Accounting Historians Journal

Volume 11
Issue 1 *Spring 1984*

Article 15

1984

Accounting Historians Journal, 1984, Vol. 11, no. 1 [whole issue]

The Accounting Historians Journal

Published by The Academy of Accounting Historians

Praeterita
Illuminant
Postera

Spring 1984
Volume 11, Number 1

Research on the Evolution of
Accounting Thought and
Accounting Practice

THE ACADEMY OF ACCOUNTING HISTORIANS

The Academy of Accounting Historians is a nonprofit organization of persons interested in accounting history and was formed in 1973. The objectives of The Academy are to encourage research, publication, teaching, and personal interchanges in all phases of accounting history and its interrelation with business and economic history, including the environment within which they developed. Membership is open to persons, in all countries, who are interested in accounting history.

In addition to publishing *The Accounting Historians Journal,* The Academy publishes *The Accounting Historians Notebook* (newsletter), Monographs, Working Papers, and reprints of Accounting History Classics. For information concerning the newsletter contact Dale L. Flesher, School of Accountancy, University of Mississippi, University, Mississippi 38677. For information on the publications of The Academy mentioned above, as well as back issues of *The Journal,* refer to the various announcements in this issue.

Annual membership dues, including subscriptions to *The Accounting Historians Journal* and *The Accounting Historians Notebook,* $20.00. Refer to the membership announcement in this issue.

Inquiries concerning membership and other matters relating to The Academy (other than submission of manuscripts to *The Accounting Historians Journal*) should be addressed to: Secretary, The Academy of Accounting Historians, P.O. Box 658, Georgia State University, Atlanta, Georgia 30303 U.S.A.

The Accounting Historians Journal

Spring 1984

Volume 11, Number 1

EDITORIAL STAFF OF THE ACCOUNTING HISTORIANS JOURNAL

The Accounting Historians Journal is a refereed scholarly journal published semiannually in the Spring and Fall: printed by The Birmingham Publishing Company, 130 South 19th Street, Birmingham, Alabama 35233. *The Journal* is the successor to the quarterly publication *The Accounting Historian* and is numbered as a continuation to maintain the sequence of that issue which commenced in January, 1974. *The Accounting Historians Journal* does not assume responsibility for statements of fact or opinion made by its contributors. Manuscripts submitted to *The Accounting Historians Journal* should be sent to the Manuscripts Editor whose address is shown at the end of the Guide for Submitting Manuscripts in this issue.

THE ACCOUNTING HISTORIANS JOURNAL

Semiannual Publication of The Academy of Accounting Historians

Volume 11, Number 1 **Spring, 1984**

CONTENTS

Guide for Submitting Manuscripts

Manuscripts must be in English and of acceptable style and organization for clarity of presentation. Submit three copies typewritten, double-spaced (except for indented quotations) on one side of 8½ x 11 inch (approx. 28.5 cm x 28.0 cm) white paper; paragraphs should be indented. An **abstract** of not more than 100 words should accompany the manuscript on a separate page. The manuscript should not exceed 7,000 words and margins should be wide enough to facilitate editing and duplication. All pages, including footnote and bibliography pages, should be serially numbered.

The cover sheet should state the title of paper, name(s) of author(s), affiliation, and the appropriate address for further correspondence. The title, but *not* the name(s) of the author(s), should appear on the abstract page and on the first page of the body of the manuscript. Acknowledgments should appear at the bottom of the first page of the body of the manuscript and be excluded from the consecutively numbered footnotes.

Manuscripts currently under review by other publications should not be submitted.

Major headings within the manuscript should be centered, underscored, and unnumbered with the first letter of major words capitalized. Subheadings should be on a separate line beginning flush with the left margin, and underscored with the first letter of major words capitalized. Third-level headings should lead into the paragraph, be underscored, and followed by a period; text should immediately follow on the same line.

Tables, figures, and exhibits should be numbered (arabic), titled, and, when appropriate, referenced. Limited use of original documents, etc. can be accommodated in *The Journal* for authors providing glossy black and white prints. Important textual materials may be presented in both the original language and the English translation.

Footnotes should be numbered consecutively throughout the manuscript with superscript arabic numerals and placed on a separate page at the end of the manuscript with appropriate reference to the sources appearing in the bibliography. Do not use *ibid.* or *op. cit.*

Informational footnotes are to be presented at the bottom of the page, single-spaced, referenced by lower case letters, and limited in size and number.

When referring to statutes, court cases, or legal treatises, citations acceptable in law reviews should be used.

The bibliography should appear at the end of the manuscript and contain full reference to all sources actually cited (but not limited to those sources), and arranged in alphabetical order according to the surname of the first author. Information about books and journals should include the following: Books—name of author, title underscored, place of publication, name of publisher, date of publication; Journals—name of author, article title within quotation marks, journal title underscored, date of issue in parentheses, page numbers. Multiple works by an author should be listed in chronological order of publication, and when multiple works of an author appear in a single year, the suffix a, b, etc. should be used after the year. Illustrations of footnote and bibliography entries are as follows:

FOOTNOTES

[1]Chatfield, p. 52.
[2]Previts (1982a), p. 8.
[3]Previts (1982b), pp. 19-20.

BIBLIOGRAPHY

Chatfield, Michael. *A History of Accounting Thought.* Hinsdale, Ill.: The Dryden Press, 1974.

Previts, Gary John. "Hazy History: Fact and Folklore in Accounting." *The Accounting Historians Journal,* Vol. 9, No. 2 (Fall 1982a), pp. 7-9.

________________. "Old Wine and . . . the New Harvard Bottle." *The Accounting Historians Journal,* Vol. 9, No. 2 (Fall 1982b), pp. 19-25.

As a helpful guide to questions of style not covered above, refer to *A Manual for Writers of Term Papers, Theses, and Dissertations* by Kate L. Turabian, published in paperback by The University of Chicago Press.

Galley proofs will be sent to the author(s) as permitted by scheduling; however, additions of new material must be strictly limited. The author(s) will be provided five copies of *The Journal* issue in which the manuscript is published.

Reprints may be ordered from the printer. Costs of these are billed directly to the author(s) by the printer. Minimum order 100, prices to be established by printer.

SUBMIT MANUSCRIPTS TO:

Kenneth S. Most, Manuscripts Editor
The Accounting Historians Journal
College of Business Administration
Florida International University
North Miami, FL 33181

FOR ALL OTHER MATTERS PERTAINING TO THE JOURNAL, CONTACT:

Mervyn W. Wingfield, Production Editor
The Accounting Historians Journal
Department of Accounting and Finance
School of Business
James Madison University
Harrisonburg, Virginia 22807 U.S.A.

Reproduction Policy

The Accounting Historians Journal
Vol. 11, No. 1
Spring 1984

William S. Hopwood
DIRECTOR OF THE CENTER FOR
ACCOUNTING RESEARCH
FLORIDA STATE UNIVERSITY
and
Karen S. Hreha
UNIVERSITY OF ILLINOIS

THE INTERPROFESSIONAL TAX ALTERCATION

Abstract: The paper presents an historical summary of the major issues and events which led to the development of the practice of taxation by accountants in the United States. This development was marked by tremendous conflict between the legal and accounting professions.

The purpose of this paper is to provide an historical summary of the major issues involved in the dispute between lawyers and accountants for the right to practice tax in the United States. Determination of the major issues is based upon evidence gathered from the *Journal of Accountancy* and the *American Bar Association Journal*. These journals are the primary publications which represent the thought of the two professions. By examining the bibliography, one can see that most of the documentation for this paper has been taken from the *Journal of Accountancy*. The reason for this is that the *American Bar Association Journal* published much less on the subject. The volume of articles appearing in the *Journal of Accountancy* reflects the tremendous concern and importance which the accounting profession attached to the dispute.

Published facts of the two journals may not be entirely representative of both sides of the conflict. However, the object of this paper is to highlight the major events and issues that had a significant effect on the outcome of the dispute between the professions.

The *Journal of Accountancy* was an official publication of the American Institute of Accountants (AIA), now known as the American Institute of Certified Public Accountants. Please note that where the position of the AIA is stated in this essay, such position may not have been an official one. This can be distinguished by examining the footnote to determine whether it is merely an editorial.

Beginning of Dispute

The question of whether an accountant has the right to practice in the area of taxes in the United States can be traced back as early as 1901 when a Kentucky court allowed an accountant to represent a client in a tax dispute.[1] Although in the early 1930s very few individuals paid taxes, business enterprises generally had enough income to require payment of income taxes. Since the calculation of business income required accounting knowledge, businessmen turned to certified public accountants (CPAs) in large numbers for help in preparing their returns, and in dealings with the Bureau of Internal Revenue.[2] Thus, tax practice had become a large part of professional accounting service. In 1945 it was stated, "From the very first income tax act in 1913 lawyers have shunned the business of preparing income tax returns."[3] By 1941, CPAs constituted one third of the enrollment of those entitled to practice before the Treasury Department, while at the same time the Treasury Department itself was composed of 4,400 accountants and only 400 attorneys.[4] To a large degree, the accountants even interpreted the law.

However, as more cases were taken to the Board of Tax Appeals and the courts, lawyers began to be drawn into tax practice. As early as 1932, an unsuccessful attempt was made to eliminate CPAs from practice before the Board of Tax Appeals. A similar effort was made to introduce a bill in Congress which would limit the rights of non-lawyers to represent others before federal agencies. The bill was defeated. In 1942, the name of the Board of Tax Appeals was changed to the "United States Tax Court." The new Tax Court then announced a requirement of an examination to practice before it. Lawyers were exempted from the examination but CPAs were required to pass it. Efforts by the accounting profession to have the Court restore the right of CPAs to admission without examination were unsuccessful.

By 1943 the right of the accountant to practice tax was challenged in the Supreme Court of the United States. The Supreme Court stated, "Conflicts are multiplied by treating as questions of law what are really disputes over proper accounting."[5] It is difficult to determine when the dispute began; however, in 1944 both the accounting and legal professions found it desirable to establish the National Conference of Lawyers and Accountants (hereafter referred to as the National Conference) which was later to play an instrumental role in settling the dispute.

Prior to 1950 accountants encountered some friction from the legal profession, but nevertheless members of the profession considered it proper to practice in the area of taxes. Accountants had little reason to feel otherwise, as they frequently consulted businessmen concerning their tax problems without question from the legal profession. Even the Treasury Department thought of accountants as *the* "tax people." This is evidenced by the fact that the Treasury Department used accountants in drafting and administering the provisions of the first modern tax statement.[6]

In 1950, the *Bercu*[7] case shattered the confidence of the accounting profession. In this case, the controller of a New York firm was both an accountant and a lawyer. The controller, on behalf of the firm, consulted an outside accountant (who was a CPA) on a tax deduction problem. The outside CPA rendered his services and accordingly billed the firm. The firm escaped paying on the grounds that the CPA had engaged in the unauthorized practice of law. This set a precedent that boded ill for the accounting profession.

In the same year, a Minnesota court rendered a similar decision in what was commonly called the *Conway*[8] case. The main issue centered around whether an accountant had practiced unauthorized law by giving advice to his client on the matter of filing a joint return. During the hearing the Minnesota Society of CPAs, the Minnesota Association of Public Accountants and the State Association of Public Accountants filed briefs on behalf of the CPA. The State Association said, "It must be recognized that to one having all of the qualifications of an accountant all tax returns are likely to be relatively simple." The judge referred to the briefs as, ". . . fine briefs presented on behalf of a great, though new, profession whose standards are not wholly unlike those of the older legal profession." He further stated that it was proper for an accountant to file one of the "numerous kinds of returns"; however, he also added, "That in order for a person to aid and assist a taxpayer in making out an income tax return presenting problems properly in the field of law alone or of both law and accounting it is mandatory for such a person to have and possess knowledge, training and skill found only in the profession of duly licensed attorneys at law."[9]

A Time of Negotiations

By that time both professions realized that a dispute existed and in April 1950 the National Conference proposed a body of principles (subject to ratification by both professions) to serve as a guide to resolution of the problem. The following year could be deemed "the year of negotiations"; however, as one writer, Avstein, stated, "Efforts to reconcile differences make more of a Medieval trial by combat than constructive discussion by intelligent men."[10]

In the same year, 1951, the *Iowa Law Review* devoted its entire Winter edition to the problem at hand. In that issue (in the preface) Professor Stanley wrote, "The publication in a law review of this symposium on law and accounting furnishes impressive testimony as to the close relationship between these two professions. The need for such a relationship has been present from the start, but the legal profession was slow to recognize it, and the law schools have been even slower than the rest of the profession." At about the same time, Austin claimed that there was too much extremism coming from both professions. Many accountants argued that tax practice had nothing to do with law, while at the same time, lawyers were asserting that it was pure law. Austin felt that many of the legal concepts such as consolidated returns, taxable income, and invested capital were accounting terms in spite of the fact that they were embodied in the law. It was also stated that the skills of the accountants were useful contributions in determining taxable income and the tax liability, while the lawyers skills were useful in marshalling and appraising evidence.[11]

By this time, a number of subissues had arisen. First was the question of whether it was proper for the accountant to refer to himself as a "tax consultant." The AIA agreed with the American Bar Association (ABA) that it was unfair to the legal profession to allow accountants to call themselves tax consultants, since the lawyers could not do the same because their code of ethics prohibited it. Such a thing would be "unprofessional."

Second, was it proper to practice law and accounting at the same time? In 1947, the Committee on Joint Practice (composed of ABA members) ruled that joint practice was unethical; however, in 1949 the New York County Lawyer's Association allowed two members to engage in joint practice notwithstanding the ruling to the contrary.[12] The AIA was in favor of joint practice. Thus, the answer to this question had not been fully resolved. Last, there was the problem of dealing with those who could fairly be called "fly by nighters." In relation to this subissue, the Rhode Island Bar Association won an injunction ordering a non-CPA to refrain from practice. Although these cases do not do full justice to describing the three subissues mentioned, they provide a background for understanding the principles which were developed by the National Conference.

The significance of the year 1951 is now well recognized. Principles previously established by the National Conference were officially ratified by the AIA (the ABA had done this in the prior year) and enacted. These principles are still in effect today. The AIA said that they ". . . culminated more than 15 years of patient effort by means of goodwill in both professions." Also, "It records the opinion of the organized bar that the CPA's are members of a recognized profession comparable to that of law."[13]

Some of the recommendations offered along with the principles were:

1. local committees of lawyers and accountants be established
2. both professions should feel free to consult the local bar associations with problems
3. local committees should refer difficult problems to the National Conference.

In summary, the basic principles were formulated as follows:[14]

1. accountants and lawyers should collaborate
2. it is desirable for both professions to prepare income tax returns (providing that both sides keep within reasonable boundaries)
3. either profession could estimate the tax effect of a transaction
4. neither profession should use the term "tax consultants" or similar terms
5. accountants can practice before the Treasury Department if no legal questions were involved
6. it is not wrong for an accountant to represent a client in Tax Court
7. criminal cases are beyond the scope of the accountant.

The ABA was satisfied with the principles. In the July edition of the *American Bar Association Journal,* it was stated that although the principles were general, the legal profession hoped they would furnish a basis for a cooperative effort between the bar and CPAs. The legal profession was particularly satisfied with the principle that interpretations of the law, both tax law and general, are a matter for lawyers (only). A commonly-held view by the legal profession was that if the principles were followed, both professions as well as the public would reap benefits.[15]

Although the principles were official, they were broad, untested and possibly internally inconsistent. George Hill, a New York lawyer, helped shed some light on the interpretation and application of the principles by publishing what he termed "Legal Concepts of Accounting," which are in their abstract form as follows (not meant to be comprehensive):[16]

1. The conflict in common law stems between fact as found by the court and fact as in accounting principles.
2. The conflict is similar in administrative law, except rather than a court determining the law, the law is imposed.
3. The court is only concerned with Generally Accepted Accounting Principles in the instant case.
4. Law dominates accounting principles.
5. In the absence of legislation, questions of accounting are not questions of law but rather questions of fact, and therefore accounting principles are not binding in the construction of statutory language and are not conclusive in the application of the law to the fact.

The following year was not without incident. In order to further clarify the atmosphere of the times, a letter to the Editor of the *Journal of Accountancy* is presented in part:

> Sir; for consideration of tax practitioners who have been prominently displaying in the windows of delicatessen stores, . . . barber shops, and shoeshine parlors in the past few months. I offer the following passage from the first part of St. Paul's Epistle. "I beseech you that ye may walk worthy of the vocation of where with ye are called."[17]

Shortly thereafter, the Treasury Department decided to recall 94,000 of the outstanding licenses allowing the bearer to practice before the treasury. The AIA offered assistance in the matter, so far as CPAs were concerned, and the Treasury Department cordially accepted.[18] It is also interesting to note that in the same year the AIA Tax Committee made 64 recommendations for changes in the tax laws,[19] and the Missouri Supervisor of the Internal Revenue Service publicly thanked the accounting profession for helping in the administration of the tax laws.[20] Finally, the *Journal of Accountancy* carried an advertisement for the sale of books written for lawyers.[21]

Returning again to the mainstream, by 1952 twenty-one states had formed or were in the process of forming local committees as recommended by the National Conference.[22] As was to be expected there were problems in the application of the principles, but the National Conference emphasized its desire to maintain uniformity in obtaining solutions. There were some encouraging results. In one case a dispute that was in the litigation stage was withdrawn from court and submitted to the National Conference.[23] However, the machinery for dispute settlement was not solving all of the problems; in another dispute, the attorney refused to do the same.[24]

Furthermore, there was the embarrassing case of the accountant who in representing his client in court, tried to show that a tax-free corporate reorganization had occurred and, subsequently, omitted important information. No evidence had been introduced concerning the fair market value of stock acquired by the taxpayer. It had merely been stipulated between the parties that the book value on such date was a certain amount. Then the court determined that the transfer of shares was not tax free; the taxpayer's deficiency was thus incorrectly computed. The higher court remanded the case to the lower court for rehearing.[25] This case stirred the AIA to come to the defense of the accounting profession in general. The AIA contended that very few CPAs found their way into a courtroom on behalf of clients, and of these, only a small percentage were ever accused of doing something wrong. The AIA invited criticism from the Bench or the Bar.

In regard to resolution of the dispute, 1953 was an uneventful year. In Rhode Island a man was stopped from engaging in the practice of taxes because he was not a CPA.[26] Also a tax accountant won on a charge of unauthorized law practice, citing the *Bercu* case. At this point in time, many tax practitioners may have assumed that the problem was close to being resolved. However, this would have been an incorrect assumption.

A Major Setback for the Accounting Profession

The year 1954 brought alarm to a number of accountants. Most of the alarm was a result of the *Agran v. Shapiro* case. Here a CPA rendered services to the client on the matter of a loss carryback-carryforward problem. Once again, the client refused to pay on the grounds that the accountant had engaged in the unauthorized practice of law, and the CPA in turn sued for payment. The CPA won in the lower court. On appeal the California Bar came to the aid of the client and the California Society of CPAs did the same for Agran, a CPA (both filed briefs).[27]

The defendant cited 10.2(f) of *Circular 230* (Treasury Regulation). It was advanced that due to 10.2(f) the CPA's services were illegal and therefore there should be no judgment allowed. The controversial part of 10.2(f) was: "Nothing in the regulations of this part shall be construed as authorizing nonmembers [of the bar] to practice law." The superior court ruled for the defendant stating that it was improper that the CPA had referred to the Internal Revenue Code in the course of his work.

The reason that accountants were alarmed was that if the court's reasoning were followed it would be next to impossible to do income tax work because the Code was a vital tool.[28] It is also important to note that Agran was authorized to practice before the Treasury Department and the court interpreted that under the Treasury's own regulation it was improper to do so. Correa's explanation was that the California court followed form and the Federal Government followed substance.[29] Another person summed up the matter as follows: "The conclusion is inescapable that a purposeful minority within some of the bar associations is making a conscious effort to take away from accountants a substantial part of the tax practice in which they have been traditionally engaged, and make it a monopoly for lawyers."[30]

The Unauthorized Practice of Law Committee of the California State Bar stated that no accountant could give advice as to the tax implication of a transaction to a taxpayer. Thus the California Bar had reverted back to the stance that the ABA had taken prior to the enactment of the principles.

There was also a similar case in Florida (Re: Petition of Kearney) where the state Supreme Court cited 10.2(f) and ruled that nonmembers of the Bar could not practice in the area of certain types of tax problems.

Accountants Fight Back

As a result of these occurrences, the AIA decided to vigorously oppose 10.2(f). In addition, the AIA went as far as to call its members to fight to keep the practice of taxes.[31] This was coupled with a large increase in the number of articles published in the AIA official publication, *Journal of Accountancy*. The following recommendations were made:

1. Inform businessmen that they might be deprived of their right to choose their tax advisors
2. Ask sympathetic lawyers to protest
3. Speak to U.S. Senators during the recess of Congress
4. Talk to state Legislators

A further sample of the desire to fight exists in some of the letters written to the Editor of the *Journal of Accountancy*:[32]

> I have always felt that the average accountant was not enough of a scrapper and in these attacks has sat back and taken it too long.
>
> I think that it is time . . . to fight in this matter.

J. S. Seidman wrote:[33]

> Top tax positions are held by accountants . . . Less frequently the tax administrator is an attorney. I think that this has significance in terms of the practical facts of tax life.

The accounting profession had clearly decided not to turn and run. Their line of attack began to crystalize. The AIA stated, "Perhaps the ultimate solution must be action by the federal government to remove the jurisdiction of the state courts' activities related to the collection of federal taxes."[34]

The legal profession became aware that the accountant wanted to press the issue. However, the lawyers had a different viewpoint of the matter. The lawyer applied the same type of thinking that he would apply to most types of legal problems. That is, he saw the problem as a matter of law and applied the concepts of statutory construction and *stare decisis.* There also was a whole sector of common law in the area of unauthorized practice. An analysis of this area (from an attorney's point of view[35]) is summarized as follows:

1. statutes of unlawful practice exist on both state and federal levels
2. unlawful practice originated in England
3. state laws were rather uniform in this area
4. the general rule was that services normally performed by a lawyer, in or out of court, could only be performed by a bar member except for the following:
   a nonbar member could perform some legal services if they were incidental to his main endeavor, but
   a nonmember could not engage in a legal matter that was either "difficult or doubtful"
5. in federal law the Treasury had the power to override the individual states in income tax practice administration problems
6. the Treasury Department had three basic rules
   a. the practitioner had to be of good moral character
   b. he had to have "adequate education"
   c. he had to know the tax laws
7. 10.2(f) applied

The general rule was easy to apply to the problem of the accounting profession engaging in the practice of taxes. The accountant was not allowed to do any tax work normally done by a lawyer. This did not leave much for the accountant. On the other hand, the exception was much more difficult to discern. First, it was difficult to draw a line between incidental and nonincidental problems. Second, for the accountant practicing in taxes, it was often impossible or at least extremely impractical to determine ahead of time if a particular tax problem would be difficult.[36] The intent of the incidental test was to allow the layman to engage in matters that were very simple (i.e., the selling of a piece of personal property). However, what was "difficult" for one man might not be difficult for another. This left the accountant in a dilemma. He never could be sure whether he was in the "clear" or not.

No doubt a large number of accountants were concerned about losing their livelihood. It cannot be said that all accountants were worried because different treatments prevailed in different states. The "tougher states" were Florida, California, Minnesota, and New York. However, the accountants in the other states were in danger of the unfavorable court decision spreading into their own domains.

The ABA Responds

Although the accounting profession to some extent propounded that it was in a dilemma, Erwin Griswold, Dean of the Harvard Law School, had a different opinion on the position of the accountant-tax practitioner. He asserted that accountants were blowing up the problem and were getting excited over things that did not deserve attention.[37] He also stated that the accountant was really in a very good position and should have recognized and accepted his good fortune as fact. Griswold made the following five assertions:[38]

1. The term "practice of law" was being interpreted too narrowly. Policemen constantly used the statutes in performing their duties and no one thought about accusing them of unauthorized practice
2. In the *Agran* case the court was too literal in defining the practice of law
3. The ABA should not take an extreme position, as this might cause Congress to take a position strongly in favor of the accounting profession
4. The CPA's were harming themselves by seeking legal changes for all agents (those allowed to practice before the Treasury). They should "separate" themselves from non-CPA's
5. If the CPA's did get what they wanted, an undesirable

> thing could happen, that is, a disbarred attorney would be able to continue to practice law (tax law anyway).

Also, Griswold wrote: ". . . many if not most accountants are better equipped to handle many tax questions than a considerable proportion of the members of the Bar," and in relation to corporate returns he said, "Here there is much that only the accountant can do if the return is of any complexity."[39] The latter statement is of particular significance because it is incongruent with the "difficult" test as set forth by Rembar. If one begins with the premise that the "difficult" test was for the public good, and then the test is applied to the complex corporate return, it is at least plausible that the accountant would, under this test, not be able to deal with the complex return. But this conclusion would seemingly contradict the "public good" premise if what Griswold said were true; namely, ". . . there is much that only an accountant can do." The logic is inescapable; if the law will not allow the only qualified person to do the work, how can the law be benefiting the public? In *Agran,* part of the logic that was used against him was that his legal research was of a difficult nature.[40] The court took this thought and pointed to 10.2(f) and Agran lost.

The AIA recommended that 10.2(f) be changed to the following: "No enrolled practitioner who is not a member of a recognized profession shall hold himself out as qualified by virtue of his enrollment to engage in the practice of that particular profession."[41]

The ABA in a response stated: "The ABA opposes the deletion or emasculation of the existing 10.2(f)" (while at the same time calling for collaboration between professions). They said that they did not mind the CPAs filing returns or refund forms, but they did not want accountants in tax court.

In April 1955, Griswold published a few suggestions for the CPAs to follow:[42]

1. The AIA should "call off the dogs"
2. The CPA should "separate" himself from the non-CPA
3. Problems that arise should be kept out of the courts and in the hands of the National Conference. The Conference could wield a great deal of power by arguing in court, if necessary, for the party with which it sided
4. Let the matter work itself out by way of ordinary competition
5. The CPA should make it a rule to contact a lawyer when a legal problem exists

Griswold also acknowledged that there was an overlap between the two professions, and that in other countries accountants were accepted in the area of taxes.

In July 1955, a response was published by Richardson who stated that within the framework of Griswold's suggestions there was a solution if the members of the Bar sincerely desired one. His main points are listed as follows:

1. Accept the premise that CPA's are qualified to practice taxes
2. Acknowledge that CPA's are honest in their contention that Sec. 10.2(f) of Circular 230 is being used to deprive accountants of well established rights and privileges
3. Both professions need to make sacrifices
4. Having "cleared the air" with 230, establish a cooperative organization to settle disputes
5. Let there be more evidence that the rank and file lawyers are willing to follow men like Griswold.[43]

A deeper understanding of the ABA's position can be found by examining William Jameson's address to the House of Representatives. An abstract in outline form is presented below:[44]

1. William Jameson was the President of the Committee on Professional Relations (CPR)
2. The committee was aware of the AIA's proposed change in Circular 230. The 1954 House had authorized a special committee to oppose the proposed Circular change
3. Congressman Reed of New York (Chairman of the Ways and Means Committee) introduced HR 9922 proposing that the Secretary of the Treasury regulate tax matters relating to lawyers and accountants
4. The Committee on Unauthorized Practice became the Committee on Professional Relations (the CPR) of which Jameson became president
5. HR 9922 was also introduced as HR 1601 and HR 2461
6. The CPR was very aware that the AIA had sent letters to its members (calling the members to action) and as a result sent a counter letter to each member of Congress stating, ". . . we believe it would be an unwise interference by the federal government with the traditional control of the practice of law by the several states."
7. The AIA published a pamphlet called "Helping the Tax-

payer." In referring to this James said, "I'm sure that you all will agree that the publication of that pamphlet was unfortunate." The ABA sent out a counter pamphlet called "Lawyers and Accountants in the Tax Practice" to "clear the air," but not to "aggravate."

8. In December Maurice Stans (AIA President) met with Loyd Wright (ABA President) and the two appointed a committee to negotiate. Jameson stated, "We have been negotiating in good faith and this is true of both sides."
9. It is interesting to note what Jameson expected to happen in the event the negotiations failed. He said that the AIA would push for the bills to be passed and also that ". . . they have accumulated a substantial fund for that purpose . . . we can't hope to match that in the event that we get into this controversy."
10. Jameson expressed a desire not to dispute.

In relation to the AIA pamphlet, "Helping the Taxpayer," mentioned in item 7 above, the ABA had a number of criticisms to offer:[45]

1. The pamphlet incorrectly states the position of the legal profession concerning the proper activities of lawyers and accountants in tax practice
2. The pamphlet fails to state correctly the nature of the federal tax problem and the procedures involved in the disposition of tax controversies
3. The AIA failed to mention the principles of 1951 which ". . . creates confusion where none exists."

Along with these points were included the following examples of problems in which the accountant should not engage:

1. determination of whether a minor should be included as a member of a partnership
2. determination of when monetary payments to a divorced wife are tax deductible
3. determination of when the forgiveness of a debt is taxable to the debtor
4. determination of whether a merger or consolidation qualifies as a tax-free reorganization.

On January 1, 1956, the Treasury Department finally made a statement regarding 10.2(f). The Department acknowledged that it was responsible for uniform interpretation of the regulation and that the particular problem would be monitored closely in the future; if necessary, an investigation would be made to determine the need for a change in regulations. This statement was very much in favor of the accountants as the legal profession was not in favor of uniform interpretation (unless such interpretation would be slanted in their favor which was unlikely).

Later in the same year, the AIA announced that it was dropping the *Agran* case and was not going to take it to the Supreme Court. The reason cited was that the AIA's legal counsel recommended that the case was not a serious precedent in the other states and, being two years old, would not likely be cited as it once was. It is interesting to note that at the time this statement was made, accountants in Los Angeles were practicing tax as if nothing had happened.[46]

Early in 1957, the Special Committee on Professional Relations of the ABA and the Committee on Relations with the ABA of the AIA met and issued a joint report.[47] It was stated that each state should set up a joint committee and litigation should pass through these committees rather than going to court. The 1951 principles were reiterated. It was also stated that there should be only one state committee per state and that there should be a high degree of coordination between the state, local, and national levels.

Accountants and Lawyers Work Toward Resolution of Dispute

After the 1957 joint report, an atmosphere of mutual confidence and cooperation was being created. *Circular 230* had been completely revised (although it was argued that there was no real change[48]). In the same state in which the *Bercu* case had been held, a decade later, the State Bar met with the State Society of CPAs and made a formal agreement consistent with the 1951 principles and also established the machinery for settling disputes.[49] Moreover, in California a CPA won a judgment for professional fees (for tax work). The defendant cited *Agran,* but the judge stated that *Agran* was not applicable in the instant case because an important fact was missing—the research of a hundred legal cases which Agran had done.[50]

The National Conference was influential in settling controversies which arose in a number of states. Its lawyer-members dissuaded some state or local bar associations from intended hostile actions against the accounting profession. Gradually, incidents of this nature ceased, and the situation became stabilized throughout the country.[51]

Later, the Editor of the *Journal of Accountancy* wrote:

> However it is not the machinery alone that is responsible for the present harmony. There has been a change of basic attitudes, from one of conflict, to one of cooperation, from one of silence to one of disclosure, and from one of suspicion to one of trust.

In the past, the AIA had been instrumental in blocking a series of bills supported by the ABA relating to practice before administrative agencies of the federal government.[52] Most of these bills contained provisions which would severely restrict CPAs in their tax practice or in informal representation before governmental agencies.

Major legislation of this type was introduced with the support of the Bar in 1965. The AIA's position was that it would support the bill if an amendment were made to provide specifically that certified public accountants were entitled to practice before the Treasury Department. After consultation, the ABA stated that it would not object to the desired amendment.

On September 23, 1965, the bill passed both houses of Congress. It contained the following provision, inserted as an amendment at the AIA's request:

> Any person who is duly qualified to practice as a certified public accountant in any state, possession, territory, commonwealth, or the District of Columbia may represent others before the Internal Revenue Service of the Treasury Department upon filing with that agency a written declaration that he is currently qualified as provided by this subsection and is authorized to represent the particular party in whose behalf he acts.[53]

Thus, after a long struggle, the right of CPAs to practice before the Treasury Department was law.

Conclusions

The tax dispute played an important role in the evolution of the modern accountant. It helped establish accountancy as a profession in the eyes of the law and also formally introduced the "newly recognized profession" to the legal profession. The dispute also helped the general public by establishing further clarity in the law regarding what is in fact unauthorized practice.

After 30 years of controversy, the authority of CPAs to practice before the Internal Revenue Service was firmly established. Fortunately, the ABA did not offer massive resistance and conceded to the demands of the AIA. Today, lawyers and CPAs are dependent upon each other's expertise in dealing with the complexities of tax law.

FOOTNOTES

[1]Dunlop v. Lubus, 112 Ky. 237, 65 s.w. 441, 1901.
[2]Carey, p. 204.
[3]Kopta, p. 76.
[4]Austin, p. 808.
[5]Dobson v. Comm., 320 U.S. 489.
[6]Kopta, p. 76.
[7]Re New York County Lawyers Association (Bercu case), 273 App. Div. 524, 78 N.Y.S. 2d 909, 87 N.E. 2d 461 (1948).
[8]" 'Tax Expert' Found Guilty of Unauthorized Practice of Law," p. 185.
[9]" 'Tax Expert' Found Guilty of Unauthorized Practice of Law," p. 260.
[10]Austin, p. 805.
[11]Austin, p. 805.
[12]This is not meant to imply that the same thing was happening in all states.
[13]"Tax Practice Principles Approved by Lawyers and CPAs," p. 802.
[14]Official Decisions and Releases, "Lawyers and CPAs Join in Statement of Principles Defining Proper Areas of Federal Tax Practice for Members of Both Professions," *Journal of Accountancy,* 1951, p. 869.
[15]"The Interrelationship Between Law and Accountancy," p. 62.
[16]"The Interrelationship Between Law and Accountancy," p. 67.
[17]Letters to the Editor, "A Word for Advertising 'Tax Expert,' " *Journal of Accountancy,* 1952, p. 537.
[18]"Practice Before Treasury Under Congressional Investigation," p. 33.
[19]Journal Newsletter, *Journal of Accountancy,* 1952, p. 389.
[20]"Accountants' Help Acknowledged by Tax Authorities," p. 161.
[21]Current Books and Articles, "Publications for or by Lawyers Can Be Useful to Accountants as Well," *Journal of Accountancy,* 1952, p. 109.
[22]Official Decisions and Releases, "February Meeting of the National Conference of Lawyers and Certified Public Accountants," *Journal of Accountancy,* 1952, p. 466.
[23]Official Decisions and Releases, "February Meeting of the National Conference of Lawyers and Certified Public Accountants," *Journal of Accountancy,* 1952, p. 466.
[24]Official Decisions and Releases, "February Meeting of the National Conference of Lawyers and Certified Public Accountants," *Journal of Accountancy,* 1952, p. 466.
[25]F. K. Ketler, 196 F.2d 822 reversing and remanding 17 TC 216.
[26]Rhode Island Bar Assoc. et. al. v. D. Libutti Eq #2181 Supreme Court of Rh. I.
[27]Correa, p. 599.
[28]It also deserves mention that Agran did extensive legal research for his client in order to do the tax work.
[29]Correa, p. 599.

[30]"CPAs' Tax Practice Seriously Threatened," p. 161.
[31]"CPAs' Tax Practice Seriously Threatened," p. 161.
[32]Letters to the Editor, "Some Readers' Opinions on the Tax Practice Problem," *Journal of Accountancy,* 1954, p. 581.
[33]Letters to the Editor, "Some Readers' Opinions on the Tax Practice Problem," *Journal of Accountancy,* 1954, p. 149.
[34]"CPAs' Tax Practice Seriously Threatened," p. 162.
[35]Rembar, p. 549.
[36]Rembar, p. 549.
[37]Griswold, December, 1955, p. 1113.
[38]Griswold, p. 1113.
[39]Griswold, p. 1113.
[40]Agran did research on about 100 cases of law. A later case that was similar ended up with opposite results on the premise that the CPA did not render the legal research that Agran did.
[41]Official Decisions and Releases, "Proposed Revision of Treasury Circular 230," *Journal of Accountancy,* 1955, p. 56.
[42]Griswold, April, 1955, p. 33.
[43]Richardson, p. 27.
[44]"Chairman Jameson's Statement to the House," p. 318.
[45]The criticisms were made by the staff of the *American Bar Association Journal,* see: *American Bar Association Journal,* "Lawyers and Accountants," p. 440.
[46]"The *Agran* Case in Perspective," p. 29.
[47]Official Decisions and Releases, "Joint Report of Special Committee on Professional Relations of American Bar Association and Committee on Relations with Bar of American Institute of Accountants," *Journal of Accountancy,* 1957, p. 53.
[48]Weitzel, p. 42.
[49]"Lawyer - CPA Co-operation," p. 27.
[50]Official Decisions and Releases, "Decision Upheld in Tax Practice Case," *Journal of Accountancy,* 1961, p. 70.
[51]Carey, p. 254.
[52]Carey, pp. 255-256.
[53]Carey, p. 257.

BIBLIOGRAPHY

Austin, Maurice. "Relation Between Lawyers and CPAs in Tax Practice." *Journal of Accountancy* (June 1951), pp. 805-815.

Carey, John L. *The Rise of the Accounting Profession to Responsibility and Authority, 1937-1969.* New York: AICPA, 1970.

Correa, Mathias F. "Recent Developments in Federal Income Tax Practice." *Journal of Accountancy* (November 1954), pp. 599-609.

Current Books and Articles. "Publications for or by Lawyers Can Be Useful to Accountants as Well." *Journal of Accountancy* (January 1952), pp. 109-112.

Dobson v. Comm., 320 U.S. 489.

Dunlop v. Lubus, 112 Ky. 237, 65 s.w. 441, 1901.

Editorial. "Accountants' Help Acknowledged by Tax Authorities." *Journal of Accountancy* (February 1952), pp. 161-162.

________________. "The *Agran* Case in Perspective." *Journal of Accountancy* (December 1956), pp. 29-31.

________________. "CPAs' Tax Practice Seriously Threatened." *Journal of Accountancy* (August 1954), pp. 161-163.

____________. "The Interrelationship Between Law and Accountancy." *Journal of Accountancy* (July 1951), pp. 62-71.

____________. "Lawyer-CPA Co-operation." *Journal of Accountancy* (March 1959), p. 27.

____________. "Lawyers and Accountants." *American Bar Association Journal* (May 1955), pp. 439-442.

____________. "Lawyers and Accountants: Chairman Jameson's Statement to the House." *American Bar Association Journal* (April 1955), pp. 318-320.

____________. "Practice Before Treasury Under Congressional Investigation." *Journal of Accountancy* (January 1952), pp. 33-34.

____________. " 'Tax Expert' Found Guilty of Unauthorized Practice of Law." *Journal of Accountancy* (March 1950), p. 185.

____________. "Tax Practice Principles Approved by Lawyers and CPAs." *Journal of Accountancy* (June 1951), pp. 802-803.

Griswold, Erwin N. "A Further Look at Lawyers and Accountants." *American Bar Association Journal* (December 1955), pp. 1113-1116.

____________. "Lawyers, Accountants, and Taxes." *Journal of Accountancy* (April 1955), pp. 33-41.

Journal Newsletter. *Journal of Accountancy* (October 1952), p. 389.

Kopta, William. "What Constitutes the Unauthorized Practice of Law." *Accounting Review* (January 1950), pp. 76-80.

Letters to the Editor. "A Word for Advertising 'Tax Expert.' " *Journal of Accountancy* (May 1952), p. 537.

____________. "Some Readers' Opinions on the Tax Practice Problem." *Journal of Accountancy* (November 1954), pp. 149, 581-584.

New York County Lawyers Association (Bercu case), 273 App. Div. 524, 78 N.Y.S. 2d 909, 87 N.E. 2d 461 (1948).

Official Decisions and Releases. "Decision Upheld in Tax Practice Case." *Journal of Accountancy* (February 1961), pp. 70-72.

____________. "February Meeting of the National Conference of Lawyers and Certified Public Accountants." *Journal of Accountancy* (April 1952), pp. 466-467.

____________. "Joint Report of Special Committee on Professional Relations of American Bar Association and Committee on Relations with Bar of American Institute of Accountants." *Journal of Accountancy* (January 1957), pp. 53-54.

____________. "Lawyers and CPAs Join in Statement of Principles Defining Proper Areas of Federal Tax Practice for Members of Both Professions." *Journal of Accountancy* (June 1951), pp. 869-871.

____________. "Proposed Revision of Treasury Circular 230." *Journal of Accountancy* (January 1955), pp. 56-59.

Rembar, Charles. "The Practice of Taxes: One Attorney's Point of View." *Journal of Accountancy* (May 1954), pp. 549-564.

Richardson, Mark E. "The Accountant's Position in the Field of Taxation." *Journal of Accountancy* (August 1954), pp. 166-172.

____________. "The Tax Quarrel." *Journal of Accountancy* (July 1955), pp. 27-29.

Weitzel, John P. "Practice Before the Treasury." *Journal of Accountancy* (February 1960), pp. 42-46.

The Accounting Historians Journal
Vol. 11, No. 1
Spring 1984

Linda H. Kistler
Clairmont P. Carter
and
Brackston Hinchey
UNIVERSITY OF LOWELL

PLANNING AND CONTROL IN THE 19th CENTURY ICE TRADE

Abstract: This paper describes selected accounting records of the Tudor Ice Company which were devised to manage and control the far-flung business activities of Frederic Tudor, a 19th century entrepreneur who has been called America's first monopolist. Tudor's business genius lay in developing methods of harvesting, transporting, storing, and marketing commercial quantities of ice taken from New England ponds and shipped to tropical ports around the world. Frederic Tudor employed relatively sophisticated accounting techniques to analyze and control transportation costs and the costs of product shrinkage. He also routinely analyzed and translated foreign currency transactions for his geographically dispersed operations and evaluated the impact of competition on his operations.

Introduction

> He cuts and saws the solid pond, unroofs the house of fishes, and carts off their very elements and air, held fast by chains and stakes like corded wood, through the favoring winter air to wintry cellars to underlie the summer there . . . .
>
> *Walden*—Henry David Thoreau

Frederic Tudor (1783-1864) was a 19th century Boston entrepreneur who recognized the potential profit in shipping and marketing commercial quantities of ice harvested from New England lakes and ponds to tropical climates where the product, if known at all, was a luxury good. Through his singleminded and often ruthless pursuit of profit, he developed a thriving industry where none had existed before. Tudor's business practices earned him some notoriety as America's first monopolist.

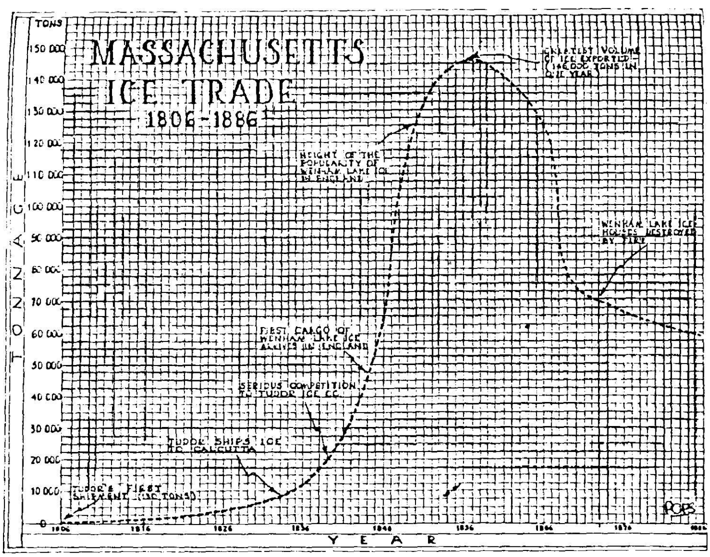
Eventually known throughout New England as "The Ice King," Tudor's first ice shipment in 1806 amounted to only 130 tons. At the height of the ice trade during the 1850s, however, more than 140,000 tons of ice were exported from Massachusetts in one year. Exhibit 1 depicts the growth and decline of the ice trade from 1806 to 1886. Beginning with his first cargo to the West Indies in 1806, Tudor shipped ice from Boston to such distant ports as New Orleans, Charleston, Savannah, Calcutta, Singapore, Rio de Janeiro and throughout the Caribbean.

The personal diaries and accounting records of Frederic Tudor are housed in Harvard University's Baker Library. They offer fascinating glimpses of his entrepreneurial vision, his management methods and philosophy, and his skillful application of accounting and financial data to manage his diverse business interests which

EXHIBIT 1

MASSACHUSETTS ICE TRADE

1806 - 1886



SMOOTH CURVE GRAPH SHOWING THE GROWTH OF THE MASSACHUSETTS ICE TRADE 1806-1886

Source: Essex Institute, Historical Collection.

included sailing vessels to transport the ice and ice houses to store the product while awaiting sale.

