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2. Authors should describe the method employed in the research, indicating the extent and manner in which they intend to employ the methodology. Manuscripts are encouraged that draw on a variety of conceptual frameworks and techniques, including those used in other social sciences.

3. Manuscripts that rely on primary sources should contain a statement specifying the original materials or data collected or analyzed and the rationale used in selection of those source materials. Authors should provide the reader information as to how these source materials may be accessed.

4. Authors who use a critical or new theoretical framework to examine prior historical interpretations of the development of accounting thought or practice should include a discussion of the rationale for use of that framework in the manuscript.

5. In performing all analyses, authors should be sensitive to and take adequate account of the social, political, and economic contents of the time period examined and of other environmental factors.

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2. an abstract of approximately 100 words on a page that includes the article's title but no identification of the author(s)

3. a limited number of content footnotes which appear at the bottom of the appropriate page

4. a limited number of tables, figures, etc., appended at the conclusion of the text, but whose positioning in the narrative is indicated

5. References are to appear in brackets within the text. Specific page numbers are mandatory for all direct quotes but are optional otherwise.

6. a bibliography of all references cited in the text

Upon acceptance or an invitation to revise and resubmit, authors will be sent a style sheet which must be followed conscientiously for all subsequent revisions of the paper. Once the article is accepted, the editor will request the submission of a diskette prepared in IBM compatible ASCII file format. If time permits, authors will be sent galley proofs. However, the inclusion of additional material will be severely limited.

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THE SCIENCE OF ACCOUNTS: BOOKKEEPING ROOTED IN THE IDEAL OF SCIENCE

Abstract: This paper presents the discourse of the "science of accounts" as it developed in 19th century U.S. accounting literature. The paper initially emphasizes the meaning which the term "science of accounts" had during this period. In addition, it presents the contemporary belief that this science helped reveal the essential economic ontology, which bookkeeping makes visible. Second, the paper analyzes how this rational institutional myth became institutionalized within the emerging profession's technical journals and its professional organization, the Institute of Accounts. Through reliance on this scientific foundation, the newly emerging profession could gain greater social legitimacy, leading to the first CPA law in 1896.

INTRODUCTION

Accountics is the mathematical science of values [Office, 1887, p. 103].

Inasmuch as other branches of scientific work manifest unexpected life from time to time, so may we assume that there lurks among the foundations of bookkeeping some as yet unapplied principles, which, once brought into play, will change, more or less, the routine of our office practice [Kittredge, 1896, pp. 320-321].

The term "science of accounts" became the most defining and formalizing concept for the body of knowledge encompass-
ing bookkeeping and accountancy during the latter half of the 19th century in the U.S. As the CPA movement began to spread from New York to other states at the end of that century, the idea of the accountant as a scientist dominated the profession's self-image. As promulgated by elite accountants in the Institute of Accounts (IA) and affiliated professional journals, this image portrayed the accountant as investigating scientifically and rationally the political economy in order to explain that economy more efficiently and more truthfully. The affinity between an accountant and a scientist was so strong that writers continually stressed the similarities of actions of accountants and physical scientists, especially practical scientists such as architects and engineers. The "science of accounts" or "accountics," a body of thought that provided a rational investigative method equivalent to any other science's body of thought, permitted the "discovery" of new principles and practices through investigations. Kittredge [1896] demonstrated this presumed thought by relying on the science of accountics to provide new discoveries. This paper will discuss the contextual environment within which the science of accounts was developed and institutionalized in professional organizations and journals. It will be shown that the science of accounts became one of the formalized, rational institutional myths that legitimized the U.S. accounting profession within its cultural environment.

The late 19th century emergence of a U.S. accounting profession has been well documented [Wilkinson, 1904, 1928; Brown, 1905; Anyon, 1925; Littleton, 1933; Reckitt, 1953; Webster, 1954; Edwards, 1954, 1960; Carey, 1969; Miranti, 1990; Previts and Merino, 1998]. Most accounts date the origins of the profession in 1886, with the founding of the American Association of Public Accountants (AAPA). This organization, inspired by the professional developments of British accountants, is seen as the most significant influence towards the passage of the first CPA law in 1896. Miranti [1990] has described the period prior to the passage of the first professional law as pitting two organizations, the AAPA and the IA, against one another. Miranti claimed that the IA's affiliation with the concepts of the science of accounts was a significant area of contention between the two. This paper attempts to place in con-

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1For further general discussion on the concept of rational institutional myths, see Scott [1992], Meyer and Rowan [1977], and, specifically regarding accounting, Meyer [1986].

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text the concepts of the science of accounts so as to aid in the understanding of the social and technical emergence of the U.S. accounting profession.

The development of the rational institutional myth, the "science of accounts," may be glimpsed through a review of the manner in which bookkeeping was defined in 19th century bookkeeping treatises. Generally, these early treatises defined bookkeeping as a series of systematic acts of an art based on scientific principles, which could present the truth of a business [Morrison, 1808; Jackson, 1813; Hutton, 1815; Goodacre, 1818; Morrison, 1822; Bennett, 1829; Foster, 1837, 1838; Harris, 1842; Fulton and Eastman, 1851]. Jones [1855, p. viii], the most prominent author of this period, defined bookkeeping in this manner:

Book-keeping is the art of keeping Accounts in such a systematic mode, that we may be enabled to know the real state of each branch of our mercantile trans­action with ease and promptitude.

By mid-century, bookkeeping began to be defined as the "science of accounts." One of the earliest examples comes from Crittenden [1857, p. 14]:

Book-keeping is the science of accounts, and teaches how to preserve a correct record of all business trans­actions.

Crittenden did not explain what he meant by the term "science of accounts." His overall approach differed little from the typical method of presenting bookkeeping. Many other treatises never developed the idea of "science of accounts" beyond a defi­nition for bookkeeping [Palmer, 1867; Pierce, 1890; Lyte, 1891]. The meaning of "science of accounts" was perceived to be self-evident, so much so that bookkeeping could be defined as sim­ply, the science of accounts. However, numerous bookkeeping treatises were to incorporate a more "scientific" presentation into their science of accounts [Bryant et al., 1863; Packard and Bryant, 1878; Soulé, 1903].

The "science of accounts" will be shown to be rooted fundamentally in the rational process of account classification. Therefore, a review of the methods used to classify accounts will reveal the influence of this science on accounting thought. In addition, the development of the science of accounts grew dramatically once it became rooted in the professionalization of the occupation. This science promoted its ideals by becoming
the theoretical foundation for the professional journals and the first significant professional organization of bookkeepers and accountants, the IA. Consequently, this paper will review the process of classifying accounts and the science's institutionalization in professional journals and organization. The professional journals of Book-keeper (later renamed the American Counting-room), Office (later renamed Business), and Accountics constitute the major sources for this investigation.

CLASSIFICATION OF ACCOUNTS

An early 18th century British classification divided accounts into personal, real, and fictitious (or nominal) [Macghie, 1718]. This tradition continued in Jackson's treatise [1813, a reprint of his 18th century work]. He divided accounts into the following classification: personal, real, and imaginary. The imaginary category replaced fictitious. Personal accounts referred to records of what was owed to or due from other merchants, therefore personal. Real accounts were possessions of the merchant, such as cash, merchandise, property, and equipment. Imaginary accounts were "fictitious" accounts "invented" to represent the owner's capital, including the profit and loss account. This basic division was common among early treatises [Morrison, 1808, 1825; Bennett, 1829; Fulton and Eastman, 1851]. Occasionally, the third division was called fictitious rather than imaginary, as Macghie [1718] had done over a century earlier.

The isolation of personal accounts (debtors and creditors) into one separate category indicates that this classification may have emerged within a mercantile environment. These particular accounts would be the ones of greatest concern to merchants. The personal accounts encompassed the primary accounts of a merchant's single-entry system, and would have been used frequently during this period. Therefore, from the perspective of a merchant familiar with single entry, the personal accounts within a double-entry system would stand out as a unit.

To discriminate between the remaining accounts, real and fictitious, one presumably had to rely on the very material aspect of the accounts or on the material content to which the accounts referred. Real accounts had a tangible referent in the merchant's business — cash, property, merchandise. However, the fictitious accounts, which would not have existed in the single-entry system at all, would appear a creation of the book-
keeper. They would have had no obvious physical referents or, at least, not as "real" as either the personal or real accounts. This classification appears to have been an abstraction based on an experience of the single-entry system or, at least, a merchant’s double-entry system.

This basic classification appears to make no ontological claim to explain the reality of the bookkeeping system or to demonstrate the aesthetic symmetry of the system. It served primarily as a pedagogical tool to aid the novice in grasping the bookkeeping art. Instead of rhymes, authors formulated rules within each of these classifications by which the bookkeeper could analyze transactions and record them in the books of original entry.

Some U.S. writers began to criticize this basic division:

The division of Accounts into Personal, Real, and Fictitious, is one of the most ludicrous that ever enlivened the gravity of the scientific page. Are Personal Accounts unreal? Or rather, are they something neither real nor fictitious? Is the Stock Account a mere fiction? Are the accounts of Profit and Loss of some romantic nature? In the case of Loss, it would be consolation to consider them in this aerial and poetical light; but when a balance of profit occurs, the pleasure of transfer would not be much heightened by this view of the subject. The merchant may reasonably expect to find something substantial in his Stock Account; but the professors of Book-keeping, faithful to the Berkleian theory, gravely assure him that it is all fictitious and imaginary [Foster, 1837, p. 28]!

Attacking this rule-setting method, Foster demonstrated the scientific irrationality of the classification by focusing on the economic reality revealed in the bookkeeping system. Foster emphasized a pedagogical focus that correlated with the logic of economic activity rather than one that made economic activity appear absurd.

Foster's Classification of Accounts: Foster [1837] presented one of the earliest classifications that appears to make an ontological claim. His division was not for pedagogical purposes. Rather, he believed his classification had been derived from the

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2For more information on the thought of Foster and Jones and their relationship, see Hatfield [1909], Homburger and Previts [1977], and Hughes [1982].
immutable essence of bookkeeping, through the application of scientific thought. He classified all accounts into four categories — stock, money, merchandise, and personal:

It is a primary axiom of the exact sciences, that the whole is equal to the sum of its parts; and on this foundation rests the superstructure of Double Entry Book-keeping. It considers property as a whole, composed of various parts; — the Stock Account records the entire capital; the Money, Merchandise, and Personal Accounts record the component parts. Hence, there must necessarily and inevitably be constant EQUALITY between the Stock Account, and all the other Accounts [Foster, 1837, p. 25].

Foster explicitly based his classification on the scientific principles of equality. However, the scientific equality was not the simple equality of debits and credits in each transaction, but the equality of accounts classified in a certain way. Though he never expressed it algebraically, he expressed in words the balance sheet equation, from the proprietor's prospective — the proprietor's capital was equal to the value of one's property and the combined value of one's receivables and payables.

Foster placed his classification within wider scientific thought. Immutable principles of bookkeeping determined the classification and arrangement of the accounts in the ledger. For Foster, the reality revealed by these principles should be the focus of education rather than arbitrary rules:

In every art or science there are certain fundamental principles which must be first clearly impressed upon the mind before any sensible progress can be made in its attainment. This remark is particularly applicable to our present subject. There is one prominent defect in the ordinary methods of teaching book-keeping, which is, that rules are substituted for reasons, and particular forms are confounded with general principles.

The principles of double entry are unfolded in the ledger only — the journal being merely a preparatory book — it must be obvious, therefore, on a moment's reflection, that the nature, object and arrangements of the accounts in the ledger should be the first, and not, as is usual, the last thing to which students' attention is directed [Foster, 1838, pp. 152-153].

The emphasis on the ledger will be seen to be very characteristic of many authors of the science of accounts.
The reason that Foster considered his method superior was not just that it was more efficient and sound pedagogically, but, even more importantly, that it disclosed the primary principles, which, when used correctly, could reveal the true debits and credits. By stripping the practice of double entry down to its basic principles, the whole system and the interaction between each kind of account could be revealed. Once this was acquired, the particular forms in any business could have been easily perceived. Foster's pedagogical method was radically different from the majority of his contemporaries. The method emphasized the science of bookkeeping. Foster developed this science more rigorously, by focusing on the basic principles and seeing all the other particulars in their light.

