased, demand for management and financial services decreased. Furthermore, many companies failed during this period, and consequently had no need for auditors.

As mentioned in the previous section, in 1929 Arthur Andersen & Co. had fees of \$2,023,000. By 1932 these fees had decreased to \$1,488,000 [Higgins *et al.*, 1963]. Arthur Young & Co. felt the Depression's effects even more acutely. From 1931 to 1933, the number of hours charged to clients were cut in half. Most accounting firms had increased their staffs during the 1920s, but were now forced to reduce personnel — and those who remained took pay cuts. The Depression also brought a

sharp reduction in the cost of an audit. During this period, the average cost of an audit was between \$500 and \$700 [*The Arthur Young Journal*, 1969] approximately half of what it was before the Depression.

However, by 1933, changes began to occur that would have a profound effect on the growth of "Big Eight" firms. These changes principally resulted from the collapse of the securities markets in 1929 and the resulting losses to millions of investors. At the same time, it was revealed that massive fraud had occurred in Kreuger and Toll, a company listed on the New York Stock Exchange. This fraud had occurred between 1917 and 1932 without being detected [Higgins, 1965]. As a result, the NYSE announced on January 6, 1933, that companies applying for a listing would have to have an audit certificate for their financial statements and this audit must be performed by an independent certified public accountant. This announcement was followed by another on October 24, 1933, that required all companies to follow certain standard accounting methods. It also required that the scope of the audit not be less than that indicated in the pamphlet, *Verification of Financial Statements*, issued by the Federal Reserve Board in 1929 [Edwards, 1960]. With the requirement of an independent auditor and an increased audit scope, the NYSE helped create a new and larger market for major accounting firms.

Another change that resulted from the collapse of the securities market was the passage by Congress of the Securities Act of 1933 and the Securities Exchange Act of 1934. The purpose of the Securities Act of 1933 was to provide full and fair disclosure of information relating to the issuance of securities sold in interstate and foreign commerce. The 1933 Act required that, before securities are sold, a prospectus be provided to potential investors. Furthermore, under the Act; officers, directors, underwriters, and accountants could be held liable for any loss that resulted to an investor from material omissions or misstatements in the prospectus. The Securities Exchange Act of 1934 had the stated purpose of regulating the securities exchanges and the over-the-counter market operating in interstate and foreign commerce. The administration of both Acts was given to a new Securities and Exchange Commission. The 1934 Act required that all financial statements filed with the SEC be certified by an independent public accountant. Enactment of both Acts resulted in increased prestige for the public accounting

profession, and enlarged their responsibility to shareholders and to the general public alike. Not only did accountants have a social responsibility to the public, but they now had a potential legal liability to that public as well. The importance of these Acts to accounting firms can be seen by a statement in *The First Fifty Years: 1913-1963* [Higgins *et al.*, 1963], in which authors of the history of Arthur Andersen & Co. stated:

As was probably true of many of the national firms, our practice increased materially from the many cases where the firm was asked by new clients to examine their financial statements which were to be included in prospectuses issued in connection with registering their security offerings. [p. 44]

Although the Securities Act of 1933 and the Securities Exchange Act of 1934 increased the billings of the major accounting firms, the importance of these firms was already well established by 1932. In two articles, "Architects of the U. S. Balance Sheets" and "Certified Public Accountants," published in June, 1932, *Fortune* examined the role and size of the major accounting firms. At the time of the articles, companies listed on the NYSE were not required to have statements "certified", but in its examination, *Fortune* reviewed the 701 companies that did have their financial statements certified by public accountants. Using audited NYSE companies as its criteria, *Fortune's* eight largest firms were: Price Waterhouse & Co.; Haskins & Sells; Ernst & Ernst; Peat, Marwick, Mitchell & Co.; Arthur Young & Co.; Lybrand, Ross Bros. & Montgomery; Touche, Niven & Co.; and Arthur Andersen & Co. Although their names would change in subsequent mergers, each of these firms maintained or expanded their leadership position in the public accounting profession, eventually being referred to as "the Big Eight".

As the number and size of their clients increased, accounting firms also changed. In the 1930s, one of the most important changes made was industry specialization. A leader in this respect was Arthur Andersen & Co. Mr. Andersen decided early on that it was not possible for one person to have adequate knowledge to furnish needed management and financial services to all companies. Instead, he maintained that accountants should concentrate their efforts on particular industries and become specialists. Therefore, when faced with a management service or auditing problem in a specialized industry, expert knowledge would be available [Higgins *et al.*, 1963]. The concept of indus-

try specialization continued to grow and eventually most "Big Eight" firms developed reputations for expertise in specific areas.

1940 - 1950 A TIME OF CHANGE

As the 1940s began, the effects of the Depression on the accounting profession could still be seen. Many firms' billings were little more than they had been ten years previously, and many clients were still trying to minimize accounting services in order to reduce costs. With the beginning of World War II, this changed.

As in World War I, one of the first government actions was the imposition of an excess profits tax. In addition to the imposition of new taxes, the government imposed new regulations for cost determinations and new bidding procedures for defense contracts. These regulations required companies to keep accurate and current financial records, and many relied on their accounting firm to help ensure this need was met. Accounting firms thus became involved with the day-to-day operations of their clients in contrast to the audit-only relationship that existed in years past. In many cases, a close working relationship developed between the corporate client and the accounting firm, and the relationship continued after the war [*Ernst & Ernst*, 1960].

Although firms were pleased that the volume of work was greater due to the new taxes and regulations, many firms had problems coping in that substantial numbers of their employees were being drafted into the armed forces. This shortage resulted in the entry of many women into accounting and auditing positions. Women had been employed by many firms for years, but primarily in secretarial positions. Because of this need for larger staffs, firms increasingly sought women for professional positions. One firm that actively recruited women was Price Waterhouse & Co. In the spring of 1943, Price Waterhouse began to recruit recent female college graduates for a special eleven-week course in accounting and auditing at Northwestern University. Upon completion of this course they were assigned to the Chicago office. In the spring of 1944, other special courses were offered to women who were to be assigned primarily to offices in Chicago and New York. In addition to this special recruitment, many individual offices recruited women as

accountants, so that in several of Price Waterhouse's offices 30 to 40 percent of the accounting staff were women during the war [DeMond, 1951]. When the war ended, however, most women working for major firms were replaced by men. It would be the late 1960s before a significant number of women would again enter the public accounting work force.

Another major accounting change occurred during World War II. As John Carey [1970, p. 54] states: "Perhaps the most important impact of the war on the practice of public accounting was the application of mathematical and systems approaches to the logistics problems of the military." These mathematical solutions to military problems would develop into what is now called "operations research" or "scientific management". However, more important to many firms was the fact that these services could be offered to clients. During the war, good working relationships and respect had developed between many corporations and their accounting firms. So, when offered these services, many companies accepted them.

Although most "Big Eight" firms offered management services prior to World War II, it was only after the war that many firms established separate divisions or departments for these services. Ernst & Ernst, for example, established a Special Service Division several years prior to World War II, but this division had been generally restricted to tax advice and management consulting. In 1948, Special Services was reorganized into a division called Management Service. The purpose of the Management Service Division was to provide knowledge and expertise to both the firm itself and corporate clients in the area of data processing, operations research, organization and personnel, accounting and budgeting, and marketing. With this expanded service, the firm became an active participant in all facets of corporate decision making and contributed greatly to the accounting firm's potential billings. From 1940 to 1949, the billings of Ernst & Ernst more than doubled, and much of this increase was due to management services [Ernst & Ernst, 1960].

This expansion of management services led to criticism both from within and outside the profession regarding the ability of public accountants to maintain independence and objectivity while auditing the clients to whom they also provided management consulting. Critics argued that an inevitable conflict of interest results from providing the two services. Mednick and Previts [1987, p. 227] concluded, however, that "there was no conclusive evidence to support such an assertion, and . . . the

market seemed to be looking for 'one-stop shopping,' or a convenient professional service package of all three activities — attest, tax and consulting — in which CPA competency clearly provided a comparative benefit." This conflict was far from resolved, and continues today [Hodges, 1987].

In 1947, an important realignment of "Big Eight" firms occurred. George Bailey joined Ernst & Ernst in 1912 upon graduating from college, and by 1922 was managing partner of the Detroit office. Over the next several years, differences developed between Bailey and A. C. Ernst who had founded the firm in 1902. By 1947, these differences had increased to the point that Bailey left Ernst & Ernst accompanied by another partner, John McEachren, and eleven associates and started the firm of George Bailey & Co. [Swanson, 1972]. Because Chrysler Corporation would only agree to follow Bailey to his new firm if there was a nationwide organization to service its account, Bailey quickly combined with two well-established firms — Allen R. Smart & Co. and Touche, Niven, & Co. Allen R. Smart & Co. was started in the United States in 1927 while Touche, Niven & Co. was founded in the United States in 1900. On August 27, the partnership of Touche, Niven, Bailey & Smart was announced, and the realignment was complete [Swanson, 1972].

1950 - 1960

GROWTH THROUGH MERGER

As American corporations became larger, more complex, and international in scope, auditing them became more difficult. By 1950, most major accounting firms had offices in major U.S. cities, but they did not have offices in the smaller cities where their clients were located or in the foreign countries to which their clients were expanding. Furthermore, the expansion of management services required more personnel, often resulting in shortages in the audit staff. An answer to these problems was afforded by mergers with smaller local accounting firms. A merger enabled a large firm to obtain an accounting office in a city where its client was located, and at the same time, to obtain experienced personnel familiar with local practices.

An examination of Haskins & Sells gives a good example of the merger pattern of the 1950s. Between 1923 and 1952, Haskins & Sells merged with only three firms. However, between 1952 and 1960, it was involved in nineteen mergers expanding its operations to: London and San Francisco (1952),

New York (1953), Portland and San Diego (1954), San Juan and Cincinnati (1955), Los Angeles, Rochester, Honolulu, Omaha, and Birmingham (1956), Seattle (1957), Hilo and Rochester (1958), Phoenix and Salt Lake City (1959), and San Diego and Dallas (1960) [Haskins & Sells, 1970]. Haskins & Sells was not alone in this merger trend. During this period, most "Big Eight" firms used mergers as means of growth and expansion.

Of the many mergers in the 1950s, the most important one occurred on November 21, 1950, and would be today's equivalent of a merger of two "Big Eight" firms. On that date, Peat, Marwick, Mitchell & Co. merged with Barrow, Wade, Guthrie & Co. under the former's name. Barrow, Wade, Guthrie & Co., established in 1883, was probably the first national accounting firm in the United States, and at the time of the merger was nearly equal in size to either Arthur Young & Co. or Touche, Niven, Bailey & Smart, both "Big Eight" firms [Wise, 1982]. Through this merger, Peat, Marwick, Mitchell & Co., already one of the largest accounting firms in the United States, expanded its client base and grew even larger.

As clients grew larger and more complex, the traditional audit had to be expanded to meet this challenge. In *Touche Ross: A Biography*, Theodore Swanson [1972] wrote of the change:

During the eventful decade of the fifties, the Touche Ross accounting and auditing practice developed its present distinctive character and form . . . The growing complexities of auditing, and the burden of documentation, invited what could have become an undue emphasis on mechanics — a regimented organizational approach which would leave little room for individual judgment and personal development. The problem . . . was how to extend the area of judgment so as to develop "thinking auditors" . . . it meant that Touche Ross auditors would have to be trained and equipped to audit not merely the books but the business. [p. 28]

This last sentence is very important, for it emphasizes the enlarged scope of the 1950s audit, to consider the whole business entity, not just its financial records. Auditing the whole business involved a study of the company's internal control system. For the first time, accounting firms truly appreciated the fact that the strength of a firm's internal control determined the scope and depth of the audit itself. A new term, "integrated audit program", developed in this decade and reflected the rec-

ognition that an accounting firm could no longer audit only financial records, but had to examine the corporation as an integrated system.

By the end of the 1950s, "the Big Eight" were national firms with offices in every major city and many smaller ones. Based on U.S. revenues, the two largest "Big Eight" firms were Peat, Marwick, Mitchell, & Co. and Arthur Andersen & Co. with estimated billings of more than \$40 million each. Next in size were Ernst & Ernst, Price Waterhouse & Co., and Haskins & Sells with billings estimated at more than \$30 million each. The sixth and seventh firms, Lybrand, Ross Bros. & Montgomery and Arthur Young & Co., reported billings of more than \$25 million; while the smallest firm, Touche, Ross, Bailey & Smart (formerly Touche, Niven, Bailey & Smart), had estimated billings of \$17 million [Wise, 1960].

1960 - 1970

CONTINUED GROWTH AND INTERNATIONALIZATION

In many ways, the period 1960-1970 was similar to the previous decade. The major accounting firms continued the merger patterns started in the 1950s. As previously noted, Haskins & Sells merged with nineteen accounting firms between 1950 and 1960. In the next decade, Haskins & Sells merged with yet another nineteen firms. As before, these mergers were geographically diverse — from Boston to Memphis to San Antonio [*Haskins & Sells*, 1970]. The merger strategy was seen as the best way to obtain needed personnel and offices.

Arthur Young, on the other hand, had resisted the merger trend prevalent among other "Big Eight" firms throughout the 1950s. However, during the 1960s Arthur Young realized that to be competitive, it needed to expand. Mergers with geographically diverse firms offered the solution. Merger activity during this decade increased the number of Arthur & Young partners from 100 in 1960 to over 250 by 1970 [*The Arthur Young Quarterly*, 1980].

The expansion of the major accounting firms was not limited to the United States. Several of "the Big Eight" firms were founded in Britain or Scotland and had been international firms since the early 1900s when they opened offices in the United States or in Continental Europe. By the 1960s, most of the firms founded in the United States had offices in other countries or had established working relationships with foreign accounting

firms. Ernst & Ernst, for example, expanded internationally by establishing a working relationship with Whinney, Smith & Whinney. Through this relationship, they opened four offices in Canada, five in South America, one in Central America, twelve in Europe, and one in Japan during the 1960s [*Ernst & Ernst*, 1960].

The decade witnessed a tremendous increase in billings for members of "the Big Eight". This increase was due to several factors, including: growth through merger, an increase in services offered, client growth, an increase in nonprofit accounting, and rising inflation. In 1968, *Fortune* estimated the United States billings for members of "the Big Eight" as follows [Louis, 1968]: Peat, Marwick, Mitchell & Co. (\$125 million), Arthur Andersen & Co. (\$100 million), Ernst & Ernst (\$95 million), Price Waterhouse & Co. (\$95 million), Haskins & Sells (\$80 million), Lybrand, Ross Bros. & Montgomery (\$65 million), Touche, Ross, Bailey & Smart (becoming Touche Ross & Co. in 1969) (\$60 million), and Arthur Young & Co. (\$57 million). A comparison of these billings with billings a decade earlier shows the dramatic increase that occurred. For example, Peat, Marwick, Mitchell & Co.'s estimated billings increased from \$45 million in 1960 to \$125 million in 1968 while Ernst & Ernst's billings increased from \$36 million to \$95 million. Each of these firms almost tripled their billings in just eight years.

One "Big Eight" firm that published its financial statements during this period was Arthur Andersen & Co. An examination of the year 1970 illustrates the growth that occurred in the decade of the 1960s. In 1970, Arthur Andersen reported worldwide billings of \$190,154,000 and earnings of \$47,937,000. The 1970 earnings were greater than the firm's United States billings (\$40 million) for 1960 [*Arthur Andersen Annual Report*, 1979].

The 1960s also brought problems to "the Big Eight" firms. Of paramount importance was an increase in lawsuits. The decade witnessed an unprecedented deluge of lawsuits against "Big Eight" firms. Several of these suits were successful; others were settled out of court. Of special significance to accountants was a change in the viewpoint of the courts regarding the responsibility of the auditor. Up to this time, courts were reluctant to question an auditor's use of "generally accepted accounting principles," and auditors' adherence to these principles was usually a strong defense. In 1968, however, in the *Continental Vending* case, U. S. District Court Judge Walter R. Mansfield ruled that adherence to generally accepted principles is not an

adequate defense if the court finds that further disclosure was needed [Louis, 1970]. This case brought a new awareness of the potential liability of auditors.

1970 - 1980 A TIME OF CHALLENGE

Prior to the 1970s, accounting firms were basically conservative entities, content to wait for clients to come to them. In the early 1900s, Ernst & Ernst advertised for clients and had actively solicited new accounts. These actions resulted in conflicts with other firms. The Ohio Society of CPAs responded by redrawing its rules to greatly limit solicitation of clients [Ernst & Ernst, 1960]. For the next several decades, the accounting profession discouraged, and the AICPA's Code of Ethics prohibited, active solicitation of clients from other accounting firms. However, in the late 1970s this changed. After several court cases involving other professions and an implied suit by the Justice Department, the AICPA's Code of Ethics was modified to allow advertising and client solicitation [Hermanson *et al.*, 1987]. The political and economic climate of the late 1960s and early 1970s served to foster changing attitudes towards competition by many in the profession. By 1978, the heretofore non-competitive world of accounting had altered to the extent that *Fortune* published an article by Peter W. Bernstein entitled "Competition Comes to Accounting." In this article, Bernstein analyzed the changing environment [p. 89]: "The big accounting firms have not yet taken to the streets with sandwich boards to hawk their wares, but a fierce competitive struggle is transforming their once-staid behavior."

The trend of growth through merger continued for the "Big Eight" firms during the 1970s. Two are particularly noteworthy. Ernst & Ernst, an American firm, had had an informal working relationship with the British firm, Whinney, Smith & Whinney, since the 1920s. In 1979, these two firms formally merged, creating Ernst & Whinney, an international firm with offices in 71 countries and billings in excess of \$500 million [*Wall Street Journal*, 17 January 1979]. Similarly, in 1978, Deloitte, Plender, Griffith & Co. merged its United States practice with the British firm of Haskins & Sells to formalize a long-term affiliation and establish Deloitte Haskins & Sells [*Wall Street Journal*, 10 January 1978].

By the 1970s, most "Big Eight" firms were large interna-

tional partnerships; moreover, they often were larger than the companies they audited. Arthur Andersen & Co.'s financial reports illustrated the growth experienced by "Big Eight" firms during the 1970s. In 1970, Arthur Andersen & Co. had operating fees of \$190,514,000. By 1975, billings had increased to \$386,341,000, and by 1979, were \$645,433,000. Impressively, in just nine years, operating revenues had more than tripled. Furthermore, its earnings increased from \$47,937,000 in 1970 to \$139,422,000 in 1979. The changing sources of these fees is also noteworthy. In 1970, accounting and auditing services generated 68 percent, tax services represented 18 percent, and administrative services were 14 percent of billings. In 1979, accounting and auditing services decreased to 58 percent while tax services increased slightly to 19 percent of fees. On the other hand, administrative services, increased from 14 percent to 23 percent of the total fees generated in 1979 [*Arthur Andersen Annual Report, 1979*].

It was during the 1970s, however, that questions were raised about "Big Eight" firms and their possible dominance of the accounting profession. Many of these questions were raised in the most comprehensive study that Congress had conducted of the accounting profession since its investigations in the early 1930s. This study was prepared by the staff of the Subcommittee on Reports, Accounting and Management of the Committee on Government Operations of the United States Senate. The study, entitled *The Accounting Establishment* [1976], has commonly been called "the Metcalf Report" after Senator Lee Metcalf who chaired the Subcommittee. The report was very critical of the "Big Eight" alleging that it controlled the AICPA and its committees, greatly influenced the FASB, dominated the auditing of large corporations, and dominated the practice of accounting in the United States and probably throughout the world. The report's recommendations included: greater oversight by Congress of accounting practices, establishment of financial accounting and auditing standards for publicly-owned corporations, public reporting by the fifteen largest accounting firms of their financial data and earnings, and consideration by Congress of methods to increase competition among accounting firms.

This report was followed by a series of hearings held by the Subcommittee on Reports, Accounting and Management in April, May, and June of 1977. During the hearings, testimony was offered by members of the accounting profession which

attacked the conclusions and recommendations of the Report. The general consensus of the rebuttals was that large international firms were necessary to audit large industrial clients and the accounting profession with "Eight" competitors was, in fact, more competitive than nearly any other major industry. After a review of the Staff Report and eight days of hearings, the Subcommittee on Reports, Accounting and Management issued its report. Although the follow-up report was not as critical of the "Big Eight" as the Staff Report, it urged an increase in competitive aspects of the accounting profession.

1980 - 1990 BIRTH OF THE "BIG SIX"

Although some firms had offered management consulting since the early 1900s, it was in the 1980s that consulting became as important or more important than auditing for many "Big Eight" firms. Fueling this growth was the increased competition among the "Big Eight" firms that began in the 1970s. As firms competed for the same major audit clients, price cutting became an important marketing tool to attract new clients (or maintain existing ones). As a result, many firms emphasized their management services in order to obtain the larger profit margins provided by these services.

In 1978, it was estimated that between 7% and 21% of the total revenues of individual "Big Eight" firms were generated by their management consulting practices [Bernstein, 1978]. By 1988, the percentage ranged from 14% (Deloitte Haskins & Sells) to 37% (Arthur Andersen) [*Public Accounting Report*, March 15, 1989]. For the fiscal year ending August 31, 1989, Arthur Andersen & Co. reported that \$1,441.7 million of its \$3,381.9 million worldwide revenues were generated by its consulting arm, Andersen Consulting [*Public Accounting Reports*, November 15, 1989]. This reflects the reality that 42.6% of the firm's revenues was generated by consulting in contrast to 19.8% by the tax area and 37.6% by the accounting and audit area.

As consulting became more important to the major firms, it also created problems. Partners in the consulting area complained they were not adequately represented on important committees in the firm. Another major complaint was that the formula for distributing partnership profits did not give enough consideration to the amount of profits created by each area (au-

ding, tax, consulting) or the amount of revenues each partner generated. Although consulting is a major profit area, it requires a high level of capital investment in such things as expensive computer programs. Consulting partners complained that the firms were not reinvesting enough profits to ensure the area's future success.