This paper briefly introduces Frederic Tudor, the man, noting his marketing skills and selling techniques, and his innovative contributions to harvesting, transporting, and storing ice in tropical climates. Portions of Tudor's surviving financial records are described, including examples of accounting for product shrinkage, an obviously critical concern with ice—which literally melts into unprofitable water. Tudor's method of translating foreign currency transactions for his Calcutta venture during the 1850s also is noted. Finally, Tudor was sensitive to the problems of competition, and his analysis of its impact on his Calcutta operation is presented.

Frederic Tudor, Entrepreneur and Innovator

On the outgoing tide the morning of February 13, 1806, the brig "Favorite," (Captain Pearson commanding) cleared Boston harbor with the first cargo of New England ice bound for the West Indies. Between that date and 1886, the enterprises of Frederic Tudor would cut, store, and deliver to tropical destinations as far away as Calcutta an estimated two million tons of pure New England water processed by the harsh New England winters.

Frederic Tudor had previously declined the opportunity to follow his brothers into Harvard College, preferring more immediately to seek his fortune in business. He was only 23 years old when he quit his job as a clerk in the counting house of a Boston merchant and purchased and outfitted the "Favorite" using savings and borrowings that totaled about $7,000 for this first venture. While age 23 may appear somewhat youthful to embark on an enterprise of this scale, Tudor's diaries disclose that he had considered himself a businessman since he was about thirteen years old.

The "Favorite" arrived in Martinique after a 20-day passage. Upon clearing customs, Tudor circulated the following advertising broadside announcing his novel product:

> Today, March 7 and during three consecutive days, there will be put up for sale in small amounts a cargo of ice, brought into this port very well preserved, from Boston, by the brig, Favorite, Captain Pearson; this sale will take place immediately and will last three days only, the brig having to proceed at that time to another island. The price is ten cents a pound. It is necessary to bring a wool cloth or a piece of covering to wrap the ice; this means preserves it much longer.[1]

Frederic Tudor not only conceived the idea of cutting, storing, shipping, and merchandising New England ice throughout the tropical world, he also nearly singlehandedly invented the technology to accomplish the task. In the early 19th century, ice was a notoriously short-lived product. A method had to be devised to ship it over vast distances through warm climates and store it long enough to bring the product to market without critical loss of volume. Tudor's transportation solution, first introduced on the "Favorite," was to transform an ordinary merchant ship into a floating ice house by adding a foot or more of sawdust insulation to the hull and packing the ice solidly between layers of sawdust and hay. This frozen cargo was totally below the ship's water line, and used the ocean water as coolant.

Because the ice functioned as ballast, Tudor's ships also carried other cargo. For example, an 1875 cargo to Bombay contained, in addition to ice, the following items: rosin, drills, oil, glass, boards, and lobsters. A cargo from Boston to Calcutta contained rock oil, drills, salmon, lobsters, and boards. Other ships carried apples, butter, tar, pitch, turpentine, ice pitchers, painkiller, ink, manufactured cloth, and manufactured tobacco.[2]

Analyzing the results of his first venture in the ice trade, Tudor recorded in his diary in 1806:

> The plan of transporting the ice is perfectly good. Now the one thing needful is an ice house which will keep the ice after it has arrived in the West Indies.[3]

The Martinique venture of 1806 was not a financial success because the lack of an ice house at the destination precluded effective storage. A merchant whose stock in trade is literally melting away cannot afford to hold it off the market to await the prospect of later monopoly profits.

The fundamental storage problem required Tudor to concentrate his considerable talents on improvements in ice house construction and to seek additional capital.

Having secured a monopoly from the Spanish governor in Cuba and backed by several friends, Tudor constructed an ice house at Havana; and sometime in January 1807, another ice ship, the "Trident," set sail from Boston bound for Havana with 180 tons of ice. The cargo arrived with little loss in transit, but lasted only two weeks because the new storage facility, although properly designed, had been poorly constructed. The ice house was rebuilt, and by 1810 the Havana operation was sufficiently profitable to compel Tudor to record:

> I have at last the comfort of reflecting that I have given a success to this business which is permanent, and which must forever remain a monument to the advantage of steady perseverence in a project which is good in the main, but for a while plagued by unfortunate circumstances not intrinsically connected with it.[4]

Tudor faced formidable marketing and technological challenges in bringing ice to the tropics. Ice was a totally new product in most tropical cities; and Tudor realized he must not only bring the product to market, he also had to, in many cases, *create* that market. Tudor devised a two-pronged marketing strategy. The preferred approach was to obtain a distribution monopoly via contract with the local government, a method he successfully employed in his Havana venture. If sole distribution rights could not be obtained from government sources, he attempted to convince local businessmen to invest in the construction of an ice house in return for low, stable ice prices. As announced in a Tudor advertising broadside in Charleston, South Carolina (1816): "If a subscription of ten thousand dollars can be raised, then the price shall be fixed at six cents and a quarter a pound."[5] Tudor also offered volume discounts through the sale of weekly tickets allowing the purchaser to buy bulk quantities of ice at reduced prices. Thus, he not only raised capital to finance the operation, but also helped to assure a market for the product.

Introduction of ice to the public required another strategy, and Tudor outlined his plan in his diary:

> It becomes necessary to establish with one of the most conspicuous bar keepers a jar and give him his ice for a year. The object is to make the whole population use cold drinks instead of warm or tepid and it will be effected in the course of three years. A single conspicuous bar keeper having one of the jars and selling steadily his liquors all cold without an increase in price, render it absolutely necessary that the others come to it or lose their customers—they are compelled to do what they could in no other way be induced to undertake.[6]

The strategy worked, and Tudor's business soon extended throughout the Gulf of Mexico and the Caribbean; and by 1833, as far as Calcutta—where the first ice cream ever eaten in India was made from Massachusetts ice.

Successful marketing placed considerable strains on production, since the tools and machinery required for cutting and handling large quantities of ice simply did not exist. Here, also, Tudor's genius as an innovator came to the fore. At first, Tudor employed work crews to cut the ice by hand from throughout eastern Massachusetts and coastal New Hampshire and Maine. As demand grew, Tudor's ice men used equipment such as the horse-drawn ice-cutter, which was invented by Nathaniel Wyeth. Wyeth eventually developed specialized tools for cutting and processing ice at all stages of production, and Tudor strongly urged Wyeth to patent these devices and restrict their use to Tudor operations.

Tudor's success inspired competition; and by the 1820s and 1830s, he could no longer ignore the problem. Competitors copied his shipping and storage methods; and he responded in typically direct fashion—by engaging in cut-throat pricing. During this period, his business practices were vigorous—often ruthless—and Tudor perhaps deserved his reputation as America's first monopolist.

The relentless pursuit of profits from his worldwide ice business reached its zenith in 1856, when Massachusetts exported 146,000 tons of ice. During that year 363 cargoes were shipped to fifty-three different cities in the United States, the West Indies, the East Indies, China, Australia, and the Philippines.[7]

Ice exports from Massachusetts declined dramatically during the 1860s (see Exhibit 1) due to continued strong competition and the introduction of artificial means of refrigeration. An era was coming to a close; and with Frederic Tudor's death in 1864, his business operations declined and his properties were either sold or leased for other purposes.

Elements of Accounting and Control

The Frederic Tudor collection in Baker Library at Harvard University includes journals, wastebooks and cashbooks, ledgers, weather notebooks, letterbooks, and personal diaries dating from 1803 to 1897. While some records appear to be complete, others are fragmentary and nearly illegible. The following sections examine selected portions of several documents and are not intended to present a comprehensive analysis of extant records.

Tudor's accounting records are of interest both in terms of their content and also the form in which financial disclosures are made. As might be expected, there are many similarities between the Tudor Ice Company records and financial data produced by modern accounting systems. On the other hand, the form of Tudor's accounting system differs significantly from typical management information systems in use today.

Disclosure Content

The fundamental objective of management accounting is to provide relevant information to assist managers in the planning and control of business enterprises. Although management accounting as a formally recognized discipline is a relatively recent development, managers have been using cost accounting data for decision-making since Biblical times. Tudor designed his accounting records to assist him in the management and control of his operations. His early years as a counting house clerk doubtless proved valuable when he ventured forth on his own. This brief discussion merely introduces the scope and complexity of the Tudor collection, while focusing on the following management concerns: product shrinkage, competitive pricing, profitability of selected ventures, and foreign currency translations.

Product Shrinkage. By its nature, the storage and distribution of ice in distant tropical cities required careful analysis of product shrinkage to minimize and control loss of volume. Exhibit 2 is an excerpt from Tudor's Calcutta ice trade accounting records that illustrates routinely compiled statistics for product shrinkage. Based upon the data presented in Exhibit 2, product shrinkage percentages were calculated by the authors and are shown in Exhibit 3. The data reveal that, on average, nearly 50 percent of ice shipped from New England to Calcutta was lost due to melting. Selling prices clearly reflected this shrinkage or Tudor would have been forced to discontinue his Calcutta operations, which reported increasing sales from inception in 1833 until 1850 when 1,161 tons were sold.

Competition. Competition in the ice trade was a pervasive problem for Frederic Tudor, particularly in mainland cities of the United States. Tudor frequently resorted to cut-throat price reductions to control the ice trade in such southern cities as Savannah and Charleston. While the monopoly Tudor enjoyed in Havana allowed him to sell ice for as much as $0.25 per pound, in South Carolina and Georgia, prices as low as six to eight cents a pound were hard to maintain because of competition from New York entrepreneurs.[8]

Tudor apparently took an active role in pricing decisions. His typical strategy was to cut prices drastically to force his competitors out of business. For example, Tudor would price his ice for a penny a pound until a competitor's supply had melted at the docks; then he would raise prices to profitable levels. His diaries record the following case:

EXHIBIT 2

TUDOR'S CALCUTTA ICE TRADE
ACCOUNTING FOR SALES AND SHRINKAGE
1833-1850

Year	Tons Shipped	Tons Landed	Tons Sold
1833	201	82	30
1834*	—	—	—
1835	354	62	16
1836	671	369	118
1837	910	557	297
1838	613	298	143
1839	2,536	1,257	347
1840	1,885	935	420
1841	3,203	1,687	475
1842	2,063	1,073	438
1843	1,620	797	327
1844	3,320	1,524	635
1845	2,331	1,168	697
1846	3,079	1,578	766
1847	2,883	1,463	775
1848	3,266	1,661	828
1849	3,434	1,917	806
1850	3,107	1,641	1,161

*Tudor's New England shipper, S. Austin, broke his contract; shipped to Calcutta "on his own account, by which he lost greatly."

Source: Collected Papers of the Tudor Ice Company, Baker Library, Harvard University Graduate School of Business, Cambridge, MA.

> This interferer will get about $5.00 in all for what must have cost him at least $100 . . . . This business is mine. I commenced this business (the depot at Savannah), and have a right to rejoice in ill-success attending others who would profit by my discovery without allowing me the credit of teaching them.[9]

In addition to pricing references in his regular accounting reports, Frederic Tudor prepared special accounting analyses during periods of intense competition (or opposition as he called it). Exhibit 4 presents a portion of Tudor's analysis during a period of competition between November 1849 and December 31, 1850 in Calcutta, India.

The analysis of previous sales is interesting. Tudor included the

EXHIBIT 3

TUDOR'S CALCUTTA ICE TRADE
PRODUCT SHRINKAGE
1833-1850

Year	Percent Ice Tons Landed Versus Tons Shipped	Percent Ice Tons Sold Versus Tons Landed
1833	41	37
1834	—	—
1835	18	26
1836	55	32
1837	61	53
1838	49	48
1839	49	28
1840	50	45
1841	53	28
1842	52	41
1843	49	41
1844	46	42
1845	50	60
1846	51	49
1847	51	53
1848	51	50
1849	56	42
1850	53	71

December 1848 sales twice in order to develop comparative data and measure the impact of competition. Unquestionably, the effects of competition were dramatic. According to Tudor's records, ice was reduced to 1/2 anna per seer from two annas per seer to meet competition from November 3, 1849 to March 27, 1850. On April 1st, the price was restored to two annas per seer. (An anna was a fraction of a rupee. It was discontinued as a unit of account in the 1950s when cents were adopted. A seer is a unit of weight somewhat greater than two pounds, but less than one kilogram.) On July 6, 1850 ice was again reduced to 1/2 anna from two annas in response to competition.

Venture Profitability. Frederic Tudor's ice operations extended worldwide, and his accounting records indicate that each market was treated as a separate venture. Tudor also compiled extensive statistics and financial data on a monthly and an annual basis for such items as revenues, shipping costs, landing charges, tons sold,

EXHIBIT 4

CALCUTTA OPERATIONS, TUDOR ICE COMPANY
ANALYSIS OF THE IMPACT OF COMPETITION
1848-1850

Regular Sales At Similar Periods Previous (No Competition)			Sales During Opposition (Competition) Period		
Month/Year	Tons of Ice Sold	Rupees Received For Ice	Month/Year	Tons of Ice Sold	Rupees Received For Ice
1848			1849		
5th to 30th			5th to 30th		
November	43	5146.8	November	55	1726.14
December	35	4225.0	December	39	1235.10
1849			1850		
January	28	3290.0	January	41	1238.6
February	30	3558.0	February	46	1447.4
March	66	7452.0	March	93	2908.13
7 to 31 July	73	8770.9	7 to 31 July	121	3792.6
August	101	10345.4	August	143	4495.14
September	87	10724.8	September	139	4345.5
October	83	10327.12	October	114	3441.0
1848			1850		
November	51	6185.0	November	79	2586.2
December	35	4225.0	December	58	1822.12
	632	74249.9		928	29085.6

RECAPITULATION

	Tons	Rupees
Regular Sales (No Opposition)	632	74249.9
Sales During Opposition	928	29085.0
	296	45164.9

Being an increase in Quantities of 47 percent and decrease in Amount of 60 percent of money.

Source: Accounting Records of Frederic Tudor, *Calcutta Trade*, 1833 to 1850 Inclusive, Baker Library, Harvard University Graduate School of Business Administration.

sales, prices, number of purchases, and the amount of profit and loss. Separate accounts were maintained for his New Orleans venture and his Calcutta operation, for example.

Maintenance of detailed accounting records provided useful control devices, beginning with his earliest venture in Havana. At one point, Tudor detected a significant discrepancy between the tons of ice sold in Havana and the amount of money he was receiving. An investigation revealed the discrepancy was due to the misconduct of one of his agents, who subsequently was dismissed.

Foreign Currency Translation. Frederic Tudor's far-flung operations required him to account for ventures in different currencies. He encountered problems not dissimilar to those facing contemporary multinational companies. The Tudor accounting records indicate that he routinely converted foreign currency to U. S. dollars by applying a conversion factor to foreign currency data. For example, from November 1848 through March 1849, Tudor converted rupees to dollars by multiplying rupees by $0.50.

Accounting Disclosure—Form Versus Content

Two of the more interesting aspects of Tudor's ice trade records are the manner in which the information was disclosed and the level of sophistication reflected in the reports. Many statements were prepared on lined accounting paper with numerous columns. The reports were handwritten with columns neatly totaled and double-underlined. In addition to the multiple rows and columns for numerical data, Tudor's accounting records typically included a column for comments and notes by the preparer. Indeed, the narrative comments in the Tudor reports reveal some of the interesting problems this early multinational business confronted.

As well as referring to specific problems, the narrative portions of Tudor's accounting records provide a rudimentary history of his business operations at each location. He notes such events as the return of certain employees and agents, land purchases, the impact of competition, war, and the vicissitudes of weather upon his profits and losses. For example, a perusal of Tudor's Calcutta records reveals the impacts of an Indian war in 1845 and 1846, serious competition in 1849 and 1850, and notations of significant climatic variations that influenced sales during the same period.

Conclusion

Unlike most of his contemporaries in maritime commerce during the early years of the Republic, Frederic Tudor created and successfully operated a truly international company. The nature of his product dictated that the Tudor Ice Company be more than a carrier of ice: the company had to become a part of the local business scene wherever Tudor ships called. The efficient and effective management of such a world-wide enterprise in the early 19th century could not have been accomplished without the techniques of management accounting documented in this paper. Without these tools of planning and control, the profits of the Tudor Ice Company could have been as unstable and transitory as its principal product.

FOOTNOTES

[1]Collected Papers of the Tudor Ice Company, Baker Library, Harvard University Graduate School of Business.
[2]Accounting Records, 1860-1875.
[3]Frederic Tudor Diaries, 1806.
[4]Frederic Tudor Diaries, 1810.
[5]Advertising pamphlet printed by J. E. Miller, Queen Street, Charleston, South Carolina, November, 1816. Collected Papers of the Tudor Ice Company.
[6]Frederic Tudor Diaries, 1819.
[7]Boston Board of Trade.
[8]Cummings, p. 38.
[9]Frederic Tudor Diaries, May 15, 1819.

BIBLIOGRAPHY

Accounting Records, 1860-1875, Tudor Ice Company, Ledger A, Baker Library, Harvard University Graduate School of Business Administration.
Boston Board of Trade, *Third Annual Report,* 1857, pp. 79-82.
Collected Papers of the Tudor Ice Company, Baker Library, Harvard University Graduate School of Business Administration.
Cummings, Richard O. "New England Ice Industry and Trade." Unpublished doctoral thesis, Harvard University, Cambridge, Massachusetts, 1934.
Frederic Tudor Diaries, Baker Library, Harvard University Graduate School of Business Administration.

The Accounting Historians Journal
Vol. 11, No. 1
Spring 1984

J. R. Edwards
and
K. M. Webb
UNIVERSITY COLLEGE, CARDIFF

THE DEVELOPMENT OF GROUP ACCOUNTING IN THE UNITED KINGDOM TO 1933

Abstract: The publication of consolidated accounts is an early example of innovative financial reporting procedures being introduced by U.S. companies before they were adopted in the U.K., where Nobel Industries (1922) is generally cited as the first holding company to prepare economic entity based financial reports. This paper produces evidence which shows that the publication of consolidated accounts, by British companies, began at least as early as 1910. Our research nevertheless confirms the generally held view that U.S. developments occurred earlier, and we explore a range of possible explanations for this phenomenon.

Introduction

A major financial reporting development in the United Kingdom, during the first half of the twentieth century, was the publication of consolidated accounts dealing with the combined financial affairs of holding companies and their subsidiaries. Obligations to publish some form of group accounts were introduced during this period by the London Stock Exchange (1939), the Institute of Chartered Accountants in England and Wales (1942) and the Government (1947),[1] and each of these regulatory bodies expected the information to be published as a supplement to the traditional legal entity based accounting reports. Many company directors, recognising the severe limitations of legal entity based financial reports, had much earlier made the voluntary decision to publish group accounting information.

The publication of group accounting information, in the form of consolidated statements, is an early example of innovatory financial reporting procedures being introduced by companies in the United States before they were adopted in the United Kingdom. Whereas consolidated balance sheets were "almost universally adopted"[2] in

The authors thank the Social Science Research Council for financial support for this research.

the United States by 1922, in Great Britain their publication remained the exception rather than the rule throughout the 1920s.

Specification of Objectives

This paper has three related objectives.

1. To establish when the need for group accounting reports first arose in the U.K., and for this purpose it will be assumed that a need arose when intercompany shareholdings became a common means of combining business activities.
2. To provide some evidence concerning the rate of adoption of group accounting procedures by British companies.
3. To provide some explanations for the relatively late adoption of group accounting practices by British companies as compared with American companies.

Economic Developments

Many writers have assumed that the slower rate of adoption of group accounting procedures in the U.K. reflects the later introduction of the holding company concept. According to Walker, "Until the 1920s few British companies had used the holding-company form as a means of organising their affairs or carrying out mergers. . . ."[3] This section seeks to show that the timelag cannot be so easily explained, since a significant number of British holding companies undertook business activity during the first two decades of the present century through the medium of subsidiary companies.

In both Britain and the United States, the period 1870-1914 saw the emergence of the large scale enterprise based on the amalgamation of hitherto independent concerns. Carter[4] notes the absence of English texts dealing with this phenomenon prior to 1900, but a literature began to appear around the turn of the century[5] and it was added to during the period up to the First World War.[6] This literature deals primarily with the social and economic implications of the merger movement which, during the period 1919-1921, became the subject of Government enquiry.[7]

The absence of a generally accepted definition of the term "holding company," until 1928,[8] makes it difficult to assess the popularity of intercompany shareholdings as a basis for business combinations. Many early texts confine this description to investment holding companies,[a] and often apply the term to those organisations

[a]These are non-operating companies whose assets consist exclusively of shareholdings in other companies. "Industrial holding companies" are also engaged in manufacturing or trading activity.

irrespective of whether their investments comprise majority or minority shareholdings. A further problem is the lack of information concerning the extent of the shareholding implied by the following terms used to describe investments: namely "connected company," "affiliated company," "constituent company," "allied company," and "associated company." The term holding company is used, in this paper, to describe a company which possesses a majority of the voting share capital of another company so as to guarantee control over that latter company's affairs.

The transition from an economy consisting of small, independent concerns competing against one another to an economy in which "competition is no longer a reliable regulator of prices over a very considerable field,"[9] was fairly gradual, beginning in the 1880s. However, relatively rapid changes occurred in Britain during the periods 1895-1902 and 1916-1922.[10] The holding company form of business combination was prevalent towards the end of the first of these merger periods,[11] and was of the industrial type.[12] The formation of a new company solely to hold the shares of existing companies as investments, i.e. the investment holding company, is mentioned as one possible method of business combination,[13] but it does not seem to have been used much at this stage. According to Liefmann[14] the Nobel Dynamite Trust, a forerunner of Nobel Industries, was an isolated example of an investment holding company prior to the First World War; such companies became more common during the second merger period, 1916-1922.[15]

Payne notes that "the merger movement in Great Britain was on a much smaller scale than that experienced in the U.S."[16] Also, the movement towards business combination began earlier in American industry (around 1870) than in British industry and the U.S. experienced a longer period of intense activity 1890-1905,[17] than did the U.K., 1895-1902. However, there are significant similarities between the two countries' experiences. In both countries, merger activity occurred at approximately the same time and the major form of combination, at the height of this activity, was based on intercompany shareholdings.[18] According to the Report of the U.S. Industrial Commission, "in no other country than England is the form of industrial combination so like that generally found in the U.S."[19]

Legal Requirements

The Companies Act (CA) 1900 obliged British company directors to present an audited balance sheet to shareholders attending the annual general meeting, while CA 1907 required non-private companies to file an audited statement in the form of a balance sheet with the Registrar of Companies.[20] According to Walker,[21] "The 1907 U.K. Companies Act established definite incentives for the formation of holding companies," since directors, wishing to conceal financial information from investors or the general public, could form a subsidiary company to undertake some of the holding company's business activities. Indeed, exemption from the filing requirement was soon described as the main advantage of incorporating as a private company,[22] and the popular practice of forming subsidiary companies to avoid "disclosure of matters relating to what in substance is the business of the parent company"[23] is acknowledged by the Greene Committee (1926). The committee decided not to outlaw the practice, however, concluding that "The system by which a large company departmentalises its business by means of a number of private subsidiaries has been found convenient and beneficial in practice. . . ."[24] The stimulus which prevailing legislation provided for the development of the holding company form in the U.K. was absent in the U.S., where corporate accounts remained free from general regulation until the passage of the Securities Acts of 1933 and 1934. The findings presented in this section and the preceding section are inconsistent with the popular idea that the late development of consolidated accounts in the U.K. is attributable to the relative unimportance of the holding company form prior to the 1920s. We therefore believe that alternative explanations (discussed under Some Explanations and Conclusions) are required for the differential rates of adoption of group accounting procedures documented below.

Development of Group Accounting in the United States. Theory and Practice

Hawkins suggests that the wave of mergers which occurred in the United States towards the end of the nineteenth century significantly increased concentration within industries, and that the consequent reduction of competition was responsible for a change in the public's attitude towards business.[25] One result was a demand for greater disclosure of financial information in published accounts.[26] Writers have cited various American companies, publishing accounts between 1886 and 1899, as the first examples of consolidated accounts,[27] but there is general agreement that it was the published report of the United States Steel Corporation for 1902, which Arthur Lowes Dickinson helped prepare, that set new standards both in terms of it being a consolidated statement for a major organisation and because of the level of disclosure it contained.[28]

Once started, the publication of consolidated accounts for groups of companies quickly became a common feature of financial reporting procedures in the United States. May[29] notes that this practice was soon so well established that in 1917 the Treasury, without specific legislative authority, was able to require consolidated tax returns under the Revenue Act of that year. According to Dickinson,[30] speaking in 1924, the publication of a consolidated balance sheet and earnings statement had been "the almost universal practice [of U.S. holding companies] for more than fifteen years." This fact is further evidenced by the regular inclusion of the topic, from 1912 onwards, in the examinations leading to the qualification of Certified Public Accountant.[31] While conditions in America made some company directors receptive to the idea of consolidated accounts, accountants themselves were largely instrumental in getting them widely accepted.

In lectures delivered[32] and books written[33] between 1904-1912, Dickinson, Dicksee, Lybrand, and Montgomery put forward a strong case for the preparation of consolidated accounts by holding companies. This literature cannot be used to explain the initial adoption of consolidated statements by American companies (a development which was already well underway), but it does seem likely that these accountants played an important part in bringing about the widespread use of economic entity based financial statements. Dickinson, Lybrand, and Montgomery were successful American practitioners[b] and also leading figures of the American Association of Certified Public Accountants. We can therefore assume that their comments on contemporary accounting practices are reliable and that their conclusions regarding the utility of entity based accounting reports would have attracted serious consideration within the American business community.

Development of United Kingdom Theory

In December 1922, Sir Gilbert Garnsey presented a paper entitled "Holding Companies and their Published Accounts" to the London members of the Institute of Chartered Accountants in England and Wales (ICAEW), and the lecture was subsequently published in

[b]Dicksee practiced only in Great Britain, and the British version of his famous *Auditing* text did not include a chapter on holding companies until 1924. Dickinson was also British, but he was resident partner in charge of Price Waterhouse & Co.'s New York office, 1901-1913.

both *The Accountant*[34] and book form.[35] Garnsey pointed out that the holding company form of business organisation, by this time quite common in the U.K., presented new problems for accountants. He doubted whether the publication of a holding company's balance sheet alone, which satisfied the legal requirement for publication contained in the Companies Act 1908,[36] "really gives the shareholders the information to which they are entitled."[37] Accordingly, he argued that the information appearing in the legal balance sheet should be supplemented by sufficient additional information to enable users of accounts to observe the financial position of the group of companies as a whole.[38]

The importance of Garnsey's lecture to the development of accounting for British holding company groups, which Kitchen sees as central to that development,[39] is essentially a result of its being the first British book on the subject. Parker[40] acknowledges it as such and *The Accountant,* in a review of the first published edition, describes it as the "first serious examination given to the subject on this side of the Atlantic, for in this respect we are far behind our American cousins," and concludes "this first word will not be the last."[41] In the same vein, Wilkins says that "previously little serious consideration had been given to the form of their [i.e. holding companies'] published accounts."[42]

The Accountant describes it as "an accountancy classic"[43] and Kitchen, more recently, as a "technical *tour de force,*"[44] both deserved accolades, but the arguments and techniques Garnsey presents were not invented by him. As discussed in an earlier section, the literature on consolidated accounts originated from the United States, and, in fact, most of this material would have been available to accountants in the U.K. long before 1922. Each of the three lectures delivered between 1904-1908 were published in *The Accountant,*[45] and both the 1904 meeting in St. Louis and the 1908 Congress at Atlantic City were attended by distinguished representatives of the leading British professional bodies.[46] The books written by Dickinson, Dicksee, and Montgomery were published only in the United States, but some accountants in Britain would have been aware of their existence, for instance through reviews in *The Accountant,*[47] and they could have obtained copies if they had so desired. In addition, Dickinson wrote an article for *The Accountant* in 1906,[48] and a further article, written by H. C. Freeman for *The Journal of Accountancy,* was reprinted in *The Accountant* in 1915.[49] In the same year David S. Kerr delivered a lecture in Canada, which was published in *The Accountant,* stressing "the merits [of consolidated accounts] which cannot be disregarded."[50]

The findings presented in this section show that the theory and mechanics of consolidated statements preparation were established and available to U.K. accountants several years before 1922. This being so, the main significance of Garnsey's lecture is that he set out the conventional wisdom of group accounting in a clear and concise manner, and he did so while a partner in a leading firm of chartered accountants during the course of a lecture delivered to the London members of the ICAEW. We now consider the extent to which group reporting procedures were adopted by U.K. companies up to 1933.

Development of United Kingdom Practice

According to a number of authorities,[51] Nobel Industries Ltd. pioneered the publication of consolidated accounts in the U.K. Perhaps their conclusion is based on the following assertion made by Nobel's chairman, in his 1922 report to the shareholders.

> I propose to give you the salient features as at December 1920 in a statement which I think is practically an innovation for large concerns so far as this country is concerned.

The fact that the information published for Nobel Industries was neither innovatory nor, indeed, a consolidated statement in today's parlance is demonstrated in this section.

Tables 1 and 2. Table 1 lists thirty-eight British companies[c] for which some form of group accounting procedure had been introduced by 1933 when the published accounts of the Dunlop Rubber Co. Ltd. attracted so much attention. This list is constructed from two sources:

1. Companies cited in certain of the literature (see note A to Table 1) as employing group accounting procedures, twenty-three examples.
2. An examination of the accounts of two hundred and eleven U.K. registered public companies selected, at random, from the non-public utility sections of the *Stock Exchange Official Year Book, 1935,* produced fifteen further examples.[d]

---

[c]Except where otherwise stated, the accounts and records referred to in this section are located at the Guildhall Public Library, London, where they were deposited by the London Stock Exchange.

[d]We might therefore expect that approximately 7% (fifteen companies as a percentage of two hundred and eleven) of all non-public utility U.K. public companies disseminated group accounting information. The proportion would, of course, be higher for a sample confined to holding companies.

The published accounts of the thirty-eight companies were then examined for the period 1900-1933 in order to establish when group accounting procedures were first introduced and whether any changes were subsequently made. Six different schemes of group accounting were identified (see note C to Table 1). Table 2, derived from the data contained in Table 1, lists the number of examples of group accounting methods 1-6, found for each of the years 1910-1933.

Pearson and Knowles Coal and Iron Co. Ltd. The earliest example of a consolidated statement, listed in Table 1, was published by the directors of the Pearson and Knowles Coal and Iron Co. Ltd. The directors first considered the possibility of publishing a consolidated balance sheet in 1907 and a draft statement was prepared. The idea was abandoned but revived in 1910 when the company needed to raise capital to finance the establishment of a new company. A draft copy of the prospectus drew attention to an important limitation of the legal balance sheet, namely that it failed to give a proper indication of the value of the company's investment in Ryland Brothers Ltd., a wholly owned subsidiary. In the Board's view, "the surplus value of its [Ryland Brothers] assets over and above the price paid by the P. & K. Co. for its shares now represents an internal reserve of at least £140,000 [the amount of Ryland Brothers Ltd.'s undistributed profit] no part of which is shown by the P. & K. annual Balance Sheet."[52]

A consolidated balance sheet, as at 31 December 1909, was included in the prospectus and in the accounts subsequently published for the year to 30 June 1910. Following implementation of a Scheme of Arrangement dated 12 July 1928,[53] the directors of Pearson and Knowles reverted to the practice of publishing only the legal balance sheet. By this time the company had become a wholly owned subsidiary of Sir W. G. Armstrong, Whitworth and Co. Ltd. and the ultimate holding company, Armstrong Whitworth Securities Co. Ltd., commenced the practice of publishing a consolidated balance sheet in 1929 (see Table 1).

Pre-Nobel Industry developments. Prior to 22 September 1922, when the directors of Nobel Industries first published group accounts, companies experimented with five of the six procedures identified in Table 1. Seven examples are given of companies employing the "equity basis" of accounting for investments (Method 1). There are three examples of companies circulating the published accounts of subsidiaries together with their own statutory accounts (Method 2), while British Dyestuffs is the single example of a holding company publishing a statement which combines the assets and liabilities of subsidiaries (Method 3). Four companies published consolidated balance sheets instead of legal entity based financial statements (Method 5), and one of these companies, United British Oilfields of Trinidad, also published a consolidated profit and loss account. Three companies published consolidated statements on a supplementary basis (Method 6), including the Meadow Dairy group of companies which presented both a consolidated balance sheet and consolidated profit and loss account to the annual general meeting held on 28 March 1923.

No attempt is made in this study to undertake a detailed evaluation of the consolidated accounting procedures employed by directors purporting to publish economic entity based financial reports. Most of the research has been confined to published accounts and these rarely provide any indication whether essential adjustments, such as the elimination of intragroup profits and trading debts, have been made. Other information needed for a constructive criticism of procedures followed, e.g., whether there exists a minority interest and whether the shares were acquired at the subsidiary company's incorporation or later, is also unlikely to be given.

The Nobel Industries example. A statement displaying the assets and liabilities of the Nobel Industries group (Method 4) was contained in the chairman's report presented to shareholders on 22 September 1922. The document sets out the financial position of the group at 31 December 1920 and was contained in the chairman's report on the statutory accounts for 1921. The statement is described as an "aggregate document" and the figure for "Cost of Shares of Constituent Companies," contained in the statutory balance sheet, is replaced by "the actual detailed assets and liabilities of these companies." The document identifies the portion of net assets applicable to outside shareholders, but it is unaudited and contains calculations of neither goodwill nor the distributable profits of the group. Sir Joseph Stamp, a leading economist and stern critic of the secretive accounting practices employed during the 1920s,[54] was secretary of Nobel Industries and we might expect that he had some influence in improving the reporting practices employed by his company.

Post-Nobel Industries developments. Twenty-five examples are given in Table 1 of companies publishing group accounting information between the date of Nobel's aggregated statement and the Dunlop Rubber Company accounts for 1933. Table 2 shows the relative popularity of the various methods and the way that their popularity changed over time.

One noticeable feature is the growth and decline in popularity of the equity method (Method 1) of accounting for the results of subsidiary companies. Companies which adopted the equity basis, and took credit in their statutory accounts for an appropriate share of the undistributed profits of subsidiaries, included Lever Brothers, one of the largest British conglomerates at this time. This company's chairman, F. D'Arcy Cooper, argued strongly against the proposal to require holding companies to publish consolidated accounts in evidence presented to the Greene Committee,[55] and it has been suggested[56] that the views he presented were influential in persuading the Committee not to recommend the introduction of compulsory group accounting requirements.

The decline in popularity of equity accounting for investments, from 1929 onwards, is interesting. In Walker's view[57] reaction against the recognition of unrealised profits and reversion to a cost-based valuation was attributable to the mood of conservatism which followed revelations in the *Royal Mail* case. This is probably part of the explanation but it is not entirely convincing. Although equity accounting allows full recognition of profit earned, it also requires full provision to be made for the holding companies' share of any losses suffered by subsidiary companies. The equity method is therefore much less open to abuse than the cost-based valuation of investments which recognises revenue on the basis of dividends received and allows losses to be ignored. An alternative explanation for the decline in popularity of equity accounting is the failure of the Greene Committee or CA 1928 to provide any support for this method. Indeed, section 40(1) of the Company Act 1928, which made it clear that the published balance sheet should contain information concerning the assets and liabilities of "the company," may have been interpreted as requiring the exclusion of undistributed profit representing property belonging to subsidiaries.

The demise of method 5 (publication of a consolidated balance sheet only) can certainly be attributed to the provisions of CA 1928. Section 40(4) obliged the directors of holding companies to show, in the balance sheet, separate figures for shares in subsidiary companies and total debts due to and due from subsidiary companies. Clearly this information could be accommodated only by publishing legal entity based accounting reports.

A further trend which emerges from an examination of Table 2 is the continuous growth in popularity of method 6. In 1920, only one of the companies examined, Scottish Union National Insurance Co. Ltd., published a supplementary consolidated statement and, at that date, three other methods were more popular. During the 1920s, the number of companies employing method 6 grew quite rapidly, though it is not until 1928 that it becomes the most popular group accounting procedure, replacing method 1. By 1933 it was the dominant form of group accounting report, and reaction against methods 1 and 5 substantially explains the increased popularity. Both companies employing method 5 in 1928 switched to method 6 the following year; while three of the companies employing method 1 in 1928 had transferred to method 6 by 1933.

Findings in this section show that, although companies publishing group accounting information remained very much in the minority during the period examined, a wide range of methods of accounting for the results of subsidiary companies was in use by the early 1930s, and the number of companies employing group reporting procedures were clearly not insignificant. The earliest example discovered was the consolidated balance sheet published for the Pearson and Knowles group of companies in 1910, but there are eleven other instances of companies publishing group accounting information before Nobel Industries published its aggregate statement of assets and liabilities, and these included four further examples of consolidated accounts.

Some Explanations and Conclusions

The evidence presented in the section on Economic Developments, which led us to conclude that an apparent need for group accounts emerged in the U.K. at about the same time as in the U.S., is summed up by Payne who says that "the British merger movement occurred in the early 'nineties and at the turn of the century, almost simultaneously with that of the United States."[58] The thesis is developed further in the section on Legal Requirements which draws attention to prevailing legislation conducive to the holding company form. The section on Development of United Kingdom Practice demonstrates the existence of a significant time lag before British corporate reporting procedures responded to the developing need for group accounts, but the evidence also shows that companies were preparing group accounts, including consolidated statements, earlier than has been generally supposed. A full explanation for the observed time lag is not attempted in this paper. However, we make some suggestions which should help towards a resolution of the problem.

Technical Competence. A precondition for the adoption of group accounting procedures is the existence of an ability on the part of accountants to apply these techniques in practice. We might expect accountants to have obtained the necessary expertise during their training if they were required to include this topic in their studies for the professional accounting examinations. The examinations of the ICAEW first referred to the holding company form in 1914, when question 3 on the "Bookkeeping and Accounts" paper required candidates to prepare the opening balance sheet of an investment holding company formed to acquire the shares of two existing companies. In 1915, a question[59] examined candidates' knowledge of the legal relationship which exists between a holding company and its three subsidiaries, but it was not until 1925 that questions which required candidates to prepare a consolidated balance sheet were regularly included.[60] The absence of readily available texts which could be used by students preparing for their examinations is referred to in the earlier section on Development of United Kingdom Theory, and the lack of available material is the subject of correspondence in *The Accountant* in 1935.[61]

Some support for the idea of a possible link between the slow development of group reporting procedures and a lack of professional competence may also be found in the evidence presented to the Greene Committee. According to one witness the "infrequent use of consolidated reports was due to the fact that they were difficult to prepare."[62] This is a little surprising since the aggregation of the results of departments and self accounting branches, in order to produce legal entity based reports, was a routine accounting process. The preparation of consolidated accounts is, of course, a rather more complex process, but not the preparation of an aggregate statement of assets and liabilities for the group, apparently the reporting method favoured by British accountants in the early 1920s.[63]

Demand for Group Accounts. There existed a potential need for group accounts in the U.K., from the early years of this century, but it is probably true to say that the need was not so great as in the U.S. In the U.K. merger activity had been less intense and it is likely that investments accounted for a lower proportion of total assets than was the case in the U.S. companies. Moreover, it was only during the second wave of merger activity, 1916-1922, that the investment holding company was much used as a means of effecting the desired degree of business combination in the U.K., a development which is likely to have focused attention more clearly on the need to revise traditional legal entity based reporting procedures. In the industrial holding company, the implications of intercompany shareholdings for the usefulness of accounting reports is less evident since a significant proportion of total balance sheet values often continues to consist of conventional operating assets. The asset structure of the investment holding company represented a much sharper break with tradition and, at a time when the balance sheet was still regarded as the principal accounting report designed to display corporate financial strength, a document consisting primarily of figures representing the book value of investments in other companies might have been thought to possess significant drawbacks.

The information requirements of the British public do appear to have been less demanding than those of its American counterpart.[64] This reflects the British tradition of allowing the directors a free hand to manage the company's affairs, and not to saddle them unnecessarily with disclosure requirements which might hamper entrepreneurial initiative. According to the ICAEW (1925), "if in some cases they [the directors] disclose in the published accounts less than some people desire the absence of detail is in most cases wise and is generally supported by the Shareholders. To give in a Balance Sheet such detailed information as would afford full protection to creditors might mean the giving of a mass of detail of material value to competitors."[65] In Britain, the shareholders were often expected to rely on the auditors to protect their interests[66] and/or to obtain the desired information by asking pertinent questions at the annual general meeting.[67] Nevertheless, those directors who decided to publish group accounting information, generally stressed the utility to shareholders of the additional data.[68]

Management Opposition to Disclosure. The general reluctance of British management voluntarily to publish group accounting information is an important factor explaining the relatively slow rate of adoption of those procedures in Britain as compared with the United States. Garnsey, writing in 1931, refers to the growing demand for consolidated statements since the first edition of his book, published in 1923, but observes that "perhaps the real opposition to any but the most essential changes in the form of the published accounts often comes from boards of directors who are not all imbued with the desire to give their shareholders as much information as possible."[69]

Stacey attributes the more open reporting practices of American companies to their directors' desire to engender confidence within the capital market and thereby help to attract the scarce resources available for investment.[70] Stacey also claims that U.S. managers were far less wary of competitors than were their British counterparts who have traditionally maintained that disclosure would be advantageous to competitors and therefore detrimental to the company's long term interests. This argument is not, however, a convincing objection to consolidated accounts, since their function is to summarise overall progress and not to provide details regarding achievements in individual areas.

We believe that a more persuasive explanation for management's opposition to consolidated accounts recognises the fact that during this period secret reserves, as a means of fostering financial stability, were highly regarded. Subsidiary companies provided considerable scope for smoothing the holding company's trend of reported profits, and the earlier section on Legal Requirements produces evidence which shows that a great deal of business activity was structured in this way primarily for the opportunities for concealment which it offered.

The Accountants' Reluctance to Innovate. Company accounts are primarily the directors' responsibility, but accountants undoubtedly exert an influence on the form and content of these statements. Parker suggests[71] the existence of a psychological barrier which, in the early years of this century, may have discouraged British accountants from adopting group accounting procedures developed in the United States. Accounting skills were transferred to the United States by representatives of British accounting firms during the last decades of the nineteenth century,[72] but the accounting profession developed quickly in America and an element of rivalry between the two countries soon emerged. The British profession, possessing a longer tradition and, in its view,[73] a more professional and less commercial attitude towards accounting, may well have been unreceptive to ideas developed by its former student.

The reluctance of British accountants to adopt innovatory practices is discussed in a letter[74] published in *The Accountant* in 1903:

> While the British accountant is fully the equal of the American practitioner in thorough and conscientious work, he is, as it seems to me, hampered by his conservatism and by his reluctance to depart from the beaten path . . . I believe it to be the fact that whatever progress has been made in America in the creation of a wider field of usefulness for accountants has been due . . . largely to the enterprise and aggressiveness of the American accountant.

The correspondent does acknowledge the fact that the British accountant is "hampered by the conservative and 'let well alone' policy of his clients"; a view shared by Garnsey who claimed that "the natural reluctance of the people of this country to change is too well known to require any explanation."[75] No attempt is made here to rank managers and accountants in order of responsibility for the slow rate of adoption of group accounting procedures, but it does seem that British accountants took on a less vigorous role than might have been expected. Whereas leading practitioners made an important contribution to developments in the United States, for a long time in Britain they remained silent, at least in public. The first practitioner to make a determined attempt to awaken the conscience of the British accounting profession was Garnsey, but practitioners were reluctant to respond to his ideas even at that late stage.[76]

Legal Barriers. Evidence suggests that company directors considered it illegal to publish a consolidated statement instead of a legal entity based financial report. According to Garnsey, "The consolidated Balance Sheet is seldom published alone in this country, no doubt for the reason that it is not regarded as the legal Balance Sheet."[77] While in the chairman of Nobel Industries' view:

> . . . so long as they [the subsidiaries] remain separate legal entities as distinct companies we are not entitled to put in our Balance Sheet the land, buildings, etc. they own, but can, perforce, only indicate the shares we hold at what was given for them in our own Share Capital and Cash. (1922 report).