Similar to his contemporary Jones [1855], Foster stated that the terms debit and credit revealed no fundamental truth in accounting. He attacked any manipulation of reality and language which tried to distill bookkeeping into these two terms, debit and credit. The contortions of defining everything in the contexts of debtor and creditor resulted in the same old reliance on rules and arbitrary use of the definitions of words:

But even if we could point out some hidden relation of owing in each debit entry, we should only be luring the learner from the investigation of principles, by employing his ingenuity on a series of conundrums, no one of which can throw light on the next, the whole being dependent upon an arbitrary use of words [Foster, 1857, pp. xiv-xv].

Foster viewed the science of bookkeeping as more than a pedagogical tool. Bookkeeping's presentation in a scientific manner, through the primary reliance on its immutable principles, was useful in the classroom precisely because the science was revealing the objective truth in economic activity which hitherto had been obscured.

Foster expressed the science of bookkeeping's relationship to the art of bookkeeping by appealing to the relationship of other arts, which also ultimately depended on the science of mathematics. Bookkeeping was not merely a science for pedagogical purposes. Because bookkeeping was classified within the truth of the science of mathematics, which itself was classified within the truth of metaphysics, bookkeeping was a science. Any rule that had to be used in the art of bookkeeping had to be explained and justified within the principles of the science of bookkeeping. Only through a thorough investigation of the
science of bookkeeping could one gain access to the truths of bookkeeping:

Now this process of comparison on reasoning, constitutes what we term Science; and from this process of classification and arrangement arises what are called the Sciences .... But certainty and success of these arts [navigation, surveying, and engineering] depend upon the truth of the rules whereby the several operations are performed; and the truth of the rules depends upon the previous reasoning, these truths constitute what are called the principles of the science [Foster, 1857, p. xvii].

Bookkeeping was similar to the other practical sciences — navigation, surveying, and engineering. The science of bookkeeping, for Foster, entailed the rational process of discerning the classes of accounts within the double-entry system. To be scientific, one had to classify. To classify meant one gained access to the immutable truths of the system. The fact that bookkeeping was a science did not come from an analogical relationship to a science, such as mathematics. Rather, bookkeeping was a science because it was an applied science of mathematics, itself a subsience of metaphysics, which explained the entirety of the universe. Foster did not just appeal to science for a pedagogical method of instruction. Rather, because bookkeeping was a science rooted in the ultimate explanation of the universe, one needed to teach the science of bookkeeping and its principles rather than to rely on abstract, arbitrary rules. Through the science of accounts, one gained access to the immutable reality of bookkeeping.

SCIENCE OF ACCOUNTS INSTITUTIONALIZED IN THE BOOK-KEEPER

In New York City during the early part of the 1880s, the science of accounts became institutionalized in two forms — in the professional media via the Book-keeper and the American Counting-room and in a professional context via the founding of the Institute of Accountants and Bookkeepers of the City of New York (IABCNY). The Book-keeper, the first bookkeeping journal in the U.S., gave significant space to the discussion of the science of accounts illustrated by the indexed heading “Scientific and Instructive” in its annual index [Book-keeper, Vols. 4 and 5]. The IABCNY, which after a few years became the IA, made the exposition and development of the science of accounts one of its chief goals. Previously, the idea of science of
accounts had been propagated by expert bookkeepers (such as Jones and Foster) through their practice, advertisements and treatises on bookkeeping, or by certain commercial school entrepreneurs (such as S.S. Packard) through their teaching and books. The introduction of these two components, professional journalism and professional organizing, institutionalized the idea of the science of accounts to the point that it could influence more people and develop beyond a pedagogical tool for the unlearned. Through these two institutional forums, the ideas of the science could be cultivated and discussed within a protective, competent group.

In the very first issue of the *Book-keeper*, Charles E. Sprague [1880] wrote the first of a series of articles called “The Algebra of Accounts.” Sprague viewed the science of accounts as being exclusively a “mathematical science.” Through understanding the algebraic equations upon which bookkeeping was fundamentally based, one could deduce the economic reality captured within the ledger accounts:

Treated the science of accounts as a branch of mathematics (which it is), I reduce it to an algebraic notation: I constantly interpret the algebraic results into common language, and also into the technical, conventional, but often convenient, notation used by book-keepers. I show this last to be as truly algebraic as the first; and I teach that no matter what particular form is employed in the presentation of facts, if the equation is preserved, implicitly or explicitly, it is true book-keeping [Sprague, 1880, p. 2].

Sprague developed the science of accounts from the stage illustrated by Foster's [1857] use of science. Foster may have presented the algebraic equation of bookkeeping in words, but in 1880 Sprague presented it in a fully developed algebraic model. He began with a basic bookkeeping equation [Sprague, 1880, p. 2]:

**THESIS. — All the operations of double-entry book-keeping are transformations of the following equation:**

\[ \text{What I HAVE} + \text{what I TRUST} = \text{What I OWE} + \text{what I am WORTH} \]  or symbolically written \( H + T = O + X \).

Thus, for the first time in the U.S., the conceptual abstractions of the science of accounts found symbolic representation. Bookkeeping and the science of accounts gained a more scien-
tific appearance through this new symbolism. As the physical world came to be seen as modeled through mathematical science, so now the pecuniary activities of businesses came to be modeled using mathematical science. Sprague did not use this model purely for pedagogical simplicity, but rather as a method to reveal the real relationships captured by the accounts.

For Sprague, the primary equation was the balance sheet. He manipulated this basic equation so as to illustrate the simplicity of the ledger, which otherwise appeared complex. By adding in the details of cash, merchandise, land, specific debtors and creditors, and a partnership situation, the basic equation of the balance sheet became more complicated.

Using these basic categories, Sprague presented all the possible transactions that would impact balance sheet accounts, all within two simple tables:

(a) *Elements of the Equation of Value at Rest*

<table>
<thead>
<tr>
<th>Debits</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Have.</td>
<td>Owe.</td>
</tr>
<tr>
<td>Trust.</td>
<td>Worth.</td>
</tr>
</tbody>
</table>

(b) *Elements of the Equation of Value in Motion*

<table>
<thead>
<tr>
<th>Debits</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Have more.</td>
<td>2. Have less.</td>
</tr>
<tr>
<td>3. Trust more.</td>
<td>4. Trust less.</td>
</tr>
<tr>
<td>5. Owe less.</td>
<td>6. Owe more.</td>
</tr>
<tr>
<td>7. Worth less.</td>
<td>8. Worth more.</td>
</tr>
</tbody>
</table>

These tables are:

(a) A complete rule for balance-sheet or statements of financial condition.

(b) A complete rule for 'journalizing;' that is for an ascertaining the debit and credit in any transaction or shifting values; in other words, direction for placing the values on the left and right side of the equation respectively. As list b contains all the possible changes in the elements of the equation, it must suffice to represent any transaction or business occurrence [Sprague, 1880, pp. 21-22].

Thus, by deduction from the basic algebraic equation, Sprague was able to illustrate in these two tables what required other authors to deploy numerous rules and to distort the connotations of words. Importantly, Sprague separated the balance sheet equation or the equation of value into two different states, at rest and in motion. This appears to correlate with the manner in which physical objects would be analyzed, at rest and in motion. Matthern [1876] had also used the at rest and in mo-
tion analogy to defend his own classification scheme.

In all the other examples of classification, one had to infer the reasoning process that generated the classification. However, Sprague's classification came directly from his analysis of the equation of value, by classifying the balance sheet accounts as assets, liabilities, and capital:

What I have is in my possession now; what I trust is to be in my possession. But many things (such as bank notes, mortgages, promissory notes) which are really only promises, are spoken of as if they had intrinsic value; we call them, not due receivable, but property. Hence the categories H and T shade into each other. This makes no difference, as both equally tend to increase the amount of X. The names ‘Resources,’ or ‘Assets’ are applied to H + T. Let H + T or the ‘Resources’ [assets] be represented by A; then substituting this value in equation (4).

$$A = O + X$$

My assets = what I owe + what I am worth.

The word ‘Liabilities’ is sometimes applied to O alone, sometimes to O + X together. But generally there is a sharp distinction between O, the outside liabilities and X, the difference of A - O, the net proprietorship. X participates in the profits and losses; X can only be paid off after O is fully satisfied. It is the losing sight of this distinction between O and X which causes much misunderstanding respecting the processes of double entry book-keeping [Sprague, 1880, pp. 20-21].

One gathers that this classification was not purely for pedagogical efficiency, but rather attempted to reveal the economic reality any bookkeeping system should capture. His disagreement regarding whether liabilities should be considered as both outside and inside obligations implied that classifications were very important for they portrayed true economic reality. The equation of value revealed the primary truths of economic activity. Obscuring the “distinction” between outside liabilities and capital would have caused a misinterpretation of reality.

Sprague [1880, p. 35] considered the P&L account as a subsidiary of the capital account. The main classifications were assets, liabilities, and capital:

Gains and losses are not usually credited and debited to ‘Capital’ account, which department represents the present worth, but to ‘profit and loss.’ This is done, in order not to disturb the ‘Worth,’ except periodically in
a gross amount, which amount shows the extent of our business success. 'Profit and Loss' is a sort of reservoir into which all gains and losses are poured merely to be held until a convenient season, which the net result is transferred in one sum to the 'Worth' account.

The gain or loss in the P&L account merely represented a convenient reservoir so that the capital account would not be cluttered by hundreds of entries. For Sprague, these accounts were sub-accounts of capital. The only classification remained within the static equation of value — assets, liabilities, and capital.

In this brief series by Sprague [1880], the most sophisticated example of the science of accounts was presented. The initial attempts of Foster and Jones had led to this abstract, deductive proof and demonstration of the double-entry system. The emphasis of the science on the classification of accounts now found its most symbolic and scientific representation: A=O + X. The equation of value was seen to contain all the intricacies of the double-entry system and truth in political economy.

The Book-keeper continued to promote the science of accounts. Packard [1881] presented the "philosophy of bookkeeping," emphasizing that the intelligent accountant needed to understand the principles of the science and how those principles were implemented in practice. Packard appeared to be trying to walk a middle ground, emphasizing that bookkeeping must be analyzed by its basic principles, while at the same time underscoring a pragmatism for the practitioner. He was suspicious of a radical objectification of bookkeeping:

Whatever real philosophy there is in book-keeping, be it understood, is the philosophy of common sense; and whoever attempts to carry it beyond these limits or away from its reasonable application to practical things and practical thoughts, not only makes a mistake but throws himself outside the sympathy of those most apt to be interested in the matter. For instance, it may be a pretty conceit that the 'classification of accounts,' which is one of the forms in which 'philosophy' disports itself, may be made to show not only the financial condition of business, but to illustrate as well the relations of good to evil, and the whole groundwork of morals and metaphysics [Packard, 1881, p. 131].

Packard construed the science of accounts, or the philosophy of bookkeeping, as a component of political economy. Packard's focus on bookkeeping and "political economy" was evident ear-
lier in the revised edition of the Bryant and Stratton treatise, for which he was the main author [Packard and Bryant, 1878]. Bookkeeping provided one way of revealing the activities of political economy. To understand bookkeeping, one needed to focus on the wider social structures in which it was used.

This component of the science was different from others in that it reflected not on the closed system of bookkeeping, but on how bookkeeping illustrated and revealed a wider social reality. Packard made a pragmatic use of the science, where the science would provide tools by which an educated accountant would be able to aid business. The expert bookkeeper, using the principles of the science, revealed what was otherwise hidden. The application and emphasis on the science stopped there. For Packard, the science could not be used for more profound demonstrations beyond those rooted in political economy, and, more specifically, those focused on the determination of wealth, its increase and decrease.

A few years later in a lecture to the IABCNY, Packard [1884] demonstrated a classification of accounts through the use of two chalkboards. He classified accounts as “business” and “finance” accounts:

> What I attempted to illustrate on my two blackboards to that intelligent coterie of book-keepers was the intricate and complementary relation existing between the two classes of accounts; to show that what one class asserted, the other class recognized and proved; that when business declared a gain or a loss, finance immediately responded in exhibiting a corresponding increase or decrease in wealth. And beyond this, that while mere liquidating transactions, such as paying a debt or collecting what is due, could be recorded without touching the business accounts (thus requiring the use of but one board) all transactions looking to a profit or loss, or marking the progress of the business, inevitably required the use of both boards, and a compensatory record in each of the two classes [Packard, 1884, p. 79].