As noted, Arthur Andersen & Co. has for many years been the "Big Eight" leader in the consulting area. However, over the last few years, Arthur Andersen has also exemplified the growing power struggle between audit and tax partners on one side and consulting partners on the other. The extent of this struggle was illustrated in November 1988 when seven consulting partners quit to form their own consulting firm. As a result of these defections and a major self-study completed in January 1989, the partners of Arthur Andersen voted for a reorganization of the firm. The firm was divided into two operating units — the auditing/tax area and the consulting area, each responsible for its own operations and staffing. A new compensation system was also initiated that increased compensation to the consulting partners and limited the consulting revenues that had to be shared with the other area [*Chicago Tribune*, 13 April 1989]. As other firms expand their consulting areas, they may well be faced with problems similar to those experienced by Arthur Andersen.

This growth in management consulting during the 1980s, combined with highly visible corporate failures and financial institution collapses, resulted in renewed public concern regarding the profession's ability to regulate itself and maintain independence when providing both consulting and auditing services. The House Subcommittee on Oversight and Investigations of the Committee on Energy and Commerce, chaired by Rep. John D. Dingell, conducted hearings to investigate concerns about the accounting profession. In May 1985, in an interview with reporters of *Management Accounting*, Rep. Dingell indicated that the committee had no specific agenda, "other than that it is becoming rather clear to us that the regulatory process is not being well served in many instances by the work being performed by auditors and accountants" [p. 22]. He went on to indicate concerns regarding the issue of independence:

We have accountants who are going into the business of being financial advisors as well as accountants. A lawyer would regard this as a rather clear conflict of

interest were he supposed to scrutinize the behavior of a client and report on it and at the same time advise that client on how it is supposed to behave. [p. 53]

During this same period, the National Commission on Fraudulent Financial Reporting ("the Treadway Commission"), sponsored by the major professional accounting organizations, met to study the issues of increased fraudulent financial reporting. The profession responded to issues raised by both the Dingell Hearings and the Treadway Commission. In 1985, the Auditing Standards Board issued ten exposure drafts of professional standards aimed at closing the "expectations gap" between the public's and the profession's assessment of the auditor's responsibility. Eventually, nine Statements on Auditing Standards were issued, representing the most guidance ever released at one time [*Journal of Accountancy*, July, 1988]. These standards set forth the auditor's increased responsibility to detect fraud and illegal acts, to communicate important matters to the audit committee of the issuer, to apply analytical review procedures and evaluate internal controls on every engagement, as well as a revision of the standard auditors' report to more clearly convey the responsibilities of the independent auditor.

The decade witnessed a number of other significant changes within the profession. In the 1980s, the number of women entering public accounting rose dramatically, a trend that had started in the early 1960s. Although the number of women in accounting doubled between 1960 and 1970 and again between 1970 and 1980 [Wescott, 1986], it was not until the 1980s that most public accounting firms became aware that their future success depended upon recruiting and retaining women.

In the 1970s, the major accounting firms began to hire women, but only in small numbers. During the late 1970s and early 1980s, though, the need for professional accountants grew. The supply of male accountants remained level, but an increasing number of college women selected accounting as their major. By the mid-1980s, nearly half of all accounting students were women and by 1988 women comprised 52 percent of the accounting majors [*Accounting Today*, October 24, 1988]. More importantly, an even higher percentage of the "outstanding" accounting graduates (those meeting criteria typically sought by the "Big Eight" firms) were women. "Big Eight" firms responded to this reality by actively recruiting women.

During the 1980s, the number of women hired as a percentage of new CPAs increased until today most "Big Eight" firms hire nearly an equal number of men and women. However, the number of women holding manager and partner positions still remains small. Although the number of women partners in "Big Eight" firms doubled (69 to 157) between 1983 and 1986 [Hooks & Cheramy, 1988] less than 4 percent of all "Big Eight" partners are women [*Public Accounting Report*, November 15, 1989].

Other "minority" groups have achieved even less representation in the profession. Blacks, for example, make up over 3% of doctors and 2% of lawyers, but less than 1% of CPAs in the United States. Mitchell and Flintall [1990] estimated that only 50 of the 9,000 partners in the largest public accounting firms are black.

Firms continued to expand through merger in the decade of the 1980s. In 1984, Price Waterhouse and Deloitte Haskins & Sells discussed the possibility of merging as a way of increasing their competitive advantage in auditing while also increasing their consulting opportunities [*Business Week*, September 24, 1984]. However, the merger plan failed when the agreement was rejected by the British partners of both firms.

Thus, the first major accounting firm merger of the 1980s joined the "Big Eight" firm, Peat, Marwick, Mitchell & Co., and the international firm, KMG Main Hurdman. KMG Main Hurdman had been created in 1979 by a merger of accounting firms from West Germany, Netherlands, Britain, Canada, and Australia and the American firm of Main Hurdman & Cranstoun [*Wall Street Journal*, 26 July 1979]. Through this merger, Klynveld Main Goerdeler, (KMG) aspired to be a major firm in the United States. However, by the mid-1980s this goal had not been achieved. Then in early 1985, KMG began merger talks with Peat, Marwick, Mitchell [Berton, *Wall Street Journal*, 24 September 1985]. Because of the existence of structuring problems and doubts expressed by some of the KMG partners, these discussions terminated [Berton, *Wall Street Journal*, 25 September 1985]. In 1986, KMG Main Hurdman again decided a partner was necessary for it to gain a stronger presence in the United States. Ernst & Whinney made a formal merger offer to KMG, but it was rejected. KMG then renewed talks with Peat, Marwick, Mitchell. This time the discussions were successful. As a result, KPMG Peat Marwick, the largest accounting firm in the world was created with over \$2.7 billion in worldwide revenues, nearly \$1 billion more than the second ranked firm,

Arthur Andersen [Berton, *Wall Street Journal*, 4 September 1986].

As leading "Big Eight" firms continued to grow, increased their audit market shares, and expanded their services, some analysts suggested that smaller "Big Eight" firms such as Deloitte Haskins & Sells and Touche Ross should no longer be included among the first tier accounting firms. As in past decades, these smaller firms looked to mergers as a way to provide the growth necessary to continue to compete as first tier firms.

In 1989, Ernst & Whinney and Arthur Young merged to form Ernst & Young. Importantly, it was the need to grow and compete "into the 1990s and beyond" that was emphasized when Ernst & Whinney and Arthur Young announced their merger in 1989 [*Journal of Accountancy*, July, 1989]. The combined firms hold the number one audit position throughout most of the world [*Business Week*, July 24, 1989]. It is interesting to note that an "anonymous delivery" of the Ernst & Young prospectus to *Accounting Today* disclosed many heretofore unavailable facts about these firms. Robert Crane [1990] suggests that the significantly larger earnings per Ernst & Whinney partner, together with analysis of other data, "suggest that the deal was not the 'combination of equals' portrayed in the public relations campaign vigorously carried on by the two organizations" [p. 13]. In 1989, Ernst & Whinney's conformed accrual earnings per partner were \$263,000 while Arthur Young's were only \$191,000, which Crane sees as representing an effective "buy out" of Arthur Young by Ernst & Whinney.

After the breakdown in merger talks between Price Waterhouse and Deloitte Haskins & Sells, Deloitte began discussions with Touche Ross. Again, the idea of being able to compete with the other firms was emphasized as an important consideration [*The New York Times*, 7 July 1989]. As previously mentioned, Deloitte Haskins & Sells had traditionally concentrated its marketing efforts on its audit area. It was a leading auditor of manufacturing firms. In contrast, Touche Ross had concentrated on auditing and consulting in retailing and financial industries. Both firms hoped that a merger would provide the opportunity for expansion of consulting. Voluntary disclosure by Deloitte & Touche indicated the merger between these two firms was "considerably closer to a 'combination of equals' than the merger of Ernst & Whinney and Arthur Young" [Crane, 1990, p. 13]. In fiscal 1989, Touche Ross disclosed accrual earn-

ings of \$245,000 per partner, and Deloitte Haskins & Sells confirmed \$241,000 of earnings per partner.

Thus, by 1989 "the Big Eight" had been reduced to "the Big Six". In fact, it was almost reduced to the "Big Five". In July, 1989 Price Waterhouse and Arthur Andersen announced that they had begun talks aimed at merging the firms. This merger would have created the world's largest accounting firm with total revenues approaching \$5 billion [Berton, *Wall Street Journal*, 7 July 1989]. However, almost immediately the differences in firm culture became problematic. Price Waterhouse had the image of a conservative auditor of "blue chip" companies and had only recently actively entered the consulting area. On the other hand, Arthur Andersen had for many years aggressively marketed both its auditing and consulting services. In late September, 1989, talks between Arthur Andersen and Price Waterhouse broke down and merger plans were terminated [Berton, *Wall Street Journal*, 27 September 1989].

As the 1980s ended, major United States accounting firms, as in the past, were changing in response to the changing environment in which they function. Historically, they have adapted well. They have grown from small local partnerships to large international firms that measure their revenues in billions of dollars. They offer dozens of different services to thousands of clients. However, as the accounting profession enters the 1990s, for the first time in over sixty years, the term "Big Eight" accounting firm is no longer appropriate. Now, whether a company is in Japan, England, Italy, or the United States, it can be audited by one of "the Big Six" firms.

REFERENCES

- Accounting Today*, "Women Top Profile of 1989 Recruits," (October 24, 1988): 25.
- "Architects of the U. S. Balance Sheet," *Fortune* (June, 1932): 64-66, 101-102.
- Arthur Andersen & Company: 1979 Annual Report*.
- Bernstein, P. W., "Competition Comes to Accounting," *Fortune* (July 17, 1978): 88-96.
- Berton, L., *The Wall Street Journal*, "KMG Main Hurdman's Merger Interest May Portend a Marriage of Necessity," (September 24, 1985): 8.
- , *The Wall Street Journal*, "Peat Marwick and KMG Main Hurdman Terminate Exploratory Merger Talks," (September 25, 1985): 4.
- , *The Wall Street Journal*, "Peat Marwick and KMG Main to Merge," (September 4, 1986): 3, 18.
- , *The Wall Street Journal*, "Andersen, Price Waterhouse are in Formal Talks; Deloitte Haskins and Touche Ross Agree to Merge," (July 7, 1989): 3.

- , *The Wall Street Journal*, "Andersen and Price Waterhouse Scrap Merger Talks Due to Incompatibilities," (September 17, 1989): 2.
- Business Week*, "The Big Eight Could Soon Be the Big Seven," (September 24, 1984): 37-38.
- Business Week*, "The New Numbers Game in Accounting," (July 24, 1989): 20-21.
- Carey, J. L., *The Rise of the Accounting Profession: 1896-1936*; New York: American Institute of Certified Public Accountants (1969).
- , *The Rise of the Accounting Profession: 1937-1969*; New York: American Institute of Certified Public Accountants (1970).
- "Certified Public Accountants," *Fortune* (June, 1932): 62-63, 95-98.
- Chatfield, M., ed., *Contemporary Studies in the Evolution of Accounting Thought*, Belmont, CA: Dickenson Publishing Co. (1968).
- , *A History of Accounting Thought*, Revised Edition, New York: Robert E. Krieger Publishing Co. (1977).
- Chicago Tribune*, "New Andersen Fills Top Slots," (April 13, 1989): Sec. 3, p. 5.
- Crane, R., "Big 8 Merger Papers: Inside Look at 4 Firms," *Accounting Today* (February 5, 1990): 13, 20.
- Deloitte & Co., 1845-1956*, London: Deloitte, Plender, Griffiths & Co. (1958).
- DeMond, C. W., *Price Waterhouse & Company in America*, New York: Comet Press, Inc. (1951).
- Early History of Coopers & Lybrand*, New York: Garland Publishing Inc. (1984).
- Edwards, J. D., *History of Public Accounting in the United States*, East Lansing: Michigan State University (1960).
- Ernst & Ernst: A History of the Firm*, Cleveland: Ernst & Ernst (1960).
- Hall, W. D., *Accounting and Auditing: Thoughts on Forty Years in Practice and Education*, Chicago: Arthur Andersen & Co. (1987).
- Haskins & Sells: The First Fifty Years*, New York: Haskins & Sells (1947).
- Haskins & Sells: Our First Seventy Five Years*, New York: Crafton Graphic Co. (1970).
- Hermanson, R. H., L. M. Dykes, and D. H. Turner, "Enforced Competition in the Accounting Profession — Does It Make Sense?," *Accounting Horizons* (December, 1987): 13-19.
- Higgins, J. A., C. W. Jones, and P. D. Williams, eds., *The First Fifty Years: 1913-1963*, Chicago: Arthur Andersen & Co. (1963).
- Higgins, T. G., *Thomas G. Higgins, CPA: An Autobiography*, New York: Comet Press, Inc. (1965).
- Hodges, P., "Do the Big Eight Add Up?," *Datamation* (February 15, 1987): 62-68.
- Hooks, K. L., and S. J. Cheramy, "Women Accountants — Current Status and Future Prospects," *The CPA Journal* (May, 1988): 18-27.
- Journal of Accountancy*, "ASB Makes Auditing History: 10 New SASs Herald Far-Reaching Changes," (July, 1988): 144-196.
- Journal of Accountancy*, "Megamerger to Form Largest CPA Firm," (July, 1989): 15.
- L.R.B. & M. Journal*, "Lybrand, Ross Brothers & Montgomery," (January/March, 1958): 10-19.
- Littleton, A. C., and V. K. Zimmerman, *Accounting Theory: Continuity and Change*, Englewood Cliffs: Prentice Hall, Inc. (1962).
- Louis, A. M., "The Accountants are Changing the Rules," *Fortune* (June 15, 1968): 177-179, 330-339, 346.
- , "A Fat Maverick Stirs up the Accounting Profession," *Fortune* (December, 1970): 96-99, 122-125.

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- Management Accountant*, "Accountants Must Clean Up Their Act," (May, 1985): 21-23, 53-56.
- McAnly, H. T. ed., *Selected Writings on Accounting and Related Subjects*, Cleveland: Ernst & Ernst, no date.
- Mednick, R. and G. J. Previts, "The Scope of CPA Services: A View of the Future from the Perspective of a Century of Progress," *Journal of Accountancy* (May, 1987): 220-238.
- Mitchell, B. N. and V. L. Flintall, "The Status of the Black CPA: Twenty Year Update," *The Journal of Accountancy* (August, 1990): 59-69.
- Montgomery, R. H., *Fifty Years of Accountancy*, New York: The Ronald Press Co. (1939).
- The New York Times*, "U. S. Accounting Firms Merge in Hope of Growth Overseas," (July 7, 1989): 1, 27.
- Previts, G. J., and B. D. Merino *A History of Accounting In America*, New York: John Wiley & Sons Inc. (1979).
- Public Accounting Report*, "Arthur Andersen Top in Big Eight Revenue," (March 15, 1989): 1-4.
- Public Accounting Report*, "Accounting in the 1990s: Where do Women CPAs Fit?" (November 15, 1989): 1-3.
- Public Accounting Report*, "Arthur Andersen Reports Record-Breaking Results," (November 15, 1989): 5.
- Swanson, T., *Touche Ross: A Biography*, New York: Touche Ross & Co. (1972).
- The Arthur Young Journal*, "The Accounting Profession and Our Firm — Past, Present, and Future," (Spring/Summer, 1969): 4-10.
- The Arthur Young Quarterly*, "Yesterday and Tomorrow: Prospects for the Eighties," (Spring, 1980): 4-7.
- U. S. Congress. Senate. Committee on Government Operations. *The Accounting Establishment*. S. Study. 1976, 94th Cong., 2d sess., 1976.
- U. S. Congress. Senate. Subcommittee on Reports, Accounting, and Management. *Accounting and Auditing Practices and Procedures, Hearings before a Subcommittee of the Senate Committee on Governmental Affairs*. 95th Cong., 1st sess., 1977.
- The Wall Street Journal*, "Haskins & Sells, Affiliate to Change Their Names," (January 10, 1978): 12.
- The Wall Street Journal*, "Ernst & Ernst, 2 British Firms to Form Group," (January 17, 1979): 14.
- The Wall Street Journal*, "Hurdman & Cranstoun, Main LaFrentz Plan International Group," (July 26, 1979): 32.
- Wescott, S. H., and R. E. Seiler, *Women in the Accounting Profession*, New York: Markus Wiener Publishing Co. (1986).
- Wise, T. A., "The Auditors Have Arrived: Part I," *Fortune* (November, 1960): 151-157, 186-198.
- , "The Very Private World of Peat, Marwick, Mitchell," *Fortune* (July 1, 1966): 88-91, 128-130.
- , *Peat, Marwick, Mitchell & Co.: 85 Years*, New York: Peat, Marwick, Mitchell & Co. (1982).
- Young, A., "The Starting of the Firm," *The Arthur Young Journal* (Spring/Summer, 1969): 16-19.

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USING HISTORICAL ANNUAL REPORTS IN TEACHING: LETTING THE PAST BENEFIT THE PRESENT

Abstract: In this article, it is suggested that accounting education may be enhanced by the use of published historical accounting materials, such as annual reports. Comparing such materials with modern reports serves to reinforce the notion that accounting evolves in response to environmental change. Further, requiring students to analytically derive cash flow statements from historical published annual reports provides several direct pedagogical benefits.

Accounting educators have been urged to make their courses more intellectually appealing to students, and to thus contribute to education in a broad, liberal sense [Koeppen, 1990]. Critics admonish accounting instructors for ignoring students' cognitive development [Amernic and Beechy, 1984], for teaching financial accounting as a set of rules and authoritative pronouncements [Zeff, 1979; Frakes, 1983], and for ignoring the real environment within which accounting is done [Chambers, 1987; Amernic, 1985]. The purpose of this article is to suggest that accounting educators may fruitfully draw upon relatively accessible historical accounting materials as a partial means of achieving educational goals and dealing with the concerns of various critics.

With the expansion of accounting's technical body of knowledge, accounting history has tended to be ignored by accounting educators [see Bloom and Collins, 1988; and Zeff, 1989].¹ Zeff [1989, p. 204] asserts that "[a]bove all, a historical

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¹Some material emphasizing historical accounting documents in teaching has been published, but the quantity is scant. For an example, see Johnson [1975].

perspective is essential" if accounting as a discipline is to contribute to the broadening of the student's intellect, and thus deserve a place in the university curriculum. He goes on to write [pp. 204-205]:

. . . When learning a subject, a student's natural curiosity turns to the origins of thought and practice. In this way, one proceeds from the simpler to the complex, from the past to the present, establishing relevance and stimulating interest in the phenomenon under study. Yet one is unable to find a single financial accounting textbook — introductory, intermediate, or advanced — that purports to explain the historical source of present-day accounting thought or practice.

In a similar vein, Koeppen [1990, p. 89] argues that accounting graduates may "lack the conceptual and analytical skills needed for success" at least partly because of "the absence of a sense of history . . . in the classroom."

The sections which follow offer an example of relatively accessible historical accounting materials, describe how they may be integrated into accounting courses using two assignments, and suggest how their inclusion may assist in achieving various teaching goals. In particular, the differences between historical and current means of fulfilling corporate accountability are viewed as the result of changes in the legal, social and economic environments, and the changing power and demands of users of financial statements.

The specific historical accounting teaching materials employed were the 1924 and 1925 annual reports of Massey-Harris Company, Limited. This Canadian company evolved into Massey-Ferguson Limited (since renamed Varsity Corporation), with about 67,000 employees in the mid-1970s, although recently it has fallen on hard times [Baldwin and Mason, 1983; Bliss, 1988]. In 1991, it reincorporated as a U.S. company.

Historical annual reports of the larger, more important companies, while certainly not as easily accessible as current annual reports, are often accessible with some digging. In the case of Massey, the company's part-time archivist had ensured that two copies of the original annual reports were kept at corporate headquarters from 1923 (the first year that the company published its report) to the present. The older reports from the 1920s were beginning to deteriorate, and the reports had not been copied to other media (for example, microfiche). The

authors were permitted to make photocopies of the reports, portions of which are reproduced in the Appendix.

Although private collections (such as Massey's) would appear to be a potentially fruitful source for historical annual reports, public and university libraries also often maintain such collections. For example, the main reference library of Metropolitan Toronto has a historical collection of annual reports of public companies whose securities are listed on the Toronto Stock Exchange. Similarly, the University of Mississippi library has many collections of annual reports dating back to the early 1900s.

Although annual reports represent a small subset of the "accounts" created by an organization, they are the company's official public documents and thus provide a focus for accountability. Indeed, annual reports may be viewed as mass communication devices [Parker, 1982], a snapshot of top management's mind-set [Neimark, 1983], a means of obtaining unobtrusive insight into corporate strategy [Bowman, 1976 and 1978], source material for business historians [Marriner, 1980; Mason, 1982], as a means of providing an illusion of management control in a hostile environment [Salancik and Meindl, 1984], etc. Further, the accounting measurement and disclosure choices revealed in annual reports may provide insight into the quality of earnings and thus management's attitudes [Hawkins, 1986; Kochanek and Norgaard, 1988]. Thus, annual reports and the financial statements which they contain have the potential for acting as a variety of traces by which the history of an organization may be at least partly understood. In turn, the nature and structure of an organization's annual report may reveal insights into the type and details of accountability required by the environment. This importance of the annual report has also resulted in a reawakening in the accounting education literature of the value of annual reports as a pedagogical device [Harkins and Mills, 1985].

ASSIGNMENT I: COMPARISON OF HISTORICAL AND MODERN ANNUAL REPORTS

Students in undergraduate Intermediate Accounting were given the assignment described below. The students' previous exposure to financial accounting had been in a rather traditional, problem-solving and rule oriented introductory accounting course, so this assignment was an initial attempt at employ-

ing a historical approach in order to encourage the development of what Koeppen [1990] terms an "accounting culture". Use of actual historical materials (i.e., the 1924 and 1925 annual reports) was intended to provide students with assignment material that they might view as tangible and real, and therefore credible.

The assignment was in two parts, thus contributing to two sections of the curriculum. In Part I, which was administered at the beginning of the term, students were provided with the following materials:

- a copy of Massey-Harris Company, Limited's 1925 annual report (see the Appendix), and
- a copy of Varsity Corporation's (Massey as it is today) 1990 annual report.

As a homework task, the students were requested to read the two annual reports, and to identify specific differences and similarities. Then, the students were to speculate on the *reasons* for the differences in the two reports. Examples of student-generated differences are set out in Exhibit 1. During class, the student-generated material led to stimulating discussions which had two phases: in phase one, students attempted to compete with each other in identifying non-trivial differences between the two reports. Such a discussion served to reinforce the idea that financial reporting, at least as revealed in these particular annual reports, had changed considerably over the 65-year period. Having such teaching materials and discussion near the *beginning* of intermediate accounting acted as an important background against which the *breadth* of the discipline was explored as the course unfolded.