We have seen that some directors were less inhibited and Table 1 shows that three companies employed group accounting method 5 throughout much of the 1920s. At Pearson and Knowles, the decision to publish only a consolidated balance sheet was preceded by a careful examination of the likely implications, though the advice received from their solicitors seems to have been ignored. John J. Bleckly, a director of the company, wrote to A. Norman Hill of Hill, Dickinson & Co., the company's solicitors, enquiring whether there was any legal objection to the proposed course of action.[78] In reply Hill informed Bleckly, "your Official Balance Sheet . . . called for under Articles 152 and 153 and returned to Somerset House" should include only the assets and liabilities of the Pearson and Knowles company.[79]

Prior to 1929, there existed no general legal requirement that the balance sheet presented to shareholders should be confined to the strict legal entity, but this obligation was usually implied by the company's articles. For instance, Pearson and Knowles' article 152 required the balance sheet to set out the "property and liabilities of *the company*."[80] As regards the filing requirement, it does seem that CA 1908, section 26(3), implied a legal obligation for directors to deliver a legal entity based balance sheet to the Registrar, then located at Somerset House. Nevertheless, Garnsey doubted whether "the authorities could or would refuse to accept Balance Sheets prepared in the consolidated form . . . and within the writer's [Garnsey's] experience they have been accepted."[81]

There are examples of consolidated balance sheets instead of legal balance sheets being presented to members and, according to Garnsey, even submitted to the Registrar,[e] but CA 1908 makes it clear that the filed document should contain "a summary of its [the company's] share capital, its liabilities and its assets."[82] If, therefore, management took the view that a single balance sheet should be published and that the same document should be filed with the Registrar, as was presented at the annual general meeting,[f] it is likely that the prevailing legal position militated against the publication of a consolidated statement.[83] It must be added, however, that directors were under no obligation to use the same balance sheet for both purposes, and they were perfectly free to publish both a legal balance sheet and a consolidated statement if they so desired. The situation was changed by CA 1929 which, according to Counsel,[84] made it clear that the legal balance sheet should not only be filed with the Registrar but also be presented to shareholders.

The preoccupation of the auditing profession with its strict legal obligations, prior to the 1930s,[85] is a further factor which is likely to have worked against the publication of consolidated accounts. The profession's attitude is summed up by the American Certified Public Accountant who claimed that "He [the British accountant] takes a narrow view of the legitimate scope of his operations, and is fearful of going outside the traditional limits, lest by doing so he should provoke criticism and suffer any loss of the dignity which is so dear to the heart of the British professional man."[86] This view receives some support from our research. The final column of Table 1 indicates whether or not the auditors reported on the group accounting information. Of the fifteen companies publishing either an aggregate statement of assets and liabilities or consolidated

[e]Whether or not the directors of Pearson and Knowles filed the legal balance sheet with the Registrar cannot be confirmed owing to the fact that after a certain period of time has elapsed the files of defunct companies are destroyed, subject to the retention of a sample for historical purposes.

[f]It was common practice for directors to withhold, from the Registrar, financial reports presented to shareholders which they were not legally required to file. Those documents which were filed, however, were rarely amended despite the fact that they contained data significantly in excess of strict legal requirements, Edwards (1981), Table 6 and pp. 12-15.

accounts as supplements to the legal entity based report (Methods 3 and 6), only for seven was the group accounting information commented on by the companies' auditors.

Creditors' Requirements. The primary purpose of consolidated accounts is to provide the holding company's shareholders with a realistic measure of the extent of their interest in an economic entity which may comprise a number of legally distinct companies. For the creditors of either holding companies or subsidiaries the consolidated balance sheet is of little use; indeed it may be positively misleading. Creditors usually enter into contracts with the *company* and their claims will be restricted to the assets of the legal entity which has received the money or goods. The consolidated balance sheet does not list separately the assets of individual companies and this makes it impossible for creditors to identify the resources available for repayment of amounts due to them.

This limitation on the value of the consolidated balance sheet was given scant attention by early American advocates of consolidated accounting procedures. Dickinson's 1913 text makes a passing reference[87] to the fact that consolidated accounts are of little use to the creditors and minority shareholders of subsidiary companies. Other American publications were uniformly uncritical of the new technique and emphasised only its attributes.[88] The situation was quite different in the U.K., and the numerous practical difficulties associated with consolidated accounting reports were emphasised time and again in evidence presented to the Greene Committee.[89] It seems likely that this awareness of the limitations of more detailed statements partly explains the slow adoption of consolidated reporting procedures and, also, the fact that when adoption did occur it was a supplement to, rather than a replacement for, legal entity based reports.

Summary

According to Walker[90] it was "in 1922 [that] British accountants began experimenting with the use of consolidated statements." We have seen that experimentation occurred much earlier but that the rate of adoption was slow. Suggested explanations for this state of affairs include the absence of a widespread demand for consolidated statements, managerial predilection in favour of secrecy, prevailing legal requirements, the failure of consolidated statements to satisfy the information requirements of creditors, and the reluctance of accountants to adopt innovatory reporting procedures, perhaps reflecting a lack of professional competence on their part. At a time when many directors, company law and even shareholders favoured confidentiality in financial matters, some powerful external stimulus was needed if companies in general were to publish consolidated accounts. Part of the required stimulus was provided by the Garnsey lecture. Its contribution was not so much the technical content; it had all been said before and there were U.K. companies already employing the procedures which he described. More important was the fact that Garnsey was a leading professional accountant, thoroughly convinced of the value of group accounts, vigorously expressing these views to the London members of the ICAEW. For these reasons the lecture attracted a great deal of publicity and comment but, as Kitchen clearly demonstrates,[91] the immediate effect was not the widespread adoption of group accounting techniques. The evidence presented to the Greene Committee, and accepted by that committee, reveals powerful forces opposed to the statutory imposition of group accounting requirements.

The voluntary adoption of group accounting techniques, which began at least as early as 1910, continued throughout the 1920s and 1930s. During the 1920s, in particular, companies experimented with a wide range of group reporting procedures. Some methods, including the American procedure of publishing consolidated statements instead of legal entity based financial reports, were rejected, others never gained significantly in popularity. The trend towards the publication of supplementary consolidated statements was continuous, but other methods which could not be accommodated comfortably within the developing legal framework fell out of favour. In the early 1930s *The Accountant,* which had earlier been critical of economic entity based reports, enthusiastically encouraged the growing practice of holding companies publishing consolidated statements.[92] Also, revelations in the *Royal Mail* case awakened the accounting profession to the existence of a moral as opposed to a purely legal responsibility towards its clients. It is the significance of the *Royal Mail* case for the use of secret reserves which has received the bulk of the accounting historian's attention, but it should not be forgotten that the case involved an intricate web of companies which, in the absence of any requirement to publish consolidated statements, provided scope for materially misrepresenting the group's financial position. In Walker's view[93] "the *Royal Mail* case was a major factor in encouraging the publication of consolidated statements." Certainly this case, together with the widely acclaimed reporting procedures introduced at the Dunlop Rubber Co. Ltd. for 1933, provided additional stimuli for the adoption of entity based financial reports.

Table 1

Reporting Procedures of Selected Holding Companies

Company	Source (A)	Date of AGM (B)	Year End	Group Accounting Method (C)	Changes in Group Accounting Method	Other Notes (D)	Auditor of Holding Company	Auditor Reports on Group Accounting Data
Pearson and Knowles Coal and Iron Co. Ltd.	Edwards	Sept. 1910	June 1910	5	Method 5 discontinued, 1928.		Blease & Sons	Yes
General Accident, Fire and Life Assurance Co. Ltd.	Stock Exchange	April 1911	Dec. 1910	5	Method 5 replaced by method 6, 1929.		Marwick & Mitchell	Yes
Anglo Dutch Plantation of Java Ltd.	Garnsey, 1923	Sept. 1912	Dec. 1911	1 & 2	Method 1 discontinued, 1933, when method 6 was adopted.	Profit and loss account of subsidiary also published	Deloitte, Plender, Griffiths & Co.	Yes (1911-32) (E)
Orchestrelle Co. Ltd. (name changed to Aeolion Co. Ltd., 1921)	Garnsey, 1923	Dec. 1913	June 1913	6	Method 6 abandoned, 1914, reintroduced, 1922.		Price, Waterhouse & Co.	No
Scottish Union National Insurance Co. Ltd.	Stock Exchange	May 1915	Dec. 1914	5	Method 5 replaced by method 6, 1915.		J. Hamilton Buchanan	Yes
General Guarantee Corporation Ltd.	Stock Exchange	Feb. 1918	Sept. 1917	1	Method 1 discontinued, 1930.		Black, Stewart & Co.	Yes
Van Den Berghs Ltd.	Stock Exchange	Jan. 1920	June 1919	1	Method 1 discontinued, 1929.		Price, Waterhouse & Co.	Yes
British Dyestuffs Corporation Ltd.	Garnsey, 1923	May 1920	Oct. 1919	3	Method 3 discontinued, 1924, following liquidation of subsidiary.		Thompson, McLintock & Co.	No

Table 1 (Continued)
Reporting Procedures of Selected Holding Companies

Company	Source (A)	Date of AGM (B)	Year End	Group Accounting Method (C)	Changes in Group Accounting Method	Other Notes (D)	Auditor of Holding Company	Auditor Reports on Group Accounting Data
United British Oilfields of Trinidad Ltd.	Garnsey, 1923	Nov. 1920	Dec. 1919	1	Method 5 adopted, 1920, discontinued, 1929. Method 6 adopted, 1930 discontinued, 1932, following liquidation of subsidiary.	Consolidated profit and loss account also published, 1930-1932	Price, Waterhouse & Co.	Yes
Midland Bank Ltd.	Garnsey, 1931	Jan. 1921	Dec. 1920	1 & 2	Method 1 discontinued, 1929 when method 6 was adopted in addition to method 2.		Price, Waterhouse & Co.	Yes (E)
Goodsons Mantle and Costume Co. (1920) Ltd.	Stock Exchange	Nov. 1921	Jan. 1921	1 & 2	Method 1 discontinued, 1929.		Goddard, Dunkley, Davie & Fryer; Halliday, Pearson & Co.	Yes (E)
Meadow Dairy Co. Ltd.	Garnsey, 1923	March 1922	Jan. 1922	1 & 6	Methods 1 and 6 discontinued, 1930.	Consolidated profit and loss account also published	Blackburn, Barton, Mayhew & Co.	Yes (Method 1 only)
Nobel Industries	**The Accountant**	Sept. 1922	Dec. 1920	4		Statement contained in chairman's report	W. B. Peat & Co.; Thompson, McLintock & Co.	No
Lever Brothers Ltd.	Simons	April 1923	Dec. 1922	1			Cooper Brothers & Co.	Yes

Table 1 (Continued)

Reporting Procedures of Selected Holding Companies

Company	Source (A)	Date of AGM (B)	Year End	Group Accounting Method (C)	Changes in Group Accounting Method	Other Notes (D)	Auditor of Holding Company	Auditor Reports on Group Accounting Data
William Melhuish (Properties) Ltd.	Stock Exchange	April 1925	Dec. 1924	2	Method 2 replaced by method 3, 1928. Method 3 replaced by method 1, 1929. Method 1 replaced by method 3, 1931.		Jackson, Pixley & Co.	Yes (E)
Spillers Ltd.	Stock Exchange	May 1925	Jan. 1925	6	Method 6 discontinued, 1928, following liquidation of subsidiary.		Impey, Cudworths, Lakin-Smith & Grade; Deloitte, Plender, Griffiths & Co.	No
Ebbw Vale Steel and Iron Co. Ltd.	Edwards, 1981	June 1925	March 1925	3	Method 3 replaced by method 6, 1930.	Consolidated profit and loss account also published from 1930	Peat, Marwick, Mitchell & Co.	Yes
Jute Industries Ltd.	Stock Exchange	Jan. 1926	Sept. 1925	6	Method 6 replaced by method 3, 1929. Method 3 discontinued, 1932, following liquidation of subsidiaries.		Dewar and Robertson	Yes
English Electric Co. Ltd.	Stock Exchange	April 1926	Dec. 1925	6		Consolidated profit and loss account also published	Gano, Jackson, Jefferies & Freeman	Yes

Table 1 (Continued)

Reporting Procedures of Selected Holding Companies

Company	Source (A)	Date of AGM (B)	Year End	Group Accounting Method (C)	Changes in Group Accounting Method	Other Notes (D)	Auditor of Holding Company	Auditor Reports on Group Accounting Data
Agricultural and General Engineers Ltd.	**The Accountant**	July 1926	March 1926	4	Method 6 adopted, 1927, but method 4 not discontinued until 1931.	Combined profit and loss account for subsidiaries also published, 1926-1930	Price, Waterhouse & Co.	No
Vickers Ltd.	Garnsey, 1923	April 1927	Dec. 1926	6	Method 6 discontinued, 1929. Method 2 adopted, 1930.		Peat, Marwick, Mitchell & Co.; Deloitte, Plender, Griffiths & Co.	Yes (1930-33) (E)
Parana Plantations Ltd.	Stock Exchange	May 1927	Dec. 1926	2	Method 2 replaced by method 6, 1933.		McAuliffe, Davies & Hope	Yes (E)
United Molasses Ltd.	Garnsey, 1931	April 1929	Dec. 1928	6		Consolidated profit and loss account also published	Price, Waterhouse & Co.	No
G. D. Peters & Co.	Stock Exchange	April 1929	Dec. 1928	6			Davie, Parsons & Co.	Yes
Hutchinson & Co. (Publishers) Ltd.	Stock Exchange	May 1929	Dec. 1928	1	Method 1 replaced by method 6, 1930.	Consolidated profit and loss account published from 1927	Charles Comins & Co.	Yes (Method 1 only)

Table 1 (Continued)

Reporting Procedures of Selected Holding Companies

Company	Source (A)	Date of AGM (B)	Year End	Group Accounting Method (C)	Changes in Group Accounting Method	Other Notes (D)	Auditor of Holding Company	Auditor Reports on Group Accounting Data
Armstrong Whitworth Securities Co. Ltd.	Garnsey, 1931	May 1930	Dec. 1929	6			Price, Waterhouse & Co.	No
Commercial Union Ltd.	Garnsey, 1931	May 1930	Dec. 1929	6			A. Dodds Fairbairn; Charles E. Fletcher	Yes
Cable and Wireless Ltd.	Garnsey, 1931	July 1930	Dec. 1929	6			Deloitte, Plender, Griffiths & Co.; Price, Waterhouse & Co.	No
Kawie (Java) Rubber Estates Ltd.	Stock Exchange	July 1930	March 1930	2 & 6	Methods 2 and 6 replaced by method 5, 1933.	Consolidated profit and loss account also published 1930-32	Wyatt, Williams & Co.	Yes (E)
International Sleeping Car Share Trust Ltd.	Stock Exchange	July 1930	May 1930	2			Peat, Marwick, Mitchell & Co.	Yes (E)
Aerated Bread Co. Ltd.	Garnsey, 1931	Dec. 1930	Sept. 1930	3			Gibson, Harris, Prince & Co.	Yes
Tube Investments Ltd.	Garnsey, 1931	Dec. 1930	Oct. 1930	4			Gibson & Ashford	Yes

Table 1 (Continued)

Reporting Procedures of Selected Holding Companies

Company	Source (A)	Date of AGM (B)	Year End	Group Accounting Method (C)	Changes in Group Accounting Method	Other Notes (D)	Auditor of Holding Company	Auditor Reports on Group Accounting Data
Turner and Newall Ltd.	**The Accountant**	Dec. 1931	Sept. 1931	6			Deloitte, Plender, Griffiths & Co.	Yes
Amalgamated Metal Corporation Ltd.	**The Accountant**	May 1932	April 1932	6			Deloitte, Plender, Griffiths & Co.	Yes
Richard Thomas and Co. Ltd.	Edwards, 1981	Nov. 1932	March 1932	6		Consolidated profit and loss account also published from 1933	Peat, Marwick, Mitchell & Co.	Yes
Ind Coope & Co. Ltd.	**The Accountant**	Nov. 1932	Sept. 1932	3			Whinney, Smith, Wninney & Co.	Yes
Parkinson and Cowan Ltd.	Stock Exchange	May 1933	Dec. 1932	3			Cash, Stone & Co.	No
Dunlop Rubber Co. Ltd.	Simons	May 1934	Dec. 1933	6		Consolidated profit and loss account also published	Stokes Brothers and Pim; Whinney, Smith & Whinney	Yes

Table 1 (Continued)

Reporting Procedures of Selected Holding Companies

Notes:

A. The authors' attention was drawn to the fact that these companies published group accounting information, at some time prior to 1934, by the following sources: J. R. Edwards, 1981; Sir Gilbert Garnsey, 1923 and 1931; A. J. Simons and the "Finance and Commerce" section of contemporary issues of *The Accountant*. In addition, a random selection of two hundred and eleven companies from the *Stock Exchange Official Year Book*, 1935, produced a further fifteen examples.

B. Companies have been listed in the date order of annual general meetings at which the financial information relating to subsidiary companies was first reported.

C. The following coding has been used:

1—Profits earned by subsidiaries accounted for on the accruals basis in the holding company's statutory accounts.

2—Balance sheets of subsidiaries also published.

3—Combined statement of assets and liabilities of subsidiaries published in addition to the holding company's statutory accounts.

4—Combined statement of assets and liabilities of group published in addition to the holding company's statutory accounts.

5—Consolidated balance sheet published instead of the holding company's statutory accounts.

6—Consolidated balance sheet published in addition to the holding company's statutory accounts.

D. Information is given, where necessary, to elaborate the coding 1-6.

E. Where method 2 is employed the subsidiary company's accounts are normally reported on by the subsidiary companies' auditors.

Table 2

Numbers of Companies Employing Group Accounting Methods 1-6, 1910-1933

Accounting Year	Method 1	Method 2	Method 3	Method 4	Method 5	Method 6	Total
1910	0	0	0	0	2	0	2
1911	1	1	0	0	2	0	4
1912	1	1	0	0	2	0	4
1913	1	1	0	0	2	1	5
1914	1	1	0	0	3	0	5
1915	1	1	0	0	2	1	5
1916	1	1	0	0	2	1	5
1917	2	1	0	0	2	1	6
1918	2	1	0	0	2	1	6
1919	4	1	1	0	2	1	9
1920	4	2	1	1	3	1	12
1921	5	3	1	1	3	2	15
1922	7	3	1	1	3	3	18
1923	7	3	2	1	3	3	19
1924	7	4	1	1	3	3	19
1925	7	4	1	1	3	6	22
1926	7	5	1	2	3	7	25
1927	7	5	1	2	3	8	26
1928	8	4	2	2	2	9	27
1929	6	4	2	2	0	11	25
1930	3	7	2	3	0	14	29
1931	2	7	3	2	0	15	29
1932	2	7	4	2	0	16	31
1933	1	5	4	2	1 (A)	18	31

Source: Data derived from Table 1

Note A. The section in the text on Development of United Kingdom Practice explains that Method 5 was outlawed in 1928, and no rationale has been found for the adoption of this method by Kawie (Java) Rubber Estates Ltd. in 1933.

FOOTNOTES

[1]Edwards (1981), pp. 2-3 gives details of these requirements.

[2]Garnsey (1923a), p. 54.

[3]Walker, p. 113.

[4]Carter, pp. 8-9.

[5]Crewdson. Hubbard. Macrosty (1902). White.

[6]Levy. MacGregor. Macrosty (1907).

[7]*Report of the Committee on Trusts, 1919*. Also various reports by the Standing Committee on Trusts, 1920-1921, set up under the Profiteering Acts of 1919 and 1920.

[8]Companies Act 1928, 18 and 19 Geo. 5, c.45, s.40(6).

[9]Hilton, p. 46.

[10]Carter, p. 3. Fitzgerald, p. 3. Hilton, p. 48. Lewis, p. 7. Payne, p. 520.

[11]*The Accountant*, March 2, 1901, p. 258. Macrosty (1907), pp. 15 and 23. Mathias, p. 390.

[12]Liefmann, p. 410.
[13]Macrosty (1907), p. 15.
[14]Liefmann, p. 410. See also Reader, p. 389.
[15]Liefmann, p. 410. *The Accountant*, October 26, 1918, p. 222.
[16]Payne, p. 523.
[17]Bain, p. 616.
[18]Crewdson, p. 127. Macrosty (1907), p. 23. Nelson, p. 129.
[19]*Report of the U. S. Industrial Commission*, Vol. XIX, Government Printing Office, Washington D.C. 1901, p. 627, as quoted in MacGregor, p. 132.
[20]Edwards (1981), pp. 3-4 gives details of these requirements.
[21]Walker, p. 20.
[22]Walker, p. 21.
[23]*Report of the Company Law Amendment Committee*, 1926, para. 87.
[24]*Report of the Company Law Amendment Committee*, 1926, para. 87.
[25]Hawkins, p. 257.
[26]Hawkins, p. 257.
[27]Bores, cited by Parker, p. 206. Childs, p. 44. Peloubet, p. 23.
[28]Hendriksen, p. 53.
[29]May, p. 33.
[30]Dickinson (1924), p. 410.
[31]Childs, p. 46. Montgomery, p. 656.
[32]Dickinson (1904 and 1905). Lybrand.
[33]Dickinson (1975 reprint). Dicksee. Montgomery.
[34]Garnsey (1923a).
[35]Garnsey (1923b).
[36]Companies (Consolidation) Act, 1908, 8 Edw. 7, c.69, s.26(3).
[37]Garnsey (1923a), p. 18.
[38]Garnsey (1923a), p. 18.
[39]Kitchen, p. 114.
[40]Parker, p. 206.
[41]*The Accountant*, January 19, 1924, p. 118.
[42]Wilkins, p. 17.
[43]*The Accountant*, January 19, 1924, p. 118.
[44]Kitchen, p. 114.
[45]See footnote 32.
[46]*The Accountant*, September 3, 1904, p. 237 and October 31, 1908, p. 535.
[47]*The Accountant*, February 1, 1913, p. 167 and April 11, 1914, p. 529.
[48]Dickinson (1906).
[49]Freeman.
[50]Kerr, p. 630.
[51]Kitchen, p. 124. Parker, p. 206. Wilkins, p. 17.
[52]NWRRC, location No. 3248.
[53]NWRRC, location No. 9536.
[54]Stamp (1921 and 1925).
[55]*Minutes of Evidence on the Companies Acts 1908-17*, 1925, day 18 and appendix W.
[56]Kitchen, p. 126.
[57]Walker, pp. 98-103.
[58]Payne, p. 520.
[59]"Bookkeeping and Accounts" paper, question 7.
[60]"Advanced Bookkeeping and Accounts" paper, question 2.

[61]See letters published in *The Accountant,* January 26, 1935, p. 117, July 13, 1935, p. 42, and July 20, 1935, p. 82.

[62]*Minutes of Evidence on the Companies Acts 1908-17,* 1925, day 16, p. 167.

[63]*The Accountant,* January 6, 1923, p. 2.

[64]It was not until the 1930s that the *Royal Mail* case caused shareholders, directors and accountants to reassess the informational value of the annual accounts, Edwards (1976), pp. 298-303.

[65]*Minutes of Evidence on the Companies Acts 1908-17,* 1925, appendix AA to minutes of evidence for day 21, p. lxviii.

[66]See, for instance, the articles of association of Guest, Keen and Nettlefolds Ltd., reproduced in Edwards (1981), pp. 39-40.

[67]*Minutes of Evidence on the Companies Acts 1908-17,* 1925, appendix AA to minutes of evidence for day 21, p. lxviii.

[68]For examples, see 1910 directors' report of Pearson and Knowles, 1921 chairman's report of United British Oilfields of Trinidad, 1929 chairman's report of United Molasses and 1930 directors' report of Armstrong Whitworth Securities.

[69]Garnsey (1931), p. 103.

[70]Stacey, p. 109.

[71]Parker, p. 205.

[72]Parker, p. 204.

[73]See for instance *The Accountant,* October 24, 1903, p. 1276, and February 20, 1904, pp. 245 and 254.

[74]*The Accountant,* October 10, 1903, p. 1220.

[75]Garnsey (1923a), p. 54.

[76]Kitchen, p. 114.

[77]Garnsey (1923a), p. 55.

[78]NWRRC, location no. 3248, letter dated June 22, 1910.

[79]NWRRC, location no. 3248, letter dated June 23, 1910.

[80]NWRRC, location no. 3248, letter dated June 23, 1910, our emphasis.

[81]Garnsey (1923a), p. 17.

[82]Section 26(3).

[83]Dickinson (1924), p. 477.

[84]*The Accountant,* August 31, 1929, p. 281.

[85]Edwards (1976), pp. 296-297 and 301-302.

[86]*The Accountant,* October 10, 1903, p. 1220.

[87]Dickinson (1975 reprint), p. 184.

[88]Walker, pp. 214-219.

[89]Kitchen, pp. 130-134. Walker, p. 73.

[90]Walker, p. 25.

[91]Kitchen, especially pp. 124-130.

[92]*The Accountant,* January 16, 1932, p. 85, June 11, 1932, p. 817 and December 31, 1932, p. 874.

[93]Walker, p. 94.

BIBLIOGRAPHY

Bain, J. S. "Industrial Concentration and Anti-Trust Policy" in Williamson, H. F., ed. *The Growth of the American Economy.* New Jersey: Prentice-Hall, 1951.

Carter, G. R. *The Tendency Towards Industrial Combination.* London: Constable & Co., 1913.

Childs, W. H. *Consolidated Financial Statements.* New York: Cornell University Press, 1949.

Crewdson, E. "Amalgamations." *The Accountant* (January 26, 1901), pp. 126-132.

Dickinson, Sir Arthur Lowes. "The Profits of a Corporation." *The Accountant* (October 22, 1904), pp. 442-453.

____________________. "Some Special Points in Accountancy Practice." *The Accountant* (April 22, 1905), pp. 495-504.

____________________. "Notes on Some Problems Relating to the Accounts of Holding Companies." *The Accountant* (May 19, 1906), pp. 647-649.

____________________. "Publicity in Industrial Accounts, with a Comparison of English and American Methods." *The Accountant* (October 4, 1924), pp. 469-484.

____________________. *Accounting Practice and Procedure.* Houston, Texas: Scholars Book Co., 1975. Reprint of 1913 edition.

Dicksee, Lawrence R. *Auditing: A Practical Manual for Auditors,* 2nd authorised American edition. Detroit, Michigan: The Business Man's Publishing Co., 1908.

Edwards, J. R. "The Accounting Profession and Disclosure in Published Reports, 1925-1935." *Accounting and Business Research* (Autumn 1976), pp. 289-303.

____________________. *Company Legislation and Changing Patterns of Disclosure in British Company Accounts, 1900-1940.* London: ICAEW, 1981.

Fitzgerald, P. *Industrial Combination in England.* London: Pitman & Sons, 1927.

Freeman, H. C. "The Statement of Accounts of Holding Companies." *The Accountant* (June 12, 1915), p. 785.

Garnsey, Sir Gilbert. "Holding Companies and their Published Accounts." *The Accountant* (January 6 and 13, 1923a), pp. 13 and 53 respectively.

____________________. *Holding Companies and their Published Accounts.* London: Gee & Co., 1923b.

____________________. *Holding Companies and their Published Accounts,* 2nd edition. London: Gee & Co., 1931.

Hawkins, D. F. "The Development of Modern Financial Reporting Practices Among American Manufacturing Corporations" in Chatfield, M., ed. *Contemporary Studies in the Evolution of Accounting Thought.* California: Dickenson Publishing Co., 1968, pp. 247-279.

Hendriksen, Eldon S. *Accounting Theory.* 3rd ed. Homewood, Illinois: Richard D. Irwin, 1977.

Hilton, J. *A Study of Trade Organisations and Combinations in the U.K.* London: Harrison & Sons, 1919.

Hubbard, E. "American 'Trusts' and English Combinations." *Economic Journal* (1902), pp. 159-176.

Kerr, D. S. "Consolidated Balance Sheets." *The Accountant* (November 20, 1915), pp. 627-630.

Kitchen, J. "The Accounts of British Holding Company Groups: Development and Attitudes to Disclosure in the Early Years." *Accounting and Business Research* (Spring 1972), pp. 114-136.

Levy, H. *Monopoly and Competition: A Study in English Industrial Organisation.* London: Macmillan Co., 1911.

Lewis, W. A. *Monopoly in British Industry.* London: Fabian Publications, 1945.

Liefmann, R. "Holding Companies: Europe" in Seligman, E. R. A., ed. *Encyclopaedia of the Social Sciences,* Vol. 7. New York: Macmillan Co., 1932, pp. 409-410.

Lybrand, William M. "The Accounting of Industrial Enterprises." *The Accountant* (December 19, 1908), pp. 786-799.

MacGregor, D. H. *Industrial Combination.* London: George Bell & Sons, 1906.

Macrosty, H. W. "Business Aspects of British Trusts." *Economic Journal* (1902), pp. 347-366.

______________. *The Trust Movement in British Industry.* London: Longmans, Green & Co., 1907.

Mathias, P. *The First Industrial Nation: An Economic History of Britain 1700-1914.* London: Methuen & Co., 1969.

May, George O. *Financial Accounting: A Distillation of Experience.* New York: Macmillan Co., 1943.

Minutes of Evidence on the Companies Acts 1908-17, 1925, non-parliamentary, HMSO.

Montgomery, R. H. *Auditing Theory and Practice.* Reprint edition. New York: Arno Press, 1976.

Nelson, R. L. *Merger Movements in American Industry 1895-1956.* Princeton: University Press, 1959.

NWRRC. The internal accounting records and correspondence of the Pearson and Knowles Coal and Iron Co. Ltd. are located at the British Steel Corporation, North Western Regional Records Centre (NWRRC), Shotton Works, Deeside, Clwyd.

Parker, R. H. "Explaining National Differences in Consolidated Accounts." *Accounting and Business Research* (Summer 1977), pp. 203-207.

Payne, P. L. "The Emergence of the Large Scale Company in Great Britain 1870-1914." *Economic History Review* (1967), pp. 519-542.

Peloubet, Maurice E. "The Historical Development of Accounting" in Backer, Morton, ed. *Modern Accounting Theory.* New Jersey: Prentice-Hall, 1966, pp. 5-27.

Reader, W. J. *I.C.I.: A History,* Vol. I. London: O.U.P., 1970.

Report of the Committee on Trusts, 1919, London: HMSO, cd.9236.

Report of the Company Law Amendment Committee, 1926, London: HMSO, cmd. 2657.

Simons, A. J. *Holding Companies.* London: Pitman & Sons, 1927.

Stacey, Nicholas A. H. *English Accountancy: A Study in Social and Economic History, 1800-1954.* London: Gee & Co., 1954.

Stamp, Sir Josiah. "The Relation of Accountancy to Economics." *The Accountant* (October 5, 1921), pp. 501-507.

______________. "Accountants' Problems of Today." *The Accountant* (October 31, 1925), pp. 685-687.

The Accountant. (March 2, 1901), "Amalgamations," pp. 257-259.

______________. (October 10, 1903), "Accountancy in the States," p. 1220.

______________. (October 24, 1903), "Accountancy in the States," pp. 1276-1278.

______________. (February 20, 1904), "Professional Etiquette in the States," p. 245.

______________. (February 20, 1904), "Etiquette v. Progress," p. 254.

______________. (September 3, 1904), "Congress of Accountants," p. 237.

______________. (October 31, 1908), "The American Association of Public Accountants," pp. 534-536.

______________. (February 1, 1913), "Review, *Auditing: Theory and Practice,*" p. 167.

______________. (April 11, 1914), "Review, *Accounting Practice and Procedure,*" p. 529.

______________. (October 26, 1918), "A New Holding Company," p. 222.

______________. (January 6, 1923), "Holding Companies and their Published Accounts," pp. 1-3.

______________. (January 19, 1924), "Review, *Holding Companies and their Published Accounts,*" p. 118.

————————. (August 31, 1929), "Joint Opinion of Mr. Wilfred Greene King's Counsel, Mr. Cecil W. Turner, and Mr. Walter Monckton," pp. 280-281.

————————. (January 16, 1932), "A Great Advance," pp. 85-87.

————————. (June 11, 1932), "The Way They Do It," pp. 817-818.

————————. (January 26, 1935), "Consolidated Balance Sheets," pp. 117-118.

————————. (July 13, 1935), "Consolidated Balance Sheetts," p. 42.

————————. (July 20, 1935), "Consolidated Balance Sheets," pp. 82-83.

————————. (December 31, 1932), "The Ind Coope Statement," pp. 874-876.

Walker, R. G. *Consolidated Statements.* New York: Arno Press, 1978.

White, E. D. "Great Combinations of Industrial Enterprises and the Changes Necessitated in the Method of Keeping their Books, Accounts and Cash." *The Accountant* (October 12, 1901), pp. 1087-1094.

Wilkins, R. M. *Group Accounts: The Fundamental Principles, Form and Content.* London: ICAEW, 1975.

The Accounting Historians Journal
Vol. 11, No. 1
Spring 1984

Larry J. Rankin
MIAMI UNIVERSITY

THE DEVELOPMENT OF COMPILATIONS AND REVIEWS

Abstract: The article reviews the significant events in the development of AICPA standards which led to the establishment of two types of CPA engagements on the financial statements of nonpublic businesses—compilations and reviews. As a part of this development, the article describes various CPA-user communication problems which resulted from unaudited financial statement engagements and limited procedure engagements.

The American Institute of Certified Public Accountants (AICPA) in 1978 issued Statement on Standards for Accounting and Review Services No. 1 (SSARS #1),[1] which provides two types of certified public accountant (CPA) engagements and reports on the financial statements of nonpublic businesses. These were compilations and reviews. The objective of a compilation by a CPA is to present management's representations in the form of financial statements without expressing any assurances about the statements. The objective of a review by a CPA is to perform analytical and inquiry procedures which provide the CPA with a reasonable basis for expressing limited assurance that no material modifications should be made to the statements in order for them to be in conformity with generally accepted accounting principles.

Compilations and reviews replaced two types of CPA engagements on the financial statements of nonpublic businesses. These were unaudited financial statement engagements and certain limited procedure engagements. CPAs reported on both of these types of engagements by issuing an opinion disclaimer.

The purpose of this article is to review the significant events in the development of AICPA standards which led to the establishment of compilations and reviews. The article places particular emphasis on various communication problems between CPAs and users with respect to unaudited financial statement engagements and certain limited procedure engagements. The article describes how the accounting profession responded to these problems by issuing auditing standards and ultimately, a compilation and review standard (SSARS #1).

The article is comprised of four sections. The first section describes the significant events in the development of AICPA standards pertaining to unaudited financial statements for the time period, 1896-1946. During this period, CPAs were associated with unaudited financial statements, but the accounting profession emphasized procedural and reporting guidance for audit engagements. The next section describes the events and standards associated with unaudited financial statements and limited procedure engagements for the time period, 1947-1961. During this period, the accounting profession first officially recognized unaudited financial statement engagements. Also, CPAs began to practice certain types of limited procedure engagements during this time. The third section describes the events and standards related to unaudited financial statements and limited procedure engagements for the time period, 1962-1976. These events and standards immediately preceded the development of compilations and reviews. Finally, the last section describes how the accounting profession responded to the problems associated with unaudited financial statements and limited procedure engagements by issuing a separate compilation and review standard for nonpublic businesses.

Developing Auditing Standards: 1896-1946

During this period, the accounting profession recognized the need on the part of third parties for CPA association with financial statements, and the American Institute of Accountants (AIA), now known as the American Institute of Certified Public Accountants, developed and issued auditing standards to guide such an association. For example, bankers wanted CPA association with a loan customer's audited financial statements, because they relied on the CPA's assurances to provide input for the loan decision.[2] Before these standards were developed, third parties received a variety of CPA reports as a result of different types of CPA engagements. In addition, the absence of professional guidelines for these engagements and the corresponding reports contributed to this variety.[3] In 1939, the AIA issued Statement on Auditing Procedure No. 1 (SAP #1) in response to this problem. This standard required the CPA to issue either an audit opinion on the fairness of the financial statements, taken as a whole, or to report on the findings of the engagement without expressing an opinion.[4] With the publication of SAP #1 and other auditing standards, the AIA emphasized the

CPA's association with audited financial statements and related audit reports.

The AIA did not recognize the CPA's association with unaudited financial statements during this period. However, Robert H. Montgomery's auditing book reported that the preparation of a balance sheet from the unaudited books of a client was within the scope of a CPA's services. Montgomery further acknowledged that CPAs reported on unaudited financial statements by (1) issuing the statements on plain paper without CPA comments, (2) issuing the statements on the CPA's letterhead without CPA comments, or (3) issuing the statements on the CPA's letterhead with CPA comments. Comments were either a report of findings or a disclaimer, such as "Without Audit," "Tentative," or "Pro Forma."[5] Table 1 summarizes the authoritative bodies, AICPA standards, engagement tasks, and report forms which were in effect for unaudited financial statements in 1946 at the end of the first time period under consideration.

Table 1

Unaudited Financial Statements: 1946

	Unaudited Financial Statements
Authoritative Body	None
AICPA Standards	None
Engagement Tasks	Prepare financial statements
Report Forms	Financial statements on plain paper without CPA comments, or Financial statements on CPA's letterhead without CPA comments, or Financial statements on CPA's letterhead with marking i.e. "Tentative," "Without Audit," "Pro Forma," or Financial statements on CPA's letterhead with report of findings

Misunderstandings between CPAs and users resulted from the CPA's association with unaudited financial statements. For example, Montgomery explained that CPAs did not intend to give assurances to third parties about unaudited financial statements: "The representation by a client that a statement obtained in this manner has behind it the auditor's assurances of its correctness is pure fraud on the part of the client."[6] Nevertheless, when the financial statements appeared on the CPA's letterhead, it was feared that users attributed audit-type assurances to the statements merely because a CPA was associated with the statements.[7] Also, there was uncertainty about how third parties perceived the association of CPAs with financial statements which appeared on the CPA's letterhead without comments. Bankers could, for example, variously perceive that the CPA typed the statements, prepared the statements without audit, applied limited auditing procedures to the statements, or audited the statements.[8]

Recognizing Unaudited Financial Statements: 1947-1961

The accounting profession continued to emphasize the CPA's association with audited financial statements and the CPA's attest function during this period. This function comprised the CPA's expression of an opinion on the fairness of the statements taken as a whole. Performance of this function gave credibility to the financial statements and increased users' reliance on the statements. Reporting problems remained, however, when CPAs performed unaudited financial statement engagements and limited procedure engagements. One problem was that users might not have understood the CPA's responsibilities for either unaudited financial statements or limited procedure engagements. A related problem was that users might have attributed audit-type assurances to either unaudited financial statements or limited procedure engagements.

Unaudited Financial Statements

The AIA first recognized the CPA's association with unaudited financial statements in Statement on Auditing Procedure No. 23 (SAP #23). SAP #23 modified SAP #1 by requiring the CPA to issue either an audit opinion or an opinion disclaimer about the fairness of the financial statements.[9] SAP #23 required the CPA to report on unaudited financial statements by (1) issuing the statements on plain paper without CPA comments or (2) issuing the statements on the CPA's letterhead with CPA comments. Comments were specified as either a report of findings, accompanied by an opinion disclaimer, or the disclaimer, "Prepared from the Books Without Audit," appearing prominently on each page of the financial statements.[10]

SAP #23 was intended to reduce misunderstandings between CPAs and users in two ways. First, the standard eliminated the

Table 2

Unaudited Financial Statements and Limited Procedure Engagements: 1961

	Unaudited Financial Statements	*Limited Procedure Engagements*
Authoritative Body	Committee on Auditing Procedure	None
AICPA Standards	SAP #23 Clarification of Accountant's Report When Opinion is Omitted (Revised 1949)	None
Engagement Tasks	Prepare financial statements	Review interim financial statements by applying limited auditing procedures
Report Forms	Financial statements on plain paper without CPA comments, or Financial statements on CPA's letterhead with "Prepared from Books Without Audit" marked on each page of statements, or Financial statements on CPA's letterhead with report of findings and opinion disclaimer	Comfort letter

issuance of unaudited financial statements on the CPA's letterhead without comments. Second, the standard required the CPA's disclaimer as a warning to third parties that the statements were not audited. Two problems, however, were not resolved by SAP #23. One problem was that CPAs continued to issue financial statements on plain paper without comments. Users of these statements may have been uncertain about the degree of CPA association with and responsibilities for such statements.[11] The second problem was that users may not have understood the meaning of the CPA's opinion disclaimer. For example, bankers may have attributed to the statements audit-type assurances about the reliability of the financial statements, merely because a CPA was associated with the statements.[12]

Limited Procedure Engagements

During this period, CPAs practiced a limited procedure engagement that was similar to today's review engagement under SSARS #1. The limited procedure engagement was a review of interim financial statements. In carrying out this review engagement, the CPA read minutes of meetings, read the interim financial statements, and performed analytical and inquiry procedures. The CPA reported the results of this review by issuing a "comfort letter," which was addressed to the client but normally used by underwriters. In this letter, the CPA provided limited assurance that nothing came to his attention during the review which would require modification of the unaudited financial statements.[13] Table 2 summarizes the authoritative bodies, AICPA standards, engagement tasks, and report forms which were in effect for limited procedure engagements at the end of 1961.

The review of interim financial statements created two problems for CPAs and users. One problem, shown in Table 2, was that the accounting profession provided neither procedural nor reporting guidance for CPAs who performed this review. As a result, CPAs were uncertain about what auditing procedures they should perform on these engagements.[14] Another problem was that users might have attributed audit-type assurances to the financial statements because CPAs performed certain auditing procedures on the statements.[15]

Standards for Unaudited Financial Statements: 1962-1976

Despite continued emphasis on the CPA's attest function, in 1962 the accounting profession began to issue reporting standards with respect to CPA association with unaudited financial statements. However, the new standards did not provide procedural or reporting guidance for CPAs who performed limited auditing procedures on unaudited financial statements. This situation contributed to communication problems between CPAs and users concerning the CPA's association with unaudited financial statements and limited procedure engagements.

Unaudited Financial Statements

The AICPA issued two standards and a guide regarding CPA association with unaudited financial statements. These were: Statement on Auditing Procedure No. 32 (SAP #32); Statement on Auditing Procedure No. 38 (SAP #38); and *Guide for Engagements of CPAs to Prepare Unaudited Financial Statements (Guide).*

SAP #32 was the first AICPA standard to provide reporting guidance regarding CPA association with unaudited financial statements. Major points of this standard included:

1. Definition of unaudited financial statement engagements as the performance of no auditing procedures or insignificant auditing procedures.
2. Requirement that the CPA report on unaudited financial statements by marking "Unaudited" on each page of the statements, with or without other CPA comments.
3. Recommendation that the CPA report on unaudited financial statements by issuing an opinion disclaimer when the unaudited statements were not accompanied by other CPA comments.
4. Requirement that the CPA report on unaudited financial statements by issuing an opinion disclaimer when the statements were accompanied by other CPA comments.[16]

SAP #38 was the first AICPA standard to separately consider unaudited financial statements. Major provisions of this standard accomplished the following:

1. Distinguished an accounting service from an audit engagement.
2. Described an unaudited financial statement engagement as an accounting service. An accounting service included assistance in adjusting and closing the general books, and preparation of or assistance in the preparation of financial statements.
3. Described unaudited financial statement engagements as the performance of no auditing procedures, or the performance of insufficient auditing procedures to permit the expression of an audit opinion.
4. Required CPA association with plain paper financial statements.
5. Required the CPA to report on unaudited financial statements by issuing an opinion disclaimer and marking "Unaudited" on each page of the statements.
6. Permitted CPA association with general-use and internal-use unaudited financial statements. General-use unaudited statements, which required appropriate disclosures, were distributed to third parties. Internal-use unaudited statements, which did not require appropriate disclosures, were not distributed to third parties. The CPA reported on internal-use statements by adding a disclosure disclaimer to the report.[17] Table 3 summarizes the authoritative bodies, AICPA standards, engagement tasks, and report forms which were in effect for these two unaudited financial statement engagements in 1976 at the end of the time period under consideration.

Table 3

Unaudited Financial Statements: 1976

	Internal-Use Unaudited Financial Statements	*General-Use Unaudited Financial Statements*
Authoritative Body	Auditing Standards Executive Committee	Auditing Standards Executive Committee
AICPA Standards	SAP #32 Qualifications and Disclaimers (1962) SAP #38 Unaudited Financial Statements (1967) SAS #1 Statements on Auditing Standards (1972)	SAP #32 Qualifications and Disclaimers (1962) SAP #38 Unaudited Financial Statements (1967) SAS #1 Statements on Auditing Standards (1972)
Engagement Tasks	Prepare financial statements without applying auditing procedures for internal-use without appropriate disclosures	Prepare financial statements by applying limited auditing procedures for general-use with appropriate disclosures
Report Forms	Financial statements on plain paper or CPA's letterhead with "Unaudited" marked on each page of statements, and opinion disclaimer Disclosure disclaimer	Financial statements on plain paper or CPA's letterhead with "Unaudited" marked on each page of statements, and opinion disclaimer

Because of legal uncertainties pertaining to the CPA's responsibilities for unaudited financial statements, the AICPA appointed a task force in 1972 to offer guidance with respect to unaudited statements. In 1975, the task force issued *Guide for Engagements of CPAs to Prepare Unaudited Financial Statements,* which improved procedural and reporting guidelines for CPAs who were associated with unaudited financial statements.[18]

Although SAP #32, SAP #38, and the *Guide* explained the CPA's engagement and reporting responsibilities with respect to unaudited financial statements, several problems remained. These included uncertainty among CPAs about the extent of auditing procedures to perform on unaudited financial statements, unauthorized distribution of internal-use financial statements to users, and confusion by users regarding limited scope opinion disclaimers and unaudited financial statement opinion disclaimers.