This classification was more than a pedagogical tool. It represented an attempt to illustrate the real economic dynamics of economic activity within a firm, here between the business and finance sectors of the enterprise. Packard’s classification proceeded from an environment where the ledger accounts were being used to analyze the activities of a firm in a more complicated managerial way than the classification of personal, real,
and imaginary. His classification claimed to characterize entries by their assertions and proofs, which could be used to understand, either on a business or a financial basis, the activities of an enterprise.

An example of how pervasive the science of accounts was presumed to exist among the readers of the *Book-keeper* may be seen through reading the poem “Progression” [Robinsonian, 1883, p. 23]. The “light of the brighter day,” was the light shown from “That Science.” Progress in the field of accounting could only take place under the direction of its science. To neglect the science resulted in the use of old and inefficient methods, inherited over from the “Old World.”

Through the *Book-keeper*, the development of the science of accounts stimulated discussions not merely between authors of treatises for the uninitiated, but between the elite of the profession. The institutionalization of the science through professional journalism widened the forum of the discourse, creating the intellectual space from which the ever-developing abstractions could mature. The *Book-keeper* also created the opportunity for the development of a professional institution. This institution would additionally create the institutional foundation in which the science of accounts would flourish.

**SCIENCE OF ACCOUNTS INSTITUTIONALIZED IN THE INSTITUTE OF ACCOUNTS**

Through the concerted effort of the editors of the *Book-keeper*, Selden Hopkins and Charles Sprague, the IABCNY was established in 1882. Just as the *Book-keeper* aided the development of the idea of the science of accounts, the IABCNY created an institutional forum through which the refinement of the science could progress. Its first series of lectures indicate the scientific and “modern” concern of the organization — “Origin of Calculation as Deduced from Evidence in Language” by Joseph Hardcastle [1882] (chairman of the Examining Committee); “Documents as Related to Accounts” by Charles E. Sprague [1882]; “Is Capital Account a Liability?” [*Book-keeper*, 1882] (a discussion by nine members of the IABCNY); “The Theory of Life Insurance” by Joseph Hardcastle [1883]; and “The Scope of the Accountant’s Art” by E. T. Cockey [1883] (secretary of the IABCNY’s first Examination Committee).³

³Many thanks to an anonymous reviewer who identified correctly that E. T. Cockey was not E. C. Cockey, the first president of the IABCNY, a confusion in earlier drafts of the paper.
The discussion of the classification of the capital account [Book-keeper, 1882] provides an insight into the contemporary thinking of the way classifications were made and the practical and theoretical importance of such classifications. Those who claimed that the capital account was a liability relied primarily on current practice among bookkeepers. A liability was a claim against the firm, whatever its source, inside or outside the firm.

Those who believed that a clear distinction must be made between outside and inside claims argued in two directions. First, they insisted that one must use the general meaning of words and not create a fiction so as to contort the language to fit present practice:

On the other side, it was claimed that the theory must be made to agree with the facts, not the facts conformed to the theory, as was done by astronomers previous to Newton in the matter of gravitation. . . . A question in law or in language depends on usage; a question in mathematics or book-keeping depends upon principle and demonstration. Terms must not be assumed to have a distorted or fictitious meaning made to cover the case in point; they must be taken in their fair meaning. The capital account, so far from being a liability, it is in its very nature the opposite; it is the expression of un-liability; of so much of the resources as is not liable, not tied up [Book-keeper, 1882, p. 397].

The strict use of liability made the consideration of the capital account as a liability absurd, for it was the direct opposite, as seen by those advancing this argument. They required the bookkeeping system to be influenced by a wider society, even in the simple use of words. For bookkeeping words to mean the direct opposite of their definitions outside the system was not justified for these experts, even if traditional among bookkeepers.

In retort, the supporters of the use of liability to include capital argued that the “science” itself defined the classification this way. One had to respect the science rather than arbitrary custom in wider society:

The terms ‘resources’ and ‘liabilities,’ as used in the science of book-keeping, are, it was said, both, in a large sense, arbitrary, fictitious and conventional. Custom has given them a general acceptance and defined their meaning. They are terms used to represent opposite conditions, or the positive and negative elements of a business or enterprise. This, it was held, is the fabric,
the fundamental basis upon which the principles of double-entry book-keeping are founded and practiced. 'We cannot,' said one speaker, 'confine either term to a strict definition laid down by lexicographers. Usage and practice have given these words the definition to which, in discussion of the Paper before us, we must give recognition' [Book-keeper, 1882, p. 397].

The science of accounts was being used by each side to defend its position. The science must depend on the political economy or it must be respectful of contemporary bookkeeping practice.

The second argument of the group seeking a very clear distinction between capital and liabilities concerned the actual economic reality of the accounts. Where tradition dictated that liabilities and capital were the same because they were on the same side of the balance sheet, reflection on the economic conditions of these two kinds of accounts led them to see that these two accounts were radically different. One had to distinguish clearly one from the other:

Capital account represents a margin, a net result between resources and liabilities, the excess of resources over liabilities; it is not an indebtedness, but proprietorship.

The affirmative rejoined that the resources were bound to the proprietor as well as to the other creditors; that the amount due the latter was a fixed one for the reason that they had no control over the employment of capital; that terms used in book-keeping must be taken in their technical, not their popular, sense; the credit 'By Balance' is a quasi payment offset by a quasi receipt afterward.

The negative objected to the last view as being another introduction of fiction into the domain of fact and the cases rested [Book-keeper, 1882, p. 398].

The idea that capital was the margin implied use of Sprague's [1880] equation of value — capital was the net of assets and liabilities.

This late 19th century debate over classifications of various accounts, which may at first appear obscure and unsophisticated to the eye of a contemporary observer, demonstrated a sophistication regarding something of profound importance. The ideal of the "science of accounts" concerned the correct classification from which the reality of the economic activity could be made visible. Therefore, no debate over classifications was obscure or unimportant. In their context, these discussants
were grappling with the profound scientific issues of their day. Their decision either way would have greatly influenced how they interpreted what they were doing when they did accounts.

The idea of the science of accounts, as demonstrated by this self-selected group of expert accountants, became the only theoretical umbrella under which any discussion regarding the principles and foundations of the bookkeeping system could be based. No presentation of the principles of accounts was made without an appeal to the science of accounts. Therefore, only within this environment of the science of accounts could vigorous discussions take place. Arguments would be disregarded as unscientific if they were outside this perceived, rigorous, theoretical environment. One side could honorably disagree with the other as long as they both proceeded "scientifically." The presumed necessity of this science reveals very strongly the existence of the rational institutional myth of the science of accounts. Debate could take place within this presumed ideal. However, the idea that bookkeeping was a practical science was not discussed at all. All took that for granted. The IABCNY perceived its special status as a premier bookkeeping organization because it facilitated the development of the profession's science.

This over-arching belief in the scientific ideal within the IABCNY's self-selecting group of expert accountants was most explicitly demonstrated by Cockey [1883]. He attempted to expand the thought of the expert accountants to the higher levels of the science of accounts. In all seriousness, he stressed the need for accountants to get involved in natural science research, so that each of these sciences (musical sound, light and heat, chemistry, astronomy, botany, conservation of energy) could advance to a higher level. All these natural sciences had a mathematical description of the systems in which they purported to explain their particular natural phenomenon. The accountant, as the best practical expert on the manipulations of mathematical systems, was required to work with these natural scientists before these sciences could advance further:

We are accustomed to look upon Number as the handmaid of commerce, and ourselves as slaves chained to the ledger, and only, by special good fortune, having the time or opportunity to reach anything nobler or higher. But to-night I hope to convince you of a fact which should lift our ideas higher, and give our energies a scope wider than the bounds of the counting-room. My thesis is: Every natural law has
number as an essential part, and every art and every science needs the labor and experience of the practiced accountant for its full development [Cockey, 1883, p. 67].

A late 20th century reader of this lecture may perceive it as absurd. However, as demonstrated earlier, accounting principles had been explained through the use of analogies to physics [Matthern, 1876; Sprague, 1880]. Mirowski [1989] has illustrated the mutual interchange of ideas between economic and physical scientists during this period. The physicists' concept of the conservation of energy was influenced by bookkeeping, as other physical concepts were influenced by economic concepts [Mirowski, 1989]. The importance of the lecture may also be inferred from its being published in the *Book-keeper*, the unofficial forum for the IABCNY.

This lecture indicates the great importance these New York accountants placed on the view that the practice of bookkeeping rested on a profound foundation in the science of accounts. Cockey's opinions represented an extrapolation of the thoughts of Foster [1857] 30 years earlier, when Foster confidently placed the science of bookkeeping within the sphere of mathematics and, through mathematics, metaphysics. Cockey understood the relationship of bookkeeping to the sciences of the physical world as being so intertwined that good physical science could only be done with the assistance of a good, "expert accountant." This reinforces the perspective that by the late 19th century, the established elite of expert accountants considered the science of accounts to be fundamental, and that the status of this science was much more than practical methods to make efficient journal entries. Though most proponents of the science of accounts did not go as far as Cockey, he was the clearest exponent of the view that this science had real ramifications for perceiving the world. The science provided a view into the invisible world. Most authors simply limited bookkeeping to making the economic sphere visible through the determination of economic value, as Packard [1881] had made clear. However, others, like Cockey, did not limit themselves to the purely economic world.

ACCOUNTICS

In 1887, Sprague, the most prominent and respected practitioner and theorist of the science of accounts, presented a monumental lecture series at the School of Library Economy at
Columbia University. This course on accountics would be cited many times in the next decade. The new word "accountics" would become the technical term for the "science of accounts." The new school in library economy was founded by Melvil Dewey, the most prominent 19th century U.S. figure in library science. Dewey had invited Sprague to give a series of lectures describing the scientific methods of bookkeeping. The librarians considered the science of accounts a complementary science from which much could be learned. Dewey followed Sprague's series of lectures with his own presentation of a specialized set of accounts for a library he had developed. Sprague portrayed bookkeeping as explicitly scientific. Considering that many proponents of the science of accounts conceived of science as a rational classification of facts through which understandings and insights may be gleaned, the association of the science of accounts with library science does not appear accidental. Both advanced their scientific status through developing more sophisticated classificatory systems.

Sprague's actual lectures were not published. However, the editor of the Office, A. O. Kittredge, published his own summary [Office, 1887]. There appears to have been little new when this summary is compared to Sprague's earlier work, "Algebra of Accounts" [1880]. In fact, Office would republish this earlier work in 1889 [Sprague, 1889]. One can infer that, if any significant change or advancement in the science had been made by Sprague, the actual lecture would have been published with any changes or advances incorporated into the new article.

If the actual content of the lectures was not the cause of note, then the new way in which it was presented was. In this series, Sprague used the term "accountics" for the first time [Accountics, 1897]. In the next decade, this word would be used repeatedly by men claiming to be modern accountants fully trained in the science of accounts. Universally, these men would attribute this word to Sprague. He was open to the new and the modern in many areas of his life; he was U.S. president of an organization of academics promoting the universal language, Volapük. He had a series of articles in Office and Business giving basic lessons in Volapük, which he also taught at Packard's school. He had promoted a new system of numerals to replace Arabic numerals [Sprague, 1881]. Therefore, it was not uncharacteristic for Sprague to develop a new word to describe his new activities and those of his contemporaries at the IA.
He described accountics as the "mathematical science of values" [Office, 1887, p. 103]. The activity of analyzing a set of accounts through rational and scientific classifications was doing accountics. This activity was scientific for it was rational and proceeded to make deductions and classifications based on primary principles. The process used mathematical procedures, namely algebra, in formulating and expressing the fundamental principles of the science. Accountics, therefore, was placed alongside other mathematical sciences. These sciences were developing throughout the 19th century and, like statistics, were beginning to gain prominence. They were defining a rational world in place of what had previously been seen as irrational and chaotic. Sprague, through the term "accountics," made the claim that the science of accounts was included in this family of sciences. What distinguished this science from the other mathematical sciences was that accountics concerned economic values. Thus, through Sprague's definition of accountics, the science of accounts was associated with the mathematical sciences and with political economy or economics. For Sprague, this science could not progress unless it relied on mathematical expression. In addition, it could not progress unless it associated itself with economic analysis.