Phase two of the student discussion focused on generating a list of plausible reasons for the differences in the two reports. Although appropriate journal articles could have been provided as preliminary reading, they were not because the objective was to encourage each student to think seriously about the possible reasons, and not merely to have them appeal to the authority of a journal article. Such an approach was effective when followed up with a class discussion that required students to justify their possible reasons to their peers and the instructor. Linking the *actual* changes between 1925 and 1990 reports (which the students had identified earlier, and around which a consensus had developed) to *reasonably possible* reasons for the changes, was an extremely useful exercise, and was well-liked by the students.

Educators frequently make use of comparison in order to

introduce or reinforce a concept or point;² by comparing aspects of the modern report with actual historical examples, both the evolutionary nature of financial reporting, and the increased amount and diversity of information now available, are made clear. Expanding the examples of differences between the 1925 and 1990 reports in Exhibit 1 may be one way to make this point during class discussion; four of the examples from the exhibit are expanded below as discussion illustrations:

Item #1 (“Numerous terminology differences”) indicates that the labels accountants employ to identify elements of financial statements have changed over time. The change has been towards greater descriptive accuracy; for example, the historic term “surplus” suggests an excess, or an amount not needed in the operations of a business, while the modern term “retained earnings” is more neutral and more precise — it suggests nothing about the desirability of the organization’s dividend policy, but merely serves to indicate that the amounts in the account have *not* been distributed.

Item #7 (“Depreciation expense a function of income”) indicates that the notion of matching costs against revenues is a relatively recent concept. In historical financial statements, the depreciation charge was by and large discretionary, and reflected the perception of management of “what the traffic could bear”. Thus, the *process* of income measurement, students might conclude, was perhaps more arbitrary in the 1920s, and did not emphasize the normative goal of attempting an objective measure of corporate progress.

Item #8 (“No extraordinary items . . .”) suggests that the “current operating” versus “all-inclusive” views of income represents a debate that has evolved over many years in accounting. In 1925, no attempt was made in the Massey financial statements to identify an operating income number, so the idea that meaningful classification of the *components* of income is important to users, is a relatively new concept. Students may be encouraged to discuss why the settlement of the Treaty of Versailles claim would have characteristics that would lead modern accountants to classify it as “extraordinary”.

Item #15 (“No formal footnotes in the 1925 report”) may be used to illustrate the point that the quantity

²A recent published example of employing comparison is Shank and Govindarajan [1988].

and detail of information in the financial statements has increased dramatically. That this is a general phenomenon may be supported by reference to a study such as that by Lanfranconi [1976], which found that the number of pages devoted to footnotes in the annual reports of Canadian companies increased tenfold over the period 1955 to 1974. The fact of the increased quantity of information (or perhaps more precisely, data) might not necessarily lead to the conclusion that the information is useful. For example, if "readability" is one aspect of usefulness, then students may be referred to research such as that of Courtis [1986], which concluded that the footnotes of a sample of modern (1983) Canadian annual reports were not readable by the majority of potential users. Students might then apply standard readability formulas to the 1925 and 1990 Massey/Varsity annual reports, for comparison. Classroom discussion of this item from Exhibit 1 could then conclude by considering the following possibilities:

- must users of modern reports have higher education levels in order for the difficult-to-read footnotes to be understandable?
- must footnotes be written in low readability style?
- could the significant increase in footnote volume and apparent reading difficulty have led to information overload relative to 1925?

The differences summarized in Exhibit 1 may be linked to a shift in relative power from corporate management to various external users of financial reporting. This shift in the environment is evident in modern disclosure regulations and legislation, which reflect evolving public policy. The impact of such a shift readily becomes evident to students when they compare financial statements from the 1920s with modern financial statements.³

³Employing published reports from the 1920s as the "historical" comparison has several advantages:

- they are often reasonably-accessible, either in libraries or company archives,
- they were prepared during the pre-GAAP/high-regulation era, and thus provide an interesting contrast to modern reports,
- while they are quite different in detail from modern reports, they are similar to modern reports in overall structure, and thus might not alienate students by being "too different and thus unintelligible."
- they were issued in an era of reasonably well-established capital markets.

Exhibit 1

Apparent Differences — Historic (1925) Versus Modern Annual Reports

1. Numerous terminology differences; for example, “surplus” instead of “retained earnings”.
2. No comparatives in 1925 annual report.
3. “Income Account” highly condensed; no details regarding cost of sales, etc., in the 1925 report.
4. The balance sheet in the 1925 report appears to have prominence over the income statement, because of the lack of detail noted above in item #3, the prominent placing of the balance sheet in the center of the annual report, and the reference in the auditor’s opinion only to the balance sheet.
5. Order of items on both sides of balance sheet reversed from modern practice.
6. Use of a “Contingent account”.
7. Depreciation expense a function of income (shareholders’ letter for FYE 30th November, 1925 says “The Net Profit . . . was \$1,323,462 in excess of that of 1924. During the year, the Company . . . recovered the sum of \$661,139. Advantage was taken of this recovery to make liberal appropriations for depreciation . . .”).
8. No extraordinary items nor prior period adjustment categories (the settlement of the Treaty of Versailles claim is taken to income).
9. No statement of changes in financial position nor cash-flow statement in the Massey-Harris Company, Limited 1925 annual report.
10. Explicit mention of working capital improvements (reference to working capital as “net liquid or working capital”) in the 1925 annual report. In contrast, modern reports have an extensive Management Discussion and Analysis section.
11. No separate accounting policy note, although some policies are disclosed in the shareholders’ letter.
12. Wording of auditor’s report quite different:
 - no reference to GAAS or GAAP,
 - refers to “the true position of the company”,
 - focuses on the balance sheet.
13. Subsidiary not consolidated; thus, computation of total group net cash flow from operations is impossible. Furthermore, subsidiary is not accounted for using either the equity or cost basis; rather, it is accounted for based upon the stated value of the shares.
14. Asset contra accounts such as “Reserves and Funds — Buildings and Equipment” (accumulated depreciation) and “Reserves and Funds — Possible losses on collections” (allowance for doubtful accounts) shown on the equities side of the balance sheet.
15. No formal footnotes in the 1925 annual report.
16. Apparently, expenses related to pensions are discretionary.
17. No deferred taxes.

ASSIGNMENT II: PREPARATION OF A CASH-FLOW STATEMENT

Recent changes in generally accepted accounting principles requiring that companies present cash-flow statements were regarded as quite important and revolutionary during the period in the 1970s and 1980s when such changes were being debated [Largay and Stickney, 1980; Nordgren, 1986]. However, such requirements are no longer novel, and are perceived as merely another aspect of financial reporting. The importance of classifying cash (rather than accrual) flows (into operating, financing, and investing categories), and tracking their progress over time, is no longer as unique as when Largay and Stickney [1980] criticized accrual accounting information in their analysis of the W. T. Grant bankruptcy.

That this is a recent phenomenon may be surprising to some students. Requiring students to prepare a cash-flow statement for 1925 for Massey-Harris Company, Limited, using the published annual report information for both fiscal 1924 and 1925 (recall that comparatives were not published) serves the function of indicating to students how much financial reporting has changed in response to user demands (references to articles such as Largay and Stickney, 1980, may be used to illustrate the types of pressures accounting standard-setters were under to establish cash-flow principles). Students may be further surprised to learn that standard-setters were positively hostile towards operating cash-flow information up until quite recently (the cash and related approaches were approved in *APB* #3 and *APB* #19 in the United States).

The specific assignment material was provided to students at the end of a first lecture on the construction and use of cash-flow statements. The material included the following:

- the 1924 and 1925 Massey-Harris Company, Limited annual reports,
- an instruction sheet, which read as follows:
 - “Varity Corporation is a Canadian multi-national company, which was previously known as Massey-Ferguson Limited. In the mid-1970s it employed about 67,000 people and was one of Canada’s premier corporations. In the early 20th century the corporation was a single-industry firm and was called the Massey-Harris Company, Limited. Enclosed are the financial statements and the report of the direc-

tors of Massey-Harris Company, Limited for the years 1924 and 1925. You should note that accounting has evolved since the 1920s, both in content and terminology; accordingly, you may encounter in the report terms and presentations which differ from the ones that you are used to.

1. Prepare a cash-flow statement for Massey-Harris for 1925. The "t-account" method is probably most efficient and effective here.
2. Analyze the company's 1925 results in relation to its strategy and environment."

Aside from reinforcing the notion that financial reporting is evolutionary and responds to its environment (at least sometimes!), the requirement of preparing a "historic" cash-flow statement has the following specific educational benefits:

1. Students must deduce the nature of an account from the *description* of how it works in the annual report rather than from its location and title, since both account locations in the financial statements, and their titles, are different from those in modern financial statements. An example is the account "Taxes — Head Office and foreign branches". Although it is classified under "Reserves and Funds", it is similar to a modern "Income tax payable" account (current liability). Another example is the so-called reserve account for "Buildings and equipment", which must be analyzed in conjunction with the "Appropriation for depreciation of plants, etc." account in the published "Income Account".
2. Students become sensitive to alternative financial reporting formats, which is important since they likely will need to be open to accepting foreign financial statements at some point during their career.
3. Since the teaching material is "real", it has more intrinsic interest for the student than "toy" teaching material, and thus student commitment is enhanced. During the 1924-25 period, Massey-Harris Company, Limited was essentially a single-industry firm and thus relatively simple to understand, but because of its international dealings and broad product line, its annual reports were "rich". Further, even introductory students can see the impact of the uncertainty of agricultural grain yields and prices on the company.

4. Successful completion of this task helps ensure that students understand the double-entry, accrual model, and can generalize their knowledge to unfamiliar situations. Thus, enhancing the student's tolerance for ambiguity and assisting in cognitive growth may be benefits here [Amernic and Beechy, 1984].
5. Students can relate both the *nature* of the financial statements (e.g., the accounts used, the expenses incurred, etc.) to the *nature* of the business. They can also relate the company's results, environment, and strategy to the financial statement results.
6. Preparing a cash-flow statement, using the indirect method, from the 1924 and 1925 accounts, requires students to come to grips with technical issues such as the treatment of apparently non-operating transactions (the settlement of the Treaty of Versailles claim) and the impossibility of computing net cash flow from operations for the *consolidated* group when the company neither consolidates its subsidiaries nor discloses their separate financial statements.⁴

A cash-flow statement for Massey-Harris Company, Limited for 1925, as prepared by the authors, is shown in Exhibit 2.⁵ Students might note the following (among other observations) about the statement:

- net cash flow from operations is about \$900,000 *less* than reported net income.
- the company's emphasis on controlling current operating asset levels (inventories and accounts receivable) did not generate sufficient cash flow to overcome the cash drain effect of reducing accounts payable.
- the company appears to avoid debt since none appears on the 1925 balance sheet, nor as a financing cash flow item in Exhibit 2; however, the company is contingently liable for its unconsolidated subsidiary's debenture note issue. Had a consolidated cash-flow statement been prepared, the *reduction* in

⁴This observation may be used to support the recent FASB principle requiring across-the-board consolidation of subsidiaries.

⁵A complete t-account worksheet is available on request from the first author.

the subsidiary's debt would have shown up as a financing outflow of cash.

- no dividends were paid, even though 1925 was apparently a far more successful year than 1924. This, combined with management's apparent aversion to debt and the inherent riskiness of the farm implement manufacturing and distribution business, suggest a prudent, conservative management.

Exhibit 2

Massey-Harris Company, Limited Statement of Changes in Financial Position Year Ended November 30, 1925 (prepared from published annual report data) (Numbers are rounded)

OPERATIONS —	
Net income	\$ 1,411,173*
Adjustments not requiring working capital —	
Foreign exchange provision	4,942
Pension provision	(5,617)
Depreciation	869,334**
Fire indemnity fund	12,275
<hr/>	
Working capital provided by operations	2,292,107
Adjustments for operating current accounts —	
Reduction in inventory	2,465,333
Increase in prepaids	(675,528)
Reduction in accounts receivable	1,958,452
Reduction in allowance for doubtful accounts	(298,978)
Increase in goods supplied to unconsolidated subsidiary	(370,125)
Reduction in accounts payable	(4,908,260)
Increase in accrued taxes	41,644
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NET CASH FLOW FROM OPERATIONS	\$ 504,645
INVESTING ACTIVITIES	
Purchased factory assets	65,452
Purchased branch assets	255,884
Acquire additional common stock of unconsolidated subsidiary	6,538
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NET CASH FLOW FROM INVESTING ACTIVITIES	(327,874)
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TOTAL NET CASH FLOW	\$ 176,771
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* As may be seen from the notes to the 1925 financial statements (Appendix), \$661,139 represented the recovery in cash of assets previously written off due to the First World War. Most students will argue that this amount should be classified as "non-operating"; if it is so classified, then "Net Cash Flow from Operations" is negative.

** Computed from the change in the balance sheet accounts.

CONCLUSION

In this teaching note, we have suggested introducing teaching materials grounded in "reality" (specifically, historical reality) as a means of enhancing student commitment, and thus learning, in accounting. Teaching materials from a relatively-neglected area — historical annual reports — were described, and potential educational benefits were suggested. The use of materials that reflect the activities of *actual* people and their organizations, both past and present, can only serve to enrich accounting education, and assist in helping students become more aware of both the diversity and the complexity of the world that uses the structures, processes, and outputs of accounting. Indeed, Bloom and Collins [1988] have rationalized the use of a historical perspective in accounting education employing learning theory.

It is not too extreme to suggest that accounting is a social construction [Hines, 1988], and thus if educators are to assist students in *understanding* accounting and its roles in society, the perspective of the *evolution* of accounting must be stressed. Accordingly, teaching approaches which draw upon the use and analysis of historical accounting materials, as counterpoint to modern financial statements, may offer educators the opportunity of letting the past benefit the present.

REFERENCES

- Amernic, Joel H., "Teaching Accounting in a Vacuum", *CA Magazine* (May 1985): 67-71.
- Amernic, Joel H., and Thomas H. Beechy, "Accounting Students' Performance and Cognitive Complexity: Some Empirical Evidence", *The Accounting Review* (April 1984): 300-313.
- Baldwin, Carliss Y., and Scott P. Mason, "The Resolution of Claims in Financial Distress: The Case of Massey Ferguson", *The Journal of Finance* (May 1983): 505-522.
- Bliss, M., "The Last Harvest", *Report on Business Magazine* (August 1988): 48-53.
- Bloom, Robert, and Marilyn Collins, "Motivating Students with a Historical Perspective in Financial Accounting Courses", *Journal of Accounting Education*, Vol. 6 (1988): 103-115.
- Bowman, E. H., "Strategy and the Weather", *Sloan Management Review*, Vol. 17, No. 2 (1976): 49-62.
- _____, "Strategy, Annual Reports, and Alchemy", *California Management Review*, Vol. 20, No 3 (1978): 64-71.
- Chambers, R. J., "Accounting Education for the Twenty-first Century", *Abacus*, Vol. 23, No. 2 (1987): 97-106.
- Courtis, John K., "Poor Communication is Alive and Well: A Study of Annual Report Readability", *Canadian Journal of Communication*, Vol. 12, No. 3-4 (1986): 1-17.

- Frakes, Albert H., "Emphasizing Financial Accounting Theory in Intermediate Accounting", *Issues in Accounting Education*, American Accounting Association (1983): 104-114.
- Harkins, Jeffrey L., and John Mills, "Annual Reports: A Pedagogical Tool for Intermediate Accounting", *Advances in Accounting*, Vol. 2 (1985): 149-166.
- Hawkins, D. F., *Corporate Financial Reporting and Analysis: Text and Cases*, Third Edition, Irwin (1986).
- Hines, R. D., "Financial Accounting: In Communicating Reality, We Construct Reality", *Accounting, Organizations and Society*, Vol. 13, No. 3 (1988): 251-261.
- Hopwood, Anthony G., and H. Thomas Johnson, "Accounting History's Claim To Legitimacy", *The International Journal of Accounting*, Vol. 21, No. 2 (Spring 1986): 37-46.
- Johnson, Hans, V., "Evidential Matter Pertaining to the Historical Development of the Concept of Disclosure and Its Use as a Teaching Aid", The Academy of Accounting Historians, Working Paper No. 17 (1975).
- Kochanek, Richard F., and Corine T. Norgaard, "Analyzing the Components of Operating Cash Flow: The Charter Company", *Accounting Horizons* (March 1988): 58-66.
- Koepfen, David R., "Creating an Accounting Culture in the Classroom", *The Accounting Historians Journal*, Vol. 17, No. 1 (June 1990): 89-96.
- Lanfronconi, Claude Peter, *Change in Corporate Financial Disclosure in Canada: An Empirical Study of the Use of Notes to Financial Statements and Supplementary Financial Data Schedules for Disclosure in Annual Reports in Canada*, unpublished dissertation, London, Ontario: University of Western Ontario (1976).
- Largay, James A., and Clyde P. Stickney, "Cash Flows, Ratio Analysis and the W. T. Grant Company Bankruptcy", *Financial Analysis Journal* (July-August 1980): 51-54.
- Marriner, S., "Company Financial Statements as Source Material for Business Historians", *Business History* (July 1980): 203-235.
- Mason, J., "Accounting Records and Business History", *Business History* (November 1982): 293-299.
- Neimark, M., "How to Use Content Analysis in Historical Research", *The Accounting Historians Notebook*, Vol. 6, No. 2 (1983).
- Nordgren, Roger K., "Understanding Cash Flow: A Key Step in Financial Analysis", *The Journal of Commercial Bank Lending*, Vol. 68, No. 9 (May 1986): 2-17.
- Parker, L. D., "Corporate Annual Reporting: A Mass Communication Perspective", *Accounting and Business Research* (Autumn 1982): 279-286.
- Salancik, G. R., and J. R. Meindl, "Corporate Attributions as Strategic Illusions of Management Control", *Administrative Science Quarterly*, Vol. 29 (1984): 238-254.
- Shank, John K., and Vijay Govindarajan, "The Perils of Cost Allocation Based on Production Volumes", *Accounting Horizons*, Vol. 2, No. 4 (1988): 71-79.
- Zeff, Stephen A., "Theory and Intermediate Accounting", *The Accounting Review* (July 1979): 592-594.
- _____, "Does Accounting Belong in the University Curriculum?", *Issues in Accounting Education*, Vol. 4, No. 1 (Spring 1989): 203-210.

APPENDIX
MASSEY-HARRIS COMPANY, LIMITED
REPORT OF THE DIRECTORS
for the
YEAR ENDED 30th NOVEMBER, 1924*

To be submitted to the Shareholders at the Annual Meeting, on Wednesday
the 4th February, 1925, at 2.30 p.m.

To the Shareholders:

Your directors have pleasure in presenting the following report of the operations and affairs of Massey-Harris Company, Limited, and its subsidiary Companies—Verity Plow Company, Limited, and the Bain Wagon Company, Limited,—the entire capital stock of both of which Companies is owned by your Company, for the year ended 30th November, 1924.

Income Account

The Income from the year's operations before deducting interest and appropriations was	\$1,065,180.15
From this there has been deducted:	
Interest on borrowings	\$667,667.85
Appropriation for depreciation of plants, etc.	282,566.85
Appropriation for Pension Fund	27,234.73
	977,469.43
Leaving a Net Profit for the year of	\$ 87,710.72

Surplus Account

The Surplus at 30th November, 1923, was	\$750,152.73
Less amount to adjust subsidiary companies' stock to par	19,153.85
	\$ 730,99
Adding the Net Profit for 1924	87,710.72
The Surplus at 30th November, 1924, was	\$ 818,709.60

A Net Profit, after making adequate provision for depreciation and possible losses, has been realized for the first time in four years. Although it is small—\$87,711—it is significant in the light of the previous losses amounting to \$1,456,000 in 1921, \$643,000 in 1922, and \$409,578 in 1923 (after eliminating the profit realized from the sale of timber lands, which formed a part of last year's income). The improvement, therefore, in operating earnings over those of a year ago is \$497,288.

The Assets, which aggregate \$39,598,503, have been conservatively valued. Inventories of raw materials have been taken at cost or replacement value, whichever is the lower. Finished goods at factories are carried at current factory cost, likewise those at Branches, but with transfer costs added. Quick or current assets — inventories, receivables, cash — amount to \$28,988,191, and constitute 73 per cent of the total assets. Current liabilities have been reduced by \$2,670,170. The net liquid or working capital is \$20,448,377.

*This Appendix contains excerpts of the Annual reports; the type has been reset.

Capital Assets show a small increase over those of last year. Outlays were made only for such improved labour-saving machinery as would tend to lower manufacturing costs and better the quality of the product. During the year there was acquired, on reasonable terms, almost the whole of the balance of the shares of the Massey-Harris Harvester Co., Inc., Botavia, New York. The shares of this Company now stand at par in the balance sheet.

Sales, on the whole, were less in value than those of the previous year. In Canada they were approximately only 60 per cent of those of 1923, while in other countries a fair increase was shown. Various disturbing factors, including the adverse economic condition of the farmer, were responsible for the lessened volume of Canadian trade. There is substantial reason to believe, however, that the situation has commenced to improve, and that the prospects of both the home and the overseas agriculturist are distinctly brighter.

Plants, Branch warehouses and other properties, at home and abroad, have been maintained in a sound state of repair. All expenditure involved in this has been made a charge of the year's operations. A larger amount than in previous years has been transferred to reserve for depreciation of buildings, machinery and other equipment. Adequate insurance is carried on all of the Companies' properties, materials and goods. On its manufacturing plants, the coverage is approximately 90 per cent of replacement values.

The Balance Sheet, which accompanies the report, includes the certificate of the auditors appointed by the shareholders at the last Annual Meeting, Messrs. Clarkson, Gordon & Dilworth, and Mr. H. L. Gillson. The audit of the European Branch was conducted by Messrs. Howard, Howes & Company, London; of the Argentine Branch, by Messrs. Price, Waterhouse, Faller & Company, Buenos Aires, South America; of the Australasian Branch, by Mr. N. L. A. Mackenzie, Melbourne; and of the Canadian Branches by Mr. H. L. Gillson, Toronto.