The first problem of association with unaudited financial statements was that CPAs were uncertain about the extent of auditing procedures to perform on unaudited statements. Two factors, litigation and recommendations made by accounting academicians and practitioners, contributed to this uncertainty. First, several legal cases (for example, see *1136 Tenants' Corporation v. Max Rothenberg and Company*) encouraged CPAs to adopt one of two approaches concerning the extent of auditing procedures to perform on unaudited financial statements. Some CPAs believed that performing limited auditing procedures on unaudited financial statements would provide clients with a satisfactory level of service and preclude the CPA's association with substandard statements. This approach risked that users and the courts would attribute audit-type assurances to the reliability of the statements.[19] In recognition of this approach, two surveys indicated that many CPAs performed limited auditing procedures on unaudited financial statements, and that many users perceived that CPAs performed these procedures.[20] Other CPAs believed that no auditing procedures should be performed on unaudited statements to prevent users and the courts from perceiving audit-type assurances about the reliability of the statements. Holders of this view contended that users and the courts would attribute audit-type assurances to the statements merely because a CPA was associated with the statements.[21]

In addition to litigation, the recommendations of a number of accounting academicians and practitioners contributed to CPA uncertainty about the extent of auditing procedures to perform on unaudited financial statements. Many academicians and practitioners recommended that the accounting profession issue guidelines which would standardize these practices and enable CPAs to express limited assurances about the reliability of the statements. Articles of recommendation came from Chan in 1968, Saxe in 1972, Terrell in 1973, Guy and Mann in 1973, Olson in 1975, and Meddaugh in 1977.[22] The AICPA, however, neither recognized nor provided procedural or reporting guidelines for CPAs who performed these limited procedure engagements. They were performed under the guise of unaudited financial statements and reported on by opinion disclaimers and the marking of "Unaudited" on each page of the statements.[23]

Another problem of association with unaudited financial statements was the unauthorized distribution of internal-use unaudited statements to third parties. For example, a survey found that 79% of responding bankers reported at least some use of internal-use unaudited financial statements. This unauthorized distribution indicated that businesses either misunderstood or intentionally disregarded the distribution limitation. In addition, it was possible that users may have attributed unwarranted reliability to these statements, which lacked the appropriate disclosures.[24]

A final problem of association with unaudited financial statements was that third parties might not have understood the differences between a limited scope opinion disclaimer and an unaudited financial statement opinion disclaimer.[25] The former disclaimer referred to a CPA's audit engagement in which restrictions on auditing procedures precluded an audit opinion. The latter disclaimer referred to the CPA's association with unaudited financial statements in which no auditing procedures or only limited auditing procedures were performed by the CPA.

Limited Procedure Engagements

CPAs during this period performed two types of limited procedure engagements which were similar to review engagements under SSARS #1. These were applying limited auditing procedures to unaudited financial statements and reviewing interim financial statements. Table 4 summarizes the authoritative bodies, AICPA standards, engagement tasks, and report forms which were in effect for these limited procedure engagements at the end of 1976. Engagements in which CPAs performed limited auditing procedures on unaudited statements have already been discussed in the preceding section of this article. As for reviews of interim financial statements, the AICPA intended to reduce misunderstandings between CPAs and users by issuing two standards. These were Statement on Auditing Standards No. 10 (SAS #10), and Statement on Auditing Standards No. 13 (SAS #13). As part of his review of interim financial statements, SAS #10 required the CPA to read the minutes of meetings, read the interim statements, and perform analytical and inquiry procedures.[26] SAS #13 required the CPA to report on the results of this review by stating the objectives of the review, issuing an opinion disclaimer, and marking "Unaudited" on each page of the statements.[27]

The increasing frequency of limited procedure engagements created several problems for CPAs and users. One problem was the difficulty CPAs and users had in understanding differences among unaudited financial statements, limited procedure engagements, and audits. An accounting practitioner noted this problem:

Table 4

Limited Procedure Engagements: 1976

	General-Use Unaudited Financial Statements	*Interim Financial Statements*
Authoritative Body	Auditing Standards Executive Committee	Auditing Standards Executive Committee
AICPA Standards	SAP #32 Qualifications and Disclaimers (1962)	SAS #10 Limited Review of Interim Financial Information (1975)
	SAP #38 Unaudited Financial Statements (1967)	SAS #13 Reports on Limited Review of Interim Financial Information (1976)
	SAS #1 Statements on Auditing Standards (1972)	
Engagement Tasks	Review financial statements by applying limited auditing procedures	Review financial statements by applying limited auditing procedures
Report Forms	Financial statements on plain paper or CPA's letterhead with "Unaudited" marked on each page of statements, and opinion disclaimer	Review report with "Unaudited" marked on each page of statements, and opinion disclaimer

> The auditor might keep in mind that the difference between significantly audited, partially audited, and unaudited has not been sufficiently defined by the Institute's Auditing Procedure Committee and is often dependent upon the type of engagement and intent of the auditor and client.[28]

Another problem was that the CPA reported on these engagements by issuing an opinion disclaimer on the financial statements. As a result, the CPA might have achieved some assurances about the financial statements but expressed no assurances in his report. Also, users might have perceived some assurances about the statements in spite of the CPA's denial of assurances.

Compilations and Reviews

Users of nonpublic business financial statements and CPAs recognized the problems associated with unaudited financial statements and limited procedure engagements. For example, users were concerned that AICPA auditing standards did not enable CPAs to express limited assurances about the financial statements as a result of limited procedure engagements. Also, CPAs were concerned that these standards did not provide procedural or reporting guidelines for CPAs who performed limited procedure engagements.[29] At the same time, two AICPA spokesmen challenged the CPA's attest function by advocating an assurance level approach. They explained the need for an assurance level appropriate to the CPA's report on a limited procedure engagement:

> What is needed are forms of assurance that are less than that ascribed to an opinion audit but greater than those ascribed to unaudited financial statements.[30]
>
> . . . the realities of the business world and increasing complexity of professional standards have created a need for a new form of assurance that is less than expressed as a result of an audit made in accordance with generally accepted auditing standards but certainly greater than that included in the present disclaimer on unaudited financial statements.[31]

The AICPA responded to these concerns and other problems associated with unaudited financial statements and limited procedure engagements by developing a standard for compilations and reviews. Significant events in this development are described below.

In 1975, the AICPA established the Accounting and Review Services Committee (ARSC) as a subcommittee of the Auditing Standards Executive Committee (AudSEC). After two years, the ARSC became a senior technical committee with authority to issue standards for accounting and review services rendered by CPAs on nonpublic business financial statements. At this point, the ARSC issued four statements which provided directions for its work. Gregory cites them this way:

1. Auditing and accounting services are distinguishable, both conceptually and pragmatically.

2. Financial statement users and CPAs should recognize that providing accounting services in connection with unaudited statements is an acceptable and useful service.

3. The complexity of auditing standards creates a need for lower cost alternatives for CPA association with financial statements.

4. The accounting profession needs specific accounting and review guidance, in the form of standards.[32]

Following these statements, the ARSC issued an exposure draft of its first standard, *Compilation and Review of Financial Statements*. This proposed standard included the following major provisions:

1. Recognition that businesses need accounting services, compilations, and reviews.
2. Definition of compilations and reviews as the two accounting services for unaudited financial statements.
3. Identification of standards and procedures for compilations and reviews.
4. Requirement that the CPA report on a compilation by issuing a compilation report.
5. Requirement that the CPA report on a review by issuing a review report.
6. Requirement that the CPA express limited assurance in the review report.
7. Permission for third parties to use compiled financial statements which omit substantially all disclosures.[33]

After this exposure draft was reviewed, the ARSC in 1978 issued SSARS #1. In 1979, the AICPA modified Rule 204 of its *Code of Professional Ethics* in order to enforce the standards issued by the ARSC. Rule 204, as modified, required CPAs to comply with or justify departures from ARSC standards.[34]

Compilations

Since its enactment in 1978, SSARS #1 has enabled CPAs to perform two types of compilation engagements on the financial statements of nonpublic businesses. One type is a compilation of financial statements which omits substantially all disclosures. This compilation is similar to the former internal-use unaudited statements, which did not require appropriate disclosures. The other type is a compilation of financial statements which includes substantially all disclosures. This compilation engagement resembles the former general-use unaudited financial statement engagement in which CPAs performed no auditing procedures on the statements. Table 5 summarizes the authoritative bodies, AICPA standards, engagement tasks, and report forms which pertain to these two types of compilations.

The objective of both types of CPA compilations is to present management's representations in the form of financial statements without expressing any assurances about the statements. SSARS #1 requires the CPA to read the financial statements to consider whether the statements appear appropriate in form and free from

Table 5

Compilations and Reviews

	Compilations		*Reviews*
	Compilations which omit substantially all disclosures	*Compilations which include substantially all disclosures*	
Authoritative Body	Accounting and Review Services Committee	Accounting and Review Services Committee	Accounting and Review Services Committee
AICPA Standards	SSARS #1 Compilation and Review of Financial Statements (1978)	SSARS #1 Compilation and Review of Financial Statements (1978)	SSARS #1 Compilation and Review of Financial Statements (1978)
Engagement Tasks	Compile financial statements which omit substantially all disclosures	Compile financial statements which include substantially all disclosures	Review financial statements by applying limited auditing procedures
Report Forms	Compilation report with "See Accountant's Compilation Report" marked on each page of the financial statements	Compilation report with "See Accountant's Compilation Report" marked on each page of the financial statements	Review report with "See Accountant's Review Report" marked on each page of the financial statements
	Disclosure disclaimer		

material errors.[35] The CPA is required to communicate the results of a compilation by issuing a compilation report and marking each page of the financial statements with a reference such as "See Accountant's Compilation Report."[36] An example of a compilation report provided by the ARSC follows:

> We have compiled the accompanying balance sheet of XYZ Company as of December 31, 19xx, and the related statements of income, owner's capital, and changes in financial position for the year then ended, in accordance with standards established by the American Institute of Certified Public Accountants.
>
> A compilation is limited to presenting in the form of financial statements information that is the representation of management. We have not audited or reviewed the accompanying financial statements and, accordingly, do not express an opinion or any other form of assurance on them.[37]

If the financial statements omit substantially all disclosures, then SSARS #1 requires that the CPA add a third paragraph to the compilation report:

> Management has elected to omit substantially all of the disclosures required by generally accepted accounting principles. If the omitted disclosures were included in the financial statements, they might influence the user's conclusions about the company's financial position, results of operations, and changes in financial position. Accordingly, these financial statements are not designed for those who are not informed about such matters.[38]

Further, if the CPA is not independent in a compilation engagement, then SSARS #1 requires the CPA to add the following sentence to the compilation report, "We are not independent with respect to XYZ Company."[39]

Reviews

The enactment of SSARS #1 also established the current definition of a review as a limited procedure engagement on the financial statements of nonpublic businesses. A review is similar to a limited procedure engagement dealing with both unaudited and interim financial statements. In both reviews and limited procedure engagements, the CPA is required to read the financial statements and to perform analytical and inquiry procedures.[40] Table 5 summarizes the authoritative bodies, AICPA standards, engagement tasks, and report forms which pertain to reviews.

The objective of a review by a CPA is to perform certain auditing procedures which provide the CPA with a reasonable basis for expressing limited assurance that no material modifications should be made to the statements in order for them to be in conformity with generally accepted accounting principles.[41] The CPA is required to communicate the results of a review by issuing a review report and marking each page of the financial statements with a reference such as "See Accountant's Review Report."[42] An example of a review report provided by the ARSC follows:

> We have reviewed the accompanying balance sheet of XYZ Company as of December 31, 19xx, and the related statements of income, owner's capital, and changes in financial position for the year then ended, in accordance with standards established by the American Institute of Certified Public Accountants. All information included in these financial statements is the representation of the management.
>
> A review consists principally of inquiries of company personnel and analytical procedures applied to financial data. It is substantially less in scope than an examination in accordance with generally accepted auditing standards, the objective of which is the expression of an opinion regarding the financial statements taken as a whole. Accordingly, we do not express such an opinion.
>
> Based on our review, we are not aware of any material modifications that should be made to the accompanying statements in order for them to be in conformity with generally accepted accounting principles.[43]

This review report assumes that the financial statements include appropriate disclosures and that the CPA is independent.

Conclusion

This article chronologically reviewed significant events in the development of the AICPA standard for compilations and reviews, SSARS #1. This standard developed in response to CPA-user problems associated with unaudited financial statements and limited procedure engagements. Several of the major problems were:

1. Uncertainty by users about the extent of differences in CPA

work procedures and in CPA reports among unaudited financial statements, limited procedure engagements, and audits.

2. Uncertainty by users about the extent of assurances either intended or achieved by CPAs when CPAs report on unaudited financial statements or limited procedure engagements by issuing an opinion disclaimer.

3. Perceptions by users of audit-type assurances about unaudited financial statements merely because a CPA is associated with the statements.

4. Uncertainty by CPAs about the extent of auditing procedures to perform in unaudited financial statement engagements or limited procedure engagements.

SSARS #1 is intended to overcome these CPA-user problems with respect to the financial statements of nonpublic businesses. However, it remains to be seen whether these historical problems associated with unaudited financial statements and limited procedure engagements recur with respect to compilations and reviews. Given this historical perspective, perhaps the accounting profession should recognize potential CPA-user problems regarding compilations and reviews. Several of these possible issues may be:

1. Will users understand the extent of differences in CPA work procedures and in CPA reports among compilations, reviews, and audits?

2. Will users understand the extent of assurances either intended or achieved by CPAs when CPAs report on compiled or reviewed financial statements?

3. Will users perceive audit-type assurances about financial statements accompanied by either the CPA's compilation or review reports?

4. Will different CPAs perform similar work procedures in compilation engagements? Will different CPAs perform similar work procedures in review engagements?

5. Will CPAs perform the compilation and review work procedures which are in accordance with those recommended by SSARS #1?

FOOTNOTES

[1]Accounting and Review Services Committee, (1979).
[2]Kimball, pp. 268-269.
[3]Bell, pp. 116-117.
[4]Committee on Auditing Procedure, (1939).
[5]Montgomery, pp. 694-695.
[6]Montgomery, pp. 694-695.
[7]Montgomery, pp. 694-695. Carey, p. 195.

[8]Stempf, p. 443.
[9]Committee on Auditing Procedure, (1949).
[10]Committee on Auditing Procedure, (1949).
[11]Nest, pp. 63-64. Turlington, p. 30.
[12]Seidman, p. 29.
[13]Prest, p. 50.
[14]Prest, p. 52.
[15]Prest, p. 52.
[16]Committee on Auditing Procedure, (1963).
[17]Committee on Auditing Procedure, (1967).
[18]Task Force on Unaudited Financial Statements, (1975).
[19]Terrell, p. 58. Guy and Winters, p. 51.
[20]Winters, p. 32. Guy and Winters, p. 51.
[21]Saunders, p. 26. Guy and Winters, p. 51.
[22]Chan, p. 188. Saxe, p. 461. Terrell, pp. 54-60. Guy and Mann, pp. 557-558. Olson, pp. 56-57. Meddaugh, p. 78.
[23]*AICPA Codification of Statements on Auditing Standards,* (1977), Sec. 516.04.
[24]Winters, p. 30.
[25]Carmichael, (1971), pp. 74-75.
[26]*AICPA Codification of Statements on Auditing Standards,* (1977), Sec. 720.10.
[27]*AICPA Codification of Statements on Auditing Standards,* (1977), Sec. 519.04.
[28]Chan, p. 188.
[29]Kelley, p. 19.
[30]Carmichael, (1974), p. 69.
[31]Gregory, p. 61.
[32]Gregory, p. 63.
[33]Kelley, p. 19.
[34]*AICPA Code of Professional Ethics,* (1979), Sec. 204.01 and Appendix D.
[35]Accounting and Review Services Committee, (1979), par. 13.
[36]Accounting and Review Services Committee, (1979), pars. 4, 14, 16.
[37]Accounting and Review Services Committee, (1982), par. 2.
[38]Accounting and Review Services Committee, (1979), par. 21.
[39]Accounting and Review Services Committee, (1979), par. 22.
[40]Accounting and Review Services Committee, (1979), par. 27.
[41]Accounting and Review Services Committee, (1979), par. 4.
[42]Accounting and Review Services Committee, (1979), pars. 32, 34.
[43]Accounting and Review Services Committee, (1979), par. 35.

BIBLIOGRAPHY

American Institute of Accountants. Committee on Auditing Procedure. *Statement on Auditing Procedure No. 1: Extensions of Auditing Procedure.* Reprinted in *Journal of Accountancy,* Vol. 68 (December 1939), pp. 377-385.

________________. Committee on Auditing Procedure. *Statement on Auditing Procedure No. 23: Clarification of Accountant's Report When Opinion is Omitted (Restatement).* Reprinted in *Journal of Accountancy,* Vol. 87 (June 1949), pp. 468-469.

American Institute of Certified Public Accountants. Accounting and Review Services Committee. *Statement on Standards for Accounting and Review Services No. 1: Compilation and Review of Financial Statements.* New York: AICPA, 1979.

________________. Accounting and Review Services Committee. *Statement* *on Standards for Accounting and Review Services No. 5: Reporting on Compiled Financial Statements*. New York: AICPA, 1982.

____________________. *Code of Professional Ethics*. Reprinted in *AICPA Professional Standards*. Volume 2. Chicago: Commerce Clearing House, Inc., 1979, pp. 4269-5176.

____________________. *Codification of Statements on Auditing Standards: Nos. 1 to 15*. Chicago: Commerce Clearing House, Inc., 1977.

____________________. Committee on Auditing Procedure. *Statement on Auditing Procedure No. 32: Qualifications and Disclaimers*. Reprinted in *Journal of Accountancy*, Vol. 115 (January 1963), pp. 67-73.

____________________. Committee on Auditing Procedure. *Statement on Auditing Procedure No. 38: Unaudited Financial Statements*. Reprinted in *Journal of Accountancy*, Vol. 124 (November 1967), pp. 59-61.

____________________. Task Force on Unaudited Financial Statements. *Guide for Engagements of CPAs to Prepare Unaudited Financial Statements*. New York: AICPA, 1975.

Bell, William H. "Staff Preparation and Editing of Reports," *Journal of Accountancy*, Vol. 39 (February 1925), pp. 114-124.

Carey, John L. "Editorial," *Journal of Accountancy*, Vol. 72 (September 1941), pp. 193-200.

Carmichael, D. R. "Accounting and Auditing Problems," *Journal of Accountancy*, Vol. 131 (January 1971), pp. 74-75.

____________________. "The Assurance Function—Auditing at the Crossroads," *Journal of Accountancy*, Vol. 138 (September 1974), pp. 64-72.

Chan, Stephen. "A Review of Statement on Auditing Procedure No. 38," *New York Certified Public Accountant*, Vol. 38 (March 1968), pp. 187-190.

Gregory, William R. "Unaudited, But OK?" *Journal of Accountancy*, Vol. 145 (February 1978), pp. 61-65.

Guy, Dan M. and Mann, Herschel. "A Practical Guide for Reporting on Limited Examinations of Financial Statements." *CPA Journal*, Vol. 43 (July 1973), pp. 555-561.

Guy, Dan M. and Winters, Alan J. "Unaudited Financial Statements: A Survey," *Journal of Accountancy*, Vol. 134 (December 1972), pp. 46-53.

Kelley, Thomas P. "Compilation and Review—A Revolution in Practice," *CPA Journal*, Vol. 49 (April 1979), pp. 19-27.

Kimball, Charles C. "Accountant's Reports from a Banker's Viewpoint," *Journal of Accountancy*, Vol. 63 (April 1937), pp. 267-278.

Meddaugh, E. James. "Toward the Limited Review of Unaudited Statements," *Journal of Accountancy*, Vol. 143 (June 1977), pp. 77-80.

Montgomery, Robert H. *Auditing Theory and Practice*. 5th ed. New York: The Ronald Press Company, 1934.

Nest, Richard A. "Statement No. 38—Unaudited Financial Statements," *Journal of Accountancy*, Vol. 125 (February 1968), pp. 63-67.

Olson, Wallace E. "A Look at the Responsibility Gap," *Journal of Accountancy*, Vol. 139 (January 1975), pp. 52-57.

Prest, A. P. L. "The Limited Review of Unaudited Interim Statements," *Journal of Accountancy*, Vol. 104 (October 1957), pp. 49-53.

Saunders, Robert H., Jr. "Procedures in Minimizing Risk When Associated With Unaudited Financial Statements," *Connecticut CPA*, Vol. 36 (March 1973), pp. 26-29.

Saxe, Emanuel. "Unaudited Financial Statements: Rules, Risks, and Recommendations," *CPA Journal*, Vol. 42 (June 1972), pp. 457-464.

Seidman, J. S. "Letters to the Journal," *Journal of Accountancy,* Vol. 121 (March 1966), p. 29.

Stempf, Victor H. "Whose Balance Sheet Is It?" *New York Certified Public Accountant,* Vol. 11 (May 1941), pp. 442-458.

Terrell, Junius H. "Minimum Standards for Unaudited Financial Statements," *Journal of Accountancy,* Vol. 135 (May 1973), pp. 54-60.

Turlington, W. H. "Letters to the Journal," *Journal of Accountancy,* Vol. 120 (November 1965), pp. 29-31.

Winters, Alan J. "Banker Perceptions of Unaudited Financial Statements," *CPA Journal,* Vol. 45 (August 1975), pp. 29-33.

The Accounting Historians Journal
Vol. 11, No. 1
Spring 1984

Douglas Garbutt
CONSULTANT

THE SIGNIFICANCE OF ANCIENT MESOPOTAMIA IN ACCOUNTING HISTORY

Abstract: The article draws attention to the vast archive of accounting records from ancient Mesopotamia available to historians, and the advances in Assyriology which have taken place since the revival of interest in the origins of recorded history. Understanding of the materials has been advanced, in part, by specialists from other fields, such as mathematics and astronomy, yet accounting historians do not seem to have been attracted to the problems of interpreting the elegantly simple records and the societal context within which they were made and used.
To exemplify the challenges facing the accounting historian, the author considers evidence on the Dreham archive, the temple as a financial institution, and the use of loans, interest and banking. Finally, the author suggests that the records of Ancient Mesopotamia offer a rich field of research in accounting history.

Ancient Mesopotamia and Modern Iraq

There is some confusion in the terms applied to the civilisations of ancient Mesopotamia. The name, which is Greek, means the land between two rivers, the Tigris and Euphrates—which rise in the mountains of Turkey and flow south to the Gulf where they meet at the Shatt-el-Arab near Basra. The Euphrates takes a longer course, and almost joins the Mediterranean near Jerablus, but it then takes a vast curve inland. At Baghdad the two rivers nearly meet; only twenty miles separate them.

Babylonia covered the southern half of modern Iraq to the Gulf of Basra, and was centred on the ancient city of Babylon, a city ferociously denounced in Jeremiah 50 to 52 because Nebuchadnezzar took the Jews to captivity there. Babylonia was divided into *Akkad* in the north and *Sumer* in the south. Akkadian, Assyrian, and Babylonian are Semitic languages akin to Hebrew and Arabic. Sumerian has so far resisted all attempts to relate it to any language living or dead.[1] Famous Sumerian cities were Ur, Uruk, Nippur, and Kish.

The author is grateful to Professor D. J. Wiseman of the School of Oriental and African Studies, Professor R. H. Parker of the University of Exeter, and Mr. David A. R. Forrester of the University of Strathclyde for their helpful comments. The author makes the usual confession of responsibility for such errors as remain.

The northern half of modern Iraq is the real Mesopotamia, although that term is often applied to the whole of Iraq. Its ancient name was *Assyria* and it is there that one may see the ruins of Nineveh, Ashur, Nimrud, and Khorsabad.

Cities and the Rivers

The twin rivers of Mesopotamia are often compared in importance to the Nile, although they play a very different role. Rainfall in Iraq averages an unreliable 10 inches per year. The rivers are the main sources of water. The Nile floods the plains in spring and deposits alluvial silt which fertilizes the soil each year before the planting. Its annual flows are stabilised by the huge lakes in East Africa.

The Tigris and Euphrates rise in remote mountains, have no lakes to regulate their flows and are less predictable. In the north they flow through a limestone plateau where their courses have changed little over centuries. To the south, however, they meander over a vast alluvial plain and, from time to time, change course. The rivers flood in April to June which is too late for the spring crop and too early for the summer. Agriculture, therefore, has depended for thousands of years on effective irrigation and, if no artificial drains are installed, the irrigated land draws up salt from the water table and can rapidly become sterile, necessitating a move to fresh land. Many of the major centres were continually rebuilt on the ruins of the preceding generations.

This process, carried on for thousands of years, determines the picture of Iraq today outside the great city of Baghdad. There, the landscape is dotted with about 10,000 mounds or "tells," few of which have been excavated. These few have yielded up a great treasure of historical records. Curiously enough, the nomadic Bedouins know each tell by a name that is usually related to a known historical place.

Not that the picture is unchanging. The Iraqi Government is engaged in a large programme of reconstruction and the traveller is entranced by the restored walls of Nineveh, the buildings of Nimrud, and the Grecian-style buildings of "Arab" cities of the north, Hatra and Samarra.

In the south, the traveller may walk along the brick built processional way of Babylon, approached through the reconstructed triumphal archway, the Ishtar gate, decorated with bulls and dragons in brightly coloured glazed bricks and leading to Marduk's ziggurat, the famous Tower of Babel.

The Development of Assyriology

Western European interest in ancient Mesopotamia, its peoples and its culture sprang in the first place from Biblical studies and the rediscovery of the monuments of ancient Egypt. These led to a search in Mesopotamia for evidence of the long-lost civilizations of Babylon, Ur of Chaldees, Assyria, and Nineveh, all of which are mentioned in the Bible. In 1842, Botta discovered Khorsabad, and two years later Layard excavated at Nimrud. The emphasis then was on discovering and removing antiquities with little regard to the surroundings in which they were found.

The first three quarters of the nineteenth century have been called the "heroic" period of the new science of Assyriology. During this period, various systems of writing using cuneiform signs were deciphered and a group of texts known as "the royal inscriptions" were translated. Most of what we know of Mesopotamian history came from these records. At the same time, objects of silver, gold, copper, impressive statues, reliefs, and grandiose architecture were excavated and dispersed to private collections and museums throughout the world. Included in these objects were clay tablets found throughout the Near East and Egypt, many of which are accounting records.

The story of the Rossetta stone is well known. Just as exciting was Rawlinson's copying, at great peril, the inscription in Old Persian, Babylonian, and Elamite which Darius the Great had engraved on a cliff face in Behistan in Western Iran. From this, Rawlinson, Hincks and Oppert opened the door to an understanding of the Akkadian and Sumerian languages. Akkadian is so well understood today that it is taught in a number of universities; Sumerian is almost completely understood.[2]

The establishment of British and German exploration groups in the second half of the nineteenth century was accompanied by a more professional archaeological approach to excavation with a growing emphasis on stratigraphy and environmental evidence.[3] In the twentieth century, excavations have been conducted by French, Italian, and American groups, all of whom have a distinguished and continuing participation in exploration, discovery, and interpretation of the materials. There is, also, a strong group of Iraqi scholars, and the Iraqi Government now sponsors and controls the processes of exploration and restoration. During a visit in 1977, I was informed that there were five main explorations in progress, one of which I was able to observe at work in Babylon.

In the past one-hundred-and-sixty years, Assyriologists, aided by a few from other disciplines, have been at work translating and interpreting the vast evidence on the kings, merchants, scholars, and ordinary people of ancient Mesopotamia,[4] their defeats and victories, their achievements and preoccupations and, especially, their economic life. In sheer volume, the records are unrivalled, and they also extend over a much longer period—about 3,000 years—than is generally appreciated. The chronology of the main rulers of Mesopotamia from 2400 B.C. to 700 A.D. is now much clearer than it was, and is accurate within ±64 years for dates before 1500 and ±1/2 years for dates after 900 B.C.[5] (with the exception of the Parthian Dynasty).

It is now established that the Old Testament reports fairly accurately on the period after 800 B.C. and sheds some light on the previous three centuries.[6]

Another measure of the progress made in Assyriology may be gauged from Boyd's reference[7] to the Laws of Hammurabi of Babylon discovered at Susa. Hammurabi appears in Genesis 14 as Amraphel King of Shinar and was a contemporary of Abraham. Boyd quotes the dates of Hammurabi's rule as 2285 to 2242 B.C. but Brinkman's chronology dates him from 1792-1750 B.C. Hammurabi is sometimes referred to as if he were the only great codifier of the laws; in fact, this was a common activity which is second only to the main purpose of recording data for administrative purposes.

There are a number of Sumerian, Akkadian, and Hittite collections of laws apart from Hammurabi's. Similar collections of laws are incorporated into the Old Testament, but so far there is no evidence of Egyptian parallels on papyrus. The purpose of these statements was both to formalise traditional practices and to bring the law into line with changed social, economic, and political conditions.

The Extent of the Mesopotamian Records

It is important to realise the long time period which the written ancient Mesopotamian records cover, from 2500 B.C. to the first century B.C., and the sheer immensity of the number of clay tablets which have already been found. There are probably several hundred thousands in museums and collections.

Many of these record daily activities in the form of records and letters, and most deal with the administration of the great bureaucracy based on the temple that skillfully and methodically administered affairs in southern Babylonia from Ur to Sippar. They are also found throughout the Middle East, wherever the cuneiform writing system and the Akkadian language were in use. Oppenheim estimates that published material, plus the items held by major museums, cover 40-50,000 tablets in Akkadian dealing with legal and administrative matters and another 120,000 to 150,000 in Sumerian.

One of the earliest finds, at *Warka* was a library of more than 3,000 clay tablets. There have been many other finds at *Kish, Uqair, Ur, Tell-es-Salabikh,* etc. A recent find at *Tell Mardikh* in Syria yielded more than 16,000 cuneiform tablets which show among other things, records of taxes, payments and rations to workers. There was evidence of a flourishing trade in textiles.[8] One extensive set of records was found at Dreham and I discuss some of the problems which have arisen in its translation and interpretation later in this article.

Nor is that the end! Speiser says[9] that the total volume is literally incalculable since much that has been dug up so far is yet to be published and new texts are coming to light all the time. He gives us an example, a private home in Nuzi which yielded 1,000 legal documents—almost three times as many as have survived from all Egypt prior to the Persian era. Thus, we may know a community from the middle of the second millenium B.C. better than we know most European capitals at the time of Columbus.

Despite this, the records by no means give a complete picture of the long history of Mesopotamia, and new discoveries constantly give rise to revisions and reconsideration of the historical facts.

One further example, which also illustrates the possible scope for other specialists to contribute to the knowledge of the Ancient Near East is the work of Professor Neugebauer, a historian of mathematics.

Neugebauer's investigation of the mathematical and scientific tablets has shown that mathematics was fully developed in the Old Babylonian period and that mathematical astronomy probably originated in the Persian period. While the origins are still unclear, mathematics had reached, by the nineteenth century B.C. a full command of sexegisimal techniques based on place value notation, although without a zero, but including higher exponents and their inverses and a good deal of insight into algebraic and plane geometric relations in which Thale's theorem about the right angle in a semicircle and, in particular, the "Pythagorean Theorem" for the right angled triangle take a common place.[10] There was full understanding of a $a^2 + b^2 = c^2$ when a, b and 1 are integers.

Professor Neugebauer says "Since 1929, when W. Struwe and I succeeded in bringing sense also into non-trivial mathematical cuneiform texts, our available sources have expanded to constitute probably the largest body of scientific original documents from a pre-Hellenic civilisation."[11]

The Purposes of the Ancient Mesopotamian Records

The ancient Near East used writing for three main purposes:

1. *Recording data for future use.* In order of importance, five purposes may be recognised under this heading—which is, perhaps, of greatest interest to accountants.

a) Recording for administrative purposes
b) The recording of legal traditions
c) The formulation of sacred tradition
d) The annals
e) Scholarly purposes

2. *Communication of information.* The civilisations of the ancient Near East used letters, the rulers issued edicts, and public announcements of political and legal importance were made. Again, many thousands of letters are preserved on clay tablets; edicts and announcements were often carved on stone stelae or, in Babylon, on Kudurra stones which marked the boundaries of land and stated the ownership.

3. *Ceremonial use.* In Egypt, there is a considerable volume of mortuary texts in this category; this is almost unknown in Babylonia and Assyria. There was, however, a tradition still observed today of hiding in the mortar or in the wall of buildings some kind of object—a prism, a nail or a brick—inscribed with a dedication from the king to the gods. Some royal inscriptions were on rock faces or stelae.

All of these uses of writing are of interest to the accounting historian since they often cast light on the socio-economic framework within which the recording of data was practiced.

An extract from the Laws of Ur-Nammu illustrates the communication of information, the recording of law and the ceremonial use.

The announcement states the importance of equity and truth, refers to the standardisation of weights and measures and the equality of individuals in the eyes of the law and the protection of poor against rich:

> After AN and Enlil had turned over the Kingship of UR to Nanna, at that time did Ur-Nammu, son born of the Goddess Ninsun for his beloved mother, who bore him, in accordance with (Nanna's) principles of equity and truth . . . establish equity in the land, and he banished malediction, violence and strife. . . . He fashioned the bronze sila measure, he standardised the stone weight of a shekel of silver

> in relation to one mina. The orphan was not delivered up to the rich man; the widow was not delivered up to the mighty man; the man of one shekel was not delivered up to the man of one mina.[12]

The Content of the Ancient Mesopotamian Records

As previously mentioned, the tablets were created over a long period between roughly 2500 B.C. to 50 B.C. and they thus provide a unique collection of material on the history and annals of ancient Mesopotamian civilisation.

Considerable evolution of the form of the records and the organisation of the record-keeping occurred over this long period of time. The evolution of the cuneiform script from pictograms may also be observed.

Early tablets from Ur, Djemdat-Nasr, and Uruk use a pictographic script whereas the administrative archive from the Third Dynasty of Ur, mainly from Drehem and Djokha is well written, in cuneiform, dated, and indexed on the rims. The tablets were stored in baskets in which size, shape, and contents are carefully correlated; each tablet has standard information on the transaction recorded. There is evidence that methods of presentation changed over time, as Oppenheim notes: "Changes occur, of course, such as a preference for a ledger-like arrangement with entries organised in columns with appropriate headings. . . ."[13]

Tablets found in the academic institution at Tell Harmal now in (modern) Baghdad contain legal, literary, geographical, astronomical, musical, and mathematical texts of which the latter two show geometrical-algebraic theorems similar to those of Euclid and Pythagoras. They are obviously the records of a talented and well-organised society.

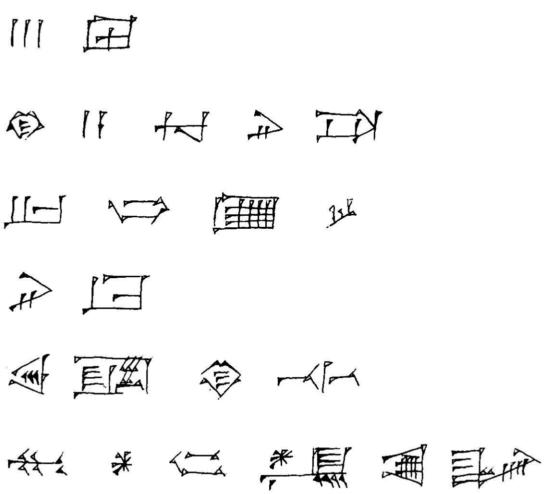
We have room to consider only a few aspects of this topic, relevant to accounting in this article.

Inspection of some of the bookkeeping tablets held by the National Museum in Baghdad shows a list of workers (1M5 8820), a list of wages paid (1M5 10628), a contract for sale of land (1M5 14182), and an account (1M5 10629) from the early Dynasty III period. Another is an account of a basket of tablets, giving the headlines (titles) of the tablets in the basket (1M5 1159) from the Neo-Sumerian period in Ur.

Similar items are on show at the British Museum and at other major museums such as Chicago.

Thomson[14] produced the following simple hypothetical example to illustrate the form, syntax, and phraseology of a business tablet from the Ur III Dynasty

CUNEIFORM TEXT



TRANSLITERATION	MEANING
0003 UDU	Three sheep
KI A-HU-NI TA	Seller : A-hu-ni
UR-NIGIN3-GAR	Buyer : Ur-nigin-gar
I3-DIB2	officially received
ITU A2-KI-TI	in the month of A-ki-ti
MU (AMAR-SIN-1)	in the year of Amar-Sin-1

This illustrates the systematic record, of key data, which is typical of the clay tablets found at Dreham.

As Thomson points out, however, of the tablets at Dreham, "While these tablets inform us of many things such as names, dates, types of transactions and itemised commodities, there is much that they do not tell us."[15] For instance, the tablets do not record where the animals came from, why they were shipped, or where they were being shipped. Often they do not show what prices were charged (in contrast to Sumerian merchant texts, which *do* give comparative prices) nor do they state whether transactions were private or not. Mahoney[16] notes that the Sumerians were very careful to indicate numbers and kinds of animals but they left out many details of the care, feeding, and transportation of these animals.

While this is a valid comment, it might equally be observed that the records are elegantly simplified data comparable to the modern computer data file. It may be inferred that the system in which they played a part *could* have been of great sophistication.

This economy of data recording may be seen in the identification of copies which were sometimes labelled as such in the dating. For instance, the date U_4 24 ba-zal

and U_4 24 ba-ra-zal

are identical except that the sign ra means "to strike," in other words, the duplicate.

Similar methods seem to have been used to distinguish interdepartmental from other transfers of animals.

The records of transactions are terse but detailed. The Sumerians had 17 different adjectives to describe the type of sheep or goats: whether grain fed or bran-fed; quality on a scale of 1 to 3; the buyer and the seller; whether deliveries were for the royal family; or offerings for a particular city. In later years, the authority for transactions entered into were recorded as were the totals on each tablet.

A further example of the underlying sophistication is that while the transliteration of seller is "he who gives," the transliteration of buyer is "he who sets the price," which certainly accords with ideas about perfect markets.[17] The innovations of the Mesopotamians were remarkable.

Babylonia laid the basis for astronomy and made systematic observations of the heavenly bodies. The Babylonians, probably in the Persian period, invented the use of place value notation, an idea which was later incorporated in the Hindu (Arabic) decimal notation which we use today.

Much of the content of legal records is relevant to accounting. It is clear that we share with the Mesopotamians some of our most basic concepts such as the idea of absolute truths which do not vary with time and person; that interpretation of law cannot be left to lay persons; the idea that judges should look at established precedents; the paramount authority of the written document which should be handled reverently; that contracts be executed in writing and signed by all the parties and that there should be witnesses.

The basic premises of cuneiform law were that law is an aspect of the cosmic order and the ruler is only a temporary trustee, answerable to powers above him. For instance "I Hammurabi am a righteous ruler, one to whom the Sun-God has granted the universal truths." The subjects of the King are protected against autocratic abuse of power and the individual has inalienable "natural rights."[18]

The Archive of Dreham

The work done on the archive at Dreham illustrates some of the fascinating insights into Ancient Mesopotamia which the administrative records contain and also some of the problems of interpreting these.

The archive covers a period from 2040 - 2027 B.C., at the end of the Third Dynasty of Ur from 2112 to 2004 B.C. Mahoney adopts the view that Dreham was a depot receiving and transferring supplies, mostly animals, to the temples and other establishments which flourished under this dynasty. She notes that, although the texts have long been available, they have not proven of interest to many historians because of their routine nature. The texts came into existence as the result of a thorough administrative reorganisation which took place under the command of Sulgi and which consolidated and expanded administrative measures inaugurated by his father, Ur-Nammu.[19]

Two approaches to the Dreham records, those of Mahoney and Thomson, provide an interesting contrast, and are sharply at variance in key respects.

Mahoney analysed all the texts of a single official NA - lu_5 whose career probably extended over 21 years.[20] During this time NA - lu_5 took various animals in charge, mostly sheep, goats and pigs, and then paid them out for various purposes—monthly festivals, offerings to the gods, supplies to the kitchen and poultry yard (probably for the use of officials therein), and dead animals to the officials and special warehouse. Mahoney arranged the tablets in chronological order, to form what she calls "a ledger" showing the income and expenditure in terms of animals.

The records are incomplete and receipts often exceed payments and vice versa. No balanced accounts have been found for NA - lu_5, nor is there a record that he totalled up at the end of a month or a year.

Mahoney explains this by suggesting that this official received animals only from a superior official whose job it was to record the complete transaction from receipt to disbursement. NA - lu_5 had three superiors for whom he worked at various times and their records of receipts usually indicate the person from whom the animals were received. Thus, NA - lu_5 appears to be a stock clerk or storekeeper and his superior the accountant or bookkeeper. Animals stated as coming from NA - lu_5 appear in summaries and one summary tablet CKS514 has five columns of animals for five officials, one of whom is NA - lu_5. There is no indication that NA - lu_5

was a scribe, although there is always a possibility that his records are purely paper transactions.

In the last year of the reign of Sulgi, the administrative formula for paying out animals changed from a noun meaning "expenditure" to a passive verb meaning "was expended," although there is no indication in the texts as to why this was so. There are also two distinct ways in which the date may be recorded on a tablet. Various explanations have been advanced as to why this should be so. One suggestion is that the methods indicate the division of the day into two parts, like a.m. and p.m., but Mahoney suggests that each method relates to the type of transaction recorded, i.e., whether a transaction has or has not been completed at Dreham and, consequently, whether a further record of receipt or disbursement needs to be made. If this were so, the supervising officers could separate the two types for summarising purposes and control.

Mahoney compares the analysis of the Dreham records to trying to compile the history of the University of Minnesota from a pile of used IBM cards, many of which have been lost and others damaged. The comparison is apt, as there has been some controversy about the actual organisational arrangements in ancient Mesopotamia even though it is known that there were two main systems, based on the palace and the temple. Most records relate to the temple, which declined in relative power over the centuries.

Thomson, by contrast, expresses some scepticism about the organisational and operational deductions which are generally, if tentatively, accepted. "To fabricate a vast hierarchical organisational structure for the Dreham depot on the basis of a few tablets is to force an unnatural form on the market place. To be sure, some men on the tablets have titles such as tablet-writer (DUBSAR), governor (ENSI), messenger (GIRIM), archivist (GA-DUB-BA), priest (SHU-DUG) or overseer (NU-BANDA) . . .,"[21] he goes on to argue that we cannot be sure, at this stage, of the precise meaning of these designations or indeed, of the nature of the operations carried out at Dreham. Thomson made an analysis of about 1,000 of the Dreham tablets using a computer program. He recorded the transliterated data from each tablet into a data file and then analysed them to see if this threw light on the agricultural and commercial activities at Dreham. His results showed that there were different levels of activity as between traders, and he then concentrated on four who were very active over long periods. His hypothesis was that if these traders were part of an imperial bureaucracy, the natural operation of the division of the work between them would lead to specialisation over a period of time. He found no evidence for this. On the contrary he argues that ". . . these dull business tablets are evidence of a dynamic free market remarkably similar to its counterpart today 4,000 years later. . . . The sizes of the shipments correspond exactly to the size of shipments being sent to Omaha between 1940 and 1960 when Nebraska was supported by a small farmer economy"![22]

Rather than a bureaucratic stock-holding centre, Thomson concludes that Dreham was a market for animals and that NA - lu_5, by analogy, was a salesman taking in animals for sale in open market. This might well explain why his records do not give a complete account of receipts and disbursements. Thus, the nature of the Mesopotamian Temple as an institution is by no means fully known, despite the abundance of records.

The fact that these documents are concerned exclusively with the lower personnel of the sanctuaries, the workers and craftsmen who received wages and rations and with the accounting for material for the manufacture of specific objects makes them of particular interest to the accounting historian, who might well be able to throw more light on the accounting systems used by the Mesopotamians and, therefore, on the institution of the temple. It would be advisable, however, to eschew approaches which look simply for evidence of "double entry" in a form resembling that of later civilisations. The tablets form a bank of data in a highly standardised form. What is of interest, is how the Mesopotamians retrieved that data and used it for various accounting purposes such as stewardship, control, and decision making. It seems inconceivable that a system of accounting records could be in use over thousands of years if it were not justified by and, indeed, essential to some wider societal purpose.

The Temple as a Financial Institution

From the evidence we have, it is clear that there was a strong financial tradition in the role of the temple. Here one might note that Christ's expulsion of the money lenders from the temple was thus directed against a Middle Eastern tradition established for several thousand years.

The temple was organised as a redistributive system dealing with incoming rents and gifts and outgoing rations and wages. Income was derived from investments, land donated by kings and also from occasional dedications of the spoils of war, precious objects and prisoners of war.

Incoming tax payments, religious dues, and various other gifts destined for the temple or for the palace were received in many forms such as animals, grains, and metals, especially silver which was melted down into ingots. Eventually, all forms of payment were assessed by an expert assayer in terms of equivalent ingots. The modern Arabic word JIHBIDH has been traced back to cuneiform records and means both financier *and* assayer. The silver received was placed in a wickerwork cash box, and the smiths received a special beer allowance for the hot work of melting it down. This system was still used later by Solomon. As it happens, most records refer to the temples, although there is evidence that a similar system was used by the palace.