These claims were not a pragmatic strategy to legitimize the development of sophisticated bookkeeping theories. Rather, this development of a science was seen as revealing long-hidden realities within the economic environment and the double-entry bookkeeping system itself. The science of accounts, through systematic mathematical analysis, could discover hidden truths of the reality of economic value. The term, "accountics," captured the imagination of the members of the IA, connoting the advances in bookkeeping that all these men were experiencing.

Hardcastle [1888] immediately took up this linguistic development in his article, "Prices and Profits, or a Chapter in Accountics." He went on to describe the construction of accounts and the determination of profits through mathematical (scientific) language, rather than in the traditional mechanical manner. He described the process to determine an account's balance mathematically and scientifically, not mechanically. The traditional process took on a more elevated, higher state because its description used accountics. The "T-account" became a physical repository of historical data in which even the physical horizontal line took on the status of encompassing time. In a rational, mathematical, and scientific manner, the
horizontal line of the "T-account" brought the past into the present. This summary of history, the mathematical resultant, Hardcastle [1888, p. 15] reluctantly called the balance, bowing to bookkeeping tradition:

The resultant weight has been called the balance. This shows that the word balance is merely metaphorical, and used to express some points of resemblance between an account and the weighing by a pair of scales. It would be better to call it the mathematical resultant, because it is obtained by subtraction, from the other elements of the account. We will, however, call it the book balance, as representing that resultant which can be obtained by subtraction, from the two sets of elements entering into the account.

The science of accounts demanded a new language describing the activity of bookkeepers in a more rigorous and rational way. In this chapter on "accountics," Hardcastle made visible the economic reality captured within the mundane "T-account," which had hitherto been imperceptible, at least in his opinion. He was far from the tradition of the writers 80 years earlier who had struggled to move the presentation of bookkeeping from personified metaphors to clear and concise rules.

Hardcastle confronted the rational problem of profits. Nineteenth century economic thought repeatedly struggled with the problem of conserving economic value, yet recognizing the reality of economic profit [Mirowski, 1989]. Hardcastle stated that accountics was best suited to confront this problem, aiding the theory of political economy:

The outgoings of our merchandise as measured by a money value may be greater than our incomings measured by the same value, or we may have the paradox that we can pour out more than was poured in. Here we have the veritable widow's cruse of oil, the oil increased in the act of using. There is nothing else like this in mathematics, and questions of this nature require special treatment, and consequently form a distinct science with its own laws, which has been named by our [IA] worthy president [Sprague] accountics, or the science of shifting values, and comprehends not only book-keeping but a great part of the science of political economy [Hardcastle, 1888, p. 16].

By demonstrating this direct link between accounting and political economy, the science of accounts could become the
method of investigation by which society could gain insight into economic reality.

The belief in the science of accounts by IA members was clearly more sophisticated than some of the other people who used the phrase. Some exclusively used it as a pedagogical tool to instruct youth better and more quickly. For Hardcastle, Sprague, Cockey, and others at the IA, the science of accounts provided the best means to comprehend the economic reality bookkeeping attempted to capture. The development of the science was essential for the understanding of bookkeeping, bookkeepers, accountants, and the historical determination of economic value. These men clearly placed the science at the center of the effort to understand the ontological essence of economic reality. The use of evolution, astronomy, and mathematical analogies all attempt to situate accountics specifically at the center of the modern scientific revolution. Cockey's [1883] radical statement of the accountant's place at the side of physical scientists does not appear as extreme when late 19th century social and philosophical considerations are placed in context. The expert bookkeeper was required to become a scientist investigating economic activity.

In 1889, Sprague made two significant contributions to the development of accountics. First, his series of articles from the Book-keeper was reprinted in the Office with only very minor alterations [Sprague, 1880, 1889a]. (The content of this series also formed the foundation for Sprague's 1908 work, The Philosophy of Accounts.) However, the actual environment in which the series could now be received was radically different. There now existed a substantial group of expert accountants and bookkeepers in New York and in other regions who could appreciate and understand this mathematical representation of bookkeeping. This series of articles was referred to by numerous contributors to Office and Business in the years to come. The use of the algebraic equation to describe the bookkeeping function was repeated by Hardcastle and others.

Throughout the 1880s, the science of accounts had been refined and nurtured through its institutionalization within bookkeeping's technical journals and the IA. The impact of the "Algebra of Accounts" in 1889, as compared to its original publication in 1880, provides the most explicit evidence of the changed intellectual and institutional environment. Through the Book-keeper, American Counting-room, Treasury, and Office, readers had been repeatedly exposed to the science of accounts.
for nine years. In addition, for seven years the IA had been sponsoring monthly meetings devoted almost exclusively to discussing the science of accounts [Romeo and Kyj, 1998]. These two significant institutions had presented this science to many practitioners. Therefore, the science of accounts had been given an environment in which it could grow, both in its theoretical presentation and in the number of people adhering to it. In return, the technical media and professional organization had gained credibility through their emphasis on the development of the science of accounts. In 1889, as compared to 1880, the "Algebra of Accounts" had an enlarged and more sophisticated audience, cognizant of the ideals embodied in the science of accounts.

One area of concern which accountics confronted was the idea of economic profit. Hardcastle [1888] had attempted to demonstrate the need of accountics to reveal the peculiar aspects of economic profit. In 1889, Sprague [1889b] applied the principles of the science of accounts to describe the profit and loss account. This account, which was barely mentioned in bookkeeping treatises in the early part of the century, had apparently become more problematic and a concern for the bookkeeping community. The explanation Sprague gave may appear to a contemporary reader as very clear but mundane. He merely made the obvious points any introductory course in accounting would make; namely, that the profit and loss account is a summary account which only indicates profit or loss after all the entries have been added together. However, Sprague felt that his point was not an accounting principle that many could readily accept. The article was written to illustrate to readers the true economic reality captured by bookkeeping. In this case, Sprague [1889b, p. 207] attempted to illustrate how accountics, the mathematical science of values, could make explicit what otherwise could be easily confused or lost:

This is the essence of business as distinguished from private or professional life. Outlay for the sake of income is business; income for the purpose of meeting expenditure is not. Therefore I contend that the profit and loss account is a unit. It is composed of outlay and income, not of losses and gains. When the results of outlay and income have by its agency been compared and the excess ascertained then and not till then do the books show a profit or a loss. Profit and loss is therefore named in the correct order, since the result is, normally, profit.
Sprague used economic arguments to interpret actual bookkeeping procedures. He stepped back from the mechanics of bookkeeping to reflect on the economic actions which the bookkeeper records. The expenses of the manufacturer were not considered losses. Instead, they were economic necessities to achieve income. The profit and loss account captured the outlays and incomes of a business. By this means, Sprague demonstrated explicitly the intimate relationship between accountics and economics.

F. W. Child [1891, p. 251] addressed engineers in 1891 to express the importance of scientific accounting. He clearly and explicitly relied on Sprague’s theoretical work. The science of accountics allowed various “confusions” of bookkeeping to be cleared up. The confusion over the classification to which capital belonged [Book-keeper, 1882c] was clarified through the algebraic presentation of Sprague.

Hardcastle [1891] also used Sprague’s algebraic presentation to expound on accountics. However, he used the same tools to arrive at different conclusions. He classified all accounts into three classes — the first two for accounts at rest and the third for accounts in motion. As with Sprague, the presentation of accounts based on the terms “at rest” and “in motion” necessarily alluded to physicists’ theories of motion. The balance sheet described accounts “at rest” and the profit and loss statement presented accounts “in motion.” The two classes of accounts at rest were “specialty accounts” (assets and liabilities) and the “capital account” (the mathematical aggregate of the specialty asset and liability accounts).

In a later article, Hardcastle [1892] subdivided specialty assets and liabilities into personal and property, being very reminiscent of the earlier classifications of real, personal, and fictitious. The personal accounts were additionally subdivided into two, depending upon whether the personal account had documentary evidence or not. This is one of the rare classifications that relied on a legal definition rather than a bookkeeping or economic one. Hardcastle, following Sprague, represented the balance sheet through an algebraic equation. Capital was the mathematical residual after the liabilities had been meet by the assets.

To present the accounts “in motion,” Hardcastle [1891] introduced a third class of accounts which were characterized by having historical rather than true mathematical value. What true value they did have was only after there had been an adjustment to their balance, such as with the merchandise inven-
tory account. The curious feature of this third class was that it was comprised of both specialty and capital accounts. The adjustment based on estimation was to determine how much of the balance should be allocated to each of the two primary classes. Hardcastle’s classification, especially of the interaction of the third class with the first two, appears confusing. His presentation, using the perceived methodology of Sprague, did not result in the same conclusions as Sprague. Hardcastle’s presentation had similarities with the earlier classification of personal, real, and fictitious. Though Hardcastle presented the framework of accountics, a thorough and rigorous science of bookkeeping, he appears to have leaned heavily on this “unscientific” 18th century classification. Importantly for this discussion, Hardcastle felt it necessary and indispensable to present the theory of accounts using the now well-developed system of accountics. To make a presentation on the principles of bookkeeping in the U.S. during the 1890s, one was required to use the rational institutional myth of the science of accounts.

SCIENCE OF ACCOUNTS: STATUS AT THE PASSAGE OF FIRST CPA LAW

In the period up to the introduction of the first CPA law in New York State, the rational institutional myth of the “science of accounts” or “accountics” had become very well-established among U.S. practitioners of bookkeeping and accounting. An article by A. O. Kittredge [1896], shortly after the passage of the law, provides an insightful illustration of the institutionalized status of the science of accounts. His concern was whether bookkeeping was “progressive.” The science of accounts had reached its full acceptance within the IA, a group encompassing the most “advanced” accountants in New York. Kittredge relied on this shared cultural belief of the science of accounts to suggest that bookkeeping was as progressive as any other science. The science of accounts was believed to be a genuine “science.”

The evidence that Kittredge considered the science of bookkeeping a real science becomes clear when he very naturally compared the development of the science of accounts directly to “other sciences” and to “electrical science” in particular:

When it comes to bookkeeping as a science, with principles established and defined, the answer to the question of progress and development is not so readily made. We are obliged, therefore, to be guided, in part at least, by analogy. Inasmuch as other sciences ad-
vance from time to time, even though their fundamen-
tal principles have long been known, we may expect
bookkeeping to advance in like manner. Inasmuch as
other branches of scientific work manifest unexpected
life from time to time, so may we assume that there
lurks among the foundations of bookkeeping some as
yet unapplied principles, which, once brought into
play, will change, more or less, the routine of our office
practice.

... Is bookkeeping progressive, what is to be its fu-
ture? What will be its ultimate development? Such
questions are useless. No one can answer them. The
best we can do is to institute comparisons. In the field
of electrical science, for example, the dynamo and elec-
tric light were known in the laboratory experiments
long before their general utility and practical availabil-
ity for use were discovered....It is possible that there
may be some germ-principle in bookkeeping which, in
the near or distant future, at the magic touch of an
office genius yet to appear, will revolutionize the art.
No one can tell at present what it is nor guess when it
will be found; but analogy says it may be there
[Kittredge, 1896, pp. 320-321].

To state so unequivocally the parallel of other sciences implied
a profound belief in the science of accounts as a means to
reveal reality that would otherwise remain hidden and lost in
the chaos of the business world. Bookkeeping was a science
because its principles were discoverable. The principles were
discoverable because they referred to some objective reality.
Inventions in technique were seen to have been made, and were
expected to be seen in the future, as long as they derived justifi-
cation from discovered principles. Because the principles de-
scribed reality, new techniques derived from them would be
true, useful, and revealing.

According to Kittredge, this science, which was intimately
bound to the business world and political economy, had shown
itself to be instrumental in aiding the business world and the
political economy to adapt to new situations created in the
process of industrialization. Many changes had affected the in-
dividual of the late 19th century. Business reality had changed
dramatically. In addition, technical progress had altered the
way people lived and worked. Kittredge placed the science of
accounts squarely within this popular belief that rational
thought could eventually encompass and control the physical
world. Belief in the science of accounts, in part, derived its
strength from this widespread optimistic faith in the future through progressive sciences:

If all these changes, and hundreds of others not necessary to mention, have taken place during the nineteenth century, why should not similar changes in other fields occur for the good of the world in the twentieth century? And why should not bookkeeping be one of the sciences to show special progress? Or to put the question otherwise: If business conditions continue to advance, can bookkeeping stand still?