The Past Year, for both the farmer and the implement maker, has been an unusually trying one. In our report, a year ago, it was stated that, while the outlook was not entirely clear, it was hoped that a turning point had been reached. Our expectations, however, were not fully realized at home, nevertheless it is believed that distinct progress has been made in several of the countries outside of Canada in which we operate. At the present time the improved prices for cereals and other farm products have given much encouragement to the farmer, and it is confidently believed that the year which we have entered will bring greater prosperity both to the farmer and to his ally, the implement maker.

During the year, the Directors experienced a severe loss in the death of their esteemed colleague, Sir Edmund Walker, C.V.O., D.C.L., LL.D., who was a valued member of the Board for twelve years. The vacancy thus created was filled by the appointment of Mr. T. A. Russell.

Your Directors desire to express again their sincere appreciation of the interest and devotion manifested by those in the Companies' service, both at home and abroad, especially during the last four years which, perhaps, have been the most difficult and trying in the experience of the organization.

T. BRADSHAW,
General Manager.

VINCENT MASSEY,
President

Toronto, January 28th, 1925.

**MASSEY-HARRIS COMPANY, LIMITED, and SUBSIDIARY COMPANIES
CONSOLIDATED BALANCE SHEET, 30th NOVEMBER, 1924**

ASSETS

Capital Assets

Factories—real estate and equipment— Toronto, Brantford, Woodstock and Weston	\$ 5,706,853.31	
Branches—real estate, buildings and equipment	2,179,758.03	
Massey-Harris Harvester Co. Inc. 27,237 shares Common stock (Cost \$2,777,274.34)	2,723,700.00	
Patents	1.00	10,610,312.34

Current Assets

Inventories of raw materials, goods in process and finished goods (valued at cost, not exceeding replacement value)	16,310,256.11	
Expenditures including interest and administration charges on account of next year's operations	1,249,010.45	
Bills and accounts receivable (accrued interest of approximately \$1,100,000.00 not taken into account)	10,635,622.97	
Massey-Harris Harvester Co., Inc., Goods Supplied	507,830.99	
Cash on hand and in banks	285,470.38	28,988,190.90
TOTAL ASSETS		<u>\$39,598,503.24</u>

LIABILITIES**Capital**

Common—authorized \$25,000,000.00—	
Issued and fully paid up	\$24,179,800.00

Current Liabilities

Bills and accounts payable	8,539,814.35
----------------------------------	--------------

Reserves and Funds

Taxes—foreign branches	\$ 270,872.62	
Foreign exchange, etc.....	545,269.65	
Pensions	205,365.42	
Buildings and equipment	2,143,663.63	
Possible losses on collections	2,025,968.28	
Fire indemnity	<u>489,039.69</u>	5,680,179.29
Contingent account (as called for by charters and by-law of companies)	380,000.00	
Profit and loss account	<u>818,709.60</u>	1,198,709.60

TOTAL LIABILITIES \$39,598,503.24

CONTINGENT LIABILITIES: — Joint Debenture Note issue with the Massey-Harris Harvester Company, Inc. (now reduced to \$2,400,000.00) and Bank loans of that Company guaranteed by this Company \$600,000.00.

VINCENT MASSEY, *President*
T. BRADSHAW, *General Manager*

We have examined the Head Office books and accounts of Massey-Harris Company Limited, The Bain Wagon Company Limited, and Verity Plow Company Limited, as of 30th November, 1924, and have accepted the returns from the Branches.

The above figures include the Australasian and Argentine Branch accounts as of 30th June, 1924.

The officials have assured us that the Reserves for possible losses on collections and for depreciation are sufficient, and that the inventories have been properly valued, and accepting this we certify that in our opinion the above Balance Sheet is properly drawn up to show the true position of the combined Companies at 30th November, 1924, according to the best of our information, the explanations given to us and as shown by the books of the Companies.

We have obtained all the information and explanations we have required.

CLARKSON, GORDON & DILWORTH, C.A.
H. L. GILLSON,

Toronto, 28th January, 1925.

Auditors.

MASSEY-HARRIS COMPANY, Limited
REPORT OF THE DIRECTORS
for the
YEAR ENDED 30th. NOVEMBER, 1925

To be submitted to the Shareholders at the Annual Meeting, on
 Monday the 1st February, 1926, at 3 p.m.

To the Shareholders:

Your Directors have pleasure in presenting the following report of the operations and affairs of Massey-Harris Company, Limited, for the year ended 30th. November, 1925.

Income Account

The Income from the year's operations before deducting interest and appropriations was			\$2,346,542.70
Recovery, in cash, of assets previously written off			661,139.30
			\$3,007,682.00
From this there has been deducted:			
Interest on borrowings			\$ 480,512.84
Appropriation for depreciation of plants, etc.			939,165.16
Appropriation for Pension Fund			26,830.69
Appropriation for Income Taxes			150,000.00
			1,596,508.69
Leaving a Net Profit for the year of			<u>\$1,411,173.31</u>

Surplus Account

The Surplus at 30th November, 1924, was \$ 818,709.60			
Amount held in Contingent Account of Subsidiary Companies not now required, as Charters are being surrendered			
			<u>130,000.00</u>
			\$ 948,709.60
Adding Net Profit for 1925			1,411,173.31
The Surplus at 30th November, 1925, was			<u>\$2,359,882.91</u>

The Net Profit of \$1,411,173, realized after interest charges, appropriations for plant depreciation, pension fund, income taxes and other reserves had been made, was \$1,323,462 in excess of that of 1924. During the year, the Company was successful in its suit, instituted under the terms of the Treaty of Versailles, against a European power for moneys sequestrated during the war and recovered the sum of \$661,139. Advantage was taken of this recovery to make liberal appropriations for depreciation and reserves, as will be noted in the income account. The effect of that action is that the present net asset value of plant property has been so adjusted that it will amortized well within the estimated life of each class of such property and that in subsequent years only

normal reserves and depreciation will be required to be made. The balance at the credit of Profit and Loss is \$2,359,883, or \$1,541,173 in excess of what it was in 1924.

Capital and Current Assets, which in aggregate make up the total of \$36,725,017, have been conservatively valued. Capital assets of \$10,938,186 have been increased within the year by \$327,874, due mainly to the purchase of necessary warehouses and branch properties in South America and Australia, the acquisition of a factory site in France, and the installation in the Canadian plants of certain improved labor-saving machinery, tending towards better and more economical production.

Current Assets, which amount to \$25,786,831, or 70 per cent of the whole, show a decrease for the year of \$3,201,359. Inventories, composed of raw materials, finished goods, and goods in process of manufacture, show a decline of \$1,789,805; while bills and accounts receivable were reduced by \$1,958,451. The usual practice of pricing everything entering into inventories at cost or replacement value, whichever was the lower and of making adequate provision for possible losses on receivables was followed.

Current Liabilities, which represent only 14 per cent of current assets, were reduced by \$4,908,259, making the net liquid working capital \$22,155,277, or almost 1¾ millions more than a year ago.

Sales, for the year, were, according to value, 29% in excess of those of 1924, and, with one exception, exceeded the amount of goods sold in any previous year. Exports, however, very greatly exceeded Canadian sales, the former being no less than 62% of the whole. It will be recalled that in the last report your Directors expressed the opinion that a substantial improvement in conditions at home was in evidence. This has been justified by the important increase in the Canadian business during 1925. While the proportion of business done outside of Canada during the past several years has substantially exceeded the home business, it is gratifying to record a distinct improvement in the domestic demand.

For a number of years the Company has been exporting goods to South Africa through a valued connection, Messrs. R. M. Ross & Company of Capetown, who still handle our line, but the time appeared to be opportune for an extension of operations and for the establishment of the Company's own organization in accordance with its method of carrying on business in other countries. After a most careful survey of the South African field, it was decided to open a Branch at Durban. The results already obtained fully justify the action taken.

Factories, distributing warehouses, and other properties owned by the Company in Canada and overseas, have been maintained in a sound state of repair. The whole of the cost involved in connection with this has been treated as a current expense and charged in the operations of the year. Fire insurance to the extent of approximately 90% of the replacement value is maintained on plants, other properties and inventories.

The high standard of workmanship and construction for which the Company's products has been deservedly noted, has not only been maintained but many

outstanding improvements have been made in the development of implements, enabling them to be operated more efficiently in the field, and producing better results for the farmer. The advance which is steadily being made in agriculture is in measure due to the improved character of the implements of production and to the service which the implement manufacturer is rendering to the farmer.

It has been gradually borne in upon the Directors that, in order to maintain the Company's important and desirable business in certain parts of Europe, it would be essential to consider seriously local manufacturing. A small plant, involving a nominal investment, has been in operation in Germany for several years. It now gives promise of becoming more important as conditions in that country improve. During recent years, the necessity of manufacturing in France, where the Company has an important business and a good sales organization, has become quite apparent, and as a consequence, and after a further careful survey of the whole subject, a factory site has been acquired and at present plans are being prepared and tenders sought with the object of proceeding promptly with the construction of a factory and the installation of the necessary manufacturing equipment.

Improved crops, combined with better prices for farm products, at home and abroad, materially helped to re-establish in 1924 the farmer's economic position, while the harvest of 1925 with even better prices in many instances, still further contributed to his welfare, with the result that he is again a substantial purchaser of needed goods. In Europe those conditions which have a bearing upon our interests, while still far from normal, have steadily improved, and there is a justifiable expectation that further advancement in the establishment of confidence and credit will proceed in 1926 and succeeding years. On the whole it is believed that not only have the farmer and the implement manufacturer made substantial progress in re-establishing themselves on a sound basis, but that the immediate future is promising for both and for practically all other Canadian industries.

The Balance Sheet, which accompanies the report, includes the certificate of the auditors appointed by the shareholders at the last Annual Meeting, Messrs. Clarkson, Gordon & Dilworth, and Mr. H. L. Gillson. The audit of the European branches was conducted by Messrs. Howard, Howes & Company, London; of the Argentine Branch, by Messrs. Price, Waterhouse, Faller & Company, Buenos Aires, South America; of the Australasian Branch, by Mr. N. L. A. Mackenzie, Melbourne; and of the Canadian Branches by Mr. H. L. Gillson, Toronto.

To fill the vacancies on the Board caused by the resignation of Mr. Vincent Massey and the death of Mr. Lloyd Harris, Mr. George W. McLaughlin of Oshawa and Mr. Charles S. Blackwell of Toronto were elected Directors. Mr. Massey became a Director in 1919 and was made President in December, 1921. During the whole of the period of his association, his direction, counsel and advice were much valued and appreciated. Mr. Harris in the early years of the Company ably represented its interests in Europe and during the past five years was a valued member of the Board.

The Directors desire to record in no formal manner their deep appreciation of the zealous, efficient and loyal manner in which those in the Company' service, both at home and abroad, have performed their duties during the past year, and

to whom, in no small measure, are the shareholders indebted for the improved condition of affairs as reflected in the report.

T. BRADSHAW,
General Manager.

JOS. N. SHENSTONE,
President.

Toronto, January 22nd, 1926.

MASSEY-HARRIS COMPANY, Limited
BALANCE SHEET, 30th NOVEMBER, 1925

ASSETS

Capital Assets

Factories—real estate and equipment— Toronto, Brantford, Woodstock and Weston	\$ 5,772,305.30	
Branches—real estate, buildings and equipment	2,435,641.81	
Massey-Harris Harvester Co. Inc. 27,361 shares Common stock	2,730,238.50	
(Cost \$2,783,812.84)		
Patents	1.00	\$10,938,186.61

Current Assets

Inventories of raw materials, goods in process and finished goods (valued at cost, not exceeding replacement value)	13,844,922.71	
Expenditures on account of next year's manufacturing operations	1,924,538.23	
Bills and accounts receivable (accrued interest of approximately \$880,000.00 not taken into account)	8,677,171.01	
Massey-Harris Harvester Co., Inc., Goods Supplied	877,956.40	
Cash on hand and in banks	462,242.69	25,786,831.04
TOTAL ASSETS	\$36,725,017.65	

LIABILITIES

Capital

Common—authorized \$25,000,000.00—	
Issued and fully paid up	\$24,179,800.00

Current liabilities

Bills and accounts payable	3,631,554.63
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Reserves and Funds

Taxes—Head Office and foreign branches	\$ 312,517.25	
Foreign exchange, etc.....	550,211.93	
Pensions	199,748.33	
Buildings and equipment	3,012,997.51	
Possible losses on collections	1,726,990.19	
Fire indemnity	501,314.90	6,303,780.11
Contingent account—per charter	250,000.00	
Profit and loss account	2,359,882.91	2,609,882.91

TOTAL LIABILITIES \$36,725,017.65

CONTINGENT LIABILITIES: — Joint
 Debenture Note issue with the Massey-
 Harris Harvester Company, Inc. (now
 reduced to \$2,000,000.00) and Bank
 Loans of that Company guaranteed by
 this Company \$485,000.00.

JOS. N. SHENSTONE, *President*
 T. BRADSHAW, *General Manager*

We have examined the Head Office books and accounts of Massey-Harris Company Limited, as of 30th November, 1925, and have accepted the returns from the Branches.

The above figures include the Australasian and Argentine Branch accounts as of 30th June, 1925.

The officials of the Company have assured us that the Reserves for possible Branch losses on collections and for depreciation are sufficient, and that the inventories have been properly valued, and accepting this we certify that in our opinion the above Balance Sheet is properly drawn up to show the true position of the combined Companies at 30th November, 1925, according to the best of our information, the explanations given to us and as shown by the books of the Companies.

We have obtained all the information and explanations we have required.

CLARKSON, GORDON & DILWORTH, C.A.
H. L. GILLSON,

Toronto, 2nd January, 1926.

Auditors.

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David E. Nix
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A HISTORICAL REVIEW OF THE ACCOUNTING TREATMENT OF RESEARCH AND DEVELOPMENT COSTS

Abstract: This study reviews the literature and the practice of accounting for research and development (R&D) costs from the first reference in 1917 to the current treatment. The conceptual treatment of R&D is compared to current financial accounting rules and explanation of the evolution of the current rules is presented. The economic and social consequences of the current rules which require R&D costs to be expressed are examined. The paper explores possible alternative treatment of R&D costs. As a contrast to U.S. practice, the accounting treatment of R&D costs in other countries is discussed. Given the findings of this paper, a strong case can be made for changing the way that R&D costs are accounted for in the United States.

In today's rapidly changing world which relies increasingly on technology, the investments made in research and development (R&D) are more critical than ever to the economic future of companies and countries. The current financial accounting for R&D costs in the United States is to expense these costs as incurred.¹ While this accounting treatment is certainly question-

¹Attempts have been made by authors such as Higgins (1954) to distinguish between research costs and development costs:

Development costs are usually thought of as being the costs of attempting to convert the results of research to a commercial basis. Since the terms "research" and "development" are often used interchangeably, it is important to distinguish between the two. Research in industry today is usually used in connection with products currently being produced or with new products and is commonly termed "general research." It includes the study of the suitability of materials for specific purposes, the experimental testing of material, the study of manufacturing processes, and techniques and similar research work.

Unless otherwise indicated, which is frequently done, R&D costs are considered as a single cost in this paper. Development costs are frequently referred to

able from a theory standpoint, the expense-as-incurred rule may have a practical consequence of being a disincentive to firms making R&D expenditures. Arguably, as a consequence, the current accounting treatment may hinder the United States' economic position in the global marketplace.

In this paper, the history of accounting for research and development costs is analyzed to determine why the current accounting rules require immediate expensing. Thus, the evolution of accounting rules is traced from 1917 to the present. The reporting environment, issues and investigation conducted by the FASB in 1974 which led to the expense-as-incurred rule is examined. Particularly significant to the thesis of this paper is empirical evidence that was available at the time to counter the FASB's overly pessimistic assessment of the likely outcome of an R&D expenditure. The paper then reviews the more recent pronouncement about accounting for software development costs as a contrast to R&D accounting. Finally the paper examines how other countries account for R&D costs as another contrast to the U.S. practice, despite the similarity to the U.S. accounting problem. Before tracing the historical evolution of the accounting for research and development costs, the paper examines the importance of R&D and the importance of how R&D costs are accounted for in the next section of the paper.

OVERVIEW OF THE R&D ISSUE

Clearly, R&D costs are necessary for the survival of many businesses and are the "engine that drives our economy." Solow [1957] estimated that 90 percent of the per capita increase in output between 1909 and 1949 was caused by technological change. Furthermore, the Committee for Economic Development [Denison, 1962] estimated 36 percent of the increase in output per worker between 1929 and 1957 was caused by research and development, and only 9 percent by capital intensity. Technology is even more pivotal in today's world economy. Thus, the amount of R&D expenditures and how these expendi-

as "applied research" while research with no immediate application is referred to as "pure research." As is the practice in the United States, the following generally do not fall under the definition of accounting for R&D costs: research under contract for others, physical plant for research activities, and costs incurred in the extractive industries.

tures are accounted have important economic impact on the future.

In an unpublished study of 182 research intensive corporations, 62 percent of the respondents spent from 25 percent to 350 percent of profits in R&D costs [Nix, 1972]. Unfortunately, the rate at which U.S. companies are increasing their R&D efforts is declining: "[a] wave of corporate restructuring and a continuing emphasis on short-term profits are pushing R&D spending back into the doldrums of the mid-1970s" [R&D Scoreboard, 1988]. According to the National Science Foundation, the first real decline in R&D expenditures in the past fourteen years occurred in 1989 [Tax Foundation, 1990]. The Industrial Research Institute's Annual R&D Trends Survey indicates that 1992 will see a slowdown in the growth of industrial R&D in the United States [November, 1991].

A major Japanese competitive trade advantage over the U.S. is Japan's heavy emphasis on the process-applied area of R&D while utilizing advanced technology from the West [Mansfield, 1988]. Although this emphasis on process-applied R&D is not likely to change in the near future, Japanese firms now seem to devote about the same percentage of their R&D budget to risky long-term projects as American firms [Mansfield, 1988]. This differs significantly from the early 1970s when Japanese industrial R&D was largely characterized by low-risk and short-term projects [Peck and Tamura, 1976]. Thus, the Japanese are increasingly moving into long-term R&D as the means for creating future innovative products and securing a long-term trade advantage. U.S. firms may be reluctant to invest in long-term R&D because of the expense-as-incurred financial reporting rules. Yet "[c]orporations in the U.S.A. are beginning to realize the intellectual property may be their most valuable asset in competing with Japan" [Dreyfuss, 1987].

The theoretical foundation for the current requirement of expensing R&D costs as incurred certainly may be questioned. The accounting model with the annual measurement of income may be best suited for an agrarian economy characterized by manual labor and a static technology. However, income may not be as easily or exactly measured in an industrialized economy characterized by long-lived capital assets and a rapidly changing technology. A longer time perspective than the annual accounting measurement cycle may be required to measure performance of many companies which sell technology based products.

In regard to the financial treatment of R&D costs, current practice may be defective in the following respects: (1) matching of revenue and associated costs often is not achieved, (2) R&D is a major asset but may not be presented as such, and (3) disclosure of R&D costs has not kept pace with its increasing importance. In short, methods used in accounting for R&D costs may not present a realistic picture of economic consequences of the firm's research and operating activities.

Accounting income is estimated by matching expenses and revenues over the appropriate time period with cost allocation being essential to the matching process. In a rapidly changing technology, however, the useful lives of capital assets become inordinately difficult to estimate. Technology may render a plant obsolete many years before it wears out. The lives of many assets are determined by technological change. Therefore, cost allocation to determine annual profits becomes even more difficult, yet more important, given a rapidly changing technology. If capital assets are currently expensed, this allocation distorts present income even more than capitalization [Thomas, 1969]. Imagine expensing a multimillion dollar plant during construction. Current accounting rules for R&D costs have the same effect because intangible assets arising from research costs are expensed in the year they are incurred. As Bierman and Dukes conclude, "[t]he result of expensing R&D may distort corporate decision making and lead to faulty measurement of income and changes in income through time. Business firms do not generally begin new product or process development projects until the principal technical uncertainties have been resolved" [Bierman and Dukes, 1975].

A study of 200 companies on the *Fortune 500* list suggested that new ventures need, on average, eight years before they reach profitability [Biggadike, 1979]. Therefore, it may be that many R&D expenditures fit the FASB definition of an asset, like expenditures for capital equipment which are required to be capitalized. This is to say that R&D expenditures are made with the expectation of future benefits and are subject to reasonable measurement. Because R&D costs are incurred to secure future benefits, expenditures for R&D costs should be capitalized as assets and allocated to expense in the periods in which they help generate revenues.

If one accepts the hypothesis that capital markets are efficient in the procuring of information, "[d]isclosure of the

amount of research and development expenditures is an extremely important first step" [Bierman and Dukes, 1975]. As suggested by Drebin [1966], either cost-allocation procedures or current market values are preferable to expensing-as-incurred for reporting R&D costs.

In support of capitalization of R&D costs and the matching principle, though the timing of benefits from R&D costs is uncertain, an appropriate allocation arguably is better than an immediate write-off. A subjective estimate of the value is better than an arbitrary write-off to no value [Drebin, 1966]. However, for such subjective estimates to be an improvement, a considerable amount of attention would have to be given in the development of industry guidelines. An analysis into what type(s) of R&D should be capitalized and at what stage of completion R&D should be capitalized would be necessary. Such efforts could result in a much better matching of these costs and related revenue. Other researchers indicate that the current expense treatment for R&D costs may be in conflict with the matching principle of financial reporting [Bierman and Dukes, 1975].

Historically, the accounting for R&D costs has ranged from requiring that all R&D costs be expensed in the year incurred (generally the current practice in the United States) to that of deferring and thereby allocating and matching R&D costs to the periods to which they help generate revenue. Although tax considerations should not be allowed to dictate accounting theory, the income tax aspects of accounting for R&D have had an impact on the choice of methods used to expense R&D costs. Prior to 1954, tax law required that the deduction of R&D costs conform to the timing of the reported expense in the financial statements. Therefore, by immediately expensing R&D costs in the period incurred, the corporation received an immediate write-off for tax purposes [Raby, 1964]. After 1954, corporations could get an immediate tax deduction for R&D expenditures whether expensed or capitalized for financial reporting purposes. Despite the ability to get the deduction irrespective of accounting treatment, after 1954 most companies continued the practice of expensing R&D costs for accounting purposes.