The temple also received payments intended for the king.

Some of the earliest records show a distinction between "exchangeable" and "non-exchangeable goods." Exchangeable goods could be transferred without formality and included gold, silver, other metals; commodities such as oil, yeast, beer, wool, leather, papyrus, and weapons. Thus, the idea of a standard for exchange, if not a single monetary currency, was established.[23] Indeed, exchange rates for exchangeable goods were posted for both current and future times.

Loans, Interest Rates and Banking

Other business documents such as loans and promissory notes were used. These referred to the *future* values of the commodities exchange rates, for instance, "(to be paid) according to the rate of exchange (valid) in the month X."[24] These rates would be applied to receipts of commodities other than silver, and periodical lists were published from time to time. In one example, the creditors took the precaution of stating that they would establish the current rates themselves: "If he does not pay the silver [of the loan] he will give barley [instead] according to the excerpt-tablet [with quotations] which A and B [representatives of the creditors?] will themselves excerpt in Babylon."[25]

There are a large number of Old Babylonian records which deal with temple loans in which the temple appears as the creditor. Harris states that "the very fact that so many temples are found in the role as creditor is reason enough to assume that temples must have had the resources to act as banks."[26]

The records of the loans are sometimes very complicated. Harris quotes an example in which a debtor, Ili-ippalsam, borrowed 5 shekels of silver from the Nanna temple and its agent Sin-ismeanni. In turn, Ili-ibnanni borrowed 1 shekel from Ili-ippalsam but Ili-ibnanni has to return the loan to the original creditors; the gods Nanna and Sin-ismeanni. Gods and goddesses often appear as creditors and especially Samas, the god of justice, whose temple, more than any other, served as a bank.[27]

In another example, a principal and his agent granted a business loan to the agent and another partner. Thus, two entities, in both of which one person participated, are clearly distinguished and the same person recorded as part creditor, part debtor.

Loans were often made to individuals to tide them over until harvest time, but they were also made for business purposes, including partnerships.

One example, quoted by Harris, may be an early example of stewardship "X shekels of silver belonging to Samas are at the disposal of PN, whatever [business] plan he sets afoot and [whatever] it will yield belongs to Samas."[28] This loan is unusual, in that it is not witnessed.

In general, the temples seem to have been run on business lines. Their interest rates were the same as those charged by private persons although there were exceptions. In certain periods private persons charged thirty-three and one-third percent on loans of barley while the temple charged only twenty percent. There is also evidence that the temple made loans at low or no interest in order to bring down market rates which were onerous to debtors. In addition, arrangements could be made for paying interest in special ways such as offerings of food. One debtor is known to have pawned his wife to the temple in lieu of interest! Another, a son, borrowed in order to redeem his father's debt and was later forced to sell himself to the temple because he was unable to repay the loan.

The Importance of Mesopotamia in Accounting History

The first great civilisations of man emerged almost simultaneously in ancient Mesopotamia and Egypt. Because the Mesopotamians maintained their records in the extremely durable form of clay tablets, there is in existence a vast volume of data extending over some 3,000 years, the vast bulk of which has still not been published, which constitutes an unrivalled storehouse of material relevant to the earliest period of accounting history. Yet accounting historians, with a few notable exceptions such as Orville Keister, have paid little attention to this material and the growing knowledge of Assyriologists about the civilisation which created it. It is argued that accountants could contribute to this knowledge by analysing and interpreting the records and more clearly delineating the institutional system which created and used them.

Writing in 1905, Edward Boyd drew attention to the way in which the nineteenth century added enormously to our knowledge of ancient nations and how at the beginning of that century, history may almost have been said to have begun with the Greeks and Romans. At the end of that century, and the beginning of ours, we were able to look back on civilised communities existing more than 5,000 years before Christ.[29] Boyd neatly makes the point that, history being always in the making, what is "modern" today is . . . . tomorrow's history.

Simply because the Mesopotamian clay tablets do not resemble the ledgers and journals of the Venetian system, as published by Paciolo and developed in the twelfth to twentieth centuries A.D., does not mean that they should be dismissed or ignored as curiosities.

History is always changing in the sense that our knowledge of the past is always being added to, and also in the sense that new "modern" times lead to new appraisals of what is and what is not significant in history.

For instance, Boyd, in discussing the Mesopotamian clay tablets says, "Much information as to business methods is derived from these ancient tablets but we have not succeeded in finding evidence that any of them can, strictly speaking, be described as accounts; and Dr. Budge of the British Museum in courteous response to an enquiry, informs us that he knows of none."[30]

Dr. Budge was an outstanding Assyriologist. His comments may fairly be taken as representing the views of the scholars at the beginning of the twentieth century. Boyd quotes Dr. Budge as saying "There is no reason for thinking that they (the Babylonians and Assyrians) managed their money affairs as we do. There are many contract tablets known and hundreds of records of commercial transactions but I know of none which could be considered as accounts in the modern sense of the word."[31] We discussed earlier the immense progress made in Assyriology since the beginning of the twentieth century, and there is no means of knowing what Dr. Budge's response to the same question might be in 1983, or, indeed, whether Boyd would—or should—ask the same question. And if he, or a modern successor did: would he mean by "modern" accounting in 1983 what he meant in 1905?

Explaining why things happened the way they did is a constant concern of historians but the explanations are modified both by what we know about the past and by what we choose to regard as significant for the present.

There may indeed, be a fallacy in an approach to historical exegesis based solely on a search for one particular phenomenon, especially if it is a particular way of accomplishing certain social ends, such as double entry bookkeeping. Indeed, more modern computer based accounting systems with their data files and information retrieval and reporting systems may be more analogous to the system used by the ancient Mesopotamians.

The evidence from Assyriology adduced in this paper shows that the ancient Mesopotamians were sophisticated in mathematical knowledge and skilled in organisation. Their societies were highly civilised and very commercially minded. They devoted great effort and considerable skills to the creation and maintenance of accounting records.

Littleton[32] suggested that there were *seven* preconditions for the development of bookkeeping, the art of writing; arithmetic; private property; money; credit; commerce; and capital. Chatfield points out that each of these prerequisites to bookkeeping development was present in some form in the ancient world, several thousand years before Paciolo. Yet Chatfield assures us that "even the most advanced of those civilisations failed to produce a double entry system or anything like it."[33]

Another accounting historian, Orville Keister, described the way in which clay tablets were used by Mesopotamian scribes in creating accounting, commercial and legal records. He tells us in some detail the methods used in making tablets, the way in which the stylus was used, how cuneiform script developed, how seals were used and how the scribal profession developed. He concludes with the thought that the Mesopotamian scribe was the predecessor of the accountant of today, but "How different yet how similar in function, were his tools."[34]

This brings us to more questions about history. Are people getting cleverer? Does today's bookkeeper stand on the shoulders of yesterday's scribe because of some natural line of progress in evolution? Do things always get better or are they sometimes up and sometimes down?

We have all heard of the Dark Ages in Europe which followed the collapse of the Roman Empire. Roman accounting collapsed, too, although there is evidence that the essential methods of accounting were maintained and preserved by the Roman bishopric[35] through to the Renaissance.

The Mesopotamians also experienced a Dark Age which began about 1600 B.C. with the conquest of Babylon by the Hittites and lasted for about 300 years. Whatever happened to accounting then? There are many centuries of accounting history before even the historical events described in the Bible began (about 800 B.C.) which have received scant attention from accounting historians. R. H. Parker's bibliography[36] contains 10 articles for the 3,000 years or so of human history embraced within his "ancient" period and 317 related to the history of the last few hundred years—hardly a balanced picture.

Yet when Keister tells us that the Mesopotamian clay tablets were so well prepared that thousands are still flawless today, after lying in a temple or palace ruins for four thousand years, are we not moved to wonder about their evolution, and the development of the system within which they were used? Did it, too, rise and then fall with the advent of the Dark Ages? Did it rise again, as in Rome? What, if anything, was continued on in other systems when the cuneiform script was abandoned shortly before the birth of Christ? Has anything of it not survived to the present day?

For the accounting historian, ancient Mesopotamia offers a rich field for research; yet as far back as 1963, Keister observed that "students of accounting history have been somewhat engrossed with post-Paciolian developments and have almost completely neglected this period of accounting history."[37]

FOOTNOTES

[1]Sollberger, p. 8.
[2]Roux, p. 46.
[3]Lloyd, p. 192.
[4]Wiseman.
[5]Brinkman, p. 335.
[6]Oppenheim, p. 72.
[7]Boyd, in Brown, p. 17.
[8]Matthiae, pp. 179-182.
[9]Speiser, p. 536.
[10]Neugebauer, p. 529.
[11]Neugebauer, p. 528.
[12]Pritchard, pp. 87-89.
[13]Oppenheim, p. 276.
[14]Thomson, p. 105.
[15]Thomson, p. 59.
[16]Mahoney, p. 88.
[17]Contenau, pp. 79-80.
[18]Speiser, p. 537.
[19]Roux, p. 161.

[20]Certain signs in Cuneiform have the same sound but a different meaning. These differences are indicated by the subscript, e.g., lu_5 or lu_4. See Thomson, p. 102. However, subscripts $_1$ and $_2$ indicate acute and grave accents respectively.

[21]Thomson, p. 80.

[22]Thomson, p. 78.

[23]Morgan, p. 11.

[24]Oppenheim, "A Fiscal Practice," p. 118.

[25]Oppenheim, "A Fiscal Practice," p. 119.

[26]Harris, p. 26.

[27]The only difficulty with this statement is that no temple of Samas has yet been found at Nippur, although Samas appears as the creditor in temple loans from that city.

[28]Harris, p. 131.

[29]Boyd, in Brown, p. 16.

[30]Boyd, in Brown, p. 19.

[31]Boyd, in Brown, p. 19.

[32]Littleton, p. 12.

[33]Chatfield, p. 15.

[34]Keister, "The Mechanics," p. 20.

[35]Chatfield, p. 15.

[36]Parker, pp. 75-126.

[37]Keister, "Commercial Record-keeping," p. 371.

BIBLIOGRAPHY

Brinkman, J. A. "Mesopotamian Chronology of the Historical Period." Appendix in Oppenheim, A. Leo. *Ancient Mesopotamia.* Chicago: University of Chicago Press, 1977, pp. 335-348.

Boyd, Edward. "Ancient Systems of Accounting" in Brown, Richard. *History of Accounting and Accountants.* Edinburgh: T. C. & E. C. Jack, 1905.

Chatfield, Michael. *A History of Accounting Thought.* Hinsdale, Ill.: The Dryden Press, 1974.

Contenau, Georges. *Everyday Life in Babylon and Assyria.* London: Edward Arnold, 1954.

Harris, Rivkah. "Old Babylonian Temple Loans." *Journal of Cuneiform Studies.* Vol. 14 (1960), pp. 126-137.

Johnson, Paul. *A History of Christianity.* Harmondsworth, England: Penguin Books, 1976.

Keister, Orville. "Commercial Record-keeping in Ancient Mesopotamia." *Accounting Review,* Vol. 38 (1963), pp. 371-376.

____________________. "The Mechanics of Mesopotamian Record-keeping." *National Association of Accountants Bulletin.* (February, 1965).

Littleton, A. C. *Accounting Evolution to 1900.* New York: American Institute Publishing Co., 1933; reprinted by Russell and Russell, 1966.

Lloyd, Seton. *The Archaeology of Mesopotamia.* London: Thames and Hudson, 1978.

Mahoney, M. H. *A Study in Sumerian Administrative History of the Third UR Dynasty.* Unpublished doctoral dissertation, University of Minnesota, 1965.

Matthiae, Paolo. *Ebla: An Empire Rediscovered,* (translated by Christopher Holme). London: Hodder and Stoughton, 1977.

Morgan, E. V. *A History of Money.* Harmondsworth, England: Penguin Books, 1965.

Neugebauer, O. "The Survival of Babylonian Methods in the Exact Sciences of Antiquity and Middle Ages." *Proceedings of the American Philosophical Society,* Vol. 107, No. 6 (December, 1963), pp. 528-535.

Oppenheim, A. Leo. "A Fiscal Practice of the Ancient Near East." *Journal of Near Eastern Studies.* Pt. 6 (1947), pp. 116-120.

____________________. *Ancient Mesopotamia.* Chicago: University of Chicago Press, Revised Edition, 1977.

Parker, R. H. *Management Accounting: an Historical Perspective.* London: MacMillan and Co., 1969.

Pritchard, J. B., ed. *Ancient Near East Texts Relating to the Bible, 3rd Edn.* Princeton: Princeton University Press, 1969.

Roux, Georges. *Ancient Iraq.* London: George Allen and Unwin, 1964.

Sollberger, Ernest. *The Babylonian Legend of the Flood.* London: The British Museum, Third Edition, 1971.

Speiser, E. A. "Cuneiform Law and the History of Civilization." *American Philosophical Society Proceedings,* Vol. 107, No. 6 (December 20, 1963), pp. 536-541.

Thomson, Gary A. *Aspects of Economic Behavior in the UR III Dynasty.* Unpublished doctoral dissertation, University of Nebraska-Lincoln, 1972.

Wiseman, D. J. *The Expansion of Assyrian Studies.* London: School of Oriental and African Studies, University of London, 1962.

The Accounting Historians Journal
Vol. 11, No. 1
Spring 1984

John J. Glynn
UNIVERSITY OF EXETER

THE DEVELOPMENT OF BRITISH RAILWAY ACCOUNTING: 1800-1911

Abstract: This paper concentrates on accounting aspects arising from the development of the railways. Railways in nineteenth century Britain had a major influence in reshaping some of the legislative procedures in parliament, the development of the capital market, and the economy at large. A background is provided to the first government regulations, introduced in 1840, and all subsequent major developments which led up to the Railway Companies (Accounts and Returns) Act, 1911. Why had it taken over eighty years (since the first commercial railway was established in 1830) to produce a standard presentation of accounts and financial reports?

Introduction[1]

While the intention of this article is to concentrate on accounting aspects arising from the development of the railways, it is also necessary to have an appreciation of the economic and political climate of the time. Railways in the nineteenth century had a major influence in reshaping some of the legislative procedures in parliament, the development of the capital market, and the economy at large. The first government regulations for the control of railways, as a whole, came in 1840 when the Board of Trade Railway Department was set up. This was the forerunner of the present Ministry of Transport which was established in 1919. Some twenty-eight years later, in 1868, the "Regulation of Railways Act" made it obligatory for all railways to render accounts half-yearly according to the forms prescribed in the first schedule of that Act. Many historians regarded the early and middle decades of the nineteenth century as being the heyday of *laissez-faire* for companies. Why then were steps taken to regulate the railways?

From 1800, many railways were built by private agreement with landowners, often as feeders to canals. Occasionally, canal owners

---

This is an abbreviated version of a paper presented by the author at the Association of University Teachers of Accounting Conference, Dundee, April 1981. I am very grateful for the comments received on earlier drafts of this paper; especially those from Professors J. Kitchen and R. H. Parker.

would allow the public to pay a toll and use these lines. The first public railway, in its own right, was the Surrey Iron Railway; authorised by Act of Parliament in 1801, and opened in 1803. The first engine was developed in 1804 by Richard Trevithick and ran on the Pennydarren tramroad near Merthyr Tydfil. This was a time of rapid technological advance in the design of engines, rolling stock, and track. The Stockton and Darlington Railway, opened in 1825, became the first commercial steam driven railway, but with steam for mineral merchandise traffic only. Railways, at this stage, aroused little public interest outside their immediate locality. The *Yorkshire Gazette* thought the opening of the Stockton and Darlington Railway was only worth eight lines. Also at this time financial backing was localized, coming mainly from the new, sturdy liberal class of the industrial cities of the North and Midlands.

The end of this second decade saw the first large-scale awareness of the public to the age of the railway. On September 15, 1830, thousands gathered in Oldfield Lane, Manchester, to see the Duke of Wellington and to witness the opening of the first steam passenger service operated by the Liverpool and Manchester Railway. This company issued a first prospectus on October 29, 1824. Only after a stormy debate did the Liverpool and Manchester Act become law in 1826. Three subsequent Acts also became law which allowed for the raising of a loan, as funds were running short, and allowing for certain route deviations and extensions. The cost of these four Acts was estimated at £27,000. By the end of 1830, the line had carried 70,000 passengers. In the first eighteen months of operation, nearly ten times that number were carried. Net receipts from all traffic, by 1835, were about £80,000 per year; £20,000 more than estimated. Total costs of building and equipping the line had, however, exceeded the estimate of £800,000; the actual expenditure coming to about £1,200,000. The half-yearly dividend rose from £4.10s percent for the first half of 1831 to £5 for the first half of 1845 and the price of shares soon rose to £200, after having been issued at £100.

Promotion of a Railway Company and the Beginnings of Regulation

Each railway was formed by its own separate Act of Parliament so that from the start a joint-stock company was created with limited liability. This was necessary due to the very size of each project. The average canal in 1825 had a capital of £165,000, and employed a few score of lock-keepers and maintenance men. The average cost of constructing twenty-seven railways opened between 1830 and 1853 was nearly £2 million, and the average labour force in 1851, excluding construction workers, was upwards of 2,500.[2]

Private Acts for the creation of railway companies were often criticised on several counts.[3] Then, as now, the most important stage was the committee stage. Nowadays, the committee is a judicial body noted for its impartiality. Then, the committee on a private Bill was composed of all locally interested members, and the knowledge of local circumstances was the hallmark of a committee man. Committees were large, attendance was not compulsory and often members only attended to vote without having heard the evidence. Members were often canvassed by interested parties and were, in many instances, interested parties on their own account (either as proponent or opponent of a particular Bill). On one occasion, a Member's vote was disallowed on the grounds that he was a subscriber to the company whose Bill was under discussion. The Speaker took the line that it was wrong to victimize one, when so many offended in the same manner. Another pointed out that Members' names were often excluded from the published list of subscribers, as his own had been.[4]

It was not until 1844, that radical changes to this system were made; brought about because of the activities of railway promoters but effective on all future Bills whatever their concern. As O. C. Williams has stated, "it was the expansion of the railways that for the first time brought more clearly than ever before the consciousness of Parliament that in private legislation there was an aspect of public, as well as one of private interest, to which no government could be indifferent; and that the function of Parliament was, not merely to act justly as between parties, but also to consider and promote the interests of the public as a whole."[5] The main features of the new procedure, introduced experimentally in 1844 and made permanent in the following year were:

(a) large, locally interested committees were replaced by small, less partial bodies;
(b) Bills were grouped so that comparable schemes were referred to the same committee;
(c) attendance was made compulsory.

All through the 1830s, there had been lively debates in both Houses of Parliament concerning the control of railways. As early as 1836, James Morrison introduced a motion for railway legislation.[6] He was concerned with the monopoly situation of railways which he believed had led to excessive charging as a result of collusion between rival companies.

The reason that years of indecision occurred, concerning railway regulation, was the conflict between the capitalistic economic philosophy of the time and the fact that governments of the day were concerned that such vast amounts of capital that were invested (by the public) should be wisely invested. Many companies were large with paid-up capital of as much as £30-£40 million. Such contradictions can often be discerned from the reading of Parliamentary debates, editorials, and letters of the time. Poulet Thomas, a minister at the Board of Trade, summarised this view when he said at one point,[7] "It is by the Government not meddling with capital that this country has been able to obtain a superiority over every other country." Yet he had previously told the house that[8] "he was not unfriendly to the great works to which these Bills related, but at the same time, he felt bound from the situation which he held in government, to take care that the capital of the country was not improvidently or unwisely applied."

In 1840, Lord Seymour's Railway Regulation Act was passed, from thence forward all new railways had to be inspected and approved by the "Lords of the Committee of Her Majesty's Privy Council appointed for Trade and Plantations," or as it later became known, the Board of Trade. This Act, though much resented at the time by the railway companies, gave the government limited powers of investigation into the safe operating of various lines. Further important Acts came into being in 1844 and 1845 but these again concentrated mainly upon the regulation of railways with respect to maintenance and operation.

Railways: Their Effect on the Capital Market

One historian[9] has said "the buying and selling of shares, unimportant before the coming of the railways, was an essential part of the Victorian commercial structure." Railways were instrumental in enlarging the investment market by attracting hitherto large numbers of untapped investors. Such expansion was not always to the good. Some of the more unfortunate side-effects were:[10]

(a) speculation in shares which, at times, amounted to "feverish gambling, on a scale big enough to entail a financial panic and a national slump;"
(b) a widening gap between the ownership of companies and their management;

(c) following from (b) the opportunity for directors to mismanage shareholders funds.

"Being first in the field, the railway companies were open to all the temptations of unregulated competition in avarice and speculation: but they were also the whipping boys of public indignation and the guinea-pigs for the first experiments in parliamentary control and the development of modern company law."

There were three railway investment booms:[11] 1824-25; 1836-37 and (by far the largest) 1845-47. In 1824-25, schemes amounting to a total expenditure of nearly £22 million were put forward but, while these could be termed "main lines," few were proceeded with. In 1836, thirty-five railway Acts were passed, twenty-nine of them for new lines covering 994 miles at an estimated cost of approximately £17.6 million. The third boom period is often referred to as the "railway mania" of 1845-47. In November 1845, when the whole capital investment in existing railways amounted to £71 million, the *Times* estimated that the cost of 620 new railway schemes (not including 643 other companies which had not yet registered their prospectuses) came to £563 million, equivalent to over two-thirds of the National Debt.

This "mania" was brought to a close in 1846 when the Bank of England raised the bank rate in an effort to stop the drain on gold and credit. As a result of this intervention, the price of shares tumbled and thousands of shareholders found themselves holding paper script worth less than they had paid or promised for it, often with money they did not have. Gullible investors had been at the mercy of unscrupulous company promoters. Many instances occurred of fraud on a grand scale. Leopold Redruth, registrar of the Great Northern Railway, was transported for life in 1857. A more notorious character was George Hudson,[12] a former draper from the city of York, who became known as the "railway king" of the 1840s. Having succeeded to the chairmanship of several railway companies he was eventually unmasked as one who had "doctored the books" to improve balance sheets, had paid dividends out of capital, had bought and sold Great North of England shares on behalf of other companies in which he had interests and pocketed the difference, and had made contracts in his private capacity with these companies to his own personal profit. His alleged frauds added to a total of £598,785. In 1855, he was forced to move abroad to avoid lawsuits from his old companies.

Up until 1830, the London Capital Market was mainly involved with the dealing of Government stocks. In that year, only four railway companies, out of a total of 205 companies, had stock exchange quotations. By 1844, the number had increased to sixty-six railways out of the 705 companies quoted. These companies had the largest single block of paid-up capital, £47 million, compared with the £26 million of the joint-stock banks. By the end of the railway "mania" in 1847, the railways' capital had risen to over £200 million.[13] Also at about this time, stock exchanges began to operate in the provinces; notably in Manchester, Liverpool, Birmingham, Leeds, Glasgow, and Edinburgh. An early Liverpool share price list, dated August 9, 1836, named 71 companies whose shares were dealt in; thirty-eight were railways, and banks, the next largest class, provided fifteen companies. The remaining eighteen were miscellaneous insurance, ferry, and utility companies. Significantly, no canals were named, suggesting that business was mainly confined to "new" companies.[14] The development of these provincial centres re-emphasises the point mentioned earlier that much of the speculative capital did in fact come from areas outside London.

The Need for Accounting Legislation[a]

Prior to 1868, no precise form of accounts was prescribed for railway companies, although certain requirements with reference to accounts were placed on such companies as came within the scope of the Railway Regulation Act, 1844, and the Railway Clauses Consolidation Act, 1845.

The keeping of accounts was, however, obligatory on all railway companies (in common with other companies carrying on undertakings of a public nature) under the provisions of the Companies Clauses Consolidation Act, 1845. Section 115 of which provided that:

> The directors shall cause full and true accounts to be kept of all sums of money received or expended on account of the company by the directors and all persons employed by or under them, and of all matters and things for which such sums of money shall have been received or disbursed and paid.

While "full and true accounts" were required, the form in which such information had to be prepared was left very much to the discretion of individual companies. This led to a diversity of practices

[a]All relevant Acts can be found in the reference to Edwards, J. R., ed. *British Company Legislation and Company Accounts*, 1844-1976.

which not only rendered such accounts incapable of comparison but in many instances led to charges of deliberate deception.

Many nineteenth century writers argued that railway accounts were not merely badly drawn up, incomplete, and incomprehensible but that directors, either individually or in collusion, deliberately sought to distort presentation to investors and other interested parties. Writing in 1867, Joseph Lee Thomas said:[15]

> My own impression is that an impartial and complete investigation of Railway Accounts, would show that dividends have been paid which could not have been, had all the items strictly chargeable against revenue been so debited; the average working expenses of Railways would not, I fear, . . . [be] found to be much less than sixty per cent of the receipts.

Up to this time, accounting provisions had been contained within the individual private Acts which formed each company. Such provisions were extremely varied. The Act incorporating the Stockton and Darlington Railway in 1821 consisted of 104 sections. One section only (s.56) vaguely required the company to keep "proper Books of Account." The company was also empowered to pay dividends (s.38). Fourteen years later, in 1835, the Great Western Railway was established. Its Act contained 251 separate sections. It was provided that accounts be made up half-yearly and that they be laid before a half-yearly general meeting of the company. If shareholders at the meeting considered the accounts to be unsatisfactory, they could appoint a committee to examine them and make a report. Dividends could be made from "clear profits" of the company, provided that "no dividends shall be made exceeding the net amount of clear profit at the time being in the hands of the said company, nor whereby the capital of the said company shall in any degree be reduced or impaired." (s.146).

It could be said that with the progression of time, additional clauses began to appear in subsequent Acts. However, there was little guidance provided by the terminology used. What, for example, did the term "profit" mean? What were "proper books of account"? It would be useful today if we knew the thoughts of the draughtsmen of such Bills and Acts. The term "gross income" was partially regulated since each Act laid down maximum charges that could be made, and interest on loans was declared a prior charge. Sometimes part of the gross profit had to be reserved as a contingencies fund. An analysis of the Acts relating to twenty-six railway companies, contained in Appendix 31 to the Second Report, "Select

Committee on Railways," PP 1839, X, pp. 449-541, shows the extent of the variations in the enactments.

Much of the legislation was a direct result of abuse of one form or another. In 1844, the Railway Regulation Act (s.19) stated:

> And whereas many railway companies have borrowed money in a manner unauthorised by their acts of incorporation or other acts . . . upon the security of loan notes or other instruments purporting to give a security for the repayment of the . . . sums . . . and whereas such loan notes . . . have no legal validity . . . but such loan notes . . . issued . . . and received in good faith . . . in ignorance of their legal invalidity, it is expedient to confirm such as have already been issued. . . .

Prior to 1844, railway companies had often borrowed without any legal authority on the basis of loan notes; the holders of which had no legal remedy whatever for the recovery of their money, either against the company or the directors. Railway borrowing powers were included in the relevant Private Acts, and companies were most frequently empowered to borrow on a mortgage or by issuing bonds. A further common restriction was that borrowing powers were normally for use if the share capital proved insufficient. This latter condition was previously ignored by most companies. In practice, there developed a heavy reliance on loan capital during the years of construction as it enabled cash receipts to be matched more exactly to construction costs. Authorizing Acts invariably placed limits on the size and frequency of share capital and required notice to shareholders. Such practice also meant that, as revenue was not yet earned, interest payments had to be met from capital.

Bank credit was a common form of finance at this time, though it is difficult to judge from surveying company reports its exact accounting presentation. Were they merely short-term overdrafts on current account or were they perhaps longer term and an indication of financial weakness? Accounts of the Birmingham and Gloucester Railway in the 1840s show how there was in fact a reliance on bank loans once authorized borrowing powers had been exhausted.[16] Under sections 115-119 of the Companies Clauses Consolidation Act of 1845 a bookkeeper was to be appointed to "enter up the accounts . . . in the books," and the accounts were to be kept and books were to be balanced at prescribed periods.

> On the books being so balanced an exact balance sheet shall be made up, which shall exhibit a true statement of

> the capital stock, credits, and property of every description belonging to the company at the date of making such balance sheet, and a distinct view of the profit or loss which shall have arisen on the transactions of the company in the course of the preceding half-year.

The balance sheet had to be examined by at least three directors and signed by the chairman or his deputy. This balance sheet, together with related balanced supporting books, was to be available for inspection by the shareholders at the company's office at least fourteen days before a meeting. The balance sheet was also to be produced at this meeting. Auditors, holding at least one share in the company but without an executive appointment, were to be appointed. They, too, were to receive the accounts, for examination, at least fourteen days before the shareholders' meeting. By sections 101-108, a report or confirmation of the accounts had to be made by the auditors. While it was not a requirement that auditors should sign such a report in practice they often did. This Act was however not retrospective, although many companies who had not previously appointed auditors did so as a result of public concern arising after the crises and scandal of the late 1840s.

There were other Acts of Parliament which affected railway accounts. For example, the Railway Passenger Duty Act, 1842, required railway companies to keep books giving details of passenger receipts. Copies had to be sent monthly to the Commissioners of Stamps and Taxes. This was for the purpose of assessing liability for passenger duty. Matters were slow to improve and public concern led the House of Lords in 1849 to appoint "The Select Committee on the Audit of Railways" in order to "consider the possibility of providing a more effectual audit of accounts."

The Select Committee of 1849

As stated above, it was not until 1845 that there was any general legislation compelling the preparation of accounts. Writing in 1850, Dionysius Lardner said:[17]

> It is well known that on the presentation of each half-year's report, auditors are appointed by the meeting of shareholders to examine and check the balance-sheet. The witnesses produced before the House of Lords [in 1849], consisting of public accountants, eminent railway directors, and others, distinguished by special knowledge on such

subjects, were unanimous in declaring this system of audit destitute of all efficiency.

This report is interesting as it provides an insight into Victorian attitudes regarding the need for a uniform format of accounts; the need for an impartial audit and the division of expenditure between capital and revenue. The examination of three witnesses is briefly reviewed.

On March 12, 1849, Charles Russell, the chairman of the Great Western Railway (G.W.R.) was called as a witness. At the time the G.W.R. Bill came before Parliament he had been chairman of the select committee. He subsequently resigned his seat and became, first, a director and, two years later, chairman of G.W.R. In response to questioning, Russell stated that he would never contract business with another railway company on the basis of published financial statements alone. He was also wary of third parties (such as the select committee) devoting attention to his industry and claimed that railway accounts presented greater information than analogous modes of investment such as the Bank of England, the East India Company, and various canal stocks.

Another witness, W. Andoe, a government auditor was called before the committee two days later. He had been requested to examine several sets of accounts and found that there was little sign of uniformity between them. At this time, government departments probably had the most efficient audits and Andoe was strongly of the opinion that independent public accountants should be employed to fulfill a similar function for railway companies.

A pioneer of the late Victorian generation of public accountants, William Quilter, was likewise called to attend. He was a partner in the firm of Quilter, Ball and Co. (later merged with what has become Deloitte Haskins & Sells). He had been involved in examining the affairs of three failed railways; the Eastern Counties Railway, the South Eastern Railway, and the East Union Railway. He later became, in 1870, the first President of the old Institute of Accountants (London Institute of Accountants).[18] As with Andoe, Quilter was strongly in favour of a uniform presentation of accounts and the appointment of independent public accountants as auditors. In his words, "I should be unfit to enter upon the duties without I felt myself to be an independent man, not intending to show favour or affection to either parts [party]."[19]

These three witnesses typically reflect the views of many of those called before the committee. There were those who argued for the status quo and the maintenance of *laissez-faire,* perhaps more for their own individual interests. Others, indeed the majority, argued for uniformity and greater disclosure because they considered an injustice arose to the greater mass of investors. Despite the forceful arguments presented, it was not until eighteen years later that a statutory form of accounts became obligatory.

The Introduction of Statutory Regulation

The Regulation of Railways Act, 1868, made it obligatory for all railway companies to render their accounts half-yearly in line with the forms prescribed in the first schedule of that Act. Judged by present standards, the financial and statistical information contained in the pro forma accounts of the Act were extremely meagre. No machinery existed in order to decide the items to be included under the various headings. Companies still had the ability to enter results in order to suit their individual purposes. In the years that followed the 1868 Act, many railway companies diversified their interests into the allied areas of hotels, docks, and steamships. Although Section 3 of the 1868 Act provided that "the Board of Trade, with the consent of a company, may alter the said forms as regards such company for the purpose of adapting them to the circumstances of such company, or of better carrying into effect the objectives of this section," the power does not appear to have been exercised.

The 1868 Act was also the first statutory recognition of the "double-account system." The principal distinction between the double- and single-account system is the method of setting out receipts and expenditure on capital account. In the double-account system, separate statements are prepared, for capital and revenue expenditure and receipts. The capital account is a cash basis statement, showing, on one side, all moneys subscribed by share and debenture-holders, and, on the other, how such sums were expended in the purchase of fixed assets. The balance of receipts over expenditure, or vice versa, is carried to the balance sheet. There was, therefore, no pretence that asset figures represented market value; simply a statement of the disbursement of capital receipts on capital expenditure. It was very much a stewardship orientated system; and according to Dicksee[20] a system very much favoured by the Chancery Division.

With the double-account system, the assets charged to capital are not written down by reason of diminished value due to wear and tear or obsolescence, but where necessary, a depreciation fund is created by charging the revenue account with an annual sum and crediting the fund with a like amount. The original designers of the double-account system appear to have decided that a provision for depreciation would not be necessary, and that the periodic renewal of assets out of revenue would be sufficient to maintain the value of the capital assets. Under the form of accounts set out in the 1868 Act, no specific provision was made for depreciation funds.

In later years, the necessity for instituting proper depreciation funds became more apparent and the companies provided the funds for the replacement of track, rolling stock, etc. Such charges tended not only to equalize annual charges to revenue, but also to cover the expired life of assets falling due for complete renewal at a subsequent date.

In the late 1840s, and particularly following the intervention (in 1846) of the Bank of England in raising the bank rate, many companies found that they had to call a halt to their capital expenditure programmes. Several limited the amount of their capital expenditure to the unexpended balance on their capital accounts. Once these accounts were balanced-off, further capital was simply passed through the revenue account. Sometimes a suspense account would be opened and expenditure charged over several accounting periods. Owing to the large amounts required for expanding or maintaining the railways such a process meant that investors could suffer fluctuating dividends.[21] A leading text of the time had the following quotation which summarises the application of depreciation of which the authors much disapproved.

> In the case of most railways, for instance, the deterioration of the plant is taken to be adequately and fairly provided for by the current expenditure upon repairs and renewals which is debited to revenue account. This practice is defended on the ground that by the very nature of railway property the repairs and renewals must be at least equivalent to depreciation, and that an effectual check against any starving in maintenance is furnished by the certificates which heads of the spending departments periodically give as to conditions of the permanent way, plant, tools, buildings and rolling stocks.[22]

A further Regulation of Railways Act was passed in 1871, under Section 9 of which railway companies were required to render annually to the Board of Trade returns of their capital, traffic, and working expenditure in the form contained in Schedule 1 to that Act. Subsequently, under Section 32 of the Railway and Canal Freight Act, 1888, the powers of the Board of Trade were further extended to enable them to call for additional statements and to amend the returns rendered under Section 9 of the 1871 Act, in such manner as they deemed expedient. As with Section 3 of the 1868 Act, Section 32 appears not to have been brought to bear. Despite legislation it very often was the case that items suddenly appeared in, and just as suddenly disappeared from, the accounts; separate figures were given for items one year, and composite figures the next. Each company adopted its own method of ascertaining the results for embodiment in the statutory pro-formas.

Further Developments in Financial Reporting

The unsatisfactory condition of railway accounting, as governed mainly by the 1868 Act, led the Railway Companies Association to attempt to remedy these anomalies when, in 1903, they appointed a committee to devise a formula to secure some uniformity of practice. This committee was composed of accountants employed within the industry and had no outside (impartial) input. This committee held over fifty meetings and issued its final report in 1905. The report contained many decisions concerning the allocation of receipts and expenses but as there was a lack of unanimity among various companies, these deliberations served little purpose.

The Board of Trade set up a Departmental Committee in June 1906 with the following terms of reference, "To consider and report what changes, if any, are desirable in the form and scope of the Accounts and Statistical Returns (capital, traffic, receipts and expenditure) rendered by railway companies under the Railway Regulation Acts."[23] Sixty-seven meetings were held and the work of the 1903 working party was acknowledged. Their report was issued in 1909 and the recommendations contained therein were subsequently given effect in the Railway Companies (Accounts and Returns) Act, 1911.

The Railway Companies (Accounts and Returns) Act, 1911

The 1911 Act prescribed that, as from January 1, 1913, every railway company must prepare annually accounts and returns in accordance with the form set out in the First Schedule and submit them to their auditors in that form. The accounts were to be made up to the uniform date December 31 in each year; but power was given to the Board of Trade to fix some other date, if necessary, in the case of any company, or class of companies, to meet special circumstances of that company or class of company.

The obligation imposed on railway companies under Section 3 of the 1868 Act to compile accounts half-yearly was repealed, and companies were specifically exempted from the necessity of compiling accounts or balance sheets, or holding ordinary general meetings more than once a year. It was provided, however, that this should not relieve a railway company of any obligation in connection with a guarantee of dividend under any statutory provision.

Authority was also given to the directors of incorporated railway companies to declare and pay interim dividends, if they so desired, for the first half-year with no need for the accounts to be audited or submitted to the shareholders.

Section 3 of the Act empowered the Board of Trade to add to or alter the accounts contained in the First Schedule. Such intention was to be advertised in the London, Edinburgh, and Dublin Gazettes and provision did exist for appeal. The rights conferred upon the Board of Trade by Section 9 of the Regulation of Railways Act, 1871 (as amended by Section 32 of the Railway and Canal Traffic Act, 1888) were preserved under Section 5 of the 1911 Act, but provided that such returns would be called for on request.

The accounts and returns prescribed in the Act are framed on definite lines: Part I consisting of "Financial Accounts" (capital, revenue receipts and expenditure, and balance sheet), and Part II "Statistical Returns." Part II was arranged to illustrate statistically the operations dealt with financially in Part I. Provision was made, for the first time, for showing separately those operations which were subsidiary to the railway operations. As with the 1868 Act, this Act adopted the double-account system but special provision was made in the balance sheet for dealing with depreciation funds.

Government Control of Railways

The accounts of railway companies for the year ended December 31, 1913, were published in accordance with the provisions of the 1911 Act. In the following year, at midnight on August 4, owing to the outbreak of the Great War, the government exercised its power under Section 16 of the Regulation of the Forces Act, 1871, and took control of the railways. Broadly speaking the terms of compensation were such that each company was guaranteed, for each year of control, the net receipts of the year 1913, covered by the first seven items in account No. 8 of the First Schedule of the 1911 Act, this being the main Revenue Account. There were a few minor adjustments to this rule of thumb approach, for example, the introduction of works brought into use since December 31, 1912. There was also a discontinuance of settlements between one company and another. The Board of Trade (and from 1919, the Ministry of Transport) authorized, for the year 1914 and onwards, that the accounts be published in abridged form. This period was from 1914 to 1921 inclusive.

The railways never again existed in their former state. In 1919, control of the railways passed to the newly created Ministry of Transport. Two years later, the Railways Act (1921), provided for the reconstitution of the railways (with a few exceptions) into four great groups styled:

(a) The Southern Group (Southern Railway);
(b) The Western Group (Great Western Railway);
(c) The North Western, Midland and West Scottish Group (London, Midland and Scottish Railway);
(d) The North Eastern, Eastern and East Scottish Group (London and North Eastern Railway).

It had taken over eighty years (since the first commercial railway was established in 1830) to produce a standard presentation of accounts and financial reporting but by then railways were moving into another era devoid of the capitalistic ideals upon which they had been founded.

FOOTNOTES

[1]For a general history of British Railways see bibliography and references to Francis, Ellis, and Perkins.

[2]Pollins, p. 407.

[3]For a fuller account of the passage of these Acts see Parris.

[4]Parris, p. 20.

[5]Williams, p. 67.

[6]Hansard, xxxiii, p. 977.

[7]Hansard, xxxvi, pp. 1161-1162.

[8]Hansard, xxxi, pp. 684-685.

[9]Porter, p. 552.

[10]Perkin, pp, 179-180.

[11]Perkin, p. 180.

[12]A full account of Hudson's life is given by Lambert.

[13]Reed, pp. 162-183.

[14]The Liverpool Stock Exchange Centenary Book, p. 22.

[15]Thomas, p. 14.

[16]BTHR. BGR 1/1 accounts for years ending 31. 12. 1841 to 31. 12. 1844. Referred to in Pollins.

[17]Lardner, p. 510.

[18]Refer to biographical reference in Parker.

[19]In reply to Q2221 of The Select Committee on the Audit of the Railways.

[20]Dicksee, pp. 141-145.

[21]See, for example, the case of the London and North Western Railway referred to in Reed, p. 154.
[22]Fells and Garcke, pp. 95-96.
[23]Newton, p. 4.

BIBLIOGRAPHY

Bagwell, P. S. *The Railway Clearing House in the British Economy, 1842-1922.* London: Geo. Allen and Unwin Ltd., 1968.

Broadbridge, S. *Studies in Railway Expansion and the Capital Market in England, 1825-1873.* London: Frank Cass and Co Ltd., 1970.

Cambell, C. D. *British Railways in Boom and Depression—An Essay on Travel Fluctuations and Their Effects, 1878-1930.* London: PS King and Son Ltd., 1932.

Dicksee, L. R. *Advanced Accounting.* Fourth edition. London: Gee and Co., 1911.

Edwards, J. R., ed. *British Company Legislation and Company Accounts, 1844-1976.* Volumes I and II. New York: Arno Press, 1980.

Ellis, H. *British Railway History—An Outline from the Accession of William I to the Nationalisation of Railways, 1830 - 1947.* London: Geo. Allen and Unwin Ltd., Third Impression 1960. Volumes I and II.

Fells, J. M. and Garcke, E. *Factory Accounts,* London: Crosby Lockwood and Son, 1887.

Francis, J. *A History of the English Railway—Its Social Relations and Revaluation, 1820-1845.* (Original 1851), Reprints of Economic Classics. New York: Augustus Kelley Publishers, 1968.

Gourrish, T. R. *Mark Huish and the London and North Western Railway—A Study in Management.* Leicester: Leicester University Press, 1972.

Kitchen, J. and Parker, R. H. *Accounting Thought and Education: Six English Pioneers.* London: Institute of Chartered Accountants in England and Wales, 1980.

Lambert, R. S. *The Railway King, 1800-1871.* Newton Abbot, Devon: David and Charles, 1968.

Lardner, D. *Railway Economy—A Treatise on the New Act of Transport.* London: Taylor, Walton and Maberley, 1850; New York: Harper and Brothers, 1855.

Newhook, A. E. *Railway Accounts and Finance.* London: Sir Isaac Pitman and Sons Ltd., 1914.

Newton, C. H. *Railway Accounts.* London: Pitman's Transport Library, 1930.

Parker, R. H., ed. *British Accountants—A Biographical Sourcebook.* New York: Arno Press, 1980.

Parris, H. *Government and the Railways in the Nineteenth Century in Britain.* London: Routledge and Kegan Paul, 1965.

Perkin, H. *The Age of the Railway.* Newton Abbot, Devon: David and Charles, 1970.

Pollins, H. "A Note on Railway Construction Costs, 1825-1850." *Economica,* Vol. XIX (1952), pp. 395-507.

Porter, G. R. *The Progress of the Nation.* London: Methuen, 1912.

Reed, M. C., ed. *Railways in the Victorian Economy: Studies in Finance and Growth.* Newton Abbot, Devon: David and Charles, 1969.

Thomas, J. L. A Letter on the Present Position of Railways, 1867. (retained in the library of the London School of Economics).

Worthington, B. *Professional Accountants.* New York: Arno Press, 1978.

The Accounting Historians Journal
Vol. 11, No. 1
Spring 1984

HISTORICAL NUGGETS

Lee D. Parker
CASE WESTERN RESERVE UNIVERSITY

THE BEHAVIOURAL IMPACT OF BUDGETS: EARLY ACCOUNTING CONTRIBUTIONS

Abstract: Accounting writers have invariably referred to the accounting literature of the 1960s and 1970s as the earliest source of discussion about the impact of budgets upon manager behaviour. This short paper identifies a number of accounting writers of earlier decades, whose contribution to this subject has to date been overlooked.

Beyond the seminal work on behavioural aspects of budgeting published by Argyris[1] in 1957, accounting writers have looked to the accounting literature of the 1960s and 1970s as the source of observations and discussion about the behavioural impact of budgets. This short paper pays due recognition to the insights offered by accounting writers in earlier decades. While they formed a decided minority relative to the mainstream of accounting writers, the prescience of their contribution should not be ignored. Accordingly, this paper seeks to establish their unique place in the behavioural accounting tradition.