New business conditions demand new methods and facilities. The truth of the old proverb, that necessity is the mother of invention, was never more strikingly illustrated than by what has been done by accountants in adapting their methods to meet the requirements of business men as new enterprises and new lines of industry have been established [Kittredge, 1896, p. 231].

The success of business relied on the success of accountants to investigate the hidden truths of economic activity embedded in bookkeeping through the use of the science of accounts.

Kittredge proceeded to demonstrate how bookkeeping had itself radically changed in the 19th century, filled with new discoveries and new applications. The dynamism of the times was manifested in bookkeeping through recent advances:

We find that classification of accounts, in the sense in which the term is generally used by advanced accountants, was absolutely unknown so recently as the date of some of the first editions of the textbooks now largely current. This classification of accounts differently applied in different lines of business by different accountants, while always holding to the double entry idea for balance proof, still makes use of certain new features, so novel and so unlike what was originally set forth in the double-entry system as to warrant the term 'new principles.' Systems of cost accounts, statements of resources and liabilities, with exhibits of profits or losses while the business is running, or our modern balance sheets, also make use of features not referred to in the least by the early writers [Kittredge, 1896, p. 231].

Higher accounting can be assumed to include the science of accounts with its emphasis on the classification of accounts.

Kittredge and others believed profoundly in the reality of the rigorous and scientific principles of accountics. This was demonstrated in the direct use of the concept of "discovering"
principles. The manner in which these scientists of accounts were open to new discoveries can be demonstrated by their reaction to a new accounting system "logismography," which had been developed by Giuseppe Cerbini, Accountant-General of Italy:

The rumor reaches us from far-away Italy, the birthplace of double-entry bookkeeping, that new discoveries have recently been made there which will place the 'new bookkeeping' as far in advance of double-entry as double-entry is in advance of what preceded it [Kittredge, 1896, p. 231].

Kittredge ended his article on the progressiveness of accounting by hinting that new discoveries were being made even as he wrote.

Both Hardcastle [1897] and Sprague [1898a, 1898b] wrote a series of articles describing this new Italian method. The development of the ideal of the science of accounts had become a sufficiently profound reality to these men that they looked for new methods which could reveal new principles that had previously remained hidden. For Kittredge, the science had progressed as the new classifications, the new financial statements, and cost accounts had demonstrated. In this belief system, as true scientists, they had to be open to new discoveries and willing to test them within the principles and methods of rigorous science.

CONCLUSION

U.S. concepts and institutions of bookkeeping had changed dramatically during the 19th century. At the beginning of the century, bookkeeping treatises were crude, simple, unscientific works, at least as they would have been perceived by IA expert accountants in 1896. The trade of bookkeeper had developed into a three-fold occupation — bookkeeper, expert bookkeeper, and expert accountant. The latter two, and especially the accountant, focused on the modern presentation of bookkeeping to develop skills and status. The shared belief in the science of accounts became a vital link in this professional development. At the point when the accounting profession was to make its most significant institutional change, the first CPA law, the science of accounts had established itself as a vital component underpinning the profession, propagated by the very people who would help create this new qualification.

The development and refinement of the rational institu-
tional myth of the science of accounts, through the second half of the 19th century, provided the intellectual and theoretical basis through which the U.S. accounting profession could develop. This emphasis on science, and the role of the accountant as a scientist, contrasted dramatically with the gentlemanly, professional idea which the Chartered Accountants from Great Britain brought to the U.S. during this same period. A better understanding of the theoretical framework in which the native accountants derived their sense of the profession provides a more nuanced understanding of the profession as it emerged in New York City. In addition, an appreciation of the science of accounts may provide a greater understanding of the development of accounting programs in U.S. universities in the 1900s and the early developments of U.S. accounting theory in the first two decades of the 20th century. In 1900, Sprague, Hardcastle, and Kittredge, the main proponents of the science of accounts, were founding faculty members of the New York University business school. This school quickly became the model for many schools throughout the country (AAPA, 1907). The legacy of the science of accounts influenced both accounting's professional and academic development in the U.S.

The strong scientific basis for the development of the U.S. accounting profession provided an institutional bias towards a technical understanding of the skills necessary for the promotion of the profession, especially focusing on the principles upon which accounting was believed to be based. Contemporary discussions concerning the manner in which accounting is a science [e.g., Mouck, 1990; Arrington and Francis, 1993; Manicas, 1993; Merino, 1993; Mattessich, 1995] illustrate how the social context of accounting thought and practice remains focused on the ways in which scientific abstractions may be gained, if at all. The debate concerning the artistic skills and scientific rigor of accounting was vigorously debated in the late 19th century, with profound influences to this day. An understanding of this development may help inform the contemporary debate.

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This special issue will be co-edited by Richard K. Fleischman and Thomas N. Tyson. Anticipated publication date is Spring, 2000. Submissions should be made by 31 March 1999 to: Thomas N. Tyson, Department of Accounting, St. John Fisher College, 3690 East Avenue, Rochester, NY 14618, U.S.A.
LABOR AND COSTING: 
THE EMPLOYEES’ DILEMMA

Abstract: The paper analyzes the discordant reactions of labor to the introduction of uniform costing in the British printing industry during the early 20th century. The paper reveals that trade unions assisted employers in the quest for a costing-based solution to the inveterate problem of excessive price competition in the printing sector. At the same time, rank-and-file unionists were fearful of the exploitative potential of one element of the prescribed costing solution — time recording. It is shown that labor hostility was sited at the point where costing converged with scientific management in the organization. Evidence is presented which confirms the pertinence of economic-rationalist, labor-process, and Foucauldian approaches to the study of cost accounting history. It is suggested that different paradigms have particular relevance to the analysis of accounting discourses conducted both at the strategic macro-level and at the micro-level of the shop floor.

INTRODUCTION

Cost accounting controls over labor have become in recent years a particularly salient concern for historical research in management accounting. Much of this interest derives from the insights which the study of this sensitive issue can bring to an understanding of the fundamental forces which have influenced the development of business control systems. Not only is the subject significant as a study of practical accounting development in industrialism, it has also provided a focus for debate on accounting historiography and methodology. However, no con-
sensus has emerged to date on the nature or relative importance of the determinants of accounting change in this context.

Indeed, a range of quite disparate emergencies and motives have been suggested for the implementation of cost accounting systems. Hopper and Armstrong’s [1991] labor-process approach emphasized the disciplinary and exploitative potential of accounting controls on labor in industrial capitalism. Miller and O’Leary’s [1987] genealogical perspective posited that the use of standard costs during the early 20th century assisted the operationalization of Taylorism and the notions of efficiency propounded by the scientific management school. Hoskin and Macve [1988, 1994] have argued that it was the absorption into business in early 19th century America of an emphasis on the control of the individual, as nurtured in the military academy, which eventually led to the development of accounting controls over labor. In contrast, Tyson [1995] has used archival data from the U.S. men’s clothing industry to advance the notion that a purely economic motive lay behind the introduction of labor performance standards during the early 20th century. Tyson [1994] has argued further that not only were controls jointly established by employers and employees, but also that both sides of industry derived benefit therefrom.

The above contributions each identify explanations for cost accounting development founded primarily on a singular (labor-process/Marxist, Foucauldian, or economic-rationalist/ Neoclassical) paradigmatic base. Each approach also suggests different potential roles for labor in the process of accounting change. Adherents to the labor-process school suggest the assumption by labor of a stance characterized by resistance or hostility. Foucauldians stress the potential of accounting technologies for the exercise of discipline over the calculable individual. Although this prospect is also likely to be encountered by a defiant work force, less aggressive postures might be adopted where employees recognize the enabling potential of the motivational effects of controls and calculation. A more overtly positive and supportive role for labor is implied by economic rationalists, such as Tyson [1994, 1995].

Some of the most recent contributions to the study of costing development have urged a departure from the seemingly debilitating monocentrism which has conditioned the historical debate. Calls have been made for greater collaboration between the advocates of the principal thematic approaches [Fleischman et al., 1995, 1996]. Increasing plurality is evident in work by
Fleischman and Tyson [1996] where the authors, who have tra-
ditionally been associated with the economic-rationalist school,
conceded that Foucauldian analysis “enriches” our understand-
ing of the history of inside contracting. In a similar vein, Boyns
and Edwards [1996] have criticized the manner in which re-
search on the history of cost and management accounting has
been encumbered and narrowed by the determination of the
adherents of a particular theoretical exemplar to search out
only that which confirms their own paradigm. Boyns and
Edwards suggested a broader conception of historical enquiry
which captures the diversity of costing development in a variety
of locales. They contended that the pursuit of paradigmatic he-
gemony might be transcended by “a balanced approach which
allows all types of history to flourish and contribute to in-
formed discussion between historians with differing view-
points” [Boyns and Edwards, 1996, p. 57].

It is in this context that the current study attempts to high-
light the limitations of adopting and generalizing a single-factor
explanation for cost accounting change and labor’s responses to
it. The paper emphasizes that labor’s reactions to change were
complex due to the heterogeneity of the work force engaged in
a particular industry or individual production site. It is sug-
gested that the attitudes of labor toward the imposition of
costing technologies are dynamic and may be conditioned by
altering situational factors. The study also underscores the im-
portance of eliciting the reactions of labor to the specific com-
ponents and practices contained within a “costing system.”

It is suggested that the dominant theoretical approaches
applied in previous analyses may all have relevance, in varying
measure, to understanding practical responses to accounting-
based labor controls. This complexity is exemplified here in an
illustrative case study of the introduction of a system of uni-
form (industry-wide) costing in the U.K. printing industry dur-
ing the first four decades of this century. A key component of
the prescribed costing system involved the routine generation
of detailed information on direct labor cost through the imple-
mentation of “daily dockets” (time sheets) which recorded how
each employee had spent his or her work time. Thus, the case
study focuses on the specific mechanism by which accounting
controls might impinge on the individual employee. At the
same time, the nature of the costing technique devised by
employers (uniform costing) required the cooperation of organ-
ized labor to secure its successful introduction and effective
implementation. The resultant engagement of employer associations and labor organizations in publicized costing discourses reveals the potentially multilayered complexion of employee attitudes. In particular, the case material presented here highlights the divergences between labor's perceptions of the strategic aspirations of costing and its practical impact on the shop floor. The paper analyzes the complex participation of organized labor in the attempt to effect accounting change in the printing industry and reports on the various reactions of workers to that change.

COSTING, CAPITAL, AND LABOR IN BRITISH PRINTING

Solomons [1950, p. 241] wrote that 26 uniform costing schemes had appeared in Britain since 1913 in sectors ranging from tin-box manufacturing to paint and varnish production. Most [1961, p. 12] subsequently contended that the number of such schemes had increased to over 30. The first and most enduring uniform costing system formulated in Britain was that devised for the printing industry. The circumstances which encouraged British printers to develop a scheme of uniform costing during the early 20th century and the subsequent attempt by their trade association to propagate its universal usage have been explored in earlier work [Mitchell and Walker, 1997; Walker and Mitchell, 1996, 1997]. In order to introduce the case, however, it is appropriate to provide a brief résumé of the structure of the printing industry in Britain and the organization of its employers and employees.

In 1911, 176,000 persons were employed as printers and lithographers in the U.K. [Members Circular, February 1915, p. 67]. The vast majority of workers in general printing work were engaged in firms which employed fewer than 20 hands [Musson, 1954, p. 93]. Most of the industry's output, however, was produced by a small number of highly capitalized medium and large concerns. Intense price competition among the 7,000 printing firms resulted in falling profit margins [Alford, 1965, pp. 10-11]. Their worsening fortunes encouraged employers to organize in 1901 as the British Federation of Master Printers (BFMP). This association sought a costing-based solution to price cutting.

From 1901 to 1910, the BFMP attempted to improve the costing and pricing practices of its members through the encouragement of collusive behavior and publications such as Profit for Printers: Or What is Cost? [1904], Printers' Costs
[1909], and *The Printers' Standard Price List* [1909]. These manuals argued the case for improved costing and provided practical guidance on the implementation of full-costing systems. The expectation was that the adverse effects of price competition would be muted as tenders were influenced by full costs [Mitchell and Walker, 1997]. In 1913, a more concerted attempt was made to achieve industry-wide uniformity in costing practice with the launch of *The Printers' Cost-Finding System* at the First British Cost Congress. This development was largely inspired by, and was emulative of, the efforts of the American Printers' Cost Commission and the United Typothetae of America to generate a uniform costing system. In October 1909, an international cost congress had been held in Chicago for master printers and, in 1911, a *Standard Cost-Finding System* had been published in the U.S. [Berk, 1997; Powell, 1926].