Although the choice of methods in financial reporting of R&D costs is no longer allowed, there seems to be little complaint from management that R&D costs ought to be capitalized and amortized, rather than expensed. The apparent satisfaction of management with the current accounting rule of "expense-as-

incurred” may be due to the fear that if financial accounting rules allow or require capitalization of R&D costs, the tax rules might be changed and the immediate write-off for tax purposes may be lost. The lack of groundswell support by management for changing the accounting for R&D costs may also be due to concerns over the problem that could be created if capitalized R&D costs suddenly must be written-off because the research proved unproductive, and, as a result, a large loss occurred. Managers also seem to be concerned that capitalizing R&D costs may complicate consolidated reporting, especially when entities with capitalized R&D costs are acquired or disposed. The satisfaction of corporate management with the expensing of R&D costs may also be due to the rule giving management the ability “to manage income” of a given accounting period by cutting or accelerating R&D expenditures. Finally, the current practice of expensing R&D costs may be preferred by management because managers feel that the company currently has the freedom to extensively disclose (or alternatively not to extensively disclose) in the notes to the financial statements the information that management wants to convey to the investor about R&D activities.

Given this background about R&D, the problem with the current accounting treatment and the apparent lack of demand for change, the history of accounting for R&D costs is traced in the sections that follow. Exhibit I contains a historical overview of the major events in R&D accounting. These events are discussed in detail in the sections that follow.

THE HISTORICAL RECORD (1917 TO PRESENT)

A search of accounting literature reveals no reference to accounting for R&D costs prior to 1917. However, in 1917 the Federal Reserve Board [*Federal Reserve Bulletin*, 1917] accepted R&D as a deferred charge in published financial statements. The Federal Reserve Board reaffirmed this position in 1929 [*Federal Reserve Bulletin*, 1929].

At approximately the same time other institutions, such as the National Association of Cost Accountants, promoted the same deferral treatment. In the 1924 edition of the *National Association of Cost Accountant's Bulletin*, the following statement is found:

It is perfectly proper to carry (the cost of developing a new article or line) as a deferred account, and an esti-

Exhibit I

A Historical Summary of the Financial Accounting for R&D in the United States

1917	Federal Reserve Board — Deferral supported.
1924	NACA — Deferral supported.
1926	NACA — Deferral reaffirmed.
1929	Federal Reserve Board — Deferral reaffirmed.
1920-1930s	IRS — Deferral preferred.
1954	AICPA — Deferral supported only if there is a reasonable connection to future operations.
Prior to 1954	Tax law allowed expenditures to be expensed only when the same procedure was followed in the financial statements.
1954	Tax legislation allows direct write-off regardless of the financial accounting treatment.
1960s	Gellein — Disclosure varies considerably.
1964	Raby — Majority of companies expense as incurred because of established practice prior to 1954 tax legislation.
1972	APB No. 22 and SEC No. 125 — Mandatory disclosure in the financial statements and annual 10K report.
1975	SFAS No. 2 (1974) — Direct write-off mandated. Disclosure required. Expenditures defined.
1985	SFAS No. 86 — Later capitalization and subsequent write-off allowed on computer software expenditures with proven feasibility.
1985 to Present	Direct write-off required. Later capitalization and subsequent write-off allowed on computer software expenditures with proven feasibility. Disclosure varies considerably.

mate should be made to ascertain the number of units or volume of sale or units, as well as an estimate of the length of time over which this development will be spread [1924].

But,

. . . experimenting (covering the current or minor experimenting that is continual in most manufacturing establishments) should be charged against current operations each month as the money is expended and assessed against the lines of products affected [1924].

In 1926, the National Association of Cost Accountants again stated that it was acceptable to capitalize the cost of developing a new product (to defer R&D expenses) “. . . if you are starting out with a new product in which you have a very definite knowl-

edge that there is a field for it, and you are going to spend a lot of money, and you know it is going to come back to you" [1926]. At its 1954 annual meeting, the American Institute of Certified Public Accountants supported the deferral treatment *only* if future benefits were definite: "Development expenses should be deferred only in those cases where they have a reasonable connection with future operations" [Higgins, 1954]. Thus, accounting organizations had generally supported the deferral treatment for research and development expenditures. It may be seen, however, that the definition of what could be deferred became, over time, more conservative and restrictive. Paton [1955] supported the deferral treatment in an accounting text:

On the other hand, whenever research and related costs are incurred in substantial amount on a particular project which is expected to result in a valuable new process, perhaps patentable, there is much to be said for deferring followed by systematic absorption in later years.

Perhaps the most influential institution affecting the accounting treatment of research and development costs has been the Internal Revenue Service. The Internal Revenue Service tax policy in the 1920s and 1930s favored the deferral treatment of research and development costs. From the beginning, early tax court decisions and accounting literature supported research and development cost deferral; but scientists and economists supported immediate deduction for tax purposes as a means to stimulate research and development.

Businessmen, constantly on the alert for immediate benefits, increased political pressure on Congress to allow the immediate deduction of R&D costs for tax purposes. However, the tax law prior to 1954 allowed the current expensing of research and development only when the same procedure was followed in the financial statement. Thus, before 1954, business firms may have switched from deferral to current expensing of research and development in published financial statements to take advantage of the tax benefits of immediate deduction.

In 1954, Congress passed tax legislation which allowed for the immediate deduction of R&D costs as they were incurred; these deductions could be taken irrespective of the financial accounting treatment of these costs. Thus there was no longer a tax requirement that R&D costs be treated for tax purposes ac-

cording to the treatment on the financial statements. Interestingly, in 1954 Congress merely removed the tax-financial accounting conformity requirement. Congress still permitted the taxpayer to elect to capitalize and amortize R&D costs for tax purposes or to deduct these costs as incurred. This tax election for R&D costs continues today.

The following quotation from the *Senate Finance Committee Report on the Internal Revenue Code of 1954* illustrates the intent of Congress in making the tax law change:

No specific treatment is authorized by present law for research and experimental expenditures. To the extent that they are ordinary and necessary they are deductible; to the extent that they are capital in nature they are to be capitalized and amortized over useful life. Losses are permitted where amounts have been capitalized in connection with abandoned projects, and recovery through amortization is provided where useful life of these capital items is determinable, as in the case of a patent. However, where projects are not abandoned and where a useful life cannot definitely be determined, taxpayers have had no means of amortizing research expenditures.

To eliminate uncertainty and to encourage taxpayers to carry on research and experimentation the House and your Committee's bill provide that these expenditures, incurred subsequent to December 31, 1953, may, at the option of the taxpayer, be treated as deductible expenses. It also provides that a taxpayer may elect to capitalize such expenditures and if no other means of amortization is provided, may write them off over a period of not less than 60 months, beginning with the month in which benefits are first realized. [Higgins, 1954].

Raby logically asserts that the majority of companies were probably currently expensing research and development in the mid-sixties because of income tax law prior to 1954. "Perhaps a major force underlying this accounting treatment is that before 1954 what was done in the books and financial statements controlled what was allowed to be done on tax returns" [Raby, August 1964]. Furthermore, once this practice was established, it was continued regardless of the post-1954 tax impact. Raby [August 1964] states, "[a]s a consequence, companies quite logically set up [the] practice of expensing research expenditures, and

this practice has continued since, even though tax justification for doing so has ceased to exist."

Indeed, a survey of 244 companies in the 1960s [Gellein and Newman, 1973] disclosed that the common practice was to currently expense research and development expenditures. The investigation also revealed 60 percent of the companies disclosed the dollar amount of research and development in some way, but only 10 percent disclosed the accounting treatment in published financial statements. Therefore, comparability of financial statements was difficult.

Acceptance of the current expense treatment for research and development expenditures in accounting practice is revealed in the accounting literature. Braithwaite [1967] said in an article in *Accountancy*, "The [British] auditor . . . will take a jaundiced attitude to any attempt to capitalize research expenditures on the grounds of expected future benefits to the company." Thus, auditors were most comfortable when research and development costs were expensed; but Braithwaite stated further, "[t]he auditor . . . may agree that in the long run a research program necessarily must be judged by its overall fruitfulness." The contradiction in Braithwaite's statements about current expensing of research and development and future benefits from research and development is obvious.

Auditors have an incentive to support the immediate write-off of research and development expenditures to avoid unnecessary audit risk. Prior to the *SFAS No. 2* [1974] expense requirement, business firms had (and still have) an incentive to capitalize research costs having little future benefit so current earnings would be more impressive. When it became apparent to the auditor and to others that these costs had no future benefit, they were written off. If the write-off caused sharp reduction in profits and investors saw their investments decline in value, the auditor might face investor liability suits for being a party to misleading prior financial statements. Thus, much of the support for expensing R&D costs as incurred came from auditors who otherwise might face difficulty in evaluating R&D costs.

Prior to *SFAS No. 2* [1974], four basic questions regarding the official accounting treatment of R&D in financial statements remained unanswered: (1) What activities should be included in R&D? (2) What portion, if any, of the costs related to these R&D activities should be deferred? (3) How should these deferred costs be amortized? (4) How should R&D be disclosed in the

financial statements? These unanswered questions made the comparability of R&D information between companies and, for a company, between years very difficult. Also, these questions made current and future financial accounting for R&D very difficult.

Prior to *SFAS No. 2*, R&D expenditures were sometimes classified as separate expenses on the income statement. Some companies included R&D expenses with other expenses, yet other companies included R&D in the cost of goods sold. Also, management had the flexibility of either currently expensing R&D or capitalizing R&D and writing it off over future time periods. Large write-offs of capitalized R&D costs would occur unexpectedly when it became apparent that the expenditures no longer had a future benefit. The variety of accounting treatments of R&D costs led to criticism over the lack of uniform accounting.

Because of criticism over the variety of methods of accounting for R&D, action was taken by the Accounting Principles Board (APB) and the Securities and Exchange Commission (SEC) in 1972. The *APB Opinion No. 22* [1972] made the disclosure of R&D expenditures in financial statements mandatory. Also, the SEC required the reporting of R&D in the Annual 10-K Report. Although badly needed, the disclosure requirements of the APB and the SEC did not solve the problem of the "proper" accounting treatment for R&D costs in financial reporting. However, these disclosures made apparent to financial statement users the significance of R&D expenditures in relationship to accounting measurements.

A BRIEF SUMMARY AND CRITIQUE OF *SFAS NO. 2*, ACCOUNTING FOR RESEARCH AND DEVELOPMENT COSTS

As of January 1975, the Financial Accounting Standards Board (FASB) required the expensing of all R&D expenditures during the year incurred. The two exceptions to this rule are (1) R&D under contract for others, and (2) plant and equipment (an R&D lab) which has alternative future uses. A further exception was made by the *SFAS No. 86* [1985] for the capitalization of computer software for which technological feasibility has been established.

In *SFAS No. 2*, FASB recognized the problems associated with the accounting for R&D costs. However, the FASB did an inadequate amount of research on the problem before making

its decision in 1974: “[t]he FASB did not undertake a major research effort for the project. The FASB staff interviewed a limited number of selected financial analysts and commercial bankers and reviewed a substantial number of published financial statements” [*SFAS No. 2, Para. 20, 1974*]. Consequently, the effect of the current expense treatment on the total dollar amount of R&D was not carefully considered. Thus, the now established practice of currently expensing R&D costs may not be appropriate for all investments or business firms. The current expense-as-incurred practice may well have reduced R&D costs in total and caused a shift from “pure” to “applied” R&D. The need to maintain current reported profits and earnings per share may have resulted in a change in type and amount of R&D expenditures.

The major objectives of the Statement were (1) to provide more uniformity in accounting reporting for R&D; and (2) to provide useful financial information about R&D. *FASB Statement No. 2* defines R&D activities, identifies costs associated with these activities, and specifies the accounting treatment and disclosure of these costs. It specifically excludes certain activities found only in the extractive industries, but includes R&D in other industries.

In *Statement No. 2*, FASB discussed four alternatives in accounting for R&D. These four alternatives are:

1. Charge all costs to expense when incurred;
2. Capitalize all costs when incurred;
3. Capitalize costs when incurred if specified conditions are fulfilled and charge all other costs to expense;
4. Accumulate all costs in a special category until the existence of future benefits can be determined [*SFAS No. 2, 1974*].

Accounting theory supports alternative three, which is to:

... capitalize costs when incurred if specified conditions are fulfilled and charge all other costs to expense” [*SFAS No. 2, 1974*]. Consequently, when research and development expenditures are expected to benefit future time periods, they should be capitalized and amortized over the periods benefited. This capitalization and future write-off is consistent with the matching concept as defined by the Financial Accounting Standards Board. The pronouncement refers to matching as, “identifying, measuring, and relating revenues and ex-

penses of an enterprise for an accounting period” [FASB, 1974].

However, the FASB still chose the first alternative which is, “. . . charge all costs to expense when incurred” [1974]. As support for this decision, the FASB utilized research studies that emphasized a high failure rate for R&D. For example, “. . . one study of a number of industries found that an average of less than 2 percent of new product development projects were commercially successful” [Higgins, 1954]. Another study estimated exceedingly high new product failure rates, ranging from 30 to 90 percent. In all likelihood, these studies were not and are not representative of typical research and development projects. Other studies indicated more optimistic results. Mansfield [May, 1972] found more than 75 percent of the projects he examined had estimated probabilities of success of 80 percent or greater. Forty-four percent of these projects were technically successful, and only 16 percent were technically unsuccessful. Scherer [1970] attributes this high success ratio to the fact that “. . . business firms do not, as a rule, begin new product or process development until the principle technical difficulties have been whittled down through inexpensive research, conducted either by their own personnel or by outsiders.” Thus, R&D success is much higher than inferred in the Board’s decision.

The FASB [1974] also states, “. . . a direct relationship between R&D and specific future revenue generally has not been demonstrated.” However, as previously stated, many projects are successful and future revenue is directly related to them. Numerous studies [Minasian, May 1969] have been undertaken to show this relationship; they have had some success in linking R&D activity with future revenue amounts, even though the studies encountered data problems. Most of these studies use the number of patents or number of employees as statistical data, rather than the dollar value spent on R&D. Additional study of the outcomes of research, with actual R&D expenditure data, may prove enlightening to accounting rule makers.

The FASB [1974] indicated, “. . . at the time most R&D costs are incurred, the future benefits are, at the most, uncertain.” This statement implies there is no economic resource creation. If no future benefits are generated, it would certainly be irrational for a firm to undertake an R&D project. However, many studies show the marginal rate of return on R&D is either

comparable to or greater than investment return on the capital expenditures. Denison [1962] calculated the rate of return on R&D to be about the same as for plant and equipment expenditures, but he assumed no time lag. The return rate for R&D investment would have been much greater with a time lag. Grilich [1964] found the rate of return for investment in agricultural research to be between 35 and 170 percent. More specifically, Mansfield [May 1972] estimates the marginal rate of return on R&D in the petroleum industry to be over 40 percent, while in the chemical industry, Minasian [May 1969] estimates a 50 percent marginal rate of return on R&D.

Referring to the total economy, Fellner [1970] estimates the rate of return on R&D to be in excess of 18 percent. Assuming a static technology, 18 percent is much greater than the marginal rate of return from plant and equipment. Consequently, contrary to the FASB opinion, there was tangible evidence of resource generation at the time of the R&D expenditure. Perhaps a final irony can be found in the following statement from the FASB. R&D should not be capitalized even when future benefits are known simply because they “. . . cannot be measured with a reasonable degree of accuracy . . .” [*SFAS No. 2, 1974*]. Following this reasoning, fixed assets, such as plant and equipment, would not be capitalized because the future productivity of fixed assets is subject to uncertain marketing conditions and rapid technology change. Who can estimate accurately the business life of fixed assets? For example, nuclear power plants may be closed on a moment's notice. Under the same rationale, “goodwill” in a purchase of a business would never be shown on the balance sheet and the intangible drilling cost of a “wild-cat” oil well, whether “wet” or “dry” can never be an asset. Thus, in comparison to other costs that are capitalized, R&D costs do not seem to be of any greater uncertainty or risk.

Given the reasoning behind the FASB's decision, it may be concluded that *SFAS No. 2* had, at best, a questionable theoretical foundation in support for its treatment of R&D costs.

THE HISTORICAL RECORD FOLLOWING THE 1974 ENACTMENT OF *SFAS NO. 2*

A considerable amount of financial accounting research was conducted subsequent to the 1974 issuance of *SFAS No. 2* to determine the impact, if any, of the expense-as-incurred requirement on R&D expenditures. A central thrust of this re-

search concerned whether the expense-as-incurred rule might result in decreased corporate spending on R&D in order to maintain profit levels.

The contradictory findings of much of this research were published in a special supplement to the 1980 *Journal of Accounting Research*. Horwitz and Kolodny [1980] concluded that the rule did, in some cases, reduce R&D expenditure. "We conclude that the evidence supports the premise that the expense only rule caused a relative decline in R&D outlays for small high technology firms which had primarily used the deferred method of measurement."

Other researchers such as Dukes, Dyckman and Elliott [1980] concluded that *SFAS No. 2* did not have any effect on R&D expenditures: "all three sets of tests fail to support an effect on research and development expenditures attributable to *SFAS No. 2*." Wolfson [1980] notes that Horwitz and Kolodny provided ". . . no evidence of market inefficiencies occurring as a result of *SFAS No. 2*." Vigeland [1981] reports that ". . . no market reaction was observed." In other words, lacking evidence to the contrary, we must conclude investors are aware of the impact of *SFAS No. 2* on reported earnings. This suggests that the price of a company's stock would not decrease in response to the effect of *SFAS No. 2* on reported earnings, and the company would not be motivated to reduce R&D expenditures as a result of the rule.

Most researchers would probably agree that we do not understand the R&D decision making process. Authors such as Ball [1980] state there is an almost complete absence of theory on the determination of R&D expenditure and accounting policy choice. Marshall [1980] states, "[t]he process of determining R&D expenditures, including the choice and role of accounting method is so complex that designs such as those used by Dukes, *et. al.*, and Horwitz and Kolodny are incapable of producing creditable results." If nothing else, the research of the late 1970s has forced us to acknowledge we may draw no firm conclusions in regard to the impact of *SFAS No. 2* on R&D expenditures.

Although additional research was conducted in the 1980s regarding the impact of *SFAS No. 2*, few, if any, conclusive findings were made. In 1984, Elliott, Richardson, Dyckman and Dukes attempted to reconcile the results of the 1980 Horwitz and Kolodny study with their study [1980] which did not show a

SFAS No. 2 effect. The results of the 1984 study were again inconclusive. Interestingly, this study did show a relative decline in R&D expenditures prior to the 1974 issuance of *SFAS No. 2*. Elliott, Richardson, Dyckman and Duke [1984] suggest that we cannot conclude that *SFAS No. 2* caused changes in R&D expenditures. In a 1984 investigation of managers' adoptions to *SFAS No. 2*, Selto and Clouse also found inconclusive results in regard to the effect of the FASB mandated expensing of R&D requirement. However, Daley and Vigeland [1983] observed that ". . . R&D capitalizing firms were more highly levered, employed more public debt, and had a higher ratio of dividends to unrestricted retained earnings, and were smaller in size than R&D expensing firms." This finding hints that the FASB requirement had an economic impact on these smaller R&D firms.

A 1987 study of R&D management and corporate financial policy by Guerard, Bean and Andrews analyzed the relationship of R&D investment, dividends and new debt financing decisions. Not surprisingly, they found significant relationships among these variables. They concluded that changes in these variables occurred simultaneously and could not be considered independently. In regard to the effect of *SFAS No. 2*, the efficient market hypothesis that stock prices reported the impact of R&D expenditures whether they were capitalized or not was neither confirmed nor denied.

Horwitz and Normolle examined the effect that *SFAS No. 2* had on small technology firms in securing R&D awards from federal agencies [1989]. The study explored whether the detrimental effect of the expense-as-incurred requirement on small firms' financial ratios might make the firms ineligible for governmental R&D contracts. As a result of *SFAS No. 2*, the financial ratios of these companies were negatively affected, but no evidence was found that the expensing requirement reduced the amount of R&D awards by federal agencies to small research intensive companies.

DISCLOSURE OF RESEARCH AND DEVELOPMENT EXPENDITURES CURRENT PRACTICE

Disclosure of R&D expenditures is, today, not unlike that existing prior to 1975 when *SFAS No. 2* was implemented. Corporations, in their annual reports, display a wide variety of information regarding R&D expenditures. Some companies provide no disclosure, others offer considerable detail. The annual

dollar amount of R&D by year is often separately disclosed on comparative income statements. Occasionally, either in the notes or in management's discussion of corporate activities, information is provided for R&D such as percentage of operating revenue, percentage change from the previous year, number of full-time R&D employees, and directions the R&D effort is taking. It appears that management of these companies disclose what they want with regard to the firm's R&D activities.

Although companies are required to expense R&D costs in the year incurred, there is still considerable latitude in what management discloses to investors. It seems that companies in which R&D activities reflect favorably upon them take ample opportunity to disclose such; other companies for various reasons provide little or no information regarding their R&D efforts. Thus, irrespective of the required current expensing of R&D, stockholders are frequently not well informed about R&D efforts.

A BRIEF SUMMARY AND CRITIQUE OF SFAS NO. 86 ACCOUNTING FOR THE COSTS OF COMPUTER SOFTWARE TO BE SOLD, LEASED OR OTHERWISE MARKETED

The costs of developing computer software that is to be marketed are similar to R&D costs. In both cases, the costs are mainly salaries of personnel who are engaged in the projects. Software development costs and R&D costs are also somewhat similar as to uncertainty of outcomes, (risks and revenue amounts) and as to long periods of time between expenditures and sales. Given these similarities, it is interesting to note the contrast in accounting for the costs related to developing computer software of software vendors to costs of R&D of a drug manufacturer, biotechnology firm or even to the R&D costs of a computer hardware manufacturer.

Before the issuance of *SFAS No. 86* in 1985, the financial statements of computer software companies provided inadequate disclosure about software development costs, and comparisons between companies in the industry were hampered by the variety of accounting practices for software development costs. Thus, the latter problem was very similar to the R&D cost situation prior to *SFAS No. 2*, while the former problem is still unresolved with regard to R&D today.

SFAS No. 86 [1985] addressed the issue of whether software producers should expense development costs as they are in-

curred or capitalize them on the theory that the cost is creating a productive asset. The potential impact of this issue is reflected in the fact that the computer software industry spent \$7 billion in 1985 [Chakravarty and Kolsek]. *SFAS No. 86* requires software producers to expense development costs while the product is still in the R&D phase; but as soon as the product is "technologically feasible," companies *must* capitalize any further development costs and amortize them over the life of the product. The practical problem in applying this statement is determining at what point in time a product becomes technologically feasible. This is particularly a complex problem in the case of computer software which is often redesigned.