Observing Unpopularity

From the 1930s onwards, just a few accounting writers observed the budget's growing unpopularity. McGladrey[2] noted for budgets that "their value is about in inverse ratio to their popularity." Such unfavourable attitudes were observed to exist in businessmen and laymen alike, particularly where budgets had been used to exert relentless pressure for improved performance. For many, budgets had become a symbol of oppressive action to be regarded with suspicion and mistrust.[3] Yet the writers who observed such budgetary unpopularity often failed to recognise the associated range of causes. Discussion of causes mostly came from others who did not appear to have considered to what extent the resulting problems had caused budgetary unpopularity.

Budgetary Problems

What sort of behavioural problems had accounting writers begun to recognise in budgeting? Makin[4] noticed the tendency of managers "to shift the blame on to 'the other fellow' " when things went wrong, but merely saw it as an inherent "singular reluctance to shoulder responsibilities" rather than as a reaction to the budgeting system. Yet some other writers had begun to recognise budgeting administration problems that caused negative subordinate reactions. Theiss[5] pointed to the overemphasis on the negative idea of restricting expenditures through budgeting, while Hawkins[6] and Bunge[7] expressed concern about the propensity for the budget to be used in a rigid and arbitrary fashion by higher management. Such rigidity, they felt could destroy executives' initiative and result in the full expenditure of all budget allowances, even when savings could have been achieved relatively easily. One further budgetary problem recognised by a small group of accounting writers was that of pressure for increasingly demanding performance targets. This, it was argued, would cause dissatisfaction and resentment among various management levels with foremen and other managers setting up defenses against those administering budget controls.[8]

Very few authors considered what positive actions could be taken in administering budgets in order to diminish observed behavioural problems. There was some recognition of the need for a degree of lower level management self-determination in the budgetary process.[9] However, there was no detailed analysis and behavioural matters did not rate any mention by the vast majority of accounting writers.

A. G. H. Dent and The Human Factor

In 1931 Dent[10] published a paper in the Manchester Guardian Commercial entitled "Budgetary Business Control in Practice." This represented a significant and apparently conscious departure from the conventional accounting wisdom about budgeting at that time and appears to have been one of the earliest and most detailed accounting discussions of the behavioural impact of budgeting.

Unlike most of his accounting colleagues, Dent considered the most important factor in budgetary control to be the human factor. Indeed he saw budgetary control as a means of curtailing the "irregular extension of power by unscrupulous executives." However in doing so, he anticipated that the budget could cause some executives to fear that their jobs would be defined and restricted.

With respect to target setting, Dent argued that salesmen should be encouraged to set their own quotas and that such quotas should not simply be handed down to them by senior management. Thus, he contended that "on psychological counts budgets should be built up from below." In this way budgets could promote coordination while not limiting initiative.

In administering the budget, Dent called for senior executives to exercise "psychological insight," patience and tact because in his view the problems of technique were secondary to the psychological problems. He concluded:

> The most important problem is organising men to work together through applied patience, understanding and goodwill.[11]

James L. Peirce and The Human Relationship

Over 20 years later, but still in advance of even the 1960s, James Peirce[12] argued that the budget rested on principles that had more in common with concepts of human relationship than with rules of accounting. He reported surveys showing the unpopularity of budgets among foremen and the damage that was caused by the misuse of budgeting procedures. He stated:

> Budgets represent restriction. They are in the same category as school bells and Monday mornings.[13]

In Peirce's view, budgets were associated in many people's minds with "paucity and niggardliness." In response, he contended that when human attitudes were conditioned by distrust, criticism and recrimination, any technique (such as budgeting) designed for improving performance would be likely to fail.

As an alternative approach to budgeting, Peirce required the budget to be continually adjusted to the needs and capacities of organisational personnel. It should function on the basis of enlightened relationships among people. He called for the budget to facilitate planned rather than expedient action and for its use as a pressure device (producing only "reluctant and minimal performance") to be abandoned. In his view blame-placing and censure of subordinates for budget results produced frustration, concealment of actual results, and padding of budget estimates. Instead, he called for an attitude to budgeting of "let's do it together" rather than "you do it or else." With respect to the accountant's role in budgeting, Peirce stated:

> It is a preposterous notion that a budget man vaults to success on the failures and errors of the line.[14]

The attitude of staff personnel, he proposed, should be one of maximum helpfulness to the line personnel.

In Retrospect

What significance can be attached to these early accounting contributions to the literature on budgeting and human behaviour? It must first be emphasized that they were a very small minority in the mainstream of accounting thought on budgeting. Their work was essentially normative, as was the custom of their times. Indeed most made their behavioural observations as "asides" to their discussions of traditional technical concerns. This makes the contributions of Dent and Peirce all the more remarkable. Dent anticipated views not really expressed again in such detail by accountants until thirty years later. Peirce indulged in a more detailed treatment of the subject than his contemporaries and even then went beyond their limited recognitions of behavioural problems in budgeting to consider potential solutions.

While such accounting contributions admittedly represent isolated occurrences in the accounting literature, it is for that very reason that they have probably been overlooked. This brief analysis is intended to redress that neglect.

FOOTNOTES

[1]Argyris (1957).
[2]McGladrey (1934) p. 488.
[3]Peck (1938) p. 471; Bronner (1953) p. 609; Loncar (1956) p. 950.
[4]Makin (1940) p. 289.
[5]Theiss (1937) p. 45.
[6]Hawkins (1935) p. 272.
[7]Bunge (1946) p. 502.
[8]Hawkins (1935) p. 272; Bronner (1935) p. 609; Loncar (1956) p. 950.
[9]Wright (1927) pp. 5-7;; Muth (1947) pp. 1504-1505.
[10]Dent (1931).
[11]Dent (1931) p. 549.
[12]Peirce (1954).
[13]Peirce (1954) p. 58.
[14]Peirce (1954) p. 64.

BIBLIOGRAPHY

Argyris, C. *Personality and Organisation, the Conflict Between System and the Individual.* New York: Harper and Row, 1957.

Bronner, S. Z. "Cost Controls for the Road Ahead." *N.A.C.A. Bulletin,* Vol. 34, No. 5 (January 1953), pp. 607-615.

Dent, A. G. H. "Budgetary Business Control in Practice." *The Manchester Guardian Commercial* (December 24, 1931), p. 549.

Hawkins, J. "Budgeting in Industry." *The Cost Accountant,* Vol. 14, No. 8 (January 1935), pp. 271-277.

Loncar, F. E. "Budgetary Planning—Yesterday and Today." *N.A.C.A. Bulletin,* Vol. 37, No. 8 (April 1956), pp. 949-955.

Makin, F. B. "Budgetary Control—II." *The Accountant,* Vol. CII, No. 3406, (March 16, 1940), pp. 288-290.

Muth, F. J. "Selling Budgetary Control to the Supervisor." *N.A.C.A. Bulletin,* Vol. 28, No. 24 (August 15, 1947), pp. 1501-1511.

McGladrey, I. B. "Budgetary Control." *The Certified Public Accountant,* Vol. XIV, No. 8 (August 1934), pp. 483-488.

Peck, S. A. "The Managerial Aspect of Controls." *N.A.C.A. Bulletin,* Section 1, Vol. 20, No. 8 (December 15, 1938), pp. 471-490.

Peirce, J. L. "The Budget Comes of Age." *Harvard Business Review,* Vol. 32, No. 3 (May-June 1954), pp. 58-66.

Theiss, E. L. "The Beginnings of Business Budgeting." *The Accounting Review,* Vol. 12, No. 1 (March 1937), pp. 43-55.

Wright, R. E. "Why Budgets?" *Special Libraries,* Vol. 18, No. 1 (January 1927), pp. 5-8.

The Accounting Historians Journal
Vol. 11, No. 1
Spring 1984

Harvey Mann
CONCORDIA UNIVERSITY

THUS SPAKE THE RABBIS — THE FIRST INCOME TAX?

Abstract: A passage from the *Talmud* concerning income tax policy is examined. The attempt is then made to apply the policy to a hypothetical situation and to see whether the policy is relevant to the modern era.

The Introduction

A recurring fiscal policy decision must be made every time a new tax is imposed or when a change is made in the way an old tax is levied. The dilemma facing the policy makers, aside from political issues, is whether the tax should be imposed on an indirect or direct basis, by means or by head, with a minimum or a maximum, etc. or by some combination of the various possibilities.

That this problem is not unique to today's economy is made quite evident by a scrutiny of some of the Hebraic writings almost 2,000 years ago. In this paper, one such case is considered; a case concerning taxation for security purposes. Aside from the historical significance and an examination of a different culture, the debate and the suggested solutions outlined in the paper may prove of interest in today's taxation climate.

The Source

The question posed here comes from the *Talmud,* probably the most important and influential piece of Jewish illumination after the *Torah*. The *Talmud* contains all the rules, laws, and regulations about how a Jew should behave, his relationship with others and, in effect, orders his total existence. Although now in written form, it was passed down through the generations in oral form from the time of Moses. The *Talmud* consists of two parts. The *Mishnah* is

My thanks to Rabbi Zushe Silberstein, who suggested this topic and made pertinent and important comments on the paper. Nevertheless, although I am neither a Talmudic scholar nor a tax expert, I alone must bear full responsibility for all interpretations and conclusions drawn.

the actual code of Jewish law, which was compiled over many generations by various Rabbis and was edited and completed by Rabbi Yehuda Hanasi (d. approx. 220 C.E.). The *Gemara* is the collected discussions of Rabbis who lived after the *Mishnah* was completed. As a general rule, in its printed form the *Talmud* is annotated by the Commentary of Rashi and other commentaries; it is also extensively footnoted and cross referenced. These addenda are absolutely essential for any real understanding of the text, although even then it is quite difficult to fathom.

The particular question discussed in this paper comes from the *Baba Bathra,* a part of one of the tractates from the *Talmud,*[a] which "deals with claims of, right to do or possess something, or to prevent another from doing or possessing something."[1] As the editor of the translation used for this paper states,

> *Baba Bathra* shows us the Palestinian and Babylonian Rabbis in the role not of religious guides but of secular judges and administrators, regulating the purely worldly affairs of the Jewish people, and deciding their business disputes . . . decisions are based to a larger extent on custom, tradition and common sense.[2]

Nevertheless, it should be emphasized that the logic and thought inherent in the text derives from the *Torah* and its principles. The reasoning followed in the *Talmud* is largely referential, constantly harkening back to other regulations, other interpretations and other portions of the text. Needless to say, this makes the text very difficult for the layman to follow. The net result, of course, is that only a very few *really* understand; "final" verdicts are left in the hands of the learned, who have devoted their lives to the study of the *Talmud*. Incidentally, orthodox Jews, to this day, seek these verdicts in disputes and abide by the decisions rendered.

The Scenario

The stage is set by the following paragraph:[3]

> MISHNAH. He (a resident of a courtyard) may be compelled (by the rest) to (contribute to) the building of a porter's lodge[1] and a door[2] for the courtyard. Rabban Simeon B. Gamaliel, however, says that not all courtyards require a porter's lodge.[3] He (a resident of a city) may be

[a]There are six major divisions to the *Talmud* and in turn the six divisions are subdivided into sixty-three tractates.

compelled to contribute to the building of a wall, folding doors and a cross bar. Rabban Simeon B. Gamaliel says that not all towns require a wall. How long must a man reside in a town to be counted as one of the townsmen?[4] Twelve months. If, however, he buys a house there, he is at once reckoned as one of the townsmen.

Note: Superscripts in the above paragraph are from the original text. The discussion will be centered on the portion following . . . require a porter's lodge.[3]

After this paragraph, which appears in bold type in the translation, there is the *Gemara* section. This consists of almost ten pages of detailed discussion, argumentation and quoting of precedent to arrive at a pragmatic understanding of the *Mishnah*.

Before getting into the debate of who should pay for a wall, the question arises, and rightly so, of whether all towns require a wall. Since the answer to this question may have an effect on how the cost of a wall is apportioned, it is reasonable that this be addressed initially. Rabban Simeon B. Gamaliel says that not all towns require a wall. The Rabbis, the representatives of the anonymous opinion cited in the *Mishnah*, however, contend that all towns require a wall. They hold this opinion on the grounds that any town can be attacked by a roving band and hence is in danger. The argument therefore hinges on the degree to which it is considered that there is a possibility of attack. Nevertheless, since the next part concerns the form of levy, it can be assumed that the Rabbis' opinion was the accepted one. In general, in cases such as this, the law is resolved according to the anonymous Rabbis, since they are in the majority.

Before addressing the next question, it is essential to appreciate that the texts being discussed are derived from oral history. The opinions had been passed down from generation to generation with the result that contradictions seemed to appear. This is evident when we examine the question of how the levy for the wall should be assessed. It is written therein that, according to one version, when R. Eleazar asked R. Johanan how the tax should be levied, he answered, according to means. Others recall, however, that he answered, in proportion to the proximity of his house to the wall. Given this dichotomy, the *Tosaphot*, in a footnote to the text, interpret the opposing views as meaning that a poor man living close to the wall would pay more than the poor man at a distance from the wall and likewise for the rich man, but that the rich man at a distance from the wall would pay more than the poor man close to the wall. (The *Tosaphot* are the collected comments of descendants and pupils of Rashi.)

ILLUSTRATION

Although the criteria for assessing the tax seem eminently sensible and straightforward from a practical viewpoint, the implementation may not prove too simple. As an example, what is a rich man or a poor man? What are the different degrees of wealth at which the break comes? What share of the assessment is there for the protection of life and what share for goods? These and other perplexing questions are difficult, if not impossible, to answer but some answer must be given.

To try to solve this dilemma, a simple (perhaps naive) example is offered. The town of Plomforta has twelve residents. Each resident has a different net worth and the homes are at various distances from the outskirts of the town. A wall has to be built at a cost of $420.00.

a) For the equal portion to be paid by each individual, the first $1,000 of worth is assessed at .4% or $4. per resident. The net worth is then reduced by this $1,000. (Total assessed $48.)

b) As an assessment for the possibility of attracting the danger in the first place, each resident is taxed .2% of his net worth less the $1,000 in a) above, i.e., R_1 — .002 (10,000 — 1,000) = 18 (Total assessed $108.)

c) The balance of the cost of the wall, $420 — $48 — $108 or $264 is assessed based on a function of the distance from the outskirts and the total net worth of the resident. This was calculated by multiplying the distance by the net worth and dividing the total into the balance of $264 to arrive at the assessment of .2%, i.e. R_3 — .002 (10,000) (3) = $60.

d) The tax assessed per resident is shown below:

	Net Worth	Distance to Out-skirts[1]	Equal Portion a) —.4%	Attracting Attention b) —.2%	Distance & Worth c) —.2%	Total
R_1	$10,000	1	$ 4	$ 18	$ 20	$ 42
R_2	$10,000	2	4	18	40	62
R_3	$10,000	3	4	18	60	82
R_4	$ 7,000	1	4	12	14	30
R_5	$ 7,000	2	4	12	28	44
R_6	$ 7,000	3	4	12	42	58
R_7	$ 4,000	1	4	6	8	18
R_8	$ 4,000	2	4	6	16	26
R_9	$ 4,000	3	4	6	24	34
R_{10}	$ 1,000	1	4	0	2	6
R_{11}	$ 1,000	2	4	0	4	8
R_{12}	$ 1,000	3	4	0	6	10
			$ 48	$ 108	$ 264	$ 420

[1] 1 = furthest froı outskirts; 3 = closest to outskirts

This assessment seems to follow the letter of the law. It is left to the reader to decide whether it is acceptable and reasonable.

Although it seems obvious that the tax should be levied on the residents of the town, two additional problems arise. 1) Should all residents of the town be required to pay for the wall? and 2) When does an individual become a resident?

The first question is posed because it is explained in the text that Rabbis do not pay the tax. The reasoning behind this dictum is based on various passages in the *Torah* and is ratified by many learned discussants. (There is insufficient space in this paper to delve into the deep theological argument underlying this thought, but it should be realized that in Judaism, spiritualism is deeply intertwined with monetary considerations. Nevertheless, essentially it is manifest that the Rabbis have no need for protection, since their safety is in the hands of the Almighty, nor it is argued, do the Rabbis bear any responsibility for attracting the danger initially.)

Another, usually unique group, the orphans, are required to pay the tax. Being minors, as a rule, even if they want to pay certain taxes or to forgive debts, they are not permitted to do so. In this instance, however, it is considered that they have no defense from violence. Not being exempted from the tax would also tend to enhance the standing of the orphans in the community. The principle that seems to follow from these examples is that a tax should be levied on those who have a need for the service being provided by the tax.

The problem of when a resident becomes a resident leads to a long discussion. Many other portions of the *Talmud* refer to this question in different circumstances and it would seem that every possible situation is examined to establish precedent. One interesting semantic distinction is made between an inhabitant and a resident, where a pragmatic decision is made that after 12 months an inhabitant becomes a resident since he is showing commitment to the town at this time. The debate becomes quite involved, however, when residency for the levy is compared to the regulations for the giving of charity. Since giving of charity is one of the most basic duties of the Jew, this duty is spelt out in great detail in the *Talmud*, i.e., after 30 days residence he must contribute to the soup kitchen, after three months to the charity box, etc. The discussion, which covers several pages, becomes quite tortuous, but I have been assured that there is a thread of continuity throughout. To this untutored eye, however, there seem to be many unrelated passages. Nevertheless, the net result—and as in all similar cases this must be resolved practically—is that a resident, for the purpose of the security tax, is one who has lived in the town for 12 months. This dictum is tempered somewhat, however, by the ruling that as soon as a residence is purchased, one is deemed to become a resident. Moreover, I understand, although this is not evident in the text, that a tenant is responsible for this tax rather than the owner of the residence, presumably because it is the tenant's life and movables at risk.

The Discussion

Over the centuries, the *Talmud* has been dissected, analyzed, and discussed *ad infinitum*. Meanings of words, their connotations, by whom they were uttered, and the circumstances under which they were said, all have a bearing in their interpretation. Even further afield, the Cabalists would calculate the numerical value of a word, based on the position of each letter in the alphabet, as an aid in divining its meaning. It should, therefore, not be surprising to learn that there is less than universal agreement about the meaning of many passages.

As an example, one of the foremost authorities in the field, Maimonides, seems to disagree with the consensus reached by the *Tosaphot* on who should pay the tax. He states, quite clearly and unequivocally, that the tax should be collected on the basis of proximity to the wall; "the closer one lives to the wall, the more he must give."[4] Unfortunately, Maimonides does not offer any justification for his disagreement with the *Tosaphot*. However, this great thinker and lawgiver is held in such awe by present students of the *Talmud* that they accept that he had good reason for ruling as he did. It is possible that Maimonides came to this conclusion on the premise that a thief would kill in order to escape detection and therefore that the sole purpose of the wall was to protect the life of the residents.

Another, more contemporary author, Aaron Levine,[5] analyzes and rationalizes the security tax levy using modern economic theory. His study examines the above passage as well as many pertinent writings over the years and attempts to justify the reasoning of each interpreter. He first uses the *Efficiency Rationale* to explain why the levy must be made coercive. Because everyone wants protection, it is a natural assumption that protection will be provided. The "free rider" motive dictates however, that someone else will pay for it, hence, it is necessary to initiate the coercive feature. Furthermore, since there is forced participation in the tax, only those who have signified that they expect to be permanent inhabitants in the town are required to pay. Permanence is pragmatically indicated by residency in the town for a twelve month period or the purchase of a house in the town for residency purposes.

A possible rationalization of the proportionate amounts to be paid is explained by the argument that those close to the outskirts of the town are more likely to be victimized by thieves, particularly in the case of movable property. It also follows that the wealthier the individual, the more he has to lose. Nevertheless, even though a thief may only be interested in stealing, it is considered natural that an inhabitant would try to prevent the theft from occurring. The thief, on his part, would tend to resist and in the ensuing struggle, the inhabitant could lose his life. Following this reasoning every man is in danger and rich or poor, every man has to contribute for the safety of his life. Levine, following through, in his argument, mentions several other commentators who justify this handling of the levy but by reference to other precedents. He concludes, however, that the causation principle plays a large part in the decision to apportion the assessment between a poll tax and a means test.

The Lesson

In matters of security—and it must be emphasized that this lesson is restricted to security—the tax to cover the cost of providing the protection required should be apportioned using the following criteria.

1. A potential initial need for the protection.
2. The individual(s) responsible for this need must pay for a greater share.
3. The greater the potential loss, the greater the amount to be paid.
4. Notwithstanding the above three points, a potential loss of life to each and every individual.

Following these precepts, it is averred, will result in an equitable apportionment of the cost of providing security to the residents of a town.

The question that arises at this point is whether the teachings of the ancient prophets of the Hebrews have any relevance to the fiscal policy setters of today. The answer must be in the affirmative, as much for the process as for the end result.

In these days of high taxation coupled with the perceived lack of control over the expenditure of the funds received, it would be instructive to the taxpayer to know why he is being assessed and the method used in arriving at his share of the tax. This calls for a more detailed breakdown of the purposes for which the tax dollar is assessed. Coupled with this detail would have to be debate and discussion akin to that used herein. In this fashion it is envisioned that a more equitable division of tax would be attained and that there would be a stronger control over the spending of the monies received.

The Conclusion

The *Talmud* is second only to the *Torah* as the Holy Book that directs every action of the observant Jew. In this paper, one passage from the *Talmud*, a very early example of income tax policy, is examined in detail. The arguments for the basis of allocation of this tax are brought out from different points of view. An attempt is then made to relate the thinking of 2,000 years ago to the modern environment. Although the principles enunciated seem to make a great deal of good sense and are quite convincing, the application of the principles to practice, as many Ministers of Finance have found to their sorrow, is a much more difficult task.

FOOTNOTES

[1]Epstein, Introduction.
[2]Epstein, Introduction.
[3]Epstein, p. 76.
[4]Maimonides, p. 178.
[5]Levine, pp. 136-147.

BIBLIOGRAPHY

Epstein, I., ed. *Baba Bathra* Vol. 1 (Hebrew-English Edition of the Babylonian Talmud). New York: The Soncino Press, 1976.

Levine, Aaron. *Free Enterprise and Jewish Law.* New York: Ktav, 1980.

Maimonides. *The Code of Maimonides* Book 12, The Book of Acquisition, Transl. by Isaac Klein. New Haven, Connecticut: Yale University Press, 1951.

The Accounting Historians Journal
Vol. 11, No. 1
Spring 1984

Richard Vangermeersch
UNIVERSITY OF RHODE ISLAND

A COMMENT ON SOME REMARKS BY HISTORIANS OF COST ACCOUNTING ON ENGINEERING CONTRIBUTIONS TO THE SUBJECT

Abstract: M. C. Wells wrote in *Accounting for Common Costs* that engineering impacts on cost accounting had ended by 1910. This paper reports the results of a review of the *Accountants' Index* from 1920 through 1949 for engineering sources listed under the general category of the two sections of "Cost and Factory Accounting" and "Depreciation, Depletion, and Obsolescence." The results show that engineering sources on these topics peaked late during the decade that began in 1910 and did not become insignificant until the 1930s.

Two studies in the history of cost accounting have commented on engineering literature and cost accounting topics. M. C. Wells reported that "whereas literally hundreds of articles and books on costing and accounting were published by engineers during the 30 years prior to 1910, very little was published after that date."[1] Paul Garner wrote that "industrial engineers, rather than cost or general accountants, took a more active interest in costing problems in the early development of the subject in this country."[2] This author decided to investigate the cutoff date of engineering contributions to the accounting literature. The author's interest in this topic developed while conducting research on engineering input into accounting decisions of capital intensive firms. To establish the cutoff date of engineering contributions to accounting literature, the author counted the engineering articles and books referenced in the "Cost and Factory Accounting" and the "Depreciation, Depletion, and Obsolescence" sections of the *Accountants' Index* from 1920 through 1949. These two classifications of "Cost and Factory Accounting" and "Depreciation, Depletion, and Obsolescence" are, in the author's view, the two most likely classifications within the *Accountants' Index* to include inputs from engineering journals and books. The study was limited to the *Accountants' Index* because it is the focal point for literature search in accounting. However, the engineering articles and books referenced by the *Account-*

ants' Index were very, very similar to the items listed under similar headings in the *Engineering Index* for these years.

Both the "Cost and Factory Accounting" and the "Depreciation, Depletion, and Obsolescence" sections have a general category followed by a list of more specific categories. The author investigated only the general listings for two reasons. Firstly, there was substantial overlap between items in the general categories and items in the specialized categories. Secondly, the length of the total coverage on depreciation was extensive and detailed. For instance, in the 1920 *Accountants' Index* listings on depreciation extended from pages 342 to 679, whereas the general listing went only from pages 344 to 353. The coverage on pages 353 to 679 included numerous pages of listings dealing with depreciation lives for different types of fixed assets.

Table 1 lists the number of sources of literature on engineering in the "Cost and Factory Accounting" section of the *Accountants' Index* from 1920 through 1949. It is important to note that the 1920 *Accountants' Index* included all literature on accounting collected by the American Institute of Accountants (now the American Institute of Certified Public Accountants) over the years prior to 1920, as well as 1920 items. An analysis by year of the engineering sources listed in the 1920 *Accountants' Index* is presented in Table 2.

Table 1

Sources of Literature on "Cost and Factory Accounting" Listed in the *Accountants' Index*

Date of *Accountants' Index*	Engineering	Accounting and Other	Total
1920	297	556	853
1920-23	118	422	540
1923-27	83	568	651
1927-31	8	200	208
1932-35	6	105	111
1936-39	1	166	167
1940-43	1	127	128
1944-47	2	123	125
1948-49	1	59	60

Table 2

Engineering Sources of Literature
on "Cost and Factory Accounting"
Listed in the 1920 *Accountants' Index* by Year

Year	Number of Items
Prior to 1900	4
1900	2
1901	3
1902	2
1903	7
1904	2
1905	4
1906	5
1907	6
1908	11
1909	9
1910	5
1911	12
1912	19
1913	15
1914	24
1915	25
1916	25
1917	29
1918	32
1919	35
1920	21
Total	297

The topic of Depreciation has spanned the history of cost accounting and it is especially important in cost accounting for capital intensive firms. Table 3 lists the number and percent of the sources of literature on "Depreciation, Depletion, and Obsolescence" listed in the *Accountants' Index* during the period covered in this study. Any non-tax item published in an engineering journal or book was classified as Engineering. Table 4 shows an analysis by year of the engineering sources listed in the 1920 *Accountants' Index*.

Table 3

Sources of Literature on Depreciation Listed in the *Accountants' Index*

Date of *Accountants' Index*	Engineering	Accounting and Other	Total
1920	124	358	482
1920-23	18	101	119
1923-27	13	141	154
1927-31	13	145	158
1932-35	7	132	139
1936-39	8	154	162
1940-43	8	122	130
1944-47	3	113	116
1948-49	1	178	179

Table 4

Engineering Sources of Literature on Depreciation
Listed in the 1920 *Accountants' Index* by Year

Year	Number of Items
Prior to 1900	1
1900	0
1901	0
1902	2
1903	0
1904	0
1905	2
1906	0
1907	6
1908	4
1909	3
1910	7
1911	14
1912	8
1913	7
1914	12
1915	10
1916	10
1917	24
1918	5
1919	4
1920	5
Total	124

The tables presented show that the 1910 cutoff date stated by Wells is not the appropriate cutoff date for engineering interest in, and potential influence on accounting literature. Engineering interest in accounting peaked in the latter part of the decade that began in 1910; however, there was substantial interest as late as the 1930s. Accounting historians concerned with the field of cost accounting should research the engineering literature beyond 1910 to at least the 1930s to note the significant engineering contributions to cost accounting in those years.

FOOTNOTES

[1]Wells, p. 92.
[2]Garner, p. 342.

BIBLIOGRAPHY

Garner, Paul. *Evolution of Cost Accounting to 1925.* Accounting History Classic Series. University, Alabama: The University of Alabama Press, 1954, 1976.

Wells, M. C. *Accounting for Common Costs,* Monograph 10. Champaign-Urbana, Illinois: Center for International Education and Research in Accounting, University of Illinois, 1978.

The Accounting Historians Journal
Vol. 11, No. 1
Spring 1984

Sadao Taketera
UNIVERSITY OF KYOTO
and
Noboru Nishikawa
SAGA UNIVERSITY

GENESIS OF DIVISIONAL MANAGEMENT AND ACCOUNTING SYSTEMS IN THE HOUSE OF MITSUI, 1710-1730

Abstract: Early in the 18th century the House of Mitsui created a divisionalized administrative structure with a general office known as Omotokata in order to control many operating shops. This paper examines the divisional administrative structure and accounting systems that the House of Mitsui developed between 1710 and 1730.

Introduction

Mitsui is known as one of the largest business enterprises in Japan. "Mitsui family opened its first shop five years before the Pilgrims landed in New England, and established a bank—still operating in the same location—in 1683, a decade before the Bank of England was founded."[1] After the Meiji Restoration (1868), the House of Mitsui was a leader of Japan's industrialization, and by the early 20th century it developed into a huge economic empire known as the Mitsui Zaibatsu.

This paper will focus on the House of Mitsui in the early 18th century, when it established the foundation for its subsequent development. Newly-rising merchants, including the House of Mitsui, grew rapidly in the surge of commodity markets during the late 17th century. Faced with a national economic recession after the mid-1710s, they rearranged their administrative structures. The objective of this paper is to examine the divisional administrative structure and accounting systems that the House of Mitsui developed between 1710 and 1730.

The research for this paper is based on the many business documents that have survived and are preserved in the House of Mitsui Archives Collection at the Mitsui Research Institute for Social and Economic History (Mitsui Bunko), Tokyo. Existing financial records include ledgers (*daifuku-chō*), accounting reports (*mokuroku, Omotokata kanjō-mokuroku*), duplicates of reports (*mokuroku-todome*), summaries of reports (*tairoku*), etc. These records help us understand both the accounting system of the House of Mitsui's general office, called Omotokata, and the accounting systems of two different types of operating divisions.

Divisional Administrative Structure under Omotokata

The House of Mitsui, founded by Mitsui Takatoshi (1622-1694), grew rapidly in the third quarter of the 17th century. In 1710, a central body known as Omotokata was formed to control sixteen operating shops located in Kyoto, Edo (present Tokyo) and Osaka. (Note that O in O-motokata means great or general and *motokata* means proprietor or controller.) Legally, Omotokata was a general partnership composed of the heads of nine families of Takatoshi's descendants.[2] It was not in charge of actual operations but held the investments in operating shops like a pure holding company of today.* Each of the shops carried on business under its own firm name. Administratively, Omotokata resembled "a general office" in the multidivisional organization, which "plans, coordinates, and appraises the work of a number of operating divisions and allocates to them the necessary personnel, facilities, funds, and other resources."[3]

Since almost all the premises of the House of Mitsui belonged to Omotokata, operating shops, therefore, leased the shop premises and paid their rent semiannually—to Omotokata. Omotokata held the investments in operating shops (their amounts sometimes changed) and received their fixed interest semiannually (its rate differed among operating shops). Beside the investments, Omotokata also gave temporary loans to operating shops. Employees in the upper two-thirds of the job-ranks were allocated by Omotokata.[4]

The arrangement of the operating shops under Omotokata took a long time. The original structure of 1710 illustrated in Figure 1 was

*Mitsui's investment-holding general family partnership was rather unique, while a decentralized administrative structure was common among the new wealthy merchants.

In order to unite a decentralized structure, the new wealthy merchant formed an institutional confederation composed of one main family and its branch families: a main family held a main shop and branch families held a branch shop. However, the solidarity in such a family group was not so strong. Some branch families could compete with a main family and other branch families. To counter the trend toward dispersion of family capital through independence of branch families, the House of Mitsui organized Omotokata as a central body to consolidate the family capital and to control a divisionalized administrative structure.

gradually changed by trial and error. By 1729, as shown in Figure 2, Mitsui's divisional structure came to consist of two major operating divisions and one original shop. (Matsusaka was the birthplace of Takatoshi.) The textile fabric division (the chain of silk fabric shops and cotton fabric shops) may be characterized as a "scaled down, specialized U[unitary]-form structure,"[5] while the banking division (the chain of banking shops) as a scaled down multidivisional structure. The difference will be discussed later in connection with their accounting systems.

The residual profit generated by the division over and above the cost of capital was employed as a measure of divisional performance. In the operating shops, reserves for bad debts and for employees' retirement allowances were set aside semiannually. Then, every three years, 10 percent of the residual profit was paid for bonuses to managers and other employees, and 90 percent was treated as liabilities of the operating shops to Omotokata. After such "every three years settlements" the latter amount was transferred to Omotokata through annual installments spread over several years.[6]

The Accounting System and the Financial Structure of Omotokata[7]

The House of Mitsui established accounting systems in accordance with Omotokata and its underlying divisional structure. Separate accounting systems were set up for Omotokata and for the operating shops. There was no consolidated accounting of Omotokata and the operating shops.

Omotokata calculated net income semiannually (dated July 14 and December 31), using the double profit measurement in property calculation and income calculation:[8]

ASSETS — (LIABILITIES + OPENING CAPITAL) = NET INCOME
REVENUES — EXPENSES = NET INCOME

They also compiled the capital calculation:

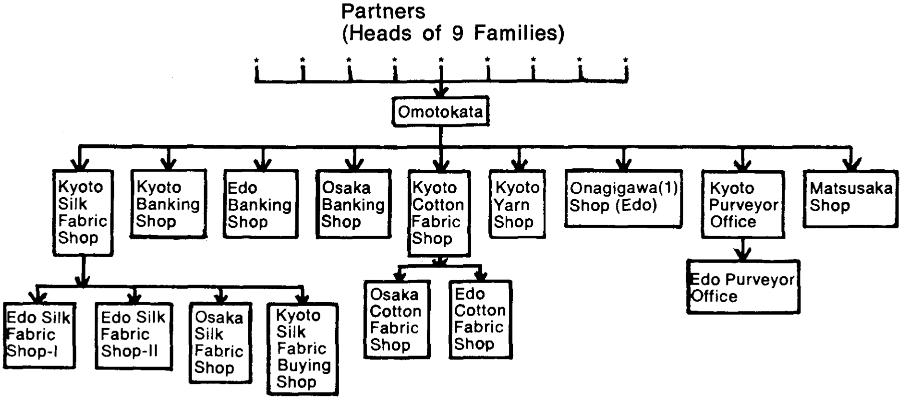
OPENING CAPITAL + NET INCOME = CAPITAL

This amount was carried forward to the next period.

The property calculation did not include the premises, since all capital expenditures on the premises were treated as expenses and all proceeds on sale of premises were treated as revenues. Therefore, in addition to the capital calculation, the net worth was calculated as follows:

Figure 1

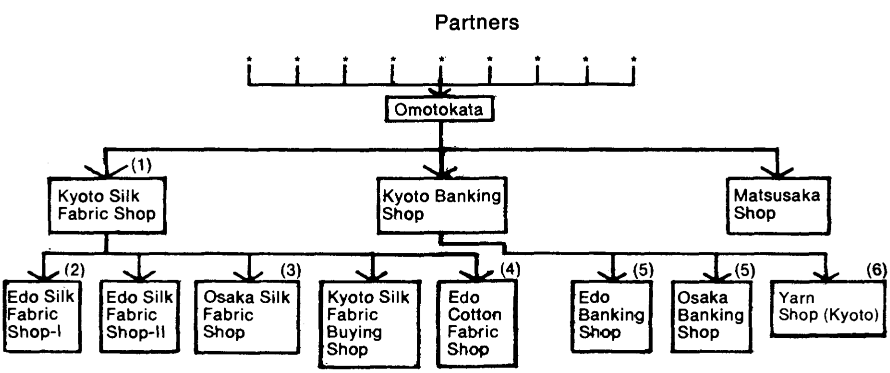
Structure under Omotokata in 1710



(1) transferred to one of Mitsui's top managers in 1724.

Figure 2

Structure under Omotokata in 1729



(1) absorbed the Kyoto Purveyor Office in 1718 and the Kyoto Cotton Shop in 1729.
(2) absorbed the Edo Purveyor Office in 1718.
(3) absorbed the Osaka Cotton Fabric Shop in 1729.
(4) affiliated with the Kyoto Silk Fabric Shop in 1729.
(5) affiliated with the Kyoto Banking Shop in 1719.
(6) affiliated with the Kyoto Banking Shop in 1729.

CAPITAL + APPRAISED VALUE OF PREMISES = NET WORTH

Accounting reports prepared according to these procedures give us certain information about the financial structure of Omotokata. The total assets of Omotokata increased from 10,607 *kan* at the beginning of 1710 to 23,712 *kan* at the end of 1730. Partners' equity constituted about 90 percent of total equities, except the year of its organization, 1710, when the debts from the Kyoto Banking Shop for the initial financing formed about 20 percent of the total equities. The appraised value of premises constituted nearly 40 percent of the total assets of Omotokata at the beginning of 1710 and then gradually dropped to 14 percent at the end of 1730 as the total assets increased. Assets other than the premises included the investments and loans to operating shops and the claims to the residual profit retained in operating shops. The component ratio of investments gradually dropped from 67 percent of all the assets except the premises (42 percent of the total assets) at the beginning of 1710 to comparable figures of 34 percent (28 percent) at the end of 1720, and 13 percent (11 percent) at the end of 1730. The loans to the operating shops, with considerable fluctuations, formed 20 to 40 percent of all the assets except the premises. The claims to the residual profit retained in the operating shops comprised 25 to 49 percent of all the assets except the premises. Other assets involved cash and loans to heads of families, to managers, to *daimyos* (feudal lords), and to others.

The ordinary revenues of Omotokata consisted of fixed interest received on investments in operating shops, interest received on loans, rental received on shop premises, and gains from money exchange. About one half to three quarters of the ordinary revenues consisted of fixed interest received on the investments. The amount of rental received was about one quarter of the amount of the fixed interest. It should be stressed that the ordinary revenues nearly balanced with all expenses and that the main source of net profit (increase of capital) was the special revenues on the "every three years settlements."

The expenses of Omotokata consisted of fixed fees for family living costs, ceremonial occasions expenses, donations to *daimyos,* and general administrative expenses, including the partners' salaries and traveling expenses of family-heads, top managers' salaries, and office supplies expenses. It is notable that the fees for family living costs were paid to non-partners as well as to partners. The amount of these fees rose slightly with an increase in the number of children. It is also notable that top managers' bonuses paid by divisions on the "every three years settlements" were sometimes much higher than their salaries paid by Omotokata.

The Accounting Systems and the Financial Structures of Operating Shops

The Chain of Banking Shops[9]

Three banking shops and the Yarn Shop had independent accounting systems, although the Kyoto Banking Shop collected and distributed the residual profit of its affiliated shops.

The Kyoto Banking Shop and its two affiliated banking shops calculated net income semiannually, using the double profit measurement in property calculation and income calculation.

A part of the semiannual net income of the affiliates was set aside as a reserve for their bad debts. The residual profit of the affiliates was then transferred to the Kyoto Banking Shop and added to its net income. A part of the Kyoto Banking Shop's total profit was set aside as a reserve for its bad debts and for employees' retirement allowances. Ten percent of the residual profit was set aside as a reserve for bonuses to managers and other employees. Further, on the "every three years settlements," the reserve for bonuses was charged when bonuses were paid, and 90 percent was treated as liabilities to Omotokata (to be transferred through annual installments).

Most of the total equities of the Kyoto Banking Shop consisted of investments and loans from Omotokata, liabilities to pay the residual profit to Omotokata, and reserves. Considerable amounts of the assets comprised investments and loans to the affiliates. Other assets were bills of exchange receivable, loans to *daimyos,* etc.

Most of the total equities of two affiliated banking shops consisted of investments and loans from the Kyoto Banking Shop, and the reserve for bad debts. Their main assets were composed of direct loans to merchants.

Almost all the revenues of three banking shops were interest received. The majority of their expenses consisted of interest paid. Other expenses included salaries to middle managers, charges for board of resident employees, donations to *daimyos,* etc.

The Chain of Silk Fabric Shops

In contrast with the banking shops, each shop in the chain of silk fabric shops did not operate its own double profit measurement in property calculation and income calculation. The Kyoto Silk Fabric

Shop combined the figures in its books and the books of its affiliated shops and calculated semiannually the double profit measurement for the chain of silk fabric shops.

The entire chain of silk fabric shops was treated as one profit center, because virtually all business activities in the silk fabric shops were closely interrelated with activities in the Kyoto Silk Fabric Shop. For example, in 1711, about 80 percent of the goods purchased by the Kyoto Silk Fabric Shop were shipped to the Edo Silk Fabric Shop, and about 80 percent of sales of the Edo Silk Fabric Shop and about 50 percent of sales of the Osaka Silk Fabric Shop depended on the goods shipped from the Kyoto Silk Fabric Shop.[10] Since the Kyoto Silk Fabric Shop fixed the selling prices, which included profit, of the goods shipped to the Edo and Osaka shops, they could not calculate profit on sales of the goods received from the Kyoto Silk Fabric Shop. But they recorded profit on sales of self-purchased goods and interest received.[11]

The semiannual profit measurement in property calculation and income calculation for the Kyoto Silk Fabric Shop was different from those for Omotokata and for the banking shops. The property calculation of the Kyoto Silk Fabric Shop measured net income by adding up the net assets (total assets minus all liabilities except the residual profit to be transferred to Omotokata) of itself and of the affiliated shops, and subtracting the investments from Omotokata and retained profit (including the residual profit to be transferred to Omotokata). The income calculation measured net income by adding up profit on sales recorded at the Kyoto Silk Fabric Shop (actual sales were done by each shop and some profit recorded at each shop) and then subtracting the rental and interest to Omotokata, donations to *daimyos,* middle managers' salaries, reserves for managers' and other employees' bonuses paid on the "every three years settlements," and other items. It is notable that the chain of silk fabric shops was vague about the distinction between expense and profit appropriation.[12]

Conclusion

Early in the 18th century the House of Mitsui created a divisionalized administrative structure with the general office known as Omotokata in order to control many operating shops. To help achieve this objective, the House of Mitsui also formulated hierarchical accounting systems for Omotokata and divisions. Since the banking division was subdivided into geographic subdivisions, each banking shop was treated as a separate profit center. In the textile fabric division, by contrast, all the shops formed one profit center as a whole, because this division was subdivided along functional lines.

The House of Mitsui, with its unique structure under Omotokata, continued to earn a comfortable profit until the 1740s and became one of the largest business enterprises in Japan. However, Omotokata and its underlying structure began to stagger. Because of the friction among heads of the Mitsui families and the overall financial difficulties, Omotokata was divided in 1774, in a way like a spin-off of today. The Mitsui families were separated into three groups: one family group directly held the chain of textile fabric shops, another group the chain of banking shops, and the other group the original shop. Omotokata returned to the original form through reconsolidation in 1797, though each division now accumulated its own residual profit.[13] After several attempts to put old wine into new bottles in the Meiji era, Omotokata finally became the incorporated Mitsui Gomei Kaisha, the stock-holding company of the Mitsui Zaibatsu, in 1909.[14]

FOOTNOTES

[1]Roberts, p. 3.
[2]Nakada, pp. 258-260.
[3]Chandler, p. 2.
[4]*Mitsui jigyo-shi*, Vol. I, pp. 99, 242-252.
[5]Williamson, p. 136.
[6]See House of Mitsui Archives Collection—*Omotokata kanjo-mokuroku, san-kanen daikanjo jubu-ichi-wari*, and *san-nen kanjo jubu-ichi-warikata no no ukagai-cho.*
[7]This section is based on *Omotokata kanjo-mokuroku* in House of Mitsui Archives Collection.
[8]For an analytical interpretation on "double profit measurement in property calculation and income calculation" diffused among the wealthy merchants, see Takatera.
[9]The following subsection is based on *mokuroku-cho, daifuku-cho, mokuroku-todome*, and *Edo-dana mokuroku-todome* in House of Mitsui Archives Collection.
[10]*Mitsui jigyo-shi*, Vol. I, pp. 148, 149.
[11]*Mitsui jigyo-shi*, Vol. I, pp. 154, 155.
Instead of inter-shop transfer prices, standard amounts in sales, inventories, and some expenses were set for remote control of shop operations. *Mitsui jigyo-shi*, Vol. I, pp. 200, 201.
[12]*Mokuroku* and *tairoku* in House of Mitsui Archives Collection.
[13]*Mitsui jigyo-shi*, Vol. I, pp. 310 ff.
[14]Roberts, chaps. 8-14.

BIBLIOGRAPHY

Chandler, Alfred D., Jr. *Strategy and Structure: Chapters in the History of Industrial Enterprise.* Cambridge, Mass.: M.I.T. Press, 1962.