The Federation Costing System devised by employing printers in Britain was designed to gather full unit-cost information segmented into direct material, direct labor, and overhead (productive and non-productive). The system required the completion of daily time dockets to capture direct labor cost and link it to specific jobs. From 1913, *The Printers' Cost-Finding System* was promoted extensively by the Costing Committee of the BFMP through a variety of propagandizing techniques [Walker and Mitchell, 1996].

During the opening decades of the 20th century, organized printing labor was dominated by older "craft unions" — the Typographical Association, the London Society of Compositors, the Scottish Typographical Association, and the National Union of Bookbinders and Machine-Rulers (NUBMR). In 1914, these organizations boasted a total membership approaching 50,000 [Child, 1967, pp. 190-191; Clegg et al., 1964, p. 468]. The growth, from the 1890s, of "new" unions representing semi-skilled labor, such as bookfolders, paper cutters, printers' operatives, and warehousemen, contributed to a general expansion of trade-union membership in the printing and allied trades. In 1914, the national organization of printing unions, the Printing and Kindred Trades Federation (PKTF), comprised 17 affiliated associations with a total membership of 68,000 [PKTF, *Annual Report*, 1913].

Because of the industry-wide scope of the costing movement in British printing, the issues surrounding its implementation were discussed in the periodicals of both employers and
employees. These publications provided a base in primary sources for the current study. The national journal of the BFMP, the *Members’ Circular*, and the journals of printers’ regional alliances reported on the attitudes of labor towards uniform costing. Trade journals such as the *Caxton Magazine* and the *British Printer* commented on issues raised by costing’s advocacy, though predominantly from the perspective of employers. The perceptions of printing labor were gleaned mainly from the periodicals of the principal trade unions, such as the *Typographical Circular* (the journal of the Typographical Association), the *London Typographical Journal* (the organ of the London Society of Compositors), trade circulars issued to members of the NUBMR, and the PKTF’s *Annual Reports*.

The remainder of the paper focuses on the apparently divergent responses of printing labor to the attempt by the employers’ organization to introduce uniform costing. The first section describes the ways in which employees and their representatives were positively inclined towards the costing movement and analyzes the foundations of their expressions of support. The second part of the paper documents the negative reactions of employees to costing and examines the sources of labor hostility.

**COMPLIANCE: LABOR, COSTING, AND INDUSTRIAL REGENERATION**

I for one hope that the day is not far distant when a new reason will be given by an employee for leaving his employer, viz., that he has not advanced with the times and installed the costing system [*Caxton Magazine*, June 1920, supp., p. 12].

*Labor and the Pursuit of a Strategic Costing Solution:* During the first decade of the 20th century, the BFMP sought an effective remedy to excessive competition in the printing industry. So far as leading trade unionists in the industry were concerned, competitive behavior not only depressed prices and profits but also restricted the ability of employers to concede to the demands of labor for improved wages and conditions [Mitchell and Walker, 1997]. Accordingly, unionists urged employers to address the fundamental problem of price cutting [*Members’ Circular*, December 1901, p. 47].

Costing, through its impact on pricing, was increasingly perceived by the master printers and labor representatives as
the means to increasing printers’ profits and, thus, ensuring that both capital and labor were properly recompensed. In 1906, the *London Typographical Journal* [September 1906, pp. 9-10] argued that:

The greatest enemy of the master printer is not the Society man, but the master printer next-door; and when the employers have become as well organized as the men, for the purpose of keeping up prices, there is not likely to be so much unnecessary friction between the two bodies. With this latter phase of their work we have every sympathy — for, given higher prices, the master printer is in a better position to pay good wages and to grant improved conditions of employment all round.

When, in 1911, a concerted endeavor was inaugurated by the BFMP to devise a uniform costing system for the printing industry, a number of trade unionists applauded the attempt to “deal with the question of printers’ costs” and “the undercutting which is ruining the trade” [*London Typographical Journal*, September 1912, p. 1]. The subsequent launch by the employers’ association of the Federation Costing System in February 1913 was supported by union periodicals due to its potentially advantageous strategic objectives. Printing labor was urged to adopt a cooperative stance [*London Typographical Journal*, February 1913, p. 10]. One contributor requested unions to “give their support to those gentlemen who have spent time and money in an earnest desire to place the printing craft on a sound business basis throughout the United Kingdom” and to encourage their members to give the system “a fair trial” [*London Typographical Journal*, March 1913, p. 4; *Typographical Circular*, March 1913, p. 2].

Subsequently, union leaders not infrequently urged the employers’ association to adopt an aggressive approach to the implementation of industry-wide costing solutions and expressed their frustration at the Federation’s apparent inability to secure the concordance of its members with centrally negotiated costing and pricing directives [*London Typographical Journal*, September 1913, p. 1; *Members’ Circular*, September 1913, pp. 322-323, December 1913, p. 415].

*Labor, Costing, and “Betterment:”* In May 1915, a letter appeared in the printing journals which initiated a movement for the betterment of the printing trade in the post-war era [Child,
“Q”, James McQuitty, the honorary secretary of the Belfast Printing Trades Employers’ Association, argued that the interests of employers and employees in the printing industry were correlative and that the enduring problem of price cutting was deleterious to both sides of the industry [Members’ Circular, May 1915, pp. 227-228]. Consequently, masters and men should pursue a strategy whereby unionists would insist that the firms in which their members worked operate a costing system. The result of this “mutuality” would be the swift eradication of price cutting, and “proper remuneration could be obtained by printers for their work, and immediately a substantial increase could be given to the workers” [Members’ Circular, May 1915, pp. 227-228; Caxton Magazine, June 1916, p. 348].

As it became apparent during World War I that the employers’ campaign for the universal adoption of a uniform costing system had met with very limited success, and as there was a significant volume of contemporary concern about the reform of industrial relations and post-war reconstruction, Q’s ideas about industrial protection through compulsory costing, enforced by unionized labor, gained increasing support in the printing industry [Typographical Circular, October 1916, p. 3, November 1916, p. 3]. During 1917, discussions took place between the federations of printing employers and unions on the subjects of industrial cooperation and the appropriate measures to secure the “betterment of the trade” [Bundock, 1959, p. 191; Caxton Magazine, April 1917, supplement]. Attention was focused on “the topic of paramount interest at the moment — the relation of accurate cost-finding to the well-being of the workers” [Accountant, June 9, 1917, p. 552]. In October 1917, representatives of the employers’ and employees’ federations agreed to establish a joint committee to consider a scheme of mutual betterment for the printing industry [Caxton Magazine, January 1918, p. 1]. In this venture, the two sides of the printing industry were in accord with the recommendations of the Whitley Committee, established by the Government in October 1916, to investigate means of improving the relations between employers and employed in Britain [Askwith, 1920, pp. 455-456].

1It was a matter of some pride within the printing industry that McQuitty’s proposals predated the Whitley Reports of 1917 and 1918, and that the craft “pioneered National Joint Councils” [Caxton Magazine, January 1922, p. 63]. In a tribute to “Q” in 1922, it was asserted that “Mr. McQuitty was really the parent of the Whitley Councils” [Caxton Magazine, July 1922, p. 404].
Labor, Costing, and the Joint Industrial Council: The work of the “Betterment Committee” in the printing industry culminated in the production of an agreed blueprint for the establishment of an industrial council. This body was to be the “basis for future co-operation for Printing Trade Betterment” [Caxton Magazine, January 1919, pp. 7-9]. The Joint Industrial Council (JIC) for the printing trades, comprised of representatives drawn from the BFMP and unions affiliated to the PKTF, met for the first time on July 1, 1919. Its existence heralded a period of comparative tranquility in industrial relations in British printing [Child, 1967, p. 231; Musson, 1954, p. 372]. In congruence with the wartime discourses on the perceived centrality of remunerative pricing and costing to the prosperity of the printing industry, the following was specified as one of the “objects” of the JIC:

5. To assist in the maintenance of such selling prices as will afford reasonable remuneration to both Employers and Employees [Members’ Circular, January 1919, p. 16].

The constitution of the JIC, which was unanimously endorsed by the organizations of employers and employees, also codified the following “agreed principle” on the subject of “cost finding:”

30. That all Employers should adopt and use for Costing and Estimating a uniform Costing System approved by the National Executive or be guided by any schedule of Hourly Cost Rates issued for their district and approved by the National Executive [Members’ Circular, January 1919, p. 19; Master Printers’ Annual, 1921, pp. 35-38].

Clause 30 did not specifically require the usage by employers of the BFMP’s uniform costing system. However, in the wake of the disappointing rate of adoption of the Federation Costing System by printers,2 together with the resurgence of price cutting from mid-1920 [Caxton Magazine, May 1920, p. 458], the employers persuaded the JIC to adopt it as the “offi-

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2In February 1920, it was asserted that less than half of all printing firms had been converted to costing [Caxton Magazine, February 1920, p. 179; also Walker and Mitchell, 1996, p. 117].

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cial" system for the industry in 1921 [Members' Circular, October 1921, pp. 331, 339]. In order to achieve this outcome, the Costing Committee of the employers' federation had set about explaining the merits of the costing system to the leaders of the printing unions [Costing Committee, Minutes, February 22, 1921]. The employers appear to have found a receptive audience. The general president of the Typographical Association, the largest printing union, had recently addressed a joint meeting of employers and his members in the following terms:

I confess that I am a convert to the costing system of the Master Printers' Federation. (Hear, hear.) When we have reached that objective we shall know then that our employers will be getting a decent return which will enable them to give a decent wage to their employes [Caxton Magazine, February 1921, p. 121].

Many union leaders actively supported the employers' quest for uniform costing during the interwar period. Employee representatives on the JIC suggested that meetings should be arranged at which union executives and shop-floor workers would be instructed in the details of the costing system by experts from the BFMP [Members' Circular, October 1921, p. 341]. One eminent master printer was to assert, "There were foolish men among both the Master Printers and the Trade Unionists, and they wanted the employees' panel [of the JIC] to assist them in making Master Printers realize the advantages of the [costing] system" [Members' Circular, October 1921, p. 340]. For their part, the employers perceived that their costing propaganda could "be carried on with much greater force now that we have the Trade Unions as well as the Federation advocating the use of proper costing methods" [Members' Circular, October 1921, pp. 365, 367].

Despite the expectation that master printers would adopt the Federation Costing System following its approbation by the JIC in 1921, it soon became apparent that the printing industry was only marginally better equipped to encounter the adversities of the slump of the 1930s [Walker and Mitchell, 1996, pp. 118, 122]. The deep and sustained depression in the trade was accompanied by the reappearance of "the panic-stricken price-cutter," who was “a menace to the Printing fraternity, both masters and men” [Members' Circular, June 1931, inset]. Once more, employers and employees set about exploring ways of curtailing price competition to restore the fortunes of the industry. Although noises were made by employers about the
merits of costing as a means of securing "economic prices" during the depression, the traditional palliative of wage cuts also resurfaced [Members' Circular, February 1932, p. 25]. Confronted with this prospect, the printing unions attempted to shift the focus towards a costing-centered strategy. The Typographical Circular argued that price stabilization and proper costing were greater imperatives than proposals which effectively penalized labor for the failures of employers to deal effectively with the problem of excessive competition [September 1932, pp. 193-194, October 1932, p. 220, April 1933, p. 73, May 1933, p. 105].

The printing unions, recognizing the difficulties confronting employers in pursuing alternatives to wage reductions due to their less than complete organization, offered their cooperation [Typographical Circular, October 1932, p. 220]. In July 1932, the employees' representatives on the JIC requested that the Costing Committee of the Council, which had not met since October 1921, be resurrected [Economic Prices Sub-Committee, Minutes, July 13, 1932]. The subsequent deliberations of this Costing Committee showed that the union representatives tended towards a more radical approach to a costing solution than the employers. In February 1933, representatives of labor on the Costing Committee suggested that the two sides should act in concert to encourage usage of the prescribed costing system, determine fair prices and wages, and outlaw price cutters [JIC Minutes, April 12, 1933].

The Costing Committee of the JIC concluded that before progress could be made in this direction, "two test questions" had to be answered:

1. Whether the employers' organizations would limit their membership to those who acted upon the Costing System; and
2. whether the Trade Unions would agree to withdraw all their members from those firms who would not conform [JIC Minutes, July 12, 1933].