SFAS No. 86's treatment of software development costs follows the conceptual definition of an asset in financial accounting: an asset is a cost which benefits a future accounting period. However, the Statement did not resolve the problem of the lack of inter-company comparability of financial statements. For instance, in 1984 IBM capitalized 67 percent of its investment in software products while other companies reported capitalizing between 3 to 25 percent of their software development costs [Chakravarty and Kospelka]. Thus it appears that *SFAS No. 86* may not accomplish its intended purposes of providing better disclosure and making software companies' financial statements more comparable. The practical effect of the statement was to allow software companies to determine when a product's asset life begins. The software firm must make this critical accounting decision to determine what costs to capitalize for each software development project. As a result, there is still difficulty in comparing companies within the industry from their financial statements.

The experience with capitalization of software development costs is instructive if changes to the accounting for R&D costs are ever considered. Even though being more conceptually correct, the capitalization of R&D costs will not automatically produce pragmatic improvement. Indeed, less comparability between companies financial statements could result. If capitalization of R&D costs became the financial accounting rule, there would probably be a requirement that a project reach "technological feasibility" before costs could be capitalized. Again, like the experience with software development costs, such a vague rule causes a wide range of interpretations and could cause the problem of lack of comparability of financial statements be-

tween R&D firms as well. Thus it is important, if changes to the accounting for R&D are made to allow capitalization of costs, that classification criteria be set forth as well to specify precisely when capitalization would begin in an R&D project.

THE HISTORICAL RECORD OF FINANCIAL ACCOUNTING FOR R&D COSTS IN OTHER SELECTED COUNTRIES

In other English-speaking nations, i.e., Australia, Canada, Great Britain, Ireland, etc., the capitalization of at least some R&D costs is permitted. This practice usually has caused a myriad of problems in defining research development and various types of research such as pure research versus applied. As with the "technologically feasible" U.S. requirement for software development costs, these distinctions are important to determine which costs are capitalized from those that are expensed. As with the U.S. software costs, interpreting the rules and applying the distinctions can vary from company to company. Thus, accounting for R&D costs, even within one country, can vary considerably. As will be examined in this section, there is great variation and problems with the accounting treatment around the globe.

In 1983, the Australian accounting profession issued the standard "Accounting for Research and Development Costs" (AAS No. 13). The objectives of the standard were similar to those of SFAS No. 2 issued in 1974: to provide useful information regarding R&D costs and to reduce the number of alternative accounting practices for R&D expenditures [Carnegie and Turner, 1983].

Attempts were made in AAS No. 13 to distinguish between research and development costs and between basic and applied research. The definitions, not surprisingly, were difficult to work with as observed in the following passage taken from AAS No. 13:

4(a) Research means planned investigation undertaken with the hope of gaining new scientific or technical knowledge and understanding which will be useful in developing a new product or service (hereinafter *product*), or a new process or technique (hereinafter *process*), or in bringing about a significant improvement to an existing product or process.

4(b) Development means the translation of research findings or other knowledge into a plan or design for a

new product or process or for a significant improvement to an existing product or process.

AAS No. 13 further divided research into basic research and applied research. Basic research was defined as “. . . original investigation directed primarily towards the advancement of knowledge,” while applied research was defined as “. . . original investigation directed primarily towards solving recognized practical problems.” This distinction was made to assist the practitioner in evaluating the classification of specific costs. From these definitions, it appears distinguishing between development costs and applied research costs is an enigmatic chore.

AAS No. 13 allows “selective capitalization” in accounting for R&D costs; that is, some R&D costs may be capitalized or expensed in the period incurred while others must be currently expensed. In general, both applied research and development costs *could* be capitalized. Basic or pure research is required to be expensed in the period incurred. Although the theory behind AAS No. 13 is sound, the practical difficulties in defining and distinguishing between research costs (pure and applied) and development costs limit the usefulness of the approach.

In Canada, there is a very basic difference between Canadian and United States’ accounting rules for R&D costs; in Canada development costs *should* be deferred to future periods if all of the following criteria are satisfied:

- (a) the product or process is clearly defined and the costs attributable thereto can be identified;
- (b) the technical feasibility of the product or process has been established;
- (c) the management of the enterprise has indicated its intention to produce and market, or use, the product or process;
- (d) the future market for the product or process is clearly defined or, if it is to be used internally rather than sold, its usefulness to the enterprise has been established; and
- (e) adequate resources exist, or are expected to be available, to complete the project. (*CICA Handbook*, Aug. 1978).

By contrast, development costs in the United States must be expensed in the period incurred.

In Great Britain, the accounting profession has taken the position that both pure and applied research should be expensed in the period incurred [SSAP No. 13 revised, Jan. 1989].

However, the British Accounting rules distinguish the development of new products and services from pure and applied research; these development costs, under certain circumstances, should be deferred. It is the authors' opinion these distinctions (which possess the same difficulties as those used in Australia) are very difficult to define and utilize.

The reasoning behind the British requirements of expensing pure and applied research is that these costs are regarded as part of continuing operations required to maintain a company's competitive position. Therefore, these costs cannot be placed on the balance sheet as assets, but should be expensed in the period incurred. Also required is a significant amount of disclosure about the R&D activities of the period. If development costs meet the rigid criteria specified in *SSAP No. 13*, they are defined as intangible assets for balance sheet purposes and are amortized as expense in revenue generation or written off immediately if found to be worthless.

The International Accounting Standards Committee takes the position that research and development costs should usually be charged to expense in the period in which they are incurred [1980]. However, notes the Committee, ". . . if it can be demonstrated that the product or process is technically and commercially feasible and that the enterprise has adequate resources to enable the product or process to be marketed—it *may be* appropriate to defer the costs of development activities to future periods."

It can be seen that the United States and other nations share the difficulty of accounting for R&D costs. Despite problems of implementation and lack of comparability of financial statements in some cases, other nations are more sophisticated in distinguishing between types and stages of R&D. These countries specify accounting treatment according to the type of R&D costs. Perhaps, U.S. accounting should consider adopting some of the approaches used in these countries.

SUMMARY

Since research and development expenditures are significant in amount, the historical accounting treatment of this important cost was investigated. Historical research reveals that accounting organizations, the Internal Revenue Service, and accounting practice originally supported capitalization and future amortization of R&D expenditures. However, economic and so-

cial forces exerted pressure for immediate write-off of R&D costs because of the income tax advantage.

The Internal Revenue Service yielded to these forces but required that R&D costs be currently expensed in published financial statements when immediate write-off for tax purposes was to be allowed. This tax requirement was reversed in 1954, but the current expensing technique had already become institutionalized into financial accounting.

Auditors who examined published financial statements supported the established practice of currently expensing research and development costs. The difficulty in measuring future benefits of the expenditures and the lack of tangible, physical evidence were the main reasons given for this support. Also, management was reluctant to adopt accounting treatment that could result in an unexpected immediate write-off of R&D "assets" when deemed to have no future value.

In 1974, the FASB issued *Statement No. 2* which required that private research and development expenditures be currently expensed. The troublesome problem of whether to capitalize or to expense R&D costs was temporarily solved. No more would the write-offs of past capitalized R&D costs cause drastic declines in current income and in the stock price.

SFAS No. 2 was pragmatically designed to temporarily handle the current problem of a lack of uniformity between companies in accounting for R&D costs. Uniformity in the accounting for R&D costs was established by simply requiring all firms to expense R&D in the year incurred. Thus, unlike the treatment of other types of costs, R&D costs are arbitrarily expensed despite the fact that R&D meets the classic definition of an asset for the "future benefit" inherent in such expenditures. Also, apparently little analysis was undertaken by the FASB either to consider the success rate of R&D expenditures or to consider the effect established practice would have on the dollar amount and on the type of private research and development in the United States. Nor was a close analysis undertaken by the Board to determine to what extent research and development might become a function of current profits *as a result of the current expense treatment*. In accounting research conducted since the issuance of *SFAS No. 2* the impact of the requirement to immediately expense R&D costs on the amount of R&D expenditures has been inconclusive. However, pressure is building for more adequate disclosure of R&D costs and toward some change in U.S. accounting rules to allow the capitalization of

some costs as permitted in numerous foreign nations and, within the U.S., as permitted for software development costs.

CONCLUSIONS AND IMPLICATIONS FOR FURTHER RESEARCH

In more and more industries, research and development is becoming the dominant asset. The accounting rules have not kept pace with adequately disclosing and capitalizing this cost. It is in both the investor's interest (in terms of rational decision making) and the accounting profession's (in terms of responsibility to society and reputation) to reconsider the accounting for R&D costs on the financial statements and the amount of detail disclosed in notes to the statements.

Corporate reporting of R&D can be improved in two ways: by disclosing more information about R&D spending and activities and by recognizing probable successful development expenditures as an asset that will give future benefits. The difficulties encountered in determining at what point in time R&D costs become an asset must be adequately addressed. This has not yet been done. By contrast, in spite of the difficulties encountered with *SFAS No. 86*, accounting rules do allow software development costs to be capitalized at some point in the development. Arguably, accounting should afford R&D costs similar treatment.

In contrast to the United States, a number of foreign nations allow the deferment of at least some R&D costs, although many definitional problems of research, pure research, applied research, and development costs are encountered.

More research is needed in the classification of R&D costs. Fortunately, a current study by the AICPA's Accounting Standards Executive Committee concerning the classification, capitalization and amortization of advertising costs clearly has implications for the accounting treatment of R&D costs [Flesher, 1979; also, Thompson, Hoskins, and Flesher, 1991]. This is especially true because advertising costs may be even more difficult to match with future revenue. Both R&D and advertising costs are "intangible" in nature, are material in amount and benefit future time periods. The expensing of either of these costs in the period incurred frequently violates the matching principle of accounting and distorts reported net income. Flesher explores the ". . . possibility of integrating qualitative marketing department information with that of accounting."

Similar research which integrates qualitative R&D department information with that of accounting may be appropriate. Also, a comprehensive study of foreign countries' economic treatment of R&D costs may be useful.

One financial accounting alternative for R&D costs currently being investigated is to classify R&D costs as a contra stockholders' equity account when incurred rather than expensing in the period incurred. This approach would eliminate the problem of calling R&D costs an asset and also would eliminate the negative effect on current net income presently experienced from expensing R&D costs when incurred. Another approach to be considered would be the capitalization of R&D costs in an account similar to organization costs and written off over a definite future time period regardless of revenue generation and recognition.

Alternatively, accounting rule makers also should consider expensing general research costs and capitalization of those costs related to specific projects. These capitalized costs could be then matched with the future revenue of the project, unless the project's revenues prove too small to recover these capitalized costs which would lead to the write-off of the remaining capitalized costs of the project [Milburn, 1968]. Milburn defines general research as ". . . research of indirect benefit to the future and its contribution cannot be related to specific future periods on a reasonable basis . . . and . . . specific development, if successful, as identifiable with specific future benefits." Milburn cites as support for his view *APB No. 11*, paragraph 14d, Accounting for Income Taxes, which follows:

Costs identifiable with future revenue or otherwise identifiable with future time periods should be deferred to those future periods. When a cost cannot be related to future revenues or to future periods on some basis other than revenues, or it cannot reasonably be expected to be recovered from future revenues, it becomes, by necessity, a cost or an expense of the current period (or in some cases of a prior period).

The impact of *SFAS No. 86*, (accounting for the costs of computer software) on R&D expenditures in total amount and type offers a fruitful area for future research. Difficulties encountered in implementing the standard and how companies and investors have reacted to it should prove interesting. Also, the appropriateness of the selective capitalization of R&D in

specific industries, such as the drug industry, merits investigation. Furthermore, the impact of *SFAS No. 2* on small developing companies should be researched in depth. Although this article has dealt primarily with the financial reporting of R&D expenditures, the tax aspects of this subject merit further research. For instance, to what extent is the United States performing R&D overseas due to the tax advantages of foreign countries?

Accounting research into the feasibility and appropriateness of capitalization and amortization of advertising costs clearly has implications for the financial accounting treatment of R&D costs, especially since advertising costs are perhaps more difficult to match with future revenue than are R&D costs. The direct costing approach in which only variable R&D costs would be capitalized and expensed over future time periods deserves further consideration. Given the historical controversy regarding the financial accounting of R&D costs, accounting researchers and policy makers should focus carefully on the impact of the current accounting rules and analyze alternative accounting treatments.

In conclusion, the current requirement [*SFAS No. 2*] of expensing R&D costs as incurred for financial statement purposes is inappropriate. R&D costs are material in amount, benefit future time periods, and should more clearly be matched with (charged to) the revenues they help generate. They also clearly fit the FASB definition of an asset. It is likely that corporations' fear of losing the R&D tax shelter and the loss of flexibility in managing reported profits via the timing of R&D expenditures are major obstacles to change in existing financial reporting requirements. However, a change in the financial reporting of these expenditures is in order.

REFERENCES

- Accounting Principles Board, *Accounting Principles Board Opinion Number 22*, 1972.
- The American Institute of Certified Public Accountants, *Examination of Financial Statements*, AICPA Bulletin (New York, January 1936).
- , *Professional Standards*, Vol II (June 1, 1989): 11161-11165.
- Ball, Ray, "Discussion of Accounting for Research and Development Costs: The Impact on Research and Development Expenditures," *Journal of Accounting Research* (1980): 27-37.
- Bierman, Harold Jr. and Roland E. Dukes, "Accounting for Research and Development Costs," *The Journal of Accountancy* (April 1975): 48-55.

- Biggadike, Ralph, "The Risky Business of Diversification," *Harvard Business Review* (May-June 1979): 103-111
- Birnberg, Jacob G., "Discussion of an Empirical Analysis of the Expenditures Budget in Research and Development," *Contemporary Accounting Research* (Spring 1988): 582-585.
- Braithwaite, M. E., "Management Control of Research Expenditures and Its Interest to the Auditor," *Accountancy* (April 1967): 248-249.
- Canadian Institute of Chartered Accountants, "Accounting Recommendations," Vol. 1 (September 1986): 1851-1856.
- Carnegie, Garry and Shane Turner, "Accounting for Research and Development Costs-A Company Response to AAS No. 13," *The Chartered Accountant in Australia* (March 1987).
- Chakravarty, Subrata N. and Rita Koselka, "When Does Life Begin?" *Forbes* (June 16, 1986): 72-74.
- Daley, Lane A. and Robert L. Vigeland, "The Effect of Debt Covenants and Political Costs on The Choice of Accounting Methods: The Case of Accounting for R&D Costs," *Journal of Accounting and Economics* (December 1983): 125-211.
- Denison, Edward F., "The Source of Economic Growth in the United States and Alternatives Before Us," Committee for Economic Development (New York, 1962): 12.
- Drebin, Allan R., "Accounting for Proprietary Research," *The Accounting Review* (July 1966): 413-425.
- Dreyfuss, Joel, "How Japan Picks America's Brains," *Fortune* (December 21, 1987): 79-89.
- Dukes, Roland E., Thomas R. Dyckman and John A. Elliott, "Accounting for Research and Development Costs: The Impact on Research and Development Expenditures," *Journal of Accounting Research* (1980): 1-25.
- "E. D. 41: Accounting for Research and Development." *The Accountant* (April 1, 1987): 137-139.
- Elliott, John and others, eds., "The Impact of SFAS No. 2 on Firm Expenditures on Research and Development: Replications and Extensions," *Journal of Accounting Research* (Spring 1984): 85-101.
- Federal Reserve Board, *Federal Reserve Bulletin*, Government Printing Office (Washington, D.C. 1917), 7; 10: 277; 11.
- _____, *Verification of Financial Statements, Revised*, Government Printing Office (Washington, D.C. 1929), 8; 11: 13-14; 11.
- Fellner, William, "Trends in the Activities Generating Technological Progress," *American Economic Review*, (March 1980): 1-29.
- Financial Accounting Standards Board, *Financial Accounting Standards Board Statement Number 2* (1974), para. 1-76.
- _____, *Financial Accounting Standards Board Statement Number 86* (1985).
- Flesher, Dale L., "Accounting for Advertising Assets," The University of Mississippi Bureau of Business and Economic Research, School of Business Administration, University, Mississippi (March 1979).
- Folsom, Marion B., "Objectives of Treasury's Tax Policies," *The Commercial and Financial Chronicle* (April 23, 1953): 36-37.
- Gellein, Oscar S. and Maurice S. Newman, "Accounting for Research and Development Expenditures," *Accounting Research Study No. 14*, American Institute of Certified Public Accountants (New York 1973).

- Grilich, Zuvi, "Research Expenditures, Education and the Aggregate Agriculture Production Function," *American Economic Review* (December 1964): 961-974.
- Guerard, John B. Jr., et al., "R and D Management and Corporate Financial Policy," *Management Science* (November 1987): 1419-1427.
- Higgins, Thomas G., "Deferral vs. Charge-off of Research and Development Costs," *Annual Meeting Papers*, American Institute of Certified Public Accountants (New York 1954).
- Horwitz, Bertrand N. and Richard Kolodny, "The Economic Effects of Involuntary Uniformity in the Financial Reporting of R&D Expenditures," *Journal of Accounting Research* (1980): 38-73.
- and Daniel Normolle, "Federal Agency R&D Contract Awards and the FASB Rule for Privately-Funded R&D," *The Accounting Review* (July 1988): 414-435.
- Industrial Research Institute, "Industrial Research Annual Trends Survey," (November 1991): 1-5.
- Institute of Chartered Accountants, "Accounting for Research and Development," *Accountancy* (March 1989): 187-192.
- International Accounting Standards Committee, *Accounting for Research and Development Activities, IAS No. 9* (January 1980): 1-2.
- Kohlberg, Jerome, Partner, Kohlberg & Co., testifying March 2, 1990, before the Senate Committee on Banking about the bankruptcy of Drexel Burnham Lambert quoted in Tax Foundation, *Tax Features* (March 1990): 4.
- Johnson, Orace, "A Consequential Approach to Accounting for R&D," *Journal of Accounting Research* (Autumn 1967): 164-172.
- Lawrence, Patricia A, "Research and Development Under the TRA," *The Tax Advisor* (October 1987): 764-774.
- Mansfield, Edwin, *Industrial Research and Technological Innovation* (New York: Norton 1968).
- Mansfield, Edwin, "Industrial R&D In Japan and the United States: A Comparative Study," AEA Papers and Proceedings (May 1988): 223-228.
- Marshall, William, "Discussion of the Economic Effects of Involuntary Uniformity in the Financial Reporting of R&D Expenditures and Accounting for Research and Development Costs: The Impact on Research and Development Expenditures," *Journal of Accounting Research* (1980): 84-107.
- Milburn, J. A., "A Look at Problems in Research and Development Accounting," *Canadian Chartered Accountant* (June 1968): 404-408.
- Minasian, Jora, "Research and Development, Production Functions, and Rates of Return," *American Economic Review* (May 1969): 80-85.
- Munson, Roger, "An Asset That Shouldn't Be Written Off," *Accountancy* (December 1987): 26.
- , "Giving R&D Its Due Recognition," *The Accountant* (March 1988): 2.
- National Association of Cost Accountants, *NACA Bulletin II* (New York, October 1924).
- , *NACA Bulletin II* (New York, October 1926).
- Newman, Maurice S., "Accounting for Research and Development," *Research Technology Management* (July-August 1988): 6-7.
- Nix, Paul E., "The Materiality of R&D in 182 Research Intensive Corporations," unpublished study, 1976.

- Nix, Paul E. and Richard M. Peters, "The Conflicts Between Corporate Financial Management and Research and Development Resulting from the Accounting Treatment of Research and Development Expenditures," *Research Management* (January-February 1988) 31(1).
- Nixon, Bill and Alastair Lonie, "Accounting for R&D: The Need for Change," *Accountancy* (February 1990): 90-91.
- Paton, William A. and William A. Paton, Jr., *Corporations Accounts and Statements-An Advanced Course* (Macmillan, 1955).
- Peck, Merton and Shuji Tamura, "Technology," in H. Patrick and H. Rosovsky, eds., *Asia's New Giant* (Washington: The Brookings Institution, 1976).
- Raby, William L., "The Impact of Income Taxes on Corporate Research," *The Journal of Accountancy* (August 1964): 53-56.
- Scherer, R. M., *Industrial Market Structure and Economic Performance* (Rand, 1970).
- Securities and Exchange Commission, *Accounting Series Release No. 125* (Government Printing Office, Washington, D.C., 1972).
- _____, *Codification of Financial Reporting Policies, Sec. 406* (1982).
- Selto, Frank H. and Maclyn L. Clouse, "An Investigation of Managers' Adoptions to SFAS No. 2: Accounting for Research and Development Costs," *Journal of Accounting Research* (Autumn 1986): 700-717.
- Solow, Robert, "Technical Change and the Aggregate Production Function," *Review of Economic and Statistics* (August 1957): 312-320.
- Tax Foundation, *Tax Features* (March 1990): 6.
- Thomas, Arthur L., *The Allocation Problem in Financial Accounting Theory* (Evanston, American Accounting Association, 1969).
- Thompson, James H., Margaret Hoskins, and Dale L. Flesher, "Accounting for Advertising Costs: The Options are Narrowing," *The CPA Journal* (August 1991): 50-54.
- Viegland, Robert L., "The Market Reaction to Statement of Financial Accounting Standards No. 2," *The Accounting Review* (April 1981): 309-325.
- Wolfson, Mark A., "Discussion of the Economic Effects of Involuntary Uniformity in the Financial Reporting of R&D Expenditures," *Journal of Accounting Research* (1980): 75-83.

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1991 ACCOUNTING HALL OF FAME INDUCTION: RAYMOND J. CHAMBERS

INTRODUCTION

by

Murray Wells

Board of Nominations

Chairman and Professor, University of Sydney

I first joined the Department of Accounting at the University of Sydney in 1967 and have remained a colleague and friend of Ray Chambers ever since. Indeed, it has been a rare privilege, not only to stay in the same university for nearly 25 years, but to work with Ray throughout that period.

During the 1970s and into the 1980s, the University of Sydney experienced one of those unusual occurrences in Universities, there emerged a genuine community of scholars. Ray's masterpiece, *Accounting, Evaluation and Economic Behavior* (and it is a masterpiece), had been published in 1966 and his stream of journal articles, reports and monographs gathered pace. His ideas were introduced into the undergraduate as well as the postgraduate teaching. They were exciting, vibrant times, and they led to the emergence of the Chambers School of Thought.