House of Mitsui Archives Collection (of primary source materials) at the Mitsui Research Institute for Social and Economic History (Mitsui Bunko), Tokyo. The collection includes *daifuku-cho,* 1728 (material number Zoku 855); *Edo-dana mokuroku-todome,* 1786-1790 (Hon 1778); *mokuroku,* from the second half of 1710 to the second half of 1711 (Hon 1354-3, 1360-1, 1360-2, 2023-17, 2026-7, 2027-1); *mokuroku-cho,* 1728-1737 (Hon 1748); *mokuroku-todome,* 1786-1797 (Hon 1763); *Omotokata kanjo-mokuroku,* from the first half of 1710 to the second half of 1730 (Zoku 2855 to Zoku 2889); *san-ka-nen daikanjo jubu-ichi-wari,* 1725-1727 (Betsu 690-6); *san-nen kanjo jubu-ichi-warikata no ukagai-cho,* 1722-1724 (Zoku 6370); *tairoku,* the first half of 1719 to the second half of 1730 (Zoku 3135 to Zoku 3163).

Mitsui jigyo-shi [The business history of Mitsui], Vol. I. Tokyo: Mitsui Research Institute for Social and Economic History, 1980.

Nakada, Yasunao. *Mitsui Takatoshi.* Tokyo: Yoshikawa Kobunkan, 1959.

Roberts, John G. *Mitsui: Three Centuries of Japanese Business.* New York and Tokyo: Weatherhill, 1973.

Takatera, Sadao. "Comparative Analysis of the Old Japanese Bookkeeping Method with the Western Bookkeeping Method." *The Kyoto University Economic Review* (April-October 1980), pp. 31-36.

Williamson, Oliver E. *Markets and Hierarchies: Analysis and Antitrust Implications.* New York and London: Free Press, 1975.

The Accounting Historians Journal
Vol. 11, No. 1
Spring 1984

Rosita S. Chen
and
Sheng-Der Pan
CALIFORNIA STATE UNIVERSITY, FRESNO

TAYLOR'S CONTRIBUTION TO COST ACCOUNTING, A REPLY

Abstract: We respond to those issues that M. C. Wells raised in his comments on our article. We found that his comments on the association of scientific management and cost accounting, and on Taylor's historical role in cost accounting were debatable, and his discussion of the first modern book on cost accounting was inconclusive.

In his article, "Taylor's Contribution to Cost Accounting: A Comment,"[1] Wells acknowledges some of Taylor's accomplishments; however, a considerable part of his discussion focused on certain statements that we made in our paper, "Frederick Winslow Taylor's Contributions to Cost Accounting."[2] In this paper we respond to the issues raised by Wells, starting with our original statements and Wells' related comments.

Unwarranted Association

Our Statement: An introduction to his [Taylor's] work in cost accounting . . . provides better understanding of his system of scientific management.[3]

Wells' Comment: The above statement suggests a fundamental misunderstanding of the nature of both cost accounting and scientific management.[4]

To support his argument, Wells states that "scientific management was designed to increase productivity, eliminate waste, and make individuals feel responsible for their assigned tasks. Costing was needed for pricing and identifying the sources of profit."[5] We are not sure to what extent this concept depicts Taylor's system.

Taylor was a doer. He developed his methods and mechanisms here and there over decades and then linked them together as a complete system of scientific management. In 1903 he presented a paper at the American Society of Mechanical Engineers in which he suggested that the shop be managed by the planning department, and that the following be one of the leading functional elements of that department:

> The cost of all items manufactured, with complete expense analysis and complete monthly comparative cost and expense exhibits.[6]

Several years later, Taylor published the *Principles of Scientific Management* (1911), because, during the intervening years, the concept of scientific management had become controversial.[7] From this latter publication, we derive the following framework of Taylor's system of scientific management, which includes two leading objectives and three conceptual levels:

Leading Objectives:
To secure the maximum prosperity for the employer, coupled with the maximum prosperity for each employee.[8]

Level 1—Philosophy of Management
A complete change in the mental attitude of the working men as of all those engaged in the management, toward each other and toward their respective duties and responsibilities.[9]

Level 2—General Principles of Management
a. The development of a true science
b. The scientific selection of the workman
c. The workman's scientific education and development
d. Intimate friendly cooperation between the management and the men.[10]

Level 3—Elements of Mechanism of Management
a. Time study
b. Functional foremanship
c. The standardization of all tools and motion study
d. The exception principle in management
e. The differential rate of wages
f. Mnemonic systems
g. A routing
h. Modern cost system, etc.[11]

Taylor further stressed that "it is no single element, but rather this whole combination, that constitutes scientific management."[12]

The foregoing shows that Taylor saw scientific management and cost accounting as more closely associated than Wells contends. In several aspects, as Wells acknowledges, the association was even necessary. For example, comparative cost reports were essential for the application of Taylor's exception principle in management.[13] Timely recording and monthly cost analysis were crucial for placing the responsibility for any improper expense incurred exactly where it belongs.[14] But even the distribution of shop expense, which Wells denies, was designed to serve managerial purposes. In a short paper on cost system, Taylor stated:

> The object in distributing the Shop Expense . . . is that by this means one is enabled to determine for each piece manufactured whether the cost can best be reduced by pushing the machine for a greater output, even if necessary at an extra expense of labor or whether this object can be obtained only by lowering the wage cost.[15]

Copley also noted that "the general object [of a record of machine dollar hours, which were used by Taylor as a means of shop expense distribution] was to show what each machine earned or the extent to which it was utilized. . . . Such a record plainly directs attention to the cost of maintaining idle machinery."[16] To direct attention in this area implies an attempt to control the waste in machine time.

Before changing the subject, a word of caution is in order. Firstly, to develop fully Taylor's system of scientific management required not only considerable time, but also a favorable environment. However, none of the firms by which Taylor was employed as a consultant did give him the necessary time and neither "were the environments such as to make it possible for him to work out a complete development of his system."[17] Moreover, Taylor himself had shifted his emphasis from a piece-rate system, to the task idea and finally to the principles and philosophy of scientific management.[18] Thus, it is possible that scientific management could mean different things to different people. While what we had in mind was the more complete system as summarized in the foregoing, we did not intend to preclude different points of view.

Secondly, although costing was considered consistently as an element of his system of management, Taylor did, in fact, put different stress on it at different times. The following is quoted from his manuscript prepared for his Harvard lectures in 1909:

> Fifteen to twenty years ago I looked upon a correct cost system as one of the most important among the various

> elements of management, and in fact devoted a large part of my time to introducing systems of cost and of expense analysis in manufacturing establishments. Now, however, under the modern scientific management, as far as they influence cheapness of manufacture, costs and expense analysis become . . . elements of lesser importance, and we generally leave them to the last in the introduction of our system.[19]

It should be added, however, a review of his costing systems installed at various companies since 1896 reveals little significant changes in either the form or the substance.

The First Modern Cost Accounting Book

Our Statement:	This [Taylor's] system is close to Metcalfe's *Cost of Manufacturers* (1855), which has been generally recognized as the first modern book on cost accounting.[20]
Wells' Comment:	. . . whether it [Metcalfe's book] represents "the first modern cost accounting book" as Chen and Pan claim, is however, much less certain.[21]

When we chose Metcalfe's book for a comparison with Taylor's work on cost accounting, we did not intend to claim anything other than did Chatfield who made it explicit that "The first modern book on cost accounting was Captain Henry Metcalfe's *The Cost of Manufacturers (1885).*"[22] We also noted that, in his *Evolution of Cost Accounting to 1925,* Garner chose 1885, the year that Metcalfe's book was first published, as the demarcation line for a more orderly arrangement of cost accounting theories and techniques for discussion.[23]

Wells has reason to doubt whether Metcalfe's book represents the first of that kind. However, we would be interested in knowing, if Metcalfe's wasn't, what was? Wells raises the issue, provides some alternatives, but gives no definite answer. After a brief review of those alternatives, we find that the "Accounting Circulars" published by the American Bell Telephone Company and reprinted in a journal can hardly be considered as books, and that the "1884 Accounting Circular," the only issue published before 1885, consisting mainly of a chart of accounts and explanations on selected accounts such as Accounts Receivable, Outstanding Tool Tickets and

Construction, was not specifically on cost accounting.[24] We also doubt whether Kirkman's publications before 1885 were specifically cost accounting books.[25] For example, his 1880's book on railway expenditures includes such non-costing topics (chapters) as "Taxation of Railway Property," "The Principles that Govern the Railroad Companies," "Railway Mortgage Bonds," "Rental of Leased Roads," and "The Form of Returns for the Use of State Commissioners," to name just a few.[26] By the same token, Carter's, Crittenden's and Sawyer's books dealing mainly with bookkeeping (as indicated in their respective titles) may not be appropriately classified in the cost accounting category—not to mention the question of their modernity.[27]

Wells claims that Battersby's book "was a modern cost accounting book in every sense."[28] Garner, however, was not so sure as he remarks after examining Battersby's book in great detail:

> After such a pithy criticism of other authorities one might expect that Battersby's own "Prime Cost" system would be rather modern in nature. Yet when it is examined closely it is found to be only a partial improvement over the methods he criticized. As a matter of fact, Battersby was considerably better in finding faults with the work of other authorities than he was in devising a more nearly perfect cost system of his own.[29]

Wells admits that "none of these expositions were as detailed or provided the explicit examples of product costing contained in Metcalfe's book. Nevertheless, [he adds,] it does seem that the ideas were more common than Chen and Pan would allow."[30] While we wonder how anybody could allow or disallow the existence of certain costing ideas about a century ago, we realize that from the "first book" to the "first idea" there is a considerable shift in issue.

Installation of Bookkeeping System At The Midvale

Our Statement: It is unlikely that Taylor installed any accounting system as such [with features indicated in his paper entitled "System of Book Keeping and Reporting as Introduced"] while he was working with the Midvale.[31]

Wells' Comment: There can be no doubt that he [Taylor] was speaking [at the 1886 Conference of the American Society of Mechanical

> Engineers] of a system which was in operation, and which by 1886 had been in operation for a number of years.[32]

It is noted that our statement was referring to Taylor's paper on bookkeeping, not cost accounting, while the paper Metcalfe presented and to which Taylor referred at the 1886 Conference was solely on cost accounting, not bookkeeping.[33] Of course there can be no doubt that some accounting system had been in operation at the Midvale since and even before Taylor was hired as a laborer in 1878, but there was no evidence showing Taylor's direct involvement in the installation of any accounting system at the Midvale with the following features as indicated in his paper:

> 1st. . . . The books are so arranged that at the end of each month the exact cost of each article or class of articles manufactured during the month is shown on the books . . . .
>
> 2nd. The books are closed as completely each month as they ordinarily are at the end of the year and complete exhibits are made out and sent to the treasurer of the company and to as many of the directors as desire them showing:
>
> A. A complete balance sheet . . . .
> B. An analysis and classification of the expenses of the company and a comparison with the expenses of former months . . . .
> C. A detailed cost sheet . . . .
> D. A detailed profit and loss account.
>
> 3rd. The books are arranged especially so that they can be balanced daily and a daily report sent to the treasurer and directors if desired giving them a complete balance of the financial side of the business.[34]

While we have been unable to find any document conclusively substantiating the existence of such a system at the Midvale in the 1880s, we tend to agree with the following comment given by Carl G. Barth, who had known Taylor since the early 1880s, became one of Taylor's closest associates in 1899, and compiled Taylor's historical files in the 1930s:

> No evidence has been found that Taylor had anything to do with stock keeping or accounting, in its broader sense, at Midvale but it is well known that he had already thought

out, and perhaps applied the fundamentals of the particular method of cost keeping, at Midvale . . . While the write-up by Taylor [Taylor's paper indicated above] was found in one of his Midvale books, it is absolutely certain that he had not while still with that company developed the style of bookkeeping therein briefly outlined.[35]

Taylor's Contribution

Our Statement: Accounting history has not done justice to Taylor's contributions.[36]

Wells' Comment: As he [Taylor] did nothing to promote cost systems, it is concluded that he has received the credit due to him.[37]

Wells acknowledges Taylor's work on cost accounting, but contends that Taylor did not publicize his costing methods.[38] Using a certain criterion to evaluate one's accomplishment does have merit. However, Wells does not specify the terms "promote" and "publicize" that he uses to evaluate Taylor's and others' contributions. It is true that Taylor never published anything specifically on cost accounting. His only article that appeared in an accounting journal, (i.e., *The Journal of Accountancy*), was not on cost accounting nor on bookkeeping, but on the principles of scientific management.[39] He was once invited to give a lecture at the University of Illinois on such topics as "the art of cutting metals" or "the cost of production," but he chose to talk about "Success" instead.[40]

While Taylor was silent in terms of publication and lecturing on his costing method, he did in fact utilize some rather unconventional channels to promote and publicize his methods of management, including costing. Chronologically, he spent twelve years working with the Midvale Steel Company, and became the general manager of the Manufacturing Investment Company in 1890, where he began to work with the details of accounting. Three years later, he withdrew from the Manufacturing Investment Company and started his new profession as a consulting engineer in management with a claim of his specialty in "systemizing shop management and manufacturing costs."[41] In this capacity, he helped organize the managements of various manufacturing companies such as the Steel Motor Works, Simonds Rolling Machine Company, and the Bethlehem Steel Works. From his files, we found evidence of those costing systems that he installed for these and other clients. Taylor retired from "money-making business" in 1901 in order to devote his time and money to promoting the cause of scientific management. In 1904, he took up his residence at Boxly, Pennsylvania and worked for the developments of his system at various establishments, including the Tabor Manufacturing Company and the Link-Belt Engineering Company in nearby Philadelphia. It is noted that the costing system that we introduced in our article was the one that he installed at the Tabor, where, according to Copley, "scientific management was developed in entire obedience to Taylor's instructions."[42] After Taylor had become settled at Boxly and the Tabor and Link-Belt developments were well advanced, he invited those individuals who had taken or who he wished would take an interest in his ideas to see scientific management in actual operations there. Copley further noted that:

> It is certain that the year 1907 saw sudden increase of interest in his general principles, that his correspondence leaped accordingly, and that thereupon began in real earnest the pilgrimage to Boxly of men and women seeking light on all sort of management problems . . . they often came in parties of as many as twenty-five or thirty.[43]

It is conceivable that among the pilgrims were men like Holden A. Evans who were interested in, among other things, cost accounting. A few years after his visit, Evans published extensively on cost accounting. From his publications, Taylor's influence is apparent.[44]

Another example of Taylor's influence is found in Frederic A. Parkhurst's writings. Parkhurst, an organizing engineer, published a series of articles on the applied methods of scientific management, which were later published in book form in 1911. The author made it very clear that:

> Mr. Fred W. Taylor, the originator of Scientific Management, and his able associates, have described the principles in detail, and any attempt of mine to elaborate upon them would be superfluous . . . In these pages the application of methods will be treated in detail and illustrated by the history of them as applied to the Ferracite Machine Co., ... The methods to be described are on lines parallel to those laid down by Mr. Taylor and are particularly adapted to a business employing 100 people or more.[45]

Parkhurst presented a detailed Chief Cost Clerk's Instructions, the similarities between these instructions and those that Taylor designed for his clients, such as the Bethlehem Steel, were overwhelming.

Conclusion

We have responded to Wells' comments on our paper on Taylor's contributions to cost accounting, and found that:

1. Taylor did point out repeatedly and consistently that costing was an element of his system of management. Their association is not as unwarranted as Wells contends.
2. Those early publications on Wells' list as candidates to replace Metcalfe's 1885 book as the first modern book on cost accounting are debatable.
3. There is no new evidence showing conclusively that Taylor did, in fact, install any accounting system in the 1880s with those features indicated in his Midvale paper on bookkeeping.
4. Taylor did use some channels other than publication and lecturing to promote and publicize the mechanics of his system, including cost accounting.

FOOTNOTES

[1]Wells, "Taylor's Contribution."
[2]Chen and Pan.
[3]Chen and Pan, p. 1.
[4]Wells, "Taylor's Contribution," p. 69.
[5]Wells, "Taylor's Contribution," p. 71.
[6]Taylor, *Shop Management,* p. 111.
[7]Harlow S. Person, "Foreword," in Taylor, *Scientific Management,* p. vi.
[8]Taylor, *The Principles,* pp. 9-10.
[9]Taylor, *The Principles,* p. 140.
[10]Taylor, *The Principles,* p. 130.
[11]Taylor, *The Principles,* pp. 129-130.
[12]Taylor, *The Principles,* p. 140.
[13]Taylor, *Shop Management,* pp. 126-127.
[14]Taylor, "Cost System."
[15]Taylor, "Cost System."
[16]Copley, Vol. I, p. 447.
[17]Copley, Vol. I, p. 445.
[18]Copley, Vol. I, pp. 3-19.
[19]Copley, Vol. I, p. 367.
[20]Chen and Pan, p. 13.
[21]Wells, "Taylor's Contribution," p. 72.
[22]Chatfield, p. 159.
[23]Garner, p. xi.
[24]American Bell Telephone Co. Ltd.
[25]Kirkman, *Railway Disbursements; Railway Expenditures; Handbook.*
[26]Kirkman, *Railway Expenditures.*
[27]Carter; Sawyer; Crittenden.
[28]Wells, "Taylor's Contribution," p. 72.
[29]Garner, p. 73.
[30]Wells, "Taylor's Contribution," p. 74.

[31]Chen and Pan, p. 2.
[32]Wells, "Taylor's Contribution," p. 70.
[33]Metcalfe, "The Shop Order System."
[34]Taylor, "System of Bookkeeping."
[35]Barth, Book 2.
[36]Chen and Pan, p. 1.
[37]Wells, "Taylor's Contribution," p. 69.
[38]Wells, "Taylor's Contribution," p. 74.
[39]Taylor, "Principles and Methods."
[40]Copley, Vol. II., p. 294.
[41]Taylor prepared a rubber stamp for his profession, in which he specified "Systematizing Shop Management and Manufacturing Costs a Specialty." Copley, Vol. I, pp. 390-391.
[42]Copley, Vol. II, p. 162.
[43]Copley, Vol. II, pp. 281-284.
[44]Evans; for an unusual relationship between Evans and Taylor, see Copley, Vol. II, Ch. XI. It is noted that all Evans' publications on scientific management and cost accounting were published in those years while he kept close contact with Taylor.
[45]Parkhurst, pp. 1-2.

BIBLIOGRAPHY

American Bell Telephone Co. Ltd. "Accounting Circulars, 1884 & 1887." Reprinted in *The Accountant* (November 29, 1913), pp. 790-792.

Barth, Carl G., Compiler. "A Brief Description of the Compiled Books of Taylor Memorabilia." Unpublished. The Taylor Collection. Hoboken, New Jersey: The Stevens Institute of Technology.

Carter, F. H., *Practical Bookkeeping.* Edinburgh: Simpkin, Marshall, Hamilton, Kent & Co. 1874. See also Wells, "A Bibliography," p. 674.

Chatfield, Michael. *A History of Accounting Thought.* Hinsdale, Ill., The Dryden Press, 1974.

Chen, Rosita S. and Pan, Sheng-Der. "Frederick Winslow Taylor's Contributions to Cost Accounting." *The Accounting Historians Journal* (Fall 1980), pp. 1-22.

Copley, Frank Barkley, *Frederick W. Taylor—Father of Scientific Management.* New York: Harper & Brothers, 1923.

Crittenden, S. W. *An Inductive and Practical Treatise on Bookkeeping by Single & Double Entry,* E. C. & J. Biddle & Co., Philadelphia, 1860.

Evans, Holden A. *Cost Keeping and Scientific Management,* New York: McGraw Hill, 1911.

________. "Overhead Charges and Shop Output," *American Machinist* (August 20, 1910), pp. 165-167.

________. "Distribution of Indirect Costs," *American Machinist,* (January 14, 1911), pp. 1158-1161.

Garner, S. Paul, *The Evolution of Cost Accounting to 1925.* University, Alabama: University of Alabama Press, 1954.

Kirkman, M. M. *Railway Disbursements and the Accounts Into Which They Are Naturally Divided.* New York: Railroad Gazette, 1877.

________. *Railway Expenditures: Their Extent, Object and Economy.* Chicago: Railway Age Pub. Co., 1880.

________. *Handbook of Railway Expenditures.* Chicago: Railway Age Pub. Co., 1881.

Metcalfe, Captain Henry. *The Cost of Manufacturers.* New York: John Wiley and Sons, 1885.

____________________. "The Shop-Order System of Accounts," *Transactions, ASME,* May 1886. Reprinted in *The Cost of Manufacturers,* 3rd Ed., 1907, pp. 311-353.

Parkhurst, Frederic A. *Applied Methods of Scientific Management.* New York: John Wiley & Sons, 1912.

Sawyer, J. *Bookkeeping for the Tanning Trade. London:* By the Author. 1851.

Taylor, Frederick Winslow. *Shop Management,* 1911, Reprinted in *Scientific Management,* New York: Harper & Brothers, 1947.

____________________. *The Principles of Scientific Management,* 1911. Reprinted in *Scientific Management,* New York: Harper & Brothers, 1947.

____________________. *Scientific Management,* New York: Harper & Brothers, 1947.

____________________. "Principles and Methods of Scientific Management." *The Journal of Accountancy* (June 1911), pp. 117-124; and (July 1911), pp. 181-188.

____________________. "Cost System." Unpublished Manuscript. The Taylor Collection. Hoboken, New Jersey: The Stevens Institute of Technology.

____________________. "System of Bookkeeping and Returns as Introduced," Unpublished Manuscript. The Taylor Collection. Hoboken, New Jersey: The Stevens Institute of Technology.

Wells, M. C. "Taylor's Contribution to Cost Accounting—A Comment." *The Accounting Historians Journal* (Fall 1982), pp. 69-77.

____________________. *A Bibliography of Cost Accounting—Its Origins and Development to 1914,* Ill.: Center for International Education and Research in Accounting, 1978.

The Accounting Historians Journal
Vol. 11, No. 1
Spring 1984

BOOK REVIEWS

Linda H. Kistler, Editor
UNIVERSITY OF LOWELL

Donald R. Adams, Jr., *Finance and Enterprise in Early America: A Study of Stephen Girard's Bank* 1812-1831 (University of Pennsylvania Press, 1978, pp. 173, price not available).

Reviewed by
Michelle Hamer
University of Maryland

Steven Girard was a wealthy Philadelphian with extensive interests in shipping and trade between the U.S. and Europe. Economic instability in Europe resulting from the Napoleonic Wars and the uncertainty of international trade caused by imminent war between the U.S. and Britain led Girard to liquidate his European assets and repatriate the resulting funds in the years 1808-1812. He used this money to establish a large, unchartered, private (as opposed to corporate) bank. His bank was opposed by the state chartered banks already in existence. This book describes the bank's operations from its establishment in 1812 to its closing in 1831 immediately after Girard's death.

Although this is the history of a single bank, the book provides considerable insight into banking legislation, the relationship between the state and federal governments, and banking practices of the period. During the early years of the bank's existence, Girard was involved in a variety of attempts to influence banking legislation at both the federal and state levels. During this period, federal legislation forbidding noncorporate banks, state legislation forbidding nonchartered banks, and tax legislation providing for higher taxes for noncorporate than for corporate banks were proposed. Girard attempted to persuade his powerful friends to block legislation harmful to his bank. Girard's bank made a large investment in U.S. bonds used to finance the War of 1812. In return for this, his bank was made a depository bank for the U.S. Treasury and notes on his bank were accepted in payment of debts owed to the Treasury. The Treasury's financial problems during this period, highlighted by the default of treasury notes in 1814, led to frequent negotiations between the Secretary of the Treasury and Girard about the possibility of additional loans to the Treasury. Girard's active support of the establishment of a national bank to regulate U.S. federal debt and to control the money supply are described. Problems with the specie (gold) standard, its suspension during the war, and reinstatement following the war are discussed.

The bank's operations are described in considerable detail. No interest was paid on deposits. Loans were short term, commercial loans restricted to residents of Philadelphia. Initially, 60 day loans were the rule, but this was gradually increased to permit loans for as long as 180 days. Girard required borrowers to keep funds on deposit (similar to modern day compensatory balance requirements). Girard favored a large portfolio of relatively small loans which diversified his risk and reduced uncollectibles. He was very conservative in his asset management and generally maintained sufficient specie (gold and silver reserves) to cover his bank notes, whereas the average Pennsylvania bank could cover only about one third of its notes. His investment portfolio included large amounts of highly liquid investments, e.g., Bank of United States stock and U.S. government bonds.

From the viewpoint of an accounting historian, the book provides an interesting example of the use of accounting records to reconstruct the activities of an enterprise. Adams used quarterly balance sheets, ledgers, and daily record books of bank tellers to shed light on the bank's asset and liability management policies and changes in these policies over time.

The book is not well organized. The later chapters frequently repeat material contained in Chapters one to four. Although Girard must have been an interesting character, he never seems to come to life. In many cases, possible motives for Girard's strategems in relations with his correspondent and competing banks and with the government are not clearly developed. Most of the discussion of the specie standard and specie raids of one bank on another is not clearly explicated. The author seems to presuppose the reader has considerable familiarity with banking. The book is probably only of use to a specialized audience.

Fred Bateman, Editor, *Business in the New South: A Historical Perspective* (Sewanee, Tennessee: The University Press, The University of the South, 1980, pp. 158, $9.50).

Reviewed by
Horace R. Givens
University of Maine at Orono

This slim volume contains papers presented at the First Annual Sewanee Economics Symposium sponsored by The University of the South in April, 1980. The purpose of this symposium was "to provide a forum through which to learn the views on a single topic of a group of people with varied backgrounds and perspectives." The single topic was the evolution, in recent years, of the economic and business climate of the South, and how the South has changed, from a region generally believed to be behind the rest of the United States, into the "last bastion of traditional American values of entrepreneurship, economic drive and business acumen."

The papers are combined in roughly chronological groupings. The first section, "Introduction," consists of two papers which outline the possibilities and opportunities for research into Southern economic and business history.

The second section, headed "The Early Problems," contains materials on traditional Southern agriculture, antebellum industrialization, and the familiar problems of black and white labor and the difficulties attendant upon the transformation of a slave society.

Under the heading, "The Modern Success," are papers discussing business development in the South in the post-World War II period, the results of a survey on the characteristics of Southern business leaders in the 1950s and an interesting, although very brief, historical study of the Life Insurance Company of Georgia.

The next section contains several short statements gathered under the heading, "The Future." (It is interesting to note that, while the historical studies in the earlier sections were almost all contributed by academicians, the prognostications are all provided by business executives. Perhaps the future requires more "real world" analysis than the past!)

The foregoing materials are of interest, especially to those concerned with Southern economic history. However, accounting historians will find the final substantive section more fruitful. This section is headed "Preserving the Record of Southern Business." The discussion is applicable to business records retention and corporate archives in general.

Philip Mooney, Manager of Archives Services for the Coca Cola Company emphasizes the fact that archives are a benefit to the firm, not just to scholars. For example, such archives have assisted in litigation involving trademarks and copyrights. Mooney points out that executives should be made aware of the value of archives to their work, and he also indicates that archives must be tailored in some measure to the needs of these executives.

Professor Herman Freudenberger of Tulane University contributed a paper entitled "Continuity in Administration: The Historical Uses of Business Records," in which he presents cogent arguments supporting the establishment of business archives. He also makes the interesting point that the retention of business records, while more and more a business necessity, has become a social responsibility. The documentation of business firm activities is as worthy of saving as are the records of political activities.

Finally, Edie Hedlin of the National Historical Publications and Records Commission spoke on "Maintaining Historical Records: The Current Situation." Hedlin's paper describes the relatively small amount of business archival materials available and notes some of the problems accompanying record retention such as space limitations and the selection of materials to preserve. She then recommends several steps to be taken to improve the situation.

First, Hedlin suggests a determination be made as to what business records are most often requested by scholars. Based on the results of this determination, the next step would be to develop and promulgate criteria for the retention of business records.

A national data base should be established containing information on the extent, content, location and availability of business collections throughout the United States.

Finally, she suggests the establishment of a service to business to aid firms in the development of in-house archival programs and in related work such as the preparation of company histories.

While not directed specifically at accounting history, this collection of papers will be of interest to those scholars concerned with the business history of the South. The final section, as described, can be read with profit by anyone concerned with matters of business records retention and archives.

Axel Grandell, *The Tally Stick: A neglected bearer of cultural tradition* (Ekenas Tryckeri Aktiebolags Forlag, Finland, 1982, pp. 161, $20.00).

Reviewed by
William Baxter
The London School of Economics, University of London

This book (*Karvstocken - en förbisedd kulturbarare*) is in Finnish, but it has an English summary, and its 38 photographs speak for themselves. Its author is professor of accounting at Abo Akademi, Finland. He gives us a clear account of the tally's history, forms, and widespread uses.

The oldest surviving tally (he tells us) was unearthed in a Schleswig village, and has been dated c. 750 A.D. But tallies had important functions long before then. Tacitus mentions them in his book on the Germans. By the second century, they played a big role in tax collection; the word for "tax" in Italian, Spanish and French (*la taille*) is firmly linked with "tally." And Professor Grandell speculates on whether the notches on tallies may not have given rise to the Roman numerals, and to the Runic symbols.

He divides tallies into four physical types:

(1) *Simple* — a stock that remains undivided.
(2) *Double* — the familiar form that was notched and then split into two bits, to record transactions between two parties. The exchequer in London raised loans against tallies till 1826; the bit kept by the lender was the "stock" (and so we get "common stock," etc.).
(3) *Triple* — used in the transport of goods (one part for the sender, one for the carrier, and one for the recipient).
(4) *Forked* — "the achievement *par excellence* of tally technology." The original stick was cunningly cut into two parts, each with two forks; thus there were in effect four pieces, which dovetailed together. This type was still used in 1922 to record deliveries of wood to Professor Grandell's college.

We are apt to remember tallies only as aids to reckoning, but they served illiterate society in many other ways. They were used by village chiefs to record fines; when the delinquent paid, the chief cut out the notches. Carved tallies acted as symbols of office, and as identification badges for messengers. Some tallies were close kin to magic wands: thus they were used by fortune-tellers to predict the future, and served as dice when lots were drawn. They were widely employed by villagers to show whose turn it was to perform social duties, such as clearing the roads of snow, caring for the sick, and giving accommodation to paupers. One tally of this kind (at Rusko, Finland) tells which household is responsible for organising bible reading meetings; it dates from the eighteenth century, and is still in use.

Professor Grandell has put us deeply into his debt with this concise description of a half-forgotten but important device.

David Green, Jr., *Accounting for Corporate Retained Earnings* (New York: Arno Press, 1980, pp. 130, $12.00).

Reviewed by
Jackie G. Williams (Mrs.)
Virginia Commonwealth University

The title of this reproduced doctoral dissertation is descriptive of the content; however, the primary thrust is the analysis of alternative ways of enhancing the understanding of current and prospective stockholders regarding the retention and distribution of corporate earnings. As the author examined improved methods of the accounting and the subsequent reporting for retained earnings, he compared the relative importance of reinvesting earnings to the dividend policy that is deemed necessary to satisfy the stockholders.

The role that federal income tax regulations played in the accounting for retained earnings is considered throughout the text. There are statistical data that give credence to the argument that, due to the impact of the income tax laws, the majority of recipients of dividend payments would have preferred having earnings reinvested rather than having dividends distributed.

The recapitulation of the entity concept and the development of the accounting method of determining "net income" will be of particular interest to accounting historians, but in retrospect, it seems that the background material contributed very little to the development of a case for the proposed "new requirement," i.e., the improvement of accounting for corporate retained earnings.

During the discussion about the homogeneity of liabilities and the proprietorship and the acknowledged heterogeneity of long-term investments, there is a table listing twenty-one manufacturing corporations with revenues in excess of one billion dollars in 1954. Ten of the eleven headings in the table relate to revenues, long-term and short-term equities, profits, and dividends. (The eleventh shows the number of employees). Green states that these statistics do not characterize heterogeneity.

Later in the paper, he uses quotations from the statements of several of these same companies to illustrate why literal adherence to auditing standards would often require the public accountant to express the seldom-seen qualified opinion. He cites specific items on the reports of American Tobacco Company (now American Brands) and The Goodyear Tire & Rubber Co. that appeared to him to be sufficient evidence to warrant a qualified opinion when an unqualified opinion was expressed. There was also information from a report of the Chrysler Corporation during the early fifties that gave evidence of that company's attempts to inflate earnings for the year.

Many reasons for the retention of earnings, other than growth and expansion, are examined. Of particular interest is quoted material from a 1941 study that investigated the reason often given that earnings were kept for the purpose of paying dividends when current earnings were insufficient. The conclusions of that study of the pre-depression years of the twenties and post-depression years of the thirties refute that claim.

The discussion of accounting for stockholders' equity includes extensive coverage of recapitalization to increase capital and to decrease legal capital. The author concludes that the adjusted book value method of accounting for earnings should be adopted; that there is no real accounting difference between a stock split and a stock dividend; and that there should be a differentiation between contributed capital and earned capital.

An illustration of a proposed multi-columned cumulative report of retained earnings that would reveal pertinent information to stockholders is shown. The clarity of the information is doubtful, particularly if the primary objective of this report was to explain to the relatively uninformed public the disposition of earnings and the related activity that affected dividend declaration.

Since internal accountants serve management's needs, the public accountant was designated as the one who should prepare the proposed supplementary report to account for earnings retention and distribution. Accountants would have to be motivated to compile such a report that would be easily understood and that would communicate clearly exactly what was done with the earnings of the corporation. They would have to become even more perceptive, look beyond the explicit transaction, and use their analytic skills in making judgements and formulating and expressing opinions.

Edwin Green and Michael Moss, *A Business of National Importance: The Royal Mail Shipping Group, 1902-1937* (New York: Methuen & Co., 1982, p. xii, 291, $32.00).

Reviewed by
Robert M. Jennings, Sr.
Indiana University Southeast

The pervasive importance of the Royal Mail Shipping Group over almost four decades at the start of this century is thoroughly examined in this business history. The impact of the ultimate dissolution of the group was far reaching and greatly influenced British accounting, legislation and national economic policy.

The accountant who faces a complex consolidation engagement could only view this entity as a nightmare. Holdings and cross-holdings intertwine to an extraordinary degree, and the preparation of accurate operating results and balance sheet data may have been virtually impossible. The appendix listing the ordinary (common) shares of the eleven principal companies in the group reports thirty cross-held listings. Green and Moss summarize the entire Group in a single sentence, "the Group controlled ninety-two wholly-owned subsidiaries, held majority shareholdings in forty-nine other companies, and was a minority shareholder of a further forty-five companies." (p. 80) By 1930, the total liabilities of the conglomeration were, at least, 120 million pounds. (p. 3)

The national "conspiracy of silence" that kept much of the disastrous news from the general public was apparently quite successful. The international depression and British national policies aimed at maintaining employment levels in the maritime field were very influential in subduing the news releases and encouraging the cooperation of diverse interests.

The liquidity roots of the dissolution are strongly evident. Eventually, however, some shares of the principal companies of the Group were traded at par, or, upon dissolution, returned more than par. For example, the authors cite (p. 177, p. 185, p. 190) the realization of 113% on common shares; a debenture stock return to 97% of par; and a third realization at 133% of par on common shares.

The authors sympathetically portray the behavior and character of the principal defendant who presumably was responsible for the tangle and ultimate dissolution of the Group. Perhaps this is due to Lord Kylsant's advanced age when he was convicted of fraud (he was nearly seventy years old). Nevertheless, the evidence presented at trial and revealed in the book leads to the conclusion that the conviction may have been a just one.

The authors have conducted exhaustive research on the Royal Mail case. In several places, proof reading errors have occurred that the trained accountant will identify almost immediately because of their jarring nature. One example is a settlement of 75% in cash and 35% (*sic*) in income bonds (p. 167) which is theoretically possible but seems very unlikely in light of related settlements. A second example (p. 181) has obviously excluded three zeros from the 1,326 shares mentioned. Considering the volume of exchanges and transactions described, it was inevitable that several such errors would creep into the final text. Use of the old British currency makes much of the financial information difficult for nonBritish readers. However, on numerous occasions, the authors have parenthetically inserted pound and decimal pence notations which definitely helps. The complex debt and equity structures frequently found in the Group, together with the unfamiliar pence/shilling/pound notations require a reader's careful attention.

The accounting historian should note the profession's disinterest in those times in *any* normative attitude towards disclosure. "The Case of the Royal Mail" was reproduced some twenty years ago in Baxter and Davidson's *Studies in Accounting Theory.* It was written by the defense counsel for the accountant charged with fraud along with Lord Kylsant, who was the Chairman of the Royal Mail and many of the constituent companies.

This volume is particularly valuable in that it presents an excellent historical perspective of a vital current problem. There exists today the need to recognize that fundamental changes in industrial structure have occurred in the last decade or two. This was exactly the situation the Royal Mail Group faced some six decades ago. But few people, if any, recognized that cash transfers and short term borrowing could not solve the more deeply rooted problems. Then, as now, investors should recognize that short term solutions may no longer be appropriate.

Marshall M. Kirkman, *Railway Revenue: A Treatise on the Organization of Railroads and the Collection of Railway Receipts* (New York: The Railroad Gazette, 2nd edition, 1879. Reprint edition, New York: Arno Press, 1979, pp. xv, 595, $60.00).

Reviewed by
Derek Acland
Carleton University

Kirkman subdivided his volume into three basically separate

Accounting Historians Journal, Vol. 11 [1984], Iss. 1, Art. 15

and distinct books. In the first book, the author described the typical organizational structure for an American railroad of the mid to late 19th century. Detailed job descriptions were established for the main officers of the railroad ranging from Accounting Officer to President. The author's personal views on the qualities or characteristics required for each position were extensively presented. Where appropriate, the author identified differences between the American and British railroad systems. Book 2 contains the accounting system and records that the author advocated for the faithful collection and audit of the railway receipts. A useful appendix reproduces seventy-seven forms to illustrate the documentation described in this book. Book 3, the shortest of the three, explains the overall accounting system of a railroad leading from journals to the financial statements. Unfortunately, illustrative financial statements were not presented.

The author was a prolific writer and this volume was followed shortly thereafter by a companion work *Railway Expenditures* (see *Accounting Historians Journal,* Spring 1981). In the Preface, Kirkman noted that the book reflected his experience of over 23 years with the accounts of railroads. As he was born in 1842, he would seem to have commenced employment at the tender age of 14, presumably without the benefit of advanced schooling. One must marvel at the extensive vocabulary and interesting writing style utilized by Kirkman. By continually using colourfully descriptive or amusingly opinionated statements, the author maintained the reader's interest when discussing what could be a rather dull and tedious subject.

Throughout the first book, the author's description of the attributes required for particular railroad positions were particularly intriguing. For example: "The office of Accountant, we observe, is never sought from choice by active or aggressive young men in our country; indeed our accountants may be said to be the least aggressive people in the world." (p. 124) or "Like all professional men animated by a high ideal, the Engineer, we may say in passing, possesses an instinctive aversion to accounts, coupled with a chronic incapacity to understand or manipulate them. He is then happily relieved of a vexatious burden." (p. 86)

Readers desiring a detailed exposition of the personal characteristics for particular positions in American railroads during the second half of the nineteenth century will find this volume useful and interesting reading. The accounting system for railway cash receipts, which includes a complete set of accounting forms, presents the state of the art at that time, clearly and completely. Anyone seeking detailed information on a railway accounting system of this period would find this quite a useful reference source.

Maurice Moonitz, Editor, *Three Contributions to the Development of Accounting Thought* (New York: Arno Press, 1978, pp. 334, $25.00).

Reviewed by
Roger H. Hermanson
Georgia State University

The purpose of the book is (1) to review the 1917 project to promulgate a program for audit procedure which was prepared by an eight-person committee at the request of the Federal Trade Commission; (2) to present the classic exchange by Paul-Joseph Esquerré and H. A. Finney regarding the funds statement; and (3) to present the content of Special Bulletins that contained questions and answers that passed through the Library and Bureau of Information of the American Institute of Accountants. The book presents some valuable insights on how present day accounting principles evolved. These three sections of the book will be discussed separately.

Uniform Accounts

Edwin N. Hurley, then Vice-Chairman, and later Chairman of the Federal Trade Commission, requested the President of the American Association of Public Accountants, J. Porter Joplin, to appoint a special committee (headed by Robert H. Montgomery) to confer with the commission on all accounting questions. The most important output of the committee was a document on uniform accounts which was first published in 1917 and again in 1918 for general distribution. In 1929, a revision was prepared by the Institute and published by the Federal Commission with the title, "Verification of Financial Statements (Revised)—A Method of Procedure Submitted by the Federal Reserve Board." The 1936 revision, "Examination of Financial Statements by Independent Accountants" was published by the Institute.

The book contains a reprint of the 1917 version of the proposal. Major headings within the proposal include "Uniform Accounts" (possibly the intended title for the entire document), "General Instructions for a Balance Sheet Audit of a Manufacturing or a Merchandising Company," "Specific Instructions and Suggestions Relating to the Separate Headings," "General," and "Form of Certificate." Under the middle heading, specific accounts such as cash, notes receivable, accounts receivable, etc., are discussed. Although the document deals primarily with auditing procedures, certain accounting principles are discussed throughout.

The document was distributed by commercial bankers and was followed by businessmen and their accountants because their financial statements had to be in proper form to increase the chance of securing loans from those bankers. One can see the formulation of many modern day accounting principles in this important document.

Resources and Their Application

An issue of *The Journal of Accountancy* had published an unofficial answer to a funds flow problem which appeared on the May 1921 CPA examination. Paul-Joseph Esquerré took issue with that solution and wrote a seven-page letter to the journal stating so. The letter was published in the May 1925 issue. H. A. Finney, then editor of the Students Department, responded to the letter with a 14-page letter in the June 1925 issue. Esquerré argued for the "all-resources" concept of funds, while Finney argued for the working capital concept. These two letters are reprinted in the book.

The emotional involvement of the individuals is evident in their letters. Esquerré [p. 425] stated:

> My personal belief is that the solution at issue is not a good one; that it is not true to accounting principles, and that, in order to balance, it violates accounting. . . . I have no desire to advertise myself or my course; I am actuated only by my firm belief in the truth and sacredness of accounting principles.

In Finney's reply [p. 497] he stated:

> It is, of course, a matter of personal concern to the editor of this department that Mr. Esquerré saw fit to make use of such expressions as "forcing the funds" and "forced figure." The first reading of the letter left the editor with the impression that he had been accused of a mathematical forcing of a balance, and it is not unlikely that many readers obtained the same impression. Such an accusation would of course have been unwarranted and untrue, as can be determined by an inspection of the problem and the solution, which are reprinted hereinafter for purposes presently to be mentioned.

> Upon second reading, it appeared more likely that Mr. Esquerré meant to convey the thought that figures were grouped in a manner which was not in accordance with his interpretation of the requirements of accounting principles. If this is the correct interpretation of his remarks, it is to be regretted that, in stating what merely amounts to a difference of opinion as to correct principle and procedure, use was made of words charged with so aspersive a connotation.

The letters are interesting as logical arguments. But they are even more interesting as exchanges in a "testy" situation.

Special Bulletins of the American Institute of Accountants

A total of 33 Special Bulletins were published from 1920 to 1929 by the Library and Bureau of Information of the American Institute of Accountants. The bulletins consisted primarily of questions and answers on specific accounting issues of the time. The answers were advisory only and represented the opinion of one or more accountants in good standing who had been asked to respond to the question. Other items occasionally were included in the bulletins. For instance, Special Bulletin No. 2 included suggestions for Professional Conduct reprinted from the bulletin of Haskins & Sells, January 15, 1919.

The bulletins provide insight on the accounting issues of interest in the 1920s. An example of a typical question and answer is:

> TAXICABS
>
> Q. What is the depreciation on taxicabs?
>
> A. The opinion we have received regarding the rate of depreciation on taxicabs is 33⅓ per cent.

Most of the questions and answers are much longer and more substantive, some running for several pages. Topics included in the bulletins are varied. For instance, those included in Special Bulletin No. 6 are fire loss, breweries, turpentine leases, seed beans, bolts and nuts, negligence, drafts, depreciation, steel vessels, and time keeping and payroll distribution.

The entire book is useful in providing readers with a historical perspective on the development of accounting principles. The funds flow debate would be a fascinating reading assignment for students. The special bulletins could be read a few at a time on a random basis to give one an idea of what the accounting issues were in the 1920s. An important part of accounting history has been preserved by publication of this book. After reading it one can understand why Moonitz began with the following quote, "Confound these thieving ancients for stealing all our modern ideas."

Donald R. Nichols and Howard F. Stettler, Editors, *Auditing Symposium VI—Proceedings of the 1982 Touche Ross/University of Kansas Symposium on Auditing Problems* (Lawrence, Kansas: School of Business, University of Kansas, 1982, pp. 139, $7.00).

Reviewed by
Jean C. Wyer
The College of William and Mary

This volume is the sixth in a series documenting the biennial conferences on auditing problems held by Touche Ross and the School of Business at the University of Kansas. As in previous years, there are eight papers, generally presented with comments from discussants. The high quality of the comments reflects the beneficial practice of providing papers to participants in advance. The synergy between papers and comments is also aided by the mixture of practitioners and academicians in both roles.