The main craft unions had long been positive about playing their part in a plan of costing "compulsion" [Typographical Circular, May 1933, p. 106]. During the 1930s, it was the members of the employers' federation who were to reject the assistance of labor in securing the universal adoption of uniform costing. The BFMP considered that coercion in costing, organization, and price control was impracticable and alien to its voluntarist ideal [Magazine of the Midland Master Printers Alliance, March
1935, pp. 5-6]. Accordingly, in the winter of 1935-1936, and much to the annoyance of the employees' panel on the JIC, master printers emphatically rejected the idea of compulsion [Members' Circular, January 1936, p. 37; JIC Minutes, January 8, 1936, April 8, 1936].

Progressing the Complicity of Printing Labor: It is clear from the foregoing that most sections of organized printing labor appear to have concurred with the strategic objectives of the uniform costing movement. At times, trade unionists were more fervent advocates of the costing cause than the employers themselves [British Printer, May-June 1933, pp. 8-9]. However, the concordance of labor was not purely founded on the prospect of higher wages as costing promoted the regeneration of the printing industry. Employees' attitudes were also fashioned by the efforts of the employers' organization to instruct labor in the benefits of the costing movement [Walker and Mitchell, 1996]. It was recognized by the BFMP at an early stage that explaining the aims and objectives of the uniform costing system to employees would meet their objections, allay mistrust, and detract workers from erecting obstacles to its implementation [London Typographical Journal, March 1913, p. 4; Report of the First British Cost Congress, 1913, p. 33].

Accordingly, it was argued at successive cost congresses of master printers that the costing cause was as much in the interests of labor as the employing class and that workers should assist in its advancement [Accountant, June 9, 1917, p. 552; Members' Circular, April 1913, pp. 108-109; Report of the First British Cost Congress, 1913, p. 21]. Testimonials from employers, attesting that increased rates of employment and wages and reductions in working hours would follow the advent of costing, gave added credence to these messages [Members Circular, June 1913, p. 201]. The BFMP also recognized the persuasive potential of expressions of support for costing made by trade-union officials [Members Circular, February 1914, p. 67]. Such "propaganda among the workers" was not without effect. The London Typographical Journal [May 1915, p. 6] declared that "COSTITIS is spreading."

The centripetal nature of union organization also ensured that efforts were made from an early stage by master printers to educate powerful union leaders in the merits of the costing system. The employers' organization skillfully directed propaganda to specific groups within the functional and status hier-
archy of printing labor. Their primary targets were the managers, overseers, and foremen, the "medium of communication between the employers and their men" [Caxton Magazine, September 1906, p. 96, July 1914, p. 4; Members' Circular, June 1913, pp. 212-213, October 1913, p. 352].

During the 1920s and 1930s, printing labor was included in a general attempt by the BFMP to educate a younger generation of employees in the virtues of costing [Members' Circular, July 1937, p. 256; Walker and Mitchell, 1996, pp. 111-112]. It was assumed that enlightened labor might persuade reluctant employers to install the uniform costing system [Caxton Magazine, 1920, supp., p. 12]. In the 1930s, the employers' federation noted the increasing enrollment of employees in its costing courses [Cost Accountant's Report, September-November 1937, Costing Committee, Minutes, BFMP].

RESISTANCE: LABOR, SCIENTIFIC MANAGEMENT, AND TIME SHEETS

Modern industry . . . cannot get on without the Time Bill — that is established beyond question [Caxton Magazine, February 1921, p. 636].

Although the propaganda distributed by the employers' organization helped facilitate the support of trade unionists for the strategic objectives of the costing system, it was not as effective in dispelling labor's fears with regard to the motives behind one central component of its practical implementation — time recording. It was at the junction where costing converged with scientific management that the attitudes of printing labor towards uniform costing were transformed from compliance and enthusiasm to objection and resistance.

The "Gospel of Scientific Management" in British Printing: From the early years of the 20th century, master printers in Britain displayed an increasing interest in scientific management. Their curiosity was ignited by the voguish application of Taylorism to the printing craft and was fuelled by efforts to improve profits at a time when competition, both national and international, was keen and labor was successful in reducing the number of hours worked. Progressive printers were urged not to "hold aloof from systematizing movements" [Caxton Magazine, October 1909, p. 655]. Many became captivated by its promise for the elimination of "leakages" and wasted labor and materials. "Systematization" was heavily advocated in the trade
press, as were the labor-saving devices and practical methods which could enhance organizational efficiency [Caxton Magazine, February 1906, p. 326, January 1907, p. 219, August 1908, p. 48, September 1908, p. 78, May 1910, pp. 927-928]. Given that printing labor was "invariably the largest item in the cost of production" [Caxton Magazine, September 1908, p. 65], the time-waged employee came under the particular scrutiny of the "modernizing" employer.

The printing unions were alert to the threat posed by the "Systematizer." During the 1900s and 1910s, the journals of the typographical associations warned members about the prevailing epidemic of "system mania" which was becoming "more widespread than influenza, and is almost as desolating in its effects" [London Typographical Journal, June 1908, p. 4, November 1910, p. 10]. The employment of an efficiency expert, who was uninstructed in the customs of the craft and the conditions of work in printing offices, was met by active trade unionists with a mixture of revulsion and cynicism [Typographical Circular, December 1912, p. 7]. The application of efficiency engineering in printing firms was also considered offensive because it relegated the skilled employee to the status of "a mere piece of machinery" [Typographical Circular, June 1912, p. 3]. Union periodicals contrasted the humane, ethical, and responsible master of old with the employer who introduced soul-destroying and "dehumanizing" methods, such as clocks and electric bells in the machine-driven factory [London Typographical Journal, June 1908, p. 4; PKTF, Annual Report, 1912, p. 21; Typographical Circular, May 1914, p. 1].

Scientific management was most obviously actualized in the larger, mechanized printing office by the introduction of time-recording techniques. During the 1900s, master printers were constantly reminded how the "time question" was central to the fortunes of the industry [Caxton Magazine, September 1908, p. 66] and how time recording was essential to the identification and elimination of waste [Caxton Magazine, April 1906, p. 380; Miller and O'Leary, 1987]. Makers of time-recording devices boasted in printing journals how usage of their products not only characterized an office as "modern" but also ensured that "minutes turned to gold" [Caxton Magazine, January 1911, p. vii].

Mechanical clocks were less common in the printing works than manual time sheets or dockets. These documents, which were described as "a way to efficiency and time saving" [Caxton
Magazine, May 1920, pp. 469-470], also comprised the foundation of the uniform costing system devised by the BFMP [Caxton Magazine, Costing Campaign supp., p. iii, October 1922, pp. 582-590; Magazine of the Midland Master Printers Alliance, September 1964, p. 18]. It was asserted that, “the accurate keeping of the daily time docket is of paramount importance because it lies at the basis of the system” [Caxton Magazine, April 1913, p. 290]. In 1922, a senior member of the employers’ federation confirmed that “the essence of costing was time” [Caxton Magazine, 1922, supp., p. 14].

The situation was exacerbated by an enduring advocacy of the new costing system as an extension from cost ascertainment for pricing to a cost-control device. In this respect, it impinged directly on the sensitivities of labor. Its use as a means of identifying opportunities for cost reduction was regularly highlighted by employers as one of its major advantages [Accountant, December 10, 1927, pp. 783-784; British Printer, July 1935-1936, pp. 40-41; Members’ Circular, April 1925, pp. 116-117].

Printed dockets and mechanical time-recording devices often elicited strong adverse reactions from printing unionists. The costing secretary of the BFMP recalled that when the uniform costing system was first introduced, there was much friction with trade unions over the issue of dockets and suspicions over the real motives of employers in introducing them [Members’ Circular, July 1934, p. 228]. The most vehement objections to time sheets were expressed by officials of the binders’ union. During the 1910s, dockets were variously described in the Trade Circular of the NUBMR as “unfair,” “annoying,” and “irritating” or as “pernicious,” “obnoxious,” “offensive,” “outrageous,” and an “injustice to the workers.”

Unions and Dockets: The use of time sheets and mechanical recording devices predated the issuance of a uniform costing scheme by the BFMP in February 1913 [see, for example, British Printer, June-July 1907, pp. 120-121]. However, when the cost-finding system was formally launched for universal and expeditious adoption in the printing trade, the profile and usage of dockets was raised almost overnight. Keeping a detailed and complete record of a workman’s time was an essential element of the costing system [The Printers Cost-Finding System, 1913, specimen forms; Members’ Circular, January 1913, p. 19]. The chief executive of the NUBMR was to reflect in 1915:
As is well known, the timing of work has long been a vexed question with our members; recently, however, it has assumed unlooked-for proportions, owing to the energetic propaganda promoted by the Federation of Master Printers and Allied Trades of Great Britain and Ireland in favour of a uniform costing system, the introduction of which, in some instances, has resulted in the victimization of our members who have refused to fill up the time dockets which are part of the system, while in many other cases, even where members have successfully opposed their introduction, a continual state of friction has been engendered [NUBMR, *Trade Circular*, Vol. 2, No. 5, 1915, p. 339].

Opposition to time sheets surfaced from the printing unions following the cost congress of the BFMP in February 1913. The Typographical Association had previously agreed to the imposition of dockets provided that their object was not to exploit its members. However, the *Typographical Circular* [March 1913, p. 2] expressed concerns about the elaborate and potentially sinister daily dockets then proposed by the employers [see also *Annual Report*, 1912, pp. 20-21; *London Typographical Journal*, February 1913, p. 1]. In March 1913, the PKTF determined that time recording was prejudicial to employees and that it would offer support to unions which resisted its implementation.

Despite concerted attempts by the employers' association to allay the fears of workers by denying any exploitative intent [*Members' Circular*, March 1913, pp. 78-80, April 1913, pp. 108-109], trade unionists continued to object to time sheets in several printing centers during 1913. Shortly after the launch of uniform costing, it was conceded that "there are, undoubtedly, signs of a serious misunderstanding on the part of some of the employees in regard to certain aspects of the Costing System, more particularly in relation to time dockets and clocking jobs" [*Caxton Magazine*, April 1913, p. 289]. At the second cost congress of the BFMP in February 1914, it was acknowledged that, "there is rather a feeling of distrust among our workpeople that we are trying to impose something upon them which will be to their detriment" [*Caxton Magazine*, February 1914, supp., p. iii].

It was also in February 1914 that a "largely attended" conference of printing unions was held to consider the question of time recording [*PKTF, Annual Report*, 1913, p. 9]. Thirteen printing unions were represented at the gathering, and their delegates agreed to enter into discussions with the employers
with a view to arriving at a national agreement on the issue [NUBMR, Vol. 1, No. 16, 1914, p. 1050]. During 1914-1915, conferences were held between the printing unions and the BFMP in order to explore the possibility of formulating an acceptable form of docket for general use [Members' Circular, May 1914, pp. 155-156]. Negotiations were protracted as it became clear that although union leaders acknowledged the necessity for dockets, most members were suspicious of their employers' motives [Members' Circular, May 1915, pp. 168, 177-178; Costing Committee, Minutes, May 6, 1915]. However, by September 1915, the secretary of the PKTF was able to inform the BFMP that a revised and simplified time sheet was now acceptable to the typographic and lithographic unions [Members' Circular, September 1915, p. 379]. In its Annual Report for 1915 [p. 6], the PKTF reported that agreement had been reached, but only on the use of dockets for legitimate purposes:

For some years friction has arisen through the introduction of time dockets of an objectionable character, and time-checking generally has been imposed under conditions which have proved irritating. To some extent this was due to the fact that no standard docket was in existence, and the introduction of a docket was never looked upon as other than a means to exercise further pressure upon the workman. Agreement having been arrived at with the Federation of Employers as to what is a reasonable form of time-checking for costing purposes, societies will be well advised to judge all time dockets by this standard, and to decline to recognize the right of any employer to introduce devices for time-checking of a more stringent character.

It was clear from the subsequent debate on dockets at the annual conference of the PKTF in February 1916 that there remained considerable antipathy among rank-and-file unionists to the use of time recording. It was conceded by the executive of the Federation that the agreement with employers did not encompass all of the affiliated societies [PKTF, Annual Report, 1915, pp. 25-27]. The binders' union was to prove particularly resistant to the use of dockets.