To the outside world, that School epitomized the arguments for using market selling prices in financial reporting. That was, of course, a key element — an unavoidable conclusion of Chambers' Theory. All of us then, and most of us still, believed in the need for a financial accounting system based on market selling prices. But what Ray's work stood for, above all, was rigor. His papers and books still stand for all time as classic examples of tightly reasoned, rigorous, logical expositions. And that, above all, is his contribution to accounting.

Not as well recognized, but just as important, is another feature of Ray's contribution, its breadth. We tend to think of Ray in terms of the advocacy of market selling prices, *Accounting, Evaluation and Economic Behavior*, or CoCoA. But the re-

cent publication by Garland of Ray's collected works, covering *five* volumes, gives an entirely different impression. There we can see Ray's understanding of, and experimentation with, many ideas that enjoy much greater popularity today. I am sure he would not want to claim responsibility for much of what passes for research in accounting today. But his writings do embody such ideas as the firm as a nexus of competing demands (or "contracts" in today's language), of the effect of information on the stock market, on the use and abuse of language, the self-protection of practitioners, the impossibility of auditing conventional numbers and many other topics now common in the accounting literature.

The other extraordinary feature of Ray's career was his continued relationship with the accounting profession. Throughout the whole of time that he was criticizing, cajoling and persuading the profession to do better, he remained an active player in professional affairs, culminating in his election to President of the Australian Society of Accountants, one of the largest accounting bodies in the world.

Some time after his term of office, one of Ray's successors in the Presidency of the Australian Society of CPAs (as it is now) told me that the Society's motto, which is simply "Integrity", was never better personified than in the form of Ray Chambers during his period of service to the Society.

Colleagues, few things have given me more pleasure and I have had no greater honor than to be invited to induct Ray Chambers into the Accounting Hall of Fame. Not many of us have the opportunity to honor our mentors in so tangible a form. I am therefore immensely grateful to the faculty at Ohio State for inviting me to carry out this task and I have great pleasure in reading the formal citations for Raymond John Chambers.

INDUCTION CITATION

by

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Among the most accomplished and respected accounting academicians in the world, he lists his recreations as “reading, writing and arithmetic”. A voracious reader with a formidable vocabulary, he has even been known to study the dictionary. Possessed by a strong desire to see language used correctly, he studies the roots of words and their derivation. When he uses a word, you can be assured that it is the right word in the context. What other accounting professor uses the word “floccinaucinihilipilification”¹?

A very private person, he is devoted to his wife and their family — a son, two daughters, and seven grandchildren. He and his wife, Margaret, married for forty crowded years, share an interest in opera and usually have a season ticket for the Sydney opera season.

He is known as an effective administrator in part because he could not be bothered wasting time on it. He dealt only with things that mattered. He made the important decisions, left the running of programs to those most directly involved, and got back to his “real” work. Taking advantage of his open door policy, his colleagues could walk into his office at will to argue a point, seek clarification, or get help with a reference. He would be writing when they walked in, put down his pen immediately, and give them his full attention. When the discussion was over, and that was sometimes hours later, he would pick up his pen and just carry on writing as if he had not been interrupted. A mean debater, he never forced his ideas on his colleagues, although on occasion he would talk for hours in efforts to convince them of the correctness of his arguments.

In this intense and exciting atmosphere, he founded a journal, *Abacus*, and forged with his colleagues a school of accounting built on a belief in the primacy of market prices. Indeed, that school of thought usually bears his name. A critic in the

¹The habit of treating things as trivial, as of no account.

tradition of Canning, Hatfield, MacNeal, Paton, and Sweeney, he has looked to economics, psychology, and science for evidence. His publications, which include numerous books and over 200 articles, are representatives of the turning point in the accounting literature away from descriptions of technical process towards rigorous debate based on scientific method. Further, he was not willing merely to understand what accountants do; he sought to bring about change, to improve both the study and the practice of accounting. For over forty years, he has made many lecture tours at universities throughout the world.

He won the Gold Medal awarded by the American Institute of Certified Public Accountants, he was the first International Distinguished Lecturer of the American Accounting Association. More than a dozen professors of accounting have studied under him or been his colleague during their formative years. He served as National President of the Australian Society of Accountants (now called the Australian Society of CPAs) which shows his commitment to the interaction between academe and the profession, and he holds many other awards and distinctions including Officer of the Order of Australia and member of the Academy of Social Sciences of Australia. For all of these accomplishments, he is named the 51st inductee into the Accounting Hall of Fame, the first one from a "Pacific Rim" country.

RAYMOND JOHN CHAMBERS

RESPONSE

by

Raymond John Chambers
1991 Hall of Fame Inductee
Professor Emeritus of Accounting
University of Sydney, Australia

The Accounting Hall of Fame is unique, for here are joined in one roster practitioners and scholars. It signifies that each group contributes in some substantial way to the advancement of one art. But the modes of contribution are essentially different. Practice demands great versatility, patience and comprehension, to match the exigencies of diverse clients with the performance of a socially necessary task. Scholars and teachers, on the other hand, serve no immediate clients. Ideally, they are the monitors of practice in general, discriminators between what is generally serviceable and what is merely expedient. The essential difference between practice and inquiry was captured by Francis Bacon, 400 years ago: "lookers on many times see more than gamesters". More recently, J. B. Priestley expressed the same idea thus: "Nobody in his senses would expect a born seer to do. That much is generally acknowledged. But it is equally ridiculous to suppose that a dashing and triumphant doer can really see." In that little bit of philosophy lies the reason why practice and inquiry, in most learned professions, proceed in tandem, practitioners and investigators doing their own thing with their special skills, each respecting the domain and the competencies of the other.

In accounting, it is still otherwise. Teachers and researchers on a large scale confuse the generally serviceable with the merely expedient. They have long tried to give the same standing to the habitual and conventional as might properly be given to firm knowledge and principle. The attempt has been in vain. The very terms *expedient* and *conventional* betray a difference between mere rules and defensible principles. Confusion of the two has led some academics to hold that "there is no theoretical basis for preferring one set of techniques over another," and "that we should abandon the chimera that we can ever establish a unified theoretical framework for accounting". There has even developed a strong strain of disbelief in the possibility of making accounting better than it is, in spite of its logical and practical flaws, flaws that have long been the butt of criticisms of

practitioners, academics, governmental officials, and business people alike.

On the other hand, there have been great practitioners who have dreamed of a better accounting than was prevalent in their time — among them George O. May, Leonard Spacek and Henry Benson, to name just three enrolled in the Hall of Fame. Who but Henry, Lord Benson, could, in the British House of Lords, describe “annual accounting prepared under the historical cost convention” as “no better than laudable pus”? Dreaming of ideals is thus not just the special province of academics and researchers. The practicing arm of the profession has striven mightily to ameliorate practice, through countless deliberative committees over decades. Doubtless there is virtue in pooling the wisdom of the practically knowledgeable. And, doubtless, where what is taught in textbooks and universities is an undifferentiated mixture of principles and expedients, the combined wisdom of committees of practitioners has seemed to be more promising than reliance on the work of independent research workers; but that enterprise, too, has failed, in spite of the devoted labor and goodwill of members of committee after committee in this country and elsewhere for decades. Which should not be surprising; for in no other field of knowledge and practice is recourse taken to deliberative committees to resolve fundamental problems.

The fundamental questions are: What is the function of accounting? and, How may that function best be served? The general function of accounting is singular — to get at the truth in financial matters. Only up-to-date truth will secure that persons entrusted with power over property and the work and prospects of others do not exercise that power ignorantly, or in a wanton or self-serving fashion. Getting at the truth thus has a highly respectable social role. It is a powerful disciplinary influence for good in business, government, and society at large. Trust, honesty, and fair dealing between those who trust and those who are entrusted, turn on truthfulness, truthfulness in accounting, in particular. It must therefore be of serious concern that disregard for the truth is endemic in modern accounting. Practitioners and teachers alike tolerate and justify the notion of conservatism — which means telling less than the truth; the cost doctrine — which entails evasion of the up-to-date truth; and creative accounting — which plainly means tinkering massively with, or disregarding utterly, the truth. To eradicate such mischievous notions is demanding of the greatest and most altruistic

tic endeavors of the profession — practitioners and academics in double harness.

They are still at cross purposes, however. To quote Henry Benson more extensively: “until we . . . learn that . . . annual accounts prepared under the historical cost convention are no better than laudable pus, so long will a large number of our businesses move remorselessly and deservedly to the mortuary”. But at the same time a substantial segment of the academic profession seeks to propagatate the notion that conventional accounts are not misleading; and it does so by recourse to the trappings of statistical analysis that not only are incomprehensible to, and therefore beyond appraisal by, practitioners, but also are the object of critical utterances of mathematicians, economists, physicists and philosophers alike. Fruitful collaboration between practitioner and academic is unlikely to flourish where the two sectors of the profession entertain antithetical ideas.

Mutual and deserved respect and goodwill between practitioners and researchers in other professions have been at the root of great advances in knowledge and technology. A similarly fruitful partnership in accounting is devoutly to be wished for. But it is not an end attainable as long as practitioners put little trust in independent researchers, researchers concern themselves more with methodological niceties than with the fundamental conditions of serviceable practice, and teachers concern themselves with propagating the conventional wisdom regardless of its follies.

I have long encountered the names, and many of the persons, of those honored in the Accounting Hall of Fame, professional leaders of eminence and scholars of great reputation. My engagements through most of my professional life have involved me in the struggles and anxieties of both sectors of the profession. If I have done anything notable, it has been because I have been able to draw on the wisdom and stand on the shoulders of many masters, great in their time and in the vocation of their choice. But, on the other side of the equator and the other side of the Pacific, I thought not that I would be summoned today to join such company.

To The Ohio State University and the Board of Nominations, custodians of the Hall of Fame, to kind advocates unknown to me, I express my deep gratitude for and appreciation of this day's mark of esteem.

THE ACCOUNTING HALL OF FAME MEMBERSHIP

<i>Year</i>	<i>Member</i>
1950	George Oliver May* Robert Hiester Montgomery* William Andrew Paton*
1951	Arthur Lowes Dickinson* Henry Rand Hatfield*
1952	Elijah Watt Sells* Victor Hermann Stempf*
1953	Arthur Edward Andersen* Thomas Coleman Andrews* Charles Ezra Sprague* Joseph Edmund Sterrett*
1954	Carman George Blough* Samuel John Broad* Thomas Henry Sanders* Hiram Thompson Scovill*
1955	Percival Flack Brundage*
1956	Ananias Charles Littleton*
1957	Roy Bernard Kester* Hermann Clinton Miller*
1958	Harry Anson Finney* Arthur Bevins Foye* Donald Putman Perry*
1959	Marquis George Eaton*
1960	Maurice Hubert Stans
1961	Eric Louis Kohler*
1963	Andrew Barr Lloyd Morey*
1964	Paul Franklin Grady* Perry Empey Mason*
1965	James Loring Pierce
1968	George Davis Bailey* John Lansing Carey* William Welling Wertz*
1974	Robert Martin Trueblood*
1975	Leonard Paul Spacek
1976	John William Queenan
1977	Howard Irwin Ross*

*Deceased

1991 Accounting Hall of Fame Induction

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1978	Robert Kuhn Mautz
1979	Maurice Moonitz
1980	Marshall Smith Armstrong
1981	Elmer Boyd Staats
1982	Herbert Elmer Miller
1983	Sidney Davidson
1984	Henry Alexander Benson
1985	Oscar Strand Gellein
1986	Robert Newton Anthony
1987	Philip Leroy Defliese
1988	Norton Moore Bedford
1989	Yuji Ijiri
1990	Charles Thomas Horngren
1991	Raymond John Chambers

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REVIEWS

PATTI A. MILLS, EDITOR
Indiana State University

REVIEWS OF BOOKS AND OTHER PUBLICATIONS

Dale L. Flesher, *The Institute of Internal Auditors: 50 Years of Progress Through Sharing* (The Institute of Internal Auditors, 1991, 180 pp.; members, \$15; nonmembers, \$20).

Reviewed by
Frank E. Ryerson III
University of Montevallo

This book is a history of the Institute of Internal Auditors and serves to commemorate the fiftieth anniversary of the Institute's founding in 1941. The author, Dale Flesher, does an admirable job of describing the individuals, events and activities that were instrumental in fostering the growth of the Institute of Internal Auditors (IIA) from an initial group of 24 businessmen to an international organization with over 42,000 members.

The book consists of ten chapters, each of which provides a chronological discussion of a major IIA-related topic area. These self-contained histories provide for easy reference to specific topics and allow for continuity of exposition within each area. Also, in order to provide an overall perspective on the development of the IIA, the book concludes with a chronological time line which integrates the major events and activities recounted in previous chapters.

The Introduction chapter describes how a number of major changes in the internal auditing environment has both expanded and enhanced the role of the internal auditor over time. The history of the IIA is incorporated into this broader discussion of the profession's development and is attributed a major role in its evolution. In fact, Flesher states that "... for the past 50 years the history of internal auditing has been synonymous with the history of the IIA" [p. 15]. Support for this assertion is provided in the remaining chapters of the book.

Chapters Two and Three discuss the leading role the IIA has played in promoting the emerging professionalism of the internal auditor. This historical review includes descriptions of such

Institute pronouncements as the "Statement of Responsibilities of Internal Auditing", "Code of Ethics", and "Standards of the Professional Practice of Internal Auditing" as well as discussions of the IIA's Quality Assurance Review Service and its professional certification efforts. With respect to the history of the Certified Internal Auditor (CIA) examination, Flesher relates an interesting anecdote regarding the IIA's deliberations on changing the CIA acronym. Debate over the acronym occurred during the mid-1980s and arose because international travelers and certificate holders were in danger of being mistaken by terrorists for members of the U.S. Central Intelligence Agency.

The material in Chapters Four through Six discusses the development of the IIA as a professional association and reviews the various types of professional service contributions the Institute has made to the practice of internal auditing. Chapter Four traces the growth of the IIA in terms of membership, chapters and member services. Chapter Five reviews the history of the periodicals published by the IIA, with specific emphasis on the Institute's journal, *Internal Auditor*, while Chapter Six details IIA activities related to colleges and universities.

The Institute's professional development activities are the subject of Chapters Seven and Eight. The history of Institute sponsored conferences, seminars and other continuing education meetings is presented in Chapter Seven. Chapter Eight continues the theme of professional development by examining the numerous IIA related research projects and publications.

Chapter Nine is devoted to the individuals who have shaped the IIA over its first fifty years and is divided into three sections: (1) international volunteer chairmen; (2) key staff members at the international headquarters; and (3) recipients of major IIA awards.

The last chapter comments on the success the IIA has had in adapting to its changing environment and in gaining recognition for itself from other professional associations and various governments. The discussion then concludes with a brief look to the future, which includes twelve strategic actions the Institute's 1990-91 Chairman, A. J. Hans Spoel, has recommended for use as a guide for the next decade.

The only criticism this reviewer has of the book is the presence of several inconsistencies between the text and several exhibits it makes reference to. However, because these inconsistencies are limited in number, they do little to disrupt the flow of the material, nor do they diminish the overall contribution

this book makes to our understanding of the development of the IIA and its associated impact on the professional practice of internal auditing. Flesher has provided an extensive summary of the who, what, when, where and why of the IIA. As such, the book fulfills the dual functions of, first, providing a concise history of the IIA and, second, serving as a reference source for those interested in exploring the Institute in more depth. The book also makes a contribution to the accounting literature by filling the gap in published IIA history which has existed since the publication of the last history of the Institute in 1977.

O. Finley Graves, ed., *The Costing Heritage: Studies in Honor of S. Paul Garner* (Harrisonburg, Virginia: The Academy of Accounting Historians, 1991, 171 pp., \$15).

Reviewed by
Jack Ruhl
Louisiana State University

The emblem of the Academy of Accounting Historians bears the Latin inscription, "Praeterita Illuminant Postera," which is literally translated as "Past events illuminate future events." The inscription hints at a way of evaluating accounting history research; that is, to what extent does an historical study illuminate future events? The more the research helps us understand and predict accounting theory and practice, the more valuable is the research.

Judging by this standard, Monograph 6 is an important achievement in accounting history research. The monograph is a collection of ten studies which has cost accounting as its unifying theme. Six of the studies base their conclusions primarily on pre-20th century materials from both within and outside the U.S. Three other papers reexamine cost accounting practices in new and insightful ways. The final study in the monograph outlines pitfalls for accounting history researchers.

As an example of a pre-20th century study, Richard Mattessich ["Counting, Accounting, and the Input-Output Principle: Recent Archeological Evidence Revising Our View on the Evolution of Early Record Keeping"] examines archeological evidence of accounting practices during the period 8,000 B.C. to 3,000 B.C. Mattessich writes that the ancient people of the Middle East transferred clay tokens from one place to another as a representation of an actual economic event. He uses this

and other evidence to argue that the foundation of accounting is not to be found in double entry bookkeeping. Rather, the foundation of accounting is found in an input-output principle which is represented by the transferring of the tokens. Put differently, by moving the clay tokens from one place to another, ancient Middle Eastern people recognized the input-output character of an underlying economic event. Double entry was of secondary importance, evolving in the service of the input-output concept.

Richard Fleischman, Lee Parker and Wray Vamplew ["New Cost Accounting Perspectives on Technological Change in the British Industrial Revolution"] reassesses the conventional wisdom that the period of the Industrial Revolution was a "cost accounting wasteland" [p. 14]. The authors examined the accounting records of several firms operating in Britain during that era and found that detailed cost analyses formed the basis for major management decisions in these firms. Such decisions included adoption of new technologies and capital investment. Further, the authors use these accounting records and related partnership correspondence to argue that the shortcomings of cost accounting during the British Industrial Revolution have been greatly exaggerated. Instead of being a hindrance to industrial development (the conventional wisdom again), cost accounting practices helped managers of that time to make informed decisions on the choice of technology.

Focusing on a 20th-century regulatory agency, Frank Rayburn ["The Cost Accounting Standards Board: Its Creation, Its Demise, and Its Reestablishment"] recounts the history of the Cost Accounting Standards Board (CASB) since its initial establishment in 1970. He explains the structure of the CASB, lists the nineteen Standards promulgated by the CASB, and describes the political and economic forces which led to the demise of the original CASB. Rayburn then describes forces which led to the 1988 reestablishment of the CASB.

Murray Wells ["The Nature of Activity Costing"] looks at Johnson and Kaplan's *Relevance Lost: The Rise and Fall of Management Accounting* (1987) from an historical perspective. Wells argues that the "activity costing" suggested by Johnson and Kaplan is not a dramatic new breakthrough, but simply another conventional product costing system. Further, Wells restates his conviction that "there should be NO allocations of overhead to products, cost centers, divisions, or whatever" [emphasis in original, p. 133]. He concludes that Johnson and Kaplan's major

contribution is that they underscore the need for managers to identify costs that are under the control of those managers. Wells' conclusion implies a need for future accounting researchers to reexamine the perennial issue of cost allocation.

Four of the ten papers in the monograph have been described here. All the papers in the monograph are interesting, clearly written, and address important cost accounting issues. Monograph 6 is important because it illuminates (1) the basic nature of cost accounting, (2) problems with currently accepted solutions to cost accounting problems, (3) the role of cost accounting on society, and (4) the role of society on cost accounting practice. Finley Graves has done an excellent job editing this volume, which is an appropriate tribute to the life and work of accounting history scholar Paul Garner.

REFERENCE

Johnson, H. T. and Kaplan, R. S., *Relevance Lost: The Rise and Fall of Management Accounting*, Boston: Harvard Business School Press, 1987.

Finley Graves, Graeme Dean and Frank Clarke, *Replacement Costs and Accounting Reform in Post World War I German* (New York: Garland Publishing, Inc., 1990, 188 pp., \$45.00).

Reviewed by
Dieter Schnedier
Ruhr-Universitaet Bochum

Proposals for inflation accounting, developed at the beginning of the "hyper-inflation" after World War I (1919-1923), belong to the most remarkable contributions of German authors to accounting theories. Moreover, "there is a considerable similarity between the motivations for, and the supporting arguments in favor of, injecting replacement cost or reproduction cost depreciation and inventory calculations into accounting in the post-World War I German accounting literature and the post-World War II U.K. and U.S. literature. . . . In many respects it has been a case of *déjà ju*" [p. 33].

Graves, Dean and Clarke explicate this idea by presenting abstracts, commentary and translations of ten articles published in 1920 on depreciation, cost accounting and financial accounting procedures in times of inflation, written by well-known Professors of Business Economics in Germany (Prion, Mahlberg, Geldmacher and F. Schmidt with two chapters of the first edi-

tion of his *Organic Accounting in the Framework of the Economy* and now forgotten managers and professors.

The translation gets into the spirit of the articles and only rarely lacks conviction, e.g., Geldmacher did not mean in "Bilznxsorgen" unspecified "Accounting Problems", but "Accountants' Anxieties or Distresses". The abstracts [pp. 3-18] are very informative but the commentary [pp 21.39] seems partly disputable.

To present the origins of inflation accounting to the Anglo-American readership is a laudable effort in the research of accounting history. However, in comparing the discussion after World War I in Germany with the post-World War II U.K. and U.S. literature, it seems a bit odd to restrict the presentation to the first and rudimentary articles written mainly in periodicals for managers. By this procedure, for example, the outstanding inaugural lecture at the University of Freiburg by Ernst Walb about the problem of paper profits ("Das Problem der Scheingewinne," Leipzig, 1921) is excluded. Mahlberg and Geldmacher have published clarifications of their first ideas in later monographs (Mahlburg, *Bilanztechnik und Bewertung bei schwankender Wahrung*, Leipzig, 1921; Geldmacher, *Wirtschaftsunruhe und Bilanz*, Berlin, 1923). Nicklisch (Professor at the Business Economics School, Berlin) developed in a book review (*Zeitschrift fur Handelswissenschaft und Handelspraxis*, 1921-22, p. 45) the concept of nominal or inflation corrected profit, whichever is lower, an often repeated idea in the 1920s and from the 1950s on.