The sixth proceedings contain papers on eight auditing topics:

- "The Evolution of Audit Reporting" by D. R. Carmichael and Alan J. Winters
- "How Not to Communicate Material and Immaterial Weaknesses in Accounting Controls" by Wanda A. Wallace
- "Human Information Processing Research in Auditing: A Review and Synthesis" by Robert H. Ashton
- "Audit Detection of Financial Statement Errors: Implications for the Practitioner" by Robert E. Hylas
- "A Multi-Attribute Model for Audit Evaluation" by Theodore J. Mock and Michael G. Samet
- "Some Thoughts on Materiality" by Kenneth W. Stringer
- "SAS 34 Procedures vs. Forecast Reviews: The Gap in GAAS" by Robert S. Kay
- "Developments in Governmental Auditing: Their Impact on the Academic and Business Communities" by Richard E. Brown.

The Proceedings are of special interest to accounting historians for two reasons. First is the explicit treatment of history in the first paper. Carmichael and Winters present an analysis of the history of audit reporting. Their basic premise is that audit reporting changes have led the development of practice standards and procedures. They discuss eleven landmarks in the development of the audit report, covering the period from the 1917 Federal Reserve Bulletin to the consideration of revisions to the standard report in 1979-80. The authors note in their conclusions that "The dormant nature of the report over the past three decades has caused readers to view it as a symbol." The discussant, J. Alex Milburn, observes that the authors have reached conclusions that are dependent on their limited focus on audit reports. He uses his comments to expand the discussion to cover other types of assurance which are where, he argues, much activity has taken place in recent times.

The Carmichael and Winters paper and the Milburn responses are knowledgeable, readable, and compact. The works could be used as an additional assignment in an introductory auditing course to provide some exposure to history (a topic that is often overlooked, especially in one-semester courses).

The second reason that the proceedings are of special interest to historians is their utility as a part of a unique, continuing record of current discussion. They permit us to take a possibly premature look at recent observations which will likely be significant indicators to historians in the future. Because the conferences have been held every two years since 1972, the volumes of papers provide an interesting longitudinal study of the trends in the analysis of auditing problems.

A cursory review of the last three volumes yields interesting observations on authors and topics. There appears to be a trend toward the combination of academic and practical experience. Three of the eight papers in the sixth volume were written by individuals or pairs who represent both backgrounds. The topics of the papers also present evidence about the areas that have been important. The editors state that the papers "reflect no unifying theme or purpose, other than that the topics addressed or the research reported hold promise of being of interest to the invited participants from both practice and academe." The areas which have received the most attention in these last three volumes are internal control and the combination of legal liability and fraud detection. A more comprehensive survey, covering all six volumes in the series, might provide insight into the trends in auditing thought since 1972.

Auditing Symposium VI is a useful addition to the libraries of accounting historians who are interested in auditing. It, like its predecessors, provides explicit coverage of one historical topic and observations for future analysis of contemporary perspectives on auditing problems.

Terry K. Sheldahl, *Beta Alpha Psi, from Alpha to Omega* (New York: Garland Publishing, Inc., 1982, pp. xli, 838, $60.00).

Reviewed by
Walker E. Fesmire
The University of Michigan-Flint

This book is a major contribution to the early history of the development of accountancy and accounting education in America. This work provides a panoramic view of significant accounting education and information on important events and personalities during the half-century following the establishment, in 1896, of the CPA Certificate by New York State. It is a detailed, documentation of the development of Beta Alpha Psi from its founding at the University of Illinois, in 1919, through its temporary deactivations brought on by World War II.

Mr. Sheldahl's work presents an unusual view of accounting education during the period before collegiate accounting instruction became the established mode of entry into the profession of accounting. He obtained an excellent balance between scholarship and readability while developing a comprehensive, balanced reporting of Beta Alpha Psi's early development. Much of the material presented is "human-centered" as numerous references are made to important accounting educators and their thoughts, while many of the important developments are presented from the perspective of these individuals. The only chapter where this reviewer's interest waned was Chapter 3 where the work departed from the human-centered approach and devoted itself to a legalistic consideration of the development of the fraternity's constitution.

The coverage in this work is presented through a combination of topical and chronological approaches. The period covered is divided into two eras, each featuring basic themes conducive to chronological presentation. The first era, the "Founding Era," extended from 1919 until 1927. This era provided the fundamental constitutional reforms and centralized governance for the fraternity. This era also saw the nationwide expansion of chapters and the generation of several significant programs which were implemented during the second era.

The "Vigorous Survival Era" extended from 1928 to 1945. Despite the effects of the Great Depression, this era was a period of impressive achievements for Beta Alpha Psi. Among the significant achievements were the development of the chapter visitation program and the three literary programs. Two of the literary programs were awards for individual contributions to accounting literature while the third was the development of a national periodical for fraternity members.

World War II resulted in Beta Alpha Psi becoming inactive as the organization was male-oriented. However, by World War II, the fraternity was firmly established, with chapters located on twenty-one campuses throughout the nation. Thus, the foundation had been established for the reactivation of the fraternity after the war.

The primary focus of this work is upon the national organization and how, as a separate guiding entity, it assisted the local chapters in their operations. Several chapters deal primarily with local units and/or their interaction with the national unit. Also, this work presents a broad range of information on related accounting events. For example, Chapter 1 describes the "environmental background" which surrounded the formation of Beta Alpha Psi; Chapter 6 concentrates on the career of Eric L. Kohler, the second president of the fraternity and describes the pivotal events in establishment of financial accounting standards and Kohler's contributions to governmental accounting for the federal government. Chapters 9 and 10 review accounting literature representative of the 1920s and 1930s. Profiles of several noted accounting educators are covered in Chapters 2 and 14.

This book is a must for all good accounting libraries as it details the remarkable contributions made by the fraternity to accounting education between the World Wars and it elaborates on the outstanding educational legacy of the Beta Alpha Psi leadership from 1919 to 1945.

James A. Tinsley, *Texas Society of Certified Public Accountants: A History* (College Station, Texas: Texas A&M University Press, 1983, pp. x, 221, $24.95).

Reviewed by
Anthony T. Krzystofik
University of Massachusetts

This book is a revision of the history of the Texas Society of Certified Public Accountants, first written in 1962. The book has been updated to include the twenty year period since the first publication. This history is unique among state society histories in that it is written by a professor of history (University of Houston) and not a society member as is often the case with books of this type.

The book contains ten chapters and three appendices. The first chapter presents a brief overview of the emergence of professional accounting in the United States in the late nineteenth and early twentieth century, setting the background for accounting in Texas at the turn of the century. The remaining nine chapters cover various landmark periods of Texas Society and public accounting history beginning with the period that led to the passage of the Public Accountancy Act of 1915, continuing through to the Act of 1979 and the present period. The three appendices list the past officers of the Society and Educational Foundation and recipients of various Society honors and awards. As is typical of books of this type, the book is replete with names of members who played important roles in the history of the Society or the public accounting profession in Texas, most of whom are probably not recognizable outside the state. Brief biographical sketches of the Society presidents are included in the chapter covering the period in which the president served.

Each chapter covers topics that were important in the period discussed. The chapters include material on various Society issues, activities, committees, structure, finances, and staff changes. Issues that were major areas of concern in one period, such as relations with bankers or controversies with lawyers, give way to new issues in a later period. The history reflects the rapid growth of the profession in Texas as well as the changes in related societal attitudes during a seventy year period and how the Society responded to these changes in what now ranks as the third largest in total membership among the state societies in the United States. The author paints the Texas history with a broad brush, covering many areas, some with uneven coverage. Several potentially important history areas, such as the activities in the late nineteenth century and the court cases involving two-class regulation, could have been expanded at the expense of the detailed biographical sketches.

A first reading of the text makes it appear somewhat of a vanity type publication, or at best a collection of annual reports taken from the Society board of directors and committee meetings, of interest mainly to those whose names appear in print. However, a closer reading of the text, and the approach taken by the author, can be of value to accounting historians and those interested in the development of the public accounting profession in the United States.

In each of the chapters discussing a landmark period of Texas accounting history, the author has related state activities, problems, or issues with those occurring at the national level and in professional organizations such as the AICPA. Using this approach the author has presented an excellent case study of how national policies are implemented at the state level. The efforts of Texas practitioners to pass state legislation on the regulation of public practice, ethics enforcement, continuing professional education, solicitation, etc., are probably similar to what other states have experienced. The discussion of Society political and legal activities in getting legislation passed or cases defended in court illustrates the efforts made at the local level in establishing the profession as it is practiced today. For the accounting historian the book is a case study of the growth of the profession in the United States, as well as, a case study of the important role state societies play in the implementation of policies initially enunciated at the national level. While in time most of the recommendations do become adopted, it is interesting to read of the efforts made at the local level in the implementation.

For those who become impatient with the slow acceptance of current issues such as professional schools of accounting, the 150 hour education proposal, uniform experience requirements, etc., one can only look to a history of a state society to see what an important role local efforts will play in the implementation of such proposals. And a state history, such as this one of Texas, is a clear indication of the important roles that a large number of dedicated (and sometimes unknown) individuals play in the development of the profession as it exists today in the United States.

The Accounting Historians Journal
Vol. 11, No. 1
Spring 1984

DOCTORAL RESEARCH

Maureen H. Berry, Editor
UNIVERSITY OF ILLINOIS

Studies seeking historical explanation for past or present phenomena rely as much on the availability of evidence as on the ingenuity of the researcher in both seeking it out, in new places or forms, and recognizing it for what it is. This point is illustrated in many of the dissertations included in the current selection, by the researchers' efforts to use new tools, or bring new perspectives, to familiar but still fruitful research areas.

Szaivert's work on the Roman minting system in the first century A.D. provides the first example of searching through non-literature sources for events in economic history. This study in numismatics is part of a large-scale research-program, involving the ancient Roman coinage plans, currently being conducted by the Numismatic Institute of the University of Vienna. Kehoe was also interested in the economic history of the Roman Empire. He moved one century later in time to the North African provinces, and made use of a series of inscriptions, already discovered in Tunisia, to build an economic model of food production.

Bringing an imaginative focus to bear on a recognized problem area, St. George integrated data developed from two artifacts: housing and furniture, with documentary sources in his study of social change in early New England. Floystad's research into the household economies of the labor force in an eighteenth century Norwegian ironworks is the first of our dissertations involving early industrial working conditions. Most of his information came from the firm's accounting records, which were very comprehensive because of the multiple economic ties between employer and employees.

Rollison's study of seventeenth- and eighteenth-century Gloucestershire, to evaluate the nature of industrial evolution, again illustrates shift in research focus. This shift had two dimensions: geographical and temporal. The selected county was somewhat distant from the industrializing areas, and the study was longitudinal to allow for trend recognition. Shelton adopted similar focus strategies in her inquiry into change in the early American textile industry. Her geographical shift was away from New England, the traditional research site, to Philadelphia. She was thus able to trace the effects of English immigrant labor on the industrialization process.

Luchembe's comparative study of copperminers in Zambia and Peru over the past century repeats the theme that broader perspectives are needed on seemingly localized problems. The dissertation looked to the world of international finance capital for explanations of industrializing processes in two widely-separated investee countries. The last dissertation also deals with industrial change: this time in the Bavarian brewery business. While other studies laid heavy emphasis on labor relations, Mayer goes to the macro level, examining the interactive effects of government and industry policies on industrial growth.

Die Muenzpraegung des Kaisers Nerva (The Coinage of Nerva) (University of Vienna, 1979; Vol. 42/02 pp. 248-9/C)[1] by E. Szaivert. This dissertation deals with the organization of the Roman minting system in the first century A.D. Szaivert chose to concentrate on the reign of Nerva for two main reasons: firstly, because this period lent itself to the study of coinage organization, and secondly, because of the broader applicability of the research findings. The coinage system of the first century can also serve as a prototype for that of the next one.

During Nerva's reign, all coins were minted in Rome. The study provides a tabulated outline of all the coinage, complete with photographs, reconstructing the chronological sequence of the different issues. The last issue of Domitianus and the first of Traianus were also analyzed and included in order to demonstrate the continuity of the Roman mint's organization. This research disclosed that Rome had six mint departments (*officinae*) in operation by the end of the first century: the same number already known to exist two centuries later. Other coins were also dated and classified in proper sequence.

As an extension of the research, a considerable number of die comparisons were made in order to clarify other research questions. The reverse sides of the types of coins might, for example, depict certain of the Emperor's political activities which were not otherwise recorded. These die comparisons brought to light Nerva's ordinance abolishing the provision of mules for the imperial postal service, for which there are no extant literature sources. This iso-

[1]*Dissertation Abstracts International,* volume and page references.

lated example shows the important role which numismatics can play in providing basic materials for ancient history research.

The Economics of Food Production on Roman Imperial Estates in North Africa (The University of Michigan, 1982; Vol. 43/10, p. 3390-A) by Dennis Patrick Kehoe. One of the problems faced by any empire-building nation is determining how to make the best comprehensive use of its colonies' resources. Various institutions in the Roman provinces, for example, were incorporated into the overall administrative structure to consolidate control mechanisms. The general question researched by Kehoe was how this process of "romanization" affected the local economy: in particular that of North Africa.

There were two main reasons for this choice of location. First, Tunisia was one of the empire's most fertile provinces and supplied Rome with about two-thirds of its grain consumption. Second, a rich data base existed from which the author could construct an economic model for food production. This base consisted of a series of inscriptions which was discovered at the beginning of this century in the middle Bagradas valley in northern Tunisia. These inscriptions describe the agricultural system and contain regulations for management of the imperial estates in the second century A.D.

Crown land was farmed out to sharecroppers, *coloni*, under perpetual leaseholds. The middlemen to whom the rents were paid were known as *conductores*. Because of the relative abundance of land, and the large volume of production, attributable to both the fertility of the land and population density, the government received significant amounts of revenues.

In developing his economic model, Kehoe examined the economic relationships between the sharecroppers, middlemen, and government, as well as the economic intents and effects of the estate management regulations. One of his conclusions is that the *coloni* were able to exercise economic leverage in their dealings with the government as independent farmers, and were not merely peasant laborers as had previously been argued.

A Retreat from the Wilderness: Pattern in the Domestic Environments of Southeastern New England, 1630-1730 (University of Pennsylvania, 1982; Vol. 43/03, pp. 887-8/A) by Robert Blair St. George. One of the frustrations encountered in trying to trace patterns of change in early New England society has been the inadequacies of available documentation. Equally obstructing is the problem of finding alternative sources of information to fill in the gaps or round out the picture. What is needed, St. George claims, is the integration of data gleaned from artifacts with other public records. The artifacts he chose to illustrate his point were houses and furniture.

This study of changes in New England society during the first century of English settlement used three research methods: documentary reconstruction, cultural geography, and structuralism. Through documentary reconstruction, a total of 439 artisans were associated with the houses and furniture of the period. Extant inventories were examined to determine the sizes and functions of houses on a room-by-room basis, and the taking of an estate inventory in 1668 was recreated. Cultural geography helped in mapping the distribution of specific types of houses and in relating furniture construction details to the demographics of artisans and their clients from identifiable areas of the mother country. Structuralism was used to establish typologies, observe their development over time, and clarify the symbolism underlying the inventory taking.

This research showed a significant degree of cognitive congruence between houses and furniture and the extent to which they were mutually reinforcing as control mechanisms. Formal changes in furniture and housing were related to similar variations in occupational identity among the artisans, attributable to shifts in religious and social sensitivities. The social upheaval in southeastern New England, particularly towards the end of the study's time-frame, were reflected in the occupational structure and artifact forms of the local economy.

The Workman's Fate. The Scanty Bread. Living Conditions of the Workers at Baaseland/Naes Ironworks 1725-1807 (Universitet i Bergen, Norway, 1979; Vol. 42/02, pp. 249-50/C) by I. Floystad. This dissertation is a detailed study of the household economies of employees at an ironworks in southern Norway during the eighteenth century. Most of the source data was obtained from the firm's accounting records which provided very comprehensive information because of the varied economic ties between workers and employer.

The firm was in virtual control of the workers' living conditions through the recycling effects of wage earnings. The company store provided most of the goods the workers needed, the firm rented the small plots on which the workers grew their food supplements, and the firm extended credit through loans and other forms of pay advances.

Using such variables as income per year, retail prices, and household budgets, Floystad developed the real wages of employees in various activities, such as the hammers, the forge, and the mines. The household budgets for all families were reconstructed for selected years, showing the annual economic resources and patterns of expenditure and consumption. Incomes generally increased during the entire period because of higher employment, productivity, and wage rates. However, in real terms wages declined in the last quarter of the century, particularly around the year 1800, because of the high grain prices. Patterns of consumption for goods and services varied between families, but the average household spent about 70-80 percent of its income on food. At least 75 percent of energy requirements were obtained from cereals, mostly barley. Consumption of fat and potatoes was low, but most households had a satisfactory or good calorie intake.

Almost continual credit debts to the firm were characteristic of household economies. As families expanded, this debt increased. But as the children grew, and sons started to work part-time when they reached the age of 10 or 12, the credits were repaid.

Across-groups comparisons with other Norwegian working communities of the period were not possible because of the lack of similar studies; a situation which points to opportunities for further research.

The Intensification of Community, Society, and Economy in Seventeenth- and Eighteenth-Century Gloucestershire (University of New South Wales (Australia), 1982; Vol. 43/10, p. 3395-A) by David Peter Rollison. The genesis of the Industrial Revolution in England poses an intriguing question: was it a decisive watershed occurring at a particular point in time, or was it an intensification, or general diffusion, of long-rooted trends towards industrialization? Rollison argues for the latter, based on his study of industrial development in Gloucestershire, England. This is a county southwest of the "dark, Satanic mills" and not usually directly associated with industrialization.

Through the use of local history sources, Rollison traced a development cycle taking place over a 400-year period from the middle of the fifteenth to the nineteenth centuries. The early social structures were based on dispersed villages, small market towns, and a few larger boroughs and cities. As mobility increased, populations grew, and agriculture and manufacturing were rationalized, the traditional structures were subjected to stresses in a developmental process which the author describes as one of "intensification." Social conflicts were heightened, pressures increased for various new social services, and the infrastructure, including communications and transportation systems, underwent severe strain.

The pattern of change was deliberate with continuous adaptation. New local government initiatives were introduced in the late sixteenth century and the following sixty years or so saw a consolidation of innovative trends. After 1660, the tempo increased significantly when Gloucestershire assumed the role of a horizontal trade axis, complementing the traditional north-south routes. By 1850, regional and national economies had replaced by assimilation the marketing districts which previously had been relatively autonomous. Thus, from early localized origins evolved a more homogeneous commercial and industrial society.

The Mills of Manayunk: Early Industrialization and Social Conflict in the Philadelphia Region, 1787-1837 (University of California, Los Angeles, 1982; Vol. 43/10, pp. 3398-9/A) by Cynthia Jane Shelton. Research into the nature of industrial development in America has usually concerned itself with New England. However, a considerable industrial growth occurred in Philadelphia where, by the middle of the nineteenth century, there were the greatest number of textile factories in the nation. Shelton's dissertation studies the development of the factory wage labor system and industrial society in the Philadelphia area during the period 1787-1837. Its special focus is on the mill village of Manayunk and its township of Roxborough, which was the center of the mid-Atlantic textile industry. The basic methodology used was library research. The data base included newspapers, church records, tax lists, census schedules, and the correspondence and records of manufacturers.

The study explored three interconnected developments: shifts in relationships between capital and labor as water-powered mills replaced shops; shifts in the balances of property ownership, economic power, and political and cultural authority in Roxborough; and the growth of religious, political, and industrial strife in the 1830s.

The broad social conflict, resulting from the industrial process, occurred earlier in the Philadelphia region than in New England and elsewhere because of the composition of the local textile work force. The stagnation of the textile industry in Britain brought a large supply of immigrant labor to the mid-Atlantic area. The nature of mill production, the timing of mechanization, and industrial conflict in the Philadelphia area can be traced to the ideology, poverty, and skill of these immigrants. Bringing a militant tradition with them from Lancashire, they were in the van of the union movement and carried out strike activities for two years in the 1830s. Those in the commercial community perceived that both evangelical religion and social reforms could mediate in the class conflict between mill-owners and the labor force. These class divisions became more distinct as struggles intensified over such issues as working conditions, temperance reforms, and public education.

Finance Capital and Mine Labor: A Comparative Study of Copper-miners in Zambia and Peru, 1870-1980 (University of California, Los Angeles, 1982; Vol. 43/04, p. 1252-A) by Chilufya Chipasha Luchembe. Research into the history of industrial development in third world countries has traditionally concentrated on causal links with former colonial powers or other major investing nations. Diverging from this line of inquiry, Luchembe's comparative study of the history of labor in the copper mines of Zambia and Peru goes beyond the conventional emphasis on localized or situation-particular influences. By using a much broader focus, Luchembe posits that the nature of copper production, and its effect on social relations, has been determined by international finance capital.

The dissertation is organized into seven chapters spanning the past century. The first chapter, set in the period 1870-1890, traces three antecedent elements which are critical for industrial development: the end of the slave trade, the rise of speculation in commodities, and the beginning of large-scale concentrated investment overseas. During the next two decades, speculation came to an end and production began. In Peru, this occurred just after the turn of the century when all locally-owned mines and concessions were purchased by a New York consortium. Speculation by the British in Zambia, on the other hand, did not end until after the first world war.

Chapter three deals with the interwar years and the differing effects on the Peruvian and Zambian copper industries of the depression years and the onset of the second world war. Social relations during these decades, particularly with respect to migrant labor, are explored in chapter four. By utilizing this type of labor, profits were maximized and international competition undercut.

Copper production was modernized and expanded in both countries during the forties and fifties. This capital investment brought an end to unskilled, labor-intensive operations and a need for skilled labor, which, in turn, stimulated labor movements.

The final chapters trace the effects on Peru and Zambia of the depreciation of the dollar on the international finance markets from 1960-1980. To minimize losses, companies cooperated in State nationalizations during this period. The concluding issue raised by the author is whether the state can maintain this posture in the face of the changing social structure in both countries.

Bavarian Breweries and Brewmasters, 1871-1914: A Study of Mittelstandspolitik and German Economic Modernization (Harvard University, 1982; Vol. 43/10, p. 3395-A) by James Douglas Mayer. What influences did rural and urban artisans bring to bear on the economic, political, and social life of Bavaria during the interwar years 1871-1914? Mayer examined this question by focusing on the Bavarian brewmasters and breweries: one of the most respected of the old middleclass (*Mittelstand*) crafts. Research data was mainly obtained from various library sources, including the Bavarian main state archive and the private archive of the Bavarian Brewers League in Munich.

Bavaria's breweries developed in the context of trade guilds. By the middle of the nineteenth century they were still operating as small artisan enterprises with a maximum of five employees, most of whom had served an apprenticeship of at least two years. Beer was a basic commodity at all levels of life and per capita consumption was unequalled elsewhere in the world. Considerable changes in organization and market orientation took place, however, in the period of 1870-1900. More than 2,000 small breweries went out of business, or were absorbed into larger firms. About 74 incorporated breweries were established, mainly in Munich and Nuremberg, and marketing adopted a national and an international focus. By 1910, Bavaria was producing 10 percent of the world's beer.

Malt taxes from beer production had long been necessary for the economic survival of the Bavarian state and local communities. As the structure of the brewing industry changed, pressure was placed on Bavaria's monarchy by two sets of conflicting demands for state intervention: on the one side, demands from regional associations of artisans and breweries for state protectionism; on the other, demands from the large firms for free trade and increased industrial opportunities. An outward appearance of harmony, however, was

Accounting Historians Journal, Vol. 11 [1984], Iss. 1, Art. 15

fostered by the mediating influences of local-level descendants of the guild system. Mayer concluded that, by the turn of the century, it was evident that the state bureaucracy had only limited ability to resolve economic differences, due to its neo-mercantilist and paternalistic philosophies.

Announcement

Publications of The Academy of Accounting Historians

ORDER FORM

THE ACCOUNTING HISTORIANS JOURNAL	
☐ Volumes 1 through 3 (1974-76) (Formerly THE ACCOUNTING HISTORIAN—Reproduced in a single volume)	$ 25.00
☐ Volumes 4 through 10 (1977-83) OR $15.00 per volume, $7.50 per issue.	$105.00
☐ Volume 11 (1984)	$ 20.00
MONOGRAPHS*	
☐ #1 A Reference Chronology of Events Significant to the Development of Accountancy in The United States, by Knight, Previts & Ratcliffe	$ 5.00
☐ #2 John Raymond Wildman, by Previts & Taylor	$ 5.00
☐ #3 E. L. Kohler: A Collection of His Writings (1919-1975), Eds., Cooper, Ijiri & Previts	
Hardback	$ 15.00
Paperback	$ 10.00
☐ #4 Selected Papers from the Charles Waldo Haskins Accounting History Seminars, ed., James F. Gaertner	$ 15.00
* 15% discount to members on individual orders.	
HISTORIANS NOTEBOOK	
☐ 1978-83 (2 per year), $1.00 per copy	$ 12.00
WORKING PAPERS (see separate announcement/ ordering information in this issue)	______
ACCOUNTING HISTORY CLASSICS SERIES (see separate announcement/ordering information in this issue)	______

PLEASE ENCLOSE PAYMENT WITH YOUR ORDER.
Make checks payable to:
The Academy of Accounting Historians

Mail to: Secretary
The Academy of Accounting Historians
P. O. Box 658
Georgia State University
Atlanta, Georgia 30303 U.S.A.

Announcement

Working Paper Series

In 1974, The Academy of Accounting Historians established the Working Paper Series as a means of circulating preliminary historical research. The Working Paper Series currently includes fifty-eight papers of which the first forty are available in two single bound volumes (see announcement on the next page concerning these two volumes).

Manuscripts submitted should be presented in duplicate, typed on 8½ x 11 inch paper, and double spaced. Footnotes should be numbered sequentially and placed at the end of the manuscript. Bibliographies should contain complete sources arranged in alphabetical order by author. Manuscripts ranging in length from 8 to 30 pages are deemed most appropriate for this Series. Copies of current working papers are provided to members free upon request. There is a cost of $2 per paper to non-members.

All matters pertaining to the Working Paper Series should be addressed to the Editor of the Series, Don-Rice Richards; School of Business; James Madison University; Harrisonburg, Virginia 22807 U.S.A. In addition to the forty working papers appearing in Volume 1 and Volume 2 listed on the next page, the following individual working papers are available:

41. "Factors Shaping the Independent Public Auditing Profession in the United States from 1905 to 1933," by Bruce E. Committe.
42. "Frederick W. Taylor and the Evolution of Standard Overhead Costing," by Rosita S. Chen and Sheng-Der Pan.
43. "A Synthesis of the Inquiry into the Contribution of Double-Entry Bookkeeping to Capitalism," by James L. Strachan.
44. "Philosophies of History—Their Basic Tenets," by Owen B. Moseley and Milton F. Usry.
45. "The Development of the Auditor's Report in the United States," by Tonya K. Flesher and Dale L. Flesher.
46. "The Evolution of Accounting in Indonesia," by Abd. Fawzy Siddik and Herbert L. Jensen.
47. "On the Evolution of Accounting Objectives," by Robert Bloom.
48. "The Pioneer of Accounts Theory in Japan: An Appraisal of the Methodology of Wasaburo Kimura," by Yoshiaki Jinnai.
49. "Accounting for Investments in Common Stock in the United States of America from 1900 to the Present," by Edward A. Becker.
50. "An Historical Perspective of the Accounting Environment: A General Outline of a Western European and North American Linkage," by Stanley C. W. Salvary.
51. "The Nature of Historical Research," by Owen B. Moseley and Milton F. Usry.
52. "The Ideas of Stuart Chase: Pioneer Social Accountant and Economist," by Robert Bloom.
53. "The Accounting Review: 1935-39 A Digest, Survey, and Commentary," by James H. Potts.
54. "An Update and Overview of the German Accounting Profession Post-1973," by Hans J. Dykxhoorn and Kathleen E. Sinning.
55. "Development of Accounting in a Centrally-Planned Economy," by Wlodzimierz Brzezin and Alicja A. Jaruga.
56. "Internal Controls Then and Now: Tontines and Life Annuities in Old Regime France," by Robert M. Jennings and Andrew P. Trout.
57. "An Historical Analysis of the Financial Reporting Practices of Philips Industries of the Netherlands for Tangible Fixed Assets and Inventory 1915-1981," by Richard Vangermeersch.
58. "The Financial Statements of U.S. Steel, 1902-1951: A Half Century of Leadership in Reporting," by Ed Younkins, Dale L. Flesher, and Tonya K. Flesher.

Announcement

Working Paper Series

Available in two single bound volumes are the first 40 working papers published by The Academy of Accounting Historians. These 6" x 9" books include the following papers and their authors.

Working Papers 1-20 Volume 1

Working Paper Number

1. "The CPA's Professional Heritage, Part I," by John L. Carey.
2. "The Audit of Historical Records as a Learning Device in Studying Environmental and Socio-Economic Influences on Accounting," by Richard H. Homburger.
3. "The Accounts of Ancient Rome," by Kenneth S. Most.
4. "Survey of the Development of Auditing in Germany," by Rosa-Elisabeth Gassmann.
5. "The CPA's Professional Heritage, Part II," by John L. Carey.
6. "A Chronological Index Prepared for John L. Carey's *The Rise of the Accounting Profession*, Volume I, 1896-1936," by Gary John Previts.
7. "The State of Bookkeeping in Upper Germany at the Time of the Fuggers and Welsers," by Hermann Kellenbenz.
8. "A Chronological Index Prepared for John L. Carey's *The Rise of the Accounting Profession*, Volume II, 1937-1970," by Gary John Previts.
9. "A Bibliography on the Relationship Between Scientific Management and Standard Costing," by Marc J. Epstein.
10. "A Significant Year (1873) in the History of Bookkeeping in Japan," by Kojiro Nishikawa.
11. "Historical Development of Early Accounting Concepts and Their Relation to Certain Economic Concepts," by Maurice S. Newman.
12. "Thirty-six Classic Articles from the 1905-1930 Issues of *The Journal of Accountancy*," by Richard Vangermeersch.
13. "The Development of the Theory of Continuously Contemporary Accounting," by R. J. Chambers.
14. "The CPA's Professional Heritage, Part III," by John L. Carey.
15. "Two Papers on the History of Valuation Theory (I. Management Behavior on Original Valuation of Tangible and Intangible Fixed Assets. II. The Significance of Write-ups of Tangible Fixed Assets in the 1920's)," by Richard Vangermeersch.
16. "The Golden Anniversary of One of Accounting History's Mysterious Contributors: Albert DuPont," by Gary John Previts and S. Paul Garner.
17. "Evidential Matter Pertaining to the Historical Development of the Concepts of Disclosure and Its Uses as a Teaching Aid," by Hans V. Johnson.
18. "The Evolution of Pooling of Interests Accounting: 1945-1970," by Frank R. Rayburn.
19. "The Study of Accounting History," by Vahe Baladouni.
20. "The Evolution of Corporate Reporting Practices in Canada," by George J. Murphy.

Working Papers 21-40 Volume 2

Working Paper Number

21. "Early Greek Accounting on Estates (Fourth Century B.C.)," by George J. Costouros.
22. "The Traditional Accounting Systems in the Oriental Countries—Korea, China, Japan," by Jong Hyeon Huh.
23. "The Evolution of Ethical Codes in Accounting," by Joyce C. Lambert and S. J. Lambert, III.
24. "The Oldest Book of Double Entry Bookkeeping in Germany," by Kiyoshi Inoue.
25. "An Annotated Bibliography for Historical Research in Cost Accounting," by Edwin Bartenstein.
26. "The Role of Academic Accounting Research: An Historical Perspective," by Eric Flamholtz.
27. "The Structure of Scientific Revolutions and Its Implications for the Development of Accounting Policy," by Diana Flamholtz.
28. "The Development of Accountancy in Hungary Since 1946. . . ," by Rezso L. Scholcz.
29. "Historic Origins of the Purchase vs. Pooling of Interests Problem," by Wesley T. Andrews.
30. "Current Efforts to Develop a Conceptual Framework for Financial Accounting and Reporting," by William G. Shenkir.
31. "Influence of Nineteenth and Early Twentieth Century Railroad Accounting on Development of Modern Accounting Theory," by James L. Boockholdt.
32. "The Historical Development of Standard Costing Systems Until 1920," by Nathan Kranowski.
33. "The CPA's Professional Heritage, Part IV," by John L. Carey.
34. "The Evolution of Accounting Theory in Europe from 1900 to the Present Day and Its Implications on Industrial Management of Tomorrow," by Paul Weilenmann.
35. "Sombart on Accounting History," by Kenneth S. Most.
36. "A Most Unforgetable Accounting Historian: Frederic G. Gamble," by Paul Garner and Reza Espahbodi.
37. "Historical Overview of Developments in Cost and Managerial Accounting," by M. Zafar Iqbal.
38. "Comments on Accounting Disclosures in the Baltimore and Ohio Annual Reports from 1828 Through 1850," by Richard Vangermeersch.
39. "A Contemporary Review of the Evolution of Value Concepts (1500-1930)," by J. W. Martin.
40. "Tracing the Development of a Conceptual Framework of Accounting—A Western European and North American Linkage: A Partial Examination," by Stanley C. W. Salvary.

Order From: Don-Rice Richards
School of Business
James Madison University
Harrisonburg, Virginia 22807 U.S.A.

Cost: $5 to members of The Academy of Accounting Historians; $7.50 to non-members

Make check payable to: The Academy of Accounting Historians

Announcement

Announcement

The Accounting Historians Journal

announces that the

ELEVENTH ANNUAL

HOURGLASS AWARD

for the most notable contribution to
the literature of Accounting History

has been awarded to

Richard P. Brief

for his publications in
Accounting History Research
and his editing of
Classic Accounting Reprints

Previous Recipients of the Award

1973 — Stephen A. Zeff
1974 — Michael Chatfield
1975 — Hans-Martin Schoenfeld
1976 — Osamu Kojima and Basil Yamey
1977 — A. Van Seventer
1978 — David Forrester
1979 — Murray Wells
1980 — Gary John Previts and
Barbara D. Merino
1981 — H. Thomas Johnson
1982 — Williard E. Stone

Announcement

ACCOUNTING AND BUSINESS RESEARCH

Number 51 **Summer 1983**

A research quarterly published by the Institute of Chartered Accountants in England and Wales

Editor: R. H. Parker, University of Exeter, England

CONTENTS

Subscriptions should be sent to City House, 56-66 Goswell Road, London EC1M 7AB, England. Subscription rates are: UK £18, Overseas £24, Airmail Overseas £29.

Announcement

THE ACCOUNTING REVIEW

The Accounting Review is the official journal of the American Accounting Association, and is published quarterly. The Association is a voluntary organization of persons interested in accounting education and research. Membership in the Association entails annual dues of US$25 for residents of the United States and Canada and US$12 for others. Libraries may take out subscriptions to the *Review*. All communications regarding membership and subscriptions should be sent to the American Accounting Association, 5717 Bessie Drive, Sarasota, Florida 33583.

TABLE OF CONTENTS

Vol. LIX July 1984 No. 3

Announcement

AVAILABLE FOR IMMEDIATE DELIVERY

SELECTED CLASSICS IN THE HISTORY OF BOOKKEEPING

A Reprint Collection

SERIES I Reprinted 1974

1. **ANYON, James T.,** Recollections of The Early Days of American Accountancy 1883-1893. New York 1925. Reprinted 1974. *68p.* Cloth $15.00
2. **CRIVELLI, Pietro,** An Original Translation of the Treatise on Double-Entry Book-Keeping by Frater Lucas Pacioli. London 1924. Reprinted 1974. *XVIII, 125p.* Cloth $26.00
3. **GREEN, Wilmer L.,** History and Survey of Accountancy. Brooklyn 1930. Reprinted 1974. *288p.* Cloth $30.00
4. **JÄGER, Ernst Ludwig,** Die ältesten Banken und der Ursprung des Wechsels: *Supplement.* Stuttgart 1881. Neudruck 1974. *VIII, 91 S.* Ln. $15.00
5. **JÄGER, Ernst Ludwig,** Die Berechtigung der einfachen Buchhaltung gegenüber der italienischen. *Dritte, durch die Geschichte der Buchhaltung und deren Unterwendung auf die Landwirtschaft, sowie bezüglich des kaufmännischen Theils vermehrte Aufl.* Stuttgart 1868. Neudruck 1974. *IV, 147 S.* Ln. $26.00
6. **JÄGER, Ernst Ludwig,** Der Traktat des Lucas Paccioli von 1494 über den Wechsel *Vortrag gehalten am 22. März 1878 vor dem kaufmännischen Vereine von Stuttgart.* Stuttgart 1878. Neudruck 1974. *40 S.* Ln. $15.00
7. **JÄGER, Ernst Ludwig,** Der Wechsel am Ende des 15. Jahrhunderts: *Ein Beitrag zum Paccioli-Jubiläum 1494-1894.* Stuttgart 1895. Neudruck 1974. *29 S. + 1.* Ln. $15.00
8. **KHEIL, Carl Peter,** Benedetto Cotrugli Raugeo: *Ein Beitrag zur Geschichte der Buchhaltung.* Wien 1906. Neudruck 1974. *36 S.* Ln $15.00
9. **PERAGALLO, Edward,** Origin and Evolution of Double Entry Bookkeeping: *A Study of Italian Practice from the Fourteenth Century.* New York 1938. Reprinted 1974. *156p. with Author's errata.* Cloth $35.00
10. **SIEVEKING, Heinrich,** Aus Genueser Rechnungsund Steuerbüchern: *Ein Beitrag zur mittlelalterlichen Handels und Vermögensstatistik.* Wien 1909. Neudruck 1974. *110 S.* Ln. $15.50
11. **SIEVEKING, Heinrich,** Genueser Finanzwesen vom 12. bis 14. Jahrhundert. Leipzig, Tübingen 1898. Neudruck 1974. *XV, 219 S.* Ln. $29.00
12. **WOOLF, Arthur H.,** A Short History of Accountants and Accountancy. London 1912. Reprinted 1974. *XXXI, 254p.* Cloth $25.00

SERIES II Reprinted 1975

1. **DE WAAL, P.G.A.,** Van Paciolo tot Stevin: *Een Bijdrage tot de Leer van het Boekhouden in de Nederlanden.* Roermond 1927. Reprinted 1975 *IX, 318p.* Cloth $34.00
2. **ELDRIDGE, H.J.,** The Evolution of the Science of Book-keeping. Second Edition by Leonard Frankland. London 1954. Reprinted 1975. *70p.* Cloth $15.00
3. **GEIJSBEEK, John B.,** Ancient Double-Entry Book-keeping: *Lucas Pacioli's Treatise (A. D. 1494 – The Earliest Known Writer on Bookkeeping) Reproduced and Translated with Reproductions, Notes and Abstracts from Manzoni, Pietra, Ympyn, Stevin and Dafforne.* Denver, 1914. Reprinted 1975. *IV, 182p. Folio.* Cloth $46.00
4. **GOMBERG, Léon,** Histoire critique de la Théorie des Comptes. Genève 1929. Reprinted 1975. *88p.* Cloth $15.00
5. **LEYERER, C.,** Theorie und Geschichte der Buchhaltung: *Ein Leitfaden.* Brünn 1919. Neudruck 1975. *40 S.* Ln. $15.00
6. **SIEVEKING, Heinrich,** Aus venetianische Handlungsbüchern: *Ein Beitrag zur Geschichte des Grosshandels im 15. Jahrhundert. [Jahrbuch für Gesetzgebung, Verwaltung und Volkswirtschaft im Deutschen Reich: Neue Folge. 25.-26. Jahrg.]* Leipzig, 1901/2. Neudruck 1975. *72 S.* Ln. $15.00
7. **SYKORA, Gustav,** Systeme, Methoden und Formen der Buchhaltung: *Von ihren Anfangen bis zur Gegenwart.* Wien, 1952. Neudruck 1975. *114 S.* Ln. $15.50

SERIES III Reprinted 1977

1. **DE ROOVER, Raymond,** Le Livre de Comptes de Guillaume Ruyelle, Changeur à Bruges (1369). *[Extrait des Annales de la Société d'Emulation de Bruges, Tome LXXVIII]* Réimpression 1977. Bruges, 1934. pp. 15-95 (81p) Cloth $15.00
2. **DE WAAL, P.G.A.,** De Engelsche Vertaling van Jan Impyn's Nieuwe Instructie. *[Economisch-Historisch Jaarboek: Bijdragen tot de Economische Geschiedenis van Nederland uitgegeven door De Vereeniging het Nederlandsch Economisch Historisch Archif, Achttiende Deel, 1934]* Reprinted 1977. 's-Gravenhage, 1934. 58p Cloth $15.00
3. **HÜGLI, Franz,** Die Buchhaltungs-Systeme und Buchhaltungs-Formen: *Ein Lehrbuch der Buchhaltung.* Mit über hundert Formularen und zwei Holzschnitten. Neudruck 1977. Bern, 1887. xii, 680 S. Ln. $69.50
4. **KEMPIN, W.,** Vom Geist der Buchführung. Neudruck 1977. Köln, 1910. 192 S. Ln. $28.00
5. **LION, Max,** Geschichtliche Betrachtungen zur Bilanztheorie bis zum Allgemeinen deutschen Handelsgesetzbuch. Neudruck 1977. Berlin, 1928. iii, 39 S. Ln. $15.00
6. **MURRAY, David,** Chapters in the History of Bookkeeping, Accountancy and Commercial Arithmetic. Reprinted 1977. Glasgow, 1930. viii, 519p. Cloth $42.00
7. **NIRRNHEIM, Hans (Bearb.),** Das Handlungsbuch Vickos von Geldersen. Hrsg. vom Verein für Hamburgische Geschichte. Neudruck 1977. Hamburg/Leipzig, 1895. lxxix, 199 S. Ln. $37.00
8. **SIEVEKING, Heinrich,** Die Casa di S. Giorgio. *[Genueser Finanzwesen mit besonderer Berücksichtigung der Casa di S. Giorgio, II]* Neudruck 1977. Freiburg, 1899. xvi, 259 S. Ln. $36.00
9. **STROOMBERG, J.,** Sporen van Boekhouding voor Paciolo. *[Overdruk uit J. G. Ch Volmer: Van Boekhouden tot Bedrijfsleer, een Bundel opstellen ter Gelegenheid van zijn Vijfentwintig Jarig hoogleeraarschap door oud-studenten aangeboden]* Reprinted 1977. Woessen, 1934. pp. 246-269. (24p.) Cloth $15.00

Please send your orders to:

NIHON SHOSEKI, LTD. • 2-11, Esakacho 2-chome, Suita City, Osaka 564, Japan

• Telephone 06-386-8601 • Telex *(International)* J64964 NIHONSHO • Cables *(International)* BESTSELLERS SUITA

Announcement

ACCOUNTING AND FINANCE

Journal of the Accounting Association of Australia and New Zealand

Vol. 23, No. 2 **November, 1983**

Accounting and Finance is published twice yearly in May and November by the Accounting Association of Australia and New Zealand. The membership fee is $20 per year and members receive the *Journal* and any published supplement. Non-members, i.e. libraries etc., can take out a subscription for the *Journal* for $20 per year. Editorial correspondence should be addressed to Professor R. R. Officer, Editor, Department of Accounting and Finance, Monash University, Clayton, Victoria, 3168, Australia. Applications for membership should be addressed to The Membership Secretary—A.A.A.N.Z., c/o Professor R. R. Officer, Department of Accounting and Finance, Monash University, Clayton, Victoria, 3168, Australia.

Announcement

TO ALL MEMBERS OF THE ACADEMY OF ACCOUNTING HISTORIANS

Please ensure that the Library of your university, firm or corporation is a subscriber to The Accounting Historians Journal

Announcement

Annual membership dues for individuals, institutions, and libraries for 1984 are twenty U.S. dollars ($20.00). Membership dues for doctoral students actively pursuing their program, $7.50.

Members residing outside the United States are asked to remit payments in U.S. funds drawn on U.S. banks. The collection costs on non-U.S. fund remittances have risen sharply in the last year and we can no longer absorb these charges.

THE ACADEMY OF ACCOUNTING HISTORIANS

APPLICATION FOR MEMBERSHIP

Name (please print) ______________________________

Street Address ______________________________

City ______________________ State __________

ZIP Code ____________ Country ______________

Phone No. (_____) ________________

Accounting History Areas of Interest ______________________

Our fiscal year ends December 31.

MEMBERSHIP DUES ....(U.S.) **$20.00**

(Entitles member to: semiannual *Accounting Historians Journal*; semiannual newsletter; annual member roster; and discounts on specified Academy publications.)

Voluntary Contributions to:

Publications Fund ....______

Research Endowment Fund ....______

Accounting History Research Center ....______

Total enclosed ....$______

Make checks payable to: THE ACADEMY OF ACCOUNTING HISTORIANS

Mail to: Secretary
The Academy of Accounting Historians
P.O. Box 658
Georgia State University
Atlanta, Georgia 30303 U.S.A.