To thoroughly compare the German literature after World War I with its Anglo-American counterpart after World War II, it would be necessary to analyze the whole period from 1920-1930. This period includes the 4th edition of Schmalenbach's *Dynamic Accounting* (1926), the 3rd edition of Fritz Schmidt's *Organic Accounting* and the antithesis by Rieger. Therefore the contribution of Graves, Dean and Clarke can only be seen as a useful beginning of accounting history research on inflation accounting procedures.

The preface contains a survey of the politico-economic background in 1918-19 [pp. XI-XVII]. I cannot see any connections between the socialist revolution 1918 in parts of Germany, the counter-revolution by parts of the former army in spring 1919 and the accounting problems resulting from price control and inflation. Without these events the same accounting problem would have existed.

The editors do not mention the fundamental changes in the tax structure in 1919 (Erzbergersche Steuerreform), an intellectual feat at the beginning of Weimar republic. The Prussian pre-war income tax which excluded capital gains had been changed to the Schanz (Haig-Simon) concept (nevertheless this attempt failed because of inflation and was then soon abandoned). The highest tax rate increased from Prussian's 6% to Weimar's 60%. Regarding this and the inflation, the section named "Taxation lobby" [pp. 25-29] in the commentary seems to be inappropriate.

Concerning replacement costs and price fixing, the articles translated in this anthology should have been compared with the state of the art of "cost accounting" in Germany before World War I. The use of cost accounting for pricing had already extensively been discussed for the first time in 1906-08 (23 articles from a prize competition had been published in the *Zeitschrift für handelswissenschaftliche Forschung*), accompanied by research in the theory of costs by Schmalenbach. Therefore, the conclusion [p. 36] "Pre-World War I accounting in Germany is best summarized as being balance sheet oriented" is not correct. Before 1914, the balance sheet was mainly a research object for jurists. Schmalenbach acknowledges as predecessors of his Dynamic Accounting, the Prussian revenue official, von Wilmowsky (1896-1907) and the Saxon lawyer, R. Fischer (1905-08).

Discussions in the economic function of depreciation as a replacement fund date from the 19th century. During that time, confusion between depreciation and reserves was common and some of the articles in the anthology partly repeat this confusion. The commentary lacks a thorough evaluation of the articles in the historical context before 1914 and after 1920. Especially, the articles do not reflect the two main directions which the discussion of inflation accounting procedures in German-speaking countries have followed from 1920 up to now: the "volume-reproduction" approach (Substanzerhaltung, in 1920; Geldmacher and with variations, Schmidt) and the "maintaining purchase power" approach (in 1920, Mahlberg; later Walb and Schmalenbach) whose ideas had been presented to the Anglo-American audience by the same authors in a publication in 1989¹.

NOTES

¹O. F. Graves, Dean, G. W. and Clarke, F. L., *Schmalenbach's Dynamic Accounting and Price-Level Adjustments* (Garland Publishing Inc., 1989).

Roxanne T. Johnson, *An Analysis of the Early Record Keeping in the DuPont Company 1800-1818* (New York: Garland Publishing, Inc., 1989, 105 pp., \$40).

Reviewed by
Harvey Mann
Brock University

In this slim volume, Johnson introduces us to the undistinguished beginnings of the DuPont business dynasty. In the Introduction to the book, we meet the grandfather, Samuel, and the father, Pierre, of Eleuthere Irene DuPont de Nemours (hereafter E. I.) and learn a little about their lives in France. It is Pierre who makes the decision to emigrate to America, influenced by the turmoil of the French Revolution and his peripheral involvement therein. This move, however, seems to have been made without form or serious plan and with hardly any capital. Pierre formed a company and, as part of his plan, he gave E. I. the responsibility of establishing a gunpowder manufacturing facility. E. I. had developed an interest in gunpowder as a teenager and learned more about it over time. Finally, early in 1801 a "Deed of Association" was drafted and the very poorly financed company came into existence. It can be noted that this company was the only successful, albeit, very successful, venture of the DuPont family.

The first bookkeepers of the company are introduced in Chapter 1. Peter Bauduy has the dubious distinction of being the first (due less to his prowess with the books than to his being a shareholder in the company). He is replaced early in 1806 by Raphael Duplanty, who seems to have been familiar with double-entry bookkeeping and also had some practical experience. In the balance of this chapter, two contemporary bookkeeping texts are quoted; however, I found the comparison between these quotes and the books of the company confusing, to say the least. There are, however, details of the early DuPont records available in the Hagley Library and Museum in Greenville, Delaware.

The emphasis in the second chapter is on the initial capitalization, or rather the lack of same, of the firm. The process is difficult to follow since most of the shares in the company were not purchased for cash, the record keeping was horrendous, and the interrelationships of the company, the father's company and the shareholders were quite confusing. The company survived in spite of these tribulations due to a provident loan as well as the

intervention of a dissatisfied Bauduy, who eventually departed. This leads to Chapter 3 and a consideration of the importance of cash and cash flows to the operation of the business in the early 19th century. Very little that is unusual is introduced. A few journal entries are shown with an emphasis on bills payable or receivable and very little actual cash being exchanged.

Chapter 4 offers a short recapitulation of the accrual accounting used by DuPont, but does not introduce any new concepts or ideas. This leads to the final chapter where it is concluded that the company had the record keeping it needed to survive. Mention is made of "work-in-progress" inventory and a writing-down of fixed assets akin to, but not as systematic as, depreciation accounting. It is pointed out that the books were not closed annually but this is excused because of the difficulty of obtaining the required information from agents across the country. In a final warning to the reader, Johnson indicates that any conclusions drawn are firm specific and cannot be generalized to other companies.

The book would benefit from a comparison with accounting practices of like, or even unlike, businesses of the same era. We do, however, now know a lot more about the early book-keeping practices of the DuPont enterprise and also about a treasure trove of data available for further research at the museum in Greenville.

T. A. Lee, ed., *The Closure of the Accounting Profession* (New York: Garland Publishing, Inc., 1990, 2 vols., \$192).

Reviewed by
Kathie Cooper
University of Wollongong

These volumes are a collection of readings with a difference, which should prove useful to accounting historians, students of accounting history and any person contemplating writing in the area of accounting history. One reason for this is that the selected readings contain a wide and varied range of interesting and useful material not drawn solely from accounting history literature but also from other disciplines. Perhaps the most outstanding feature of the text is that the articles and commentary preceding each of them are structured in such a way as to illustrate one view of how accounting has shaped and been shaped by its environment. Even if the reader does not agree

with all of the views expressed, this eclectic approach is useful to aspiring accounting history authors. It is not simply a reiteration of historical writings which really adds little to the existing literature. Rather, it is an analysis and interpretation of historical events drawn from the existing literature and incorporates new, if radical, ideas. In this context, it demonstrates that history can be used to explain the current state of accounting rather than for the sake of historical interest alone.

The purpose of the text is to demonstrate that accounting is a highly complex and inter-related social system comprising functional and organizational systems which interact with other organizational systems, for example, business and government. As a consequence, this study of the historical development of accounting is undertaken in a systems context with a view to suggesting an answer to one crucial question posed by Lee in the Introduction to volume 1:

... why a socially-valued and financially well-rewarded profession such as accounting should have, and be content to have, a relatively static body of knowledge in which major problems are investigated but not resolved; alternative theories remain theories; and research is desired but its findings are largely ignored [Introduction and Explanation, no pagination].

An explanation is sought in the notion of systems closure and, in particular, Robb's concept of supra-human, autopoietic systems [vol. 2, pp. 245-246]. In systems of this nature, instead of managing a system, humans become part of a system which has its own life and is self-managed. However, in its bid to change, adjust or adapt to its environment, the system reaches the point of chaos and becomes autopoietic. All sight of what the system is trying to achieve is lost and self-preservation becomes the overriding objective. Lee's conclusion is that accounting may have reached this point [vol. 2, p. 246].

Each of the articles or "Recommended Readings" is preceded by commentary by Lee in which the theme or explanation being sought in the readings is identified. Many of the articles are followed by an additional annotated bibliography. Each of these features should prove useful to accounting history students and other interested readers.

A primary strength of this text is that it adopts a multi-disciplinary approach. There is a strong sociological theme which is often implied in the articles but not specifically stated.

Lee's commentary provides the sociological overview where necessary, thus making the text attractive to a wide range of readers.

For those who are simply interested in accounting history, a substantial proportion of the text is devoted to the development of the occupation of accountant through to professionalization. Even here, however, the "Recommended Readings" have been selected to demonstrate how accounting, through the ages, has been an open social system subject to closure and how it has changed or remained static and the mechanisms of change [vol. 1, p. 219; vol. 2, p. 167].

In summary, even if readers do not agree with all of the views expressed and the conclusions reached in this text, it should, for the reasons given previously, be seen as a worthwhile contribution to accounting history literature. As a bonus, the new areas explored in this text may open the way for further debate and improvement in accounting.

Paul J. Miranti, Jr., *Accountancy Comes of Age: The Development of an American Profession, 1886-1940* (Chapel Hill, NC: University of North Carolina, 1990, 276 pp., \$29.95).

Reviewed by
Joni Young
Temple University

This book provides a useful history of the American Institute of Accountants (AIA) and conveys the early conflicts and reactions of various accounting organizations and individuals within these organizations. Conflicts occurred between practitioners in large and small firms, between practitioners in different geographic areas and between the AIA and academicians. The book is divided into four sections that trace the history of the AIA from its beginnings as the American Association of Public Accountants (AAPA) in 1886 to its primacy in 1940.

Section 1, 1886 to 1906, explores the "dawn" of the professional organization. This section emphasizes the divisions within the "profession" and the absence of an authority focus. The author contrasts the opinions of two contending professional organizations, the New York Institute of Accountants (NYIA) and the AAPA, on issues such as whether accounting was an art or science, the appropriate means of training new entrants, possible responses to the influx of non-Anglo-Saxons

into accounting, and the importance of professional designations. Miranti examines the different perspectives of the AAPA and NYIA leaders in an effort to understand these influences upon their opinions. However, this section tends to over-emphasize the differences and under-emphasize the similarity of views among these accountants. Both AAPA and NYIA members believed that accounting was useful in improving society. C. W. Haskins, an NYIA leader, believed that accounting "could help to perfect society by promoting efficiency and honesty" [p. 37]. AAPA leaders also believed that accounting "offered great potential for social uplift . . ." [p. 39]. With respect to attitudes about training, the text provides more evidence of diversity within the AAPA than of diversity between the AAPA and NYIA.

Section 2, 1900 to 1916, details the continuing search for professional roles. The AAPA leadership employed the *Journal of Accountancy* to promote its professional ideals and views on the roles of accountants. Miranti employs four brief case studies to illustrate this search for identity and purpose. The first study emphasizes auditing and the efforts to require annual audits for New York insurance companies. The second emphasizes accounting and the sporadic involvement of the AAPA in the public debate about railroad accounting. The third emphasizes consulting and the role of an AAPA committee in advising a government committee on Treasury Department bookkeeping procedures. The fourth emphasizes income taxes and the efforts of the AAPA to gain government acceptance of accrual accounting.

Section 3, 1917 to 1929, considers the encroachments of the Federal Reserve Board and the Federal Trade Commission in financial reporting and details the continued division of the profession over proper examinations for new entrants, adequate licensing requirements, ethics rules and "proper" accounting. The successful efforts of the AIA leadership in obtaining the AIA prohibition against "touting" drove many small practitioners and others to form a rival organization, the American Society of Certified Public Accountants (ASCPA). During this period, criticisms about the quality of attest work underscored the lack of agreement among accountants about the classification of attestations and the responsibilities of accountants in undertaking this work. The American Association of University Instructors in Accounting (AAUIA) drew attention to the inconsistent application of accounting methods — a condition that practicing accountants were unwilling to change for fear of eliminating the need for professional judgment.

Section 4, 1929 to 1940, examines the emergence of the Securities Acts and explores the coming together of the public accounting profession into a single representative organization — the AIA. Although the AIA played little role in the events culminating in the passage of securities legislation, its members and all public accountants were forced to increase their level of independence from clients [p. 153] and to consider developing accounting guidance to establish “authoritative support”. The AIA responded to an AAUIA challenge by establishing a committee to provide guidance on financial accounting matters. These challenges by the AAUIA and the changes wrought by the Securities Acts and the SEC played a significant role in facilitating the AIA merger with the ASCPA.

Miranti discusses the “politically incorrect” attitudes of the early leaders of the AIA and the role of these attitudes in delaying the AIA merger with the ASCPA. In his discussion of this merger and in other sections, he describes the racist/sexist attitudes of the AIA leadership and their concern to allow only the “right men” of the “right” social background into the partnerships of major firms and the inner circle of the AIA [e.g., p. 126, pp. 169-171, p. 180].

A major concern with the book is the lack of clear purpose in its opening chapters. In the final chapter, the reader learns that the author’s purpose is to write a history of the AIA: “this study of the history of the AIA also casts some new light . . .” [p. 190]. In contrast, the author discusses professions generally and cites histories of professions such as engineering and medicine rather than histories of professional organizations in the introductory chapter. This chapter suggests that the book would develop a history of the profession rather than a history of a professional organization, a very different historical focus. This confusion over focus leads to questions that otherwise might have been avoided: Why did the author not discuss in more detail the activities of the ASCPA and other organizations and their contribution to defining the roles of the auditor and accounting? Why did the author limit accounting professional to the public accounting professional? Given the emphasis on public accounting, why did the author not examine in more detail the changing role of the auditor in society and whether the significance and purpose of audits changed during the period studied?

The frequent use of the term “elite” throughout the text creates confusion for the reader. At times, the term refers to the

partners in national firms [e.g., p. 111]. At other times, the term refers to nonaccounting groups such as the Department of Commerce Advisory and Planning Council [p. 167]. At still other times, the term refers to the leadership within the AIA or to immigrant British chartered accountants [p. 180]. A consistent use of the term would have reduced this confusion.

The book conveys the many obstacles to establishing and maintaining one professional organization to represent the profession. The issues discussed in the book continue to reappear as subjects of current debates. For example, what should be the entry requirements for new CPA (150 hour education requirement)? What is the purpose of the audit (does it include an obligation to detect fraud)? An examination of the influence of social values in the past upon the compromises and solutions reached by the AIA suggests the need to carefully consider the contribution and impact of social values to current and future changes in the public accounting profession (and other elements of accounting).

Larry Neal, *The Rise of Financial Capitalism: International Capital Markets in the Age of Reason* (Cambridge: Cambridge University Press, 1990, 278 pp., \$37.50).

Reviewed by

Christopher J. Napier

The London School of Economics and Political Science

The use of econometric techniques to address problems in economic history has been a feature of the last thirty years [McCloskey, 1987]. Yet there are still few studies that examine the emerging capital markets of the eighteenth and early nineteenth centuries by applying the statistical procedures that are so familiar in the case of recent research in finance. Larry Neal's book is a good indication of the hurdles that have to be crossed in order to carry out worthwhile historical finance research of a quantitative nature. The first of these is the assembly of raw data. Only a small number of securities and foreign currencies (rarely more than 20) were traded on the London, Paris and Amsterdam markets at any time in the eighteenth century. But Neal could not simply run a computer tape to find the prices of these securities. He had to locate contemporary price lists, assess their reliability, and then ensure that the daily price data were input into a computer file. Given the need to

process what must have been over half a million pieces of raw data, it is not surprising that it took Neal a decade to assemble his security prices, before he could begin to test them.

The second problem that Neal had to overcome was the possible distortion of his data by institutional factors. One of the great dangers of quantitative historical research is that a fascination with manipulating the numbers can easily overshadow the many institutional nuances that set the context within which the numbers arise. A great strength of Neal's book is that he is very aware that he must consider carefully the structural similarities and differences between the main European capital markets, and the changes in these markets over time. Apparently minor factors in the set up of markets prove crucial: for example, that stock transactions in London were for spot delivery while in Amsterdam they were for settlement on one of the quarterly dates during which transfer books were open, makes it necessary for Neal to allow for the discount implicit in security prices in Amsterdam because of the later settlement of trades.

Neal adopts a topical approach in his book, much of which has been published already in the form of journal articles. The main topics considered are: how integrated were the various capital markets, and did the degree of integration differ in times of war and peace; how did financial information diffuse through European capital markets; how did the great financial "bubbles" of the early eighteenth century, involving John Law's Banque Royale in France and the South Sea Company in England, happen; and the extent to which the transfer of wealth by emigrés from the French Revolution fuelled the British Industrial Revolution at the end of the eighteenth century. Because of his quantitative approach, Neal is able to demonstrate convincingly how the South Sea Bubble was the culmination of a long period of speculation, and how market volatility became much reduced after the bubble burst. He suggests that the price movements at the outset of the South Sea Bubble can be explained as a "rational bubble" [Blanchard and Watson, 1982], while those just before the bubble burst could not be so explained.

It is perhaps unfair to criticize quantitative historical research for simply providing statistical confirmation for generally accepted history, but Neal's book does on occasion leave the impression that the application of quantitative methods has added very little to our understanding. Where Neal's conclusions are new, they are often only weakly supported by the data.

For example, Neal suggests that "... because the international capital markets of the time were larger and better organized than previously thought ... capital movements from the Continent to Britain explain succinctly why the British Industrial Revolution took place during that period [1790-1820]" [p. 181]. His evidence for this is largely anecdotal, and Neal has to acknowledge that the main statistics he uses in this context are "unreliable figures, to say the least" [p. 221].

The contribution of Neal's book for most readers will be the detailed description of the institutional structure of the London, Paris and Amsterdam capital markets during the eighteenth and early nineteenth centuries. One point that Neal stresses is the emphasis placed by investors on dividends paid by companies such as the English and Dutch East India Companies. Simple models of share valuation in terms of capitalizing dividend streams perform better as predictors of share prices than the more complex calculations (derived from internal accounting records) of researchers such as Mirowski [1981]. Neal, therefore, confirms the significance of dividends as the central indicator of investment performance to the stock market, a significance that, at least in Britain, persisted until after the Second World War (and, it sometimes seems, is still with us).

References

- Blanchard, O. J. and M. W. Watson, "Bubbles, Rational Expectations, and Financial Markets", in P. Wachtel, (ed.), *Crises in the Economic and Financial Structure*, Lexington, MA: Lexington Books (1982): 295-315.
- McCloskey, D. N., *Econometric History*, London: Macmillan (1987).
- Mirowski, P., "The Rise (and Retreat) of a Market: English Joint Stock Shares in the Eighteenth Century", *Journal of Economic History* (September 1981): 559-577.

Leonard Spacek, *The Growth of Arthur Andersen & Co. 1928-1973: An Oral History* (New York: Garland Publishing, Inc., 1989, 349 pp., \$69).

Reviewed by
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Rice University

Leonard Spacek was the managing partner of Arthur Andersen & Co. from 1947 to 1963 and was the person most responsible for its ascendancy as one of the Big Eight public

accounting firms. He served as chairman of the partnership from 1963 to 1970, and retired from the firm in 1973. He was the firm's innovative leader who challenged conventional wisdom in a conservative profession.

Spacek was unquestionably one of the most colorful and important figures on the U. S. public accounting scene during the 1950s and 1960s, and the publication of this oral history is a welcome event. This volume contains a verbatim transcript from four days of videotaping during October 1983 and May 1984 (Spacek's 77th year) at the firm's Center for Professional Education in St. Charles, Illinois. Ten of Spacek's long-time friends and colleagues took turns at the questioning. They drew on their diverse associations with Spacek to elicit his recollections about a wide array of subjects: the personality and management style of the firm's founder and namesake, the contributions of the firm's early partners, Spacek's philosophy and strategy as architect of the firm's growth, the reasons behind Spacek's frequent disputes with professional leaders over accounting principles, and some of the firm's memorable engagements. What emerges from Spacek's rendering of innumerable anecdotes, some told several times, is the portrait of a decisive, indefatigable, incorruptible, straight-talking Midwesterner who is several steps ahead of everyone around him. And, as is evident throughout this oral history, he has a remarkable memory.

One of the anecdotes helps explain the motivation behind the phenomenal growth during Spacek's tenure at the helm of the Chicago-based firm. Following Arthur Andersen's death in 1974, Spacek gave several speeches expounding his views on professional issues. The accounting establishment in New York was not amused. John L. Carey, the influential secretary of the American Institute of Accountants, invited Spacek to New York to meet with the heads of the large firms in the august setting of the Union League Club. At the meeting, which was chaired by George O. May, the retired senior partner of Price, Waterhouse & Co. and the *doyen* of the profession, Spacek was informed that "the leadership of the accounting profession must rest in the hands of the larger, successful firms and that the smaller firms [such as Arthur Andersen & Co., which was 20th in size] can enjoy the success but must acknowledge that the leadership of the profession is in the hands of the larger firms" [p. 55]. This incident became indelibly etched in Spacek's mind (he refers to it again on pp. 113, 173 and 179). On hearing May's words, Spacek immediately resolved that "if it is bigness that it takes to

have any say in the accounting profession, why then we will concentrate on first things first. We'll get big. That's when I really went out for promotion" [p. 55].

Spacek also explains the complications he had to face at the time of the founder's death, since Arthur Andersen had never actually signed the partnership contract, and an initial vote was taken to liquidate the firm. He also discusses the launching of the firm's training school in 1940 (the first centralized training program by an accounting firm), the development of the "one Firm concept", and the opening of overseas offices in the 1950s, as well as his 1957 Milwaukee speech (a vintage example of Spacek's outspokenness) which precipitated a Congressional hearing into railroad accounting and almost led to his expulsion from the American Institute of CPAs.

That Arthur Andersen & Co. would publish the unadorned thoughts of its maximal leader is further evidence of the openness for which the firm is well known. But unless the reader already knows a good deal about the historical development of the firm, some of the discussion may be confusing. Spacek's recollections dart back and forth across the years, and the timing of a number of the incidents that he discusses, and their relation to one another, is not always clear.

The oral history should be read in conjunction with the firm's 75-year history, *A Vision of Grandeur*, which was published by the firm in late 1988. The 204-page history is well-researched, well-written, and handsomely illustrated, but, as far as I know, it has not yet been reviewed in any of the journals. The author drew on Spacek's oral history, and conducted a further interview with Spacek.

There is a nice use of footnotes to supply some of the particulars that round out Spacek's responses. I could find only one error. On page 226, the reference should be to the Committee on Accounting Procedure, not the Accounting Principles Board.

Northwestern University's Accounting Research Center and Arthur Andersen & Co. are to be commended for undertaking this venture. Other firms should be encouraged to do the same.

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