The binders considered that the advancement of formalized time recording was a sinister and exploitative development. In May 1912, the NUBMR had incorporated within its general rules a provision that, "members are to strongly object to the introduction of time sheets" [NUBMR, Special Trade Circular, Vol. 1, No. 8, 1912, pp. 500-502]. In August 1914, the General
Council of the union voted unanimously in favor of a resolution which instructed members to refuse to accept or fill in day dockets [NUBMR, Special Trade Circular, Vol. 2, No. 2, 1914, p. 124]. This rule became a “prolific source of trouble” between binders and their employers [NUBMR, Special Trade Circular, Vol. 2, No. 2, 1914, p. 77]. However, the revelation that 60% of its members were completing time sheets [NUBMR, Trade Circular, Vol. 2, No. 4, 1915, p. 218] despite the union rules encouraged the executive of the NUBMR to negotiate with the BFMP a modified docket it thought “harmless” [NUBMR, Trade Circular, Vol. 2, No. 5, 1915, p. 341]. In October 1915, the union membership voted (2,567 to 2,163) to sanction this course. The central executive of the binders’ union recognized that this narrow majority meant “that a very large proportion of our members cannot reconcile themselves to a general acceptance of time dockets” [NUBMR, Trade Circular, Vol. 2, No. 6, 1915, p. 381].

In March 1916, representatives of the NUBMR and the BFMP formulated a simplified docket [Members’ Circular, February 1916, p. 75]. The union’s executive recommended that its members now agree to the revised docket and reminded them that time sheets were common “in almost every trade in the country” [NUBMR, Special Trade Circular, Vol. 2, No. 9, 1916, p. 538]. The executive was to be disappointed. In May 1916, the rank and file voted 1,704 for and 2,687 against adoption of the docket [NUBMR, Trade Circular, Vol. 2, No. 11, 1916, p. 703], and resolutions calling for the enforcement of the NUBMR’s general rule outlawing time sheets were tabled at subsequent union meetings [NUBMR, Trade Circular, Vol. 2, No. 11, 1916, p. 757].

A renewed attempt to seek agreement with employers on an even simpler time sheet took place in autumn 1918 following “serious trouble in several branches” of the binders’ union [NUBMR, Trade Circular, Vol. 3, No. 8, 1919, p. 437]. Despite assurances from the employers that no hardship or injustice would result from time sheets and a recommendation from the union executive to vote in favor of adopting a revised docket [NUBMR, Trade Circular, Vol. 3, No. 8, 1919, pp. 437-439], the members convincingly negated the proposal by an even greater majority. At a subsequent meeting of the General Council of the NUBMR, a resolution was carried, much to the annoyance of the union’s national executive, to the effect that steps be taken to eliminate time sheets from the trade [NUBMR, Trade Circular, Vol. 3, No. 41, 1919, pp. 761-762].
The executive of the binders' union now sought the direct assistance of the employers' federation in an attempt to encourage a less aggressive stance towards docketts by its members [Costing Committee, Minutes, January 19, 1920]. During 1920, local meetings were arranged at which binders were addressed by representatives of the BFMP on the need for and advantages of proper costing [Members' Circular, April 1920, p. 101]. This attrition-based approach to persuading rank-and-file binders proved more effective, and in 1921, some branches of the union voted to use docketts [Costing Committee, Minutes, January 12, 1921, February 22, 1921; Members’ Circular, July 1921, pp. 234-235]. Following the decision of the JIC to adopt the costing system of the BFMP in October 1921, and after much lobbying by employers and union executives, the second largest and recalcitrant Manchester branch of the NUBMR also agreed that its members should complete docketts for a trial period [Members’ Circular, June 1922, p. 205, October 1922, p. 258].

Despite the attempted erosion of labor resistance to the application of docketts, unease about their use persisted among printing workers during the interwar years. For example, in addition to continuing objections by binders [British Printer, May 1934-1935, p. 264], several cases of difficulty over docketts among compositors were reported in London in 1925-1926 [Members’ Circular, February 1925, p. 41]. Once union acceptance of written docketts was secured, there also remained the thorny question of the use of mechanical time-recording devices. At its annual meeting in 1923, these issues were considered by the PKTF to comprise an “atrocious and outrageous” imposition on labor [PKTF, Annual Report, 1922, pp. 29-30].

"Labour's Simple Story, Briefly Told:” Objections to Dockets: Employers often appeared perplexed by the apparent contrariness of trade-union attitudes towards costing. One commentator in 1913 asked, “why should compositors, who have urged employers to charge more, now characterize costing as speeding up” [Caxton Magazine, November 1913, p. 161]? The cause of negativity among printing labor was rooted in the relationship between costing and “systematization.”

The principal objection to docketts concerned the opportunities they offered employers to exploit labor. The information recorded on time sheets enabled the pursuit of “the insane craze for speed and cheapness” associated with scientific management. It was feared that, armed with time-task data printing managers could press for more work in less time [London Typo-
Printing unions had long nurtured an aversion to the imposition of work practices and payment regimes which conflicted with their principal objectives of securing the maximum employment rate among members and a fair rate of pay for a fair day’s work [Child, 1967, pp. 140-141]. Wage structures which resulted in the displacement of labor, prevented an equitable distribution of available work, or encouraged a competitive spirit among workers were resisted in printing during the late 19th and early 20th centuries. Union rules outlawed the implementation of bonus systems and task work, which were perceived as attempts by employers to “race,” “slog,” or “sweat” printing workers [see also Fleischman and Tyson, 1996, p. 63]. Piecework was similarly distrusted [Caxton Magazine, March 1918, p. 121; Musson, 1954, pp. 198, 498]. The objectives of printing trade unions were most achievable under the “stab” system whereby wages were based on time (usually weekly) rates [Gray, 1976, pp. 34-36, 48; Howe, 1947, p. 441; Musson, 1954, pp. 45, 200, 1974, pp. 97-98]. However, from the 1890s, progress in printing technology and increased investment in advanced machinery encouraged employers, particularly those in medium and large-scale concerns, to seek greater productivity from time-paid workers and to mount an assault on slacking [Caxton Magazine, 1919, pp. 427-428]. During the early 20th century, disputes between unions and employers’ organizations over the introduction of mechanisms and procedures to measure the output and time use of individual workers were frequent [Musson, 1954, pp. 225, 229, 246-248]. In 1905, for example, in what was described by employers as “A Strike Against Correct Accounts,” the London Society of Compositors instructed its members to refuse to complete the work tickets or use the registering clocks which had been recently installed in the large firm of Hazell, Watson, and Viney [Members’ Circular, November 1905, pp. 228-230].

The costing campaign of the employers’ federation from 1913 added a new dimension to the resistance of labor to time recording due to the centrality of the docket to the uniform costing system. The docket was perceived by many printing unionists as part of an industry-wide effort by employers to monitor the output of workers within a prescribed time as a prelude to task work, test work, and general “sweating” [Howe and Child, 1952, p. 254; Members Circular, March 1913, p. 79;
NUBMR, *Special Trade Circular*, Vol. 2, No. 2, 1914, p. 12, No. 4, 1916, p. 538]. For this reason, the whole costing system was often deemed “synonymous with ‘speeding up’” [*London Typographical Journal*, 1913, p. 9; *Typographical Circular*, March 1913, p. 2] and with “the pace that kills” [*British Printer*, July-August 1927-1928, p. 62] on the shop floor. In their attempts to encourage master printers to adopt the Federation Costing System, senior members of the BFMP often appeared to confirm an exploitative intent by advocating costing as an aid to efficiency by identifying “leaks,” idle time, and unnecessary hands [*Caxton Magazine*, March 1920, p. 223; *Magazine of the Midland Master Printers Alliance*, April 1921, p. 10; *Members’ Circular*, December 1912, p. 339; see also Berk, 1997, p. 244].

Although some printing workers considered dockets to offer a means of “self-protection” [*PKTF, Annual Report*, 1914, p. 14], greater numbers feared that the revelations provided by dockets and mechanical time devices might be used by overseers and managers to chastise individual workers. It was recognized that time information “affords the means of investigating the efficiency of each man” [*British Printer*, June-July 1915, p. 73, emphasis added]. Recorders and clocks were feared as a form of “espionage” or “spying” in the workplace [*Members Circular*, May 1915, p. 228]. The detailed disclosures made on manual dockets, pertaining to the time taken to perform each class of work or production process and the output achieved, stood in stark contrast to traditional notions of the invisibility of the printing worker under the time-wage system [Musson, 1954, p. 249].

There was a widespread perception among printing labor that the encroachment of time-checking surveillance under the uniform costing system would be used to identify “slackers” [*Typographical Circular*, May 1914, p. 1], permit “the employer to pick out the slow men from the quick ones” [NUBMR, *Special Trade Circular*, Vol. 2, No. 9, 1916, p. 571], and result in the intimidation and victimization of those so revealed [NUBMR, *Special Trade Circular*, Vol. 1, No. 1, 1912, p. 501]. Due to its role in the scrutiny and distribution of daily dockets, time recording was also perceived as enhancing the relative power of managers, overseers, and foremen over printing operatives. The “shifty” and bullying foreman, whose responsibility it was to see “that every minute of time is accounted for” [*Caxton Magazine*, September 1906, p. 96], was provided data which could be used to legitimize abhorrent behavior and “to take undue ad-
vantage of those under them" [Typographical Circular, December 1912, p. 8]. Time sheets permitted the identification of productive workers who might receive privileged treatment from the foreman, thereby encouraging submissive behavior [NUBMR, Special Trade Circular, Vol. 1, No. 8, 1912, pp. 500-502].

Such outcomes which pitted men against each other served to discourage fraternity, weakening organized labor [Members' Circular, March 1913, p. 78]. The object of time dockets "was to set one man against another, and to show that he was much more clever than another" [NUBMR, Special Trade Circular, Vol. 1, No. 8, 1912, p. 500; London Typographical Journal, October 1913, p. 9]. Competition between workers engendered friction and disharmony in the workplace [Typographical Circular, May 1914, p. 1]. It was also feared that the data contained on time sheets might be used against the printing unions in trade disputes and wage negotiations, as well as to negate hard-fought advances in wages [Typographical Circular, August 1921, p. 7]. During economic depressions printing firms tended to pursue wage cuts in order to protect profits. The printing unions feared that docket information about labor performance might enable employers to shift the onus of responsibility for industry problems to its work force. This would divert employers from addressing the root cause of the industry's problems which they had patently failed to remedy; that is, the prevailing and destructive price competition among themselves [Typographical Circular, September 1932, p. 194, October 1932, p. 220].

The particularly "obnoxious" docket of the employers' Federation Costing System was also initially rejected by many printing unionists because it was considered insulting to the skilled and dignified artisan. The disclosure of operational times to the nearest 10-15 minutes on early versions of the prescribed time sheet was deemed an affront to the craftsman's customary control over the planning and pacing of his own work routines. This had been a cause of industrial action during the 1900s, including the aforementioned "Strike Against Correct Accounts" in 1905 [Caxton Magazine, December 1905, p. 243; Members' Circular, November 1905, p. 229].

The identification and classification on early dockets of work tasks as either "chargeable" (to individual jobs) or "non-chargeable" also implied that some activities were degraded as non-productive and encouraged the usage of nomenclatures
such as "chargeable worker" and "non-chargeable worker" [Printers' Cost-Finding System, 1913, form 8]. So far as unionists were concerned, this classification was another attempt at sweating, "the object seems to be that gradually, but surely, this 'non-chargeable time' will be done away with altogether, and the men will be expected to do jobs or try to do them, at tremendously high pressure" [Typographical Circular, June 1912, p. 3].

Dockets were also deemed objectionable by printing labor due to the selective nature of the disclosures required on them. The information about the time taken on each work process and the potential use of the data to improve labor efficiency took no account of the conditions under which the tasks were performed. These conditions could vary over time and on different jobs [Typographical Circular, December 1912, p. 8]. Recording systems did not capture factors which impacted on the time taken to complete work, such as atmospheric conditions, the quality of materials used, or the tools available to the worker [NUBMR, Special Trade Circular, Vol. 2, No. 9, 1916; PKTF, Annual Report, 1912, p. 20].

Close monitoring of time usage also carried with it the assumption that employees were potentially irresponsible, time wasting, and not trustworthy [NUBMR, Special Trade Circular, Vol. 2, No. 2, 1914, p. 77]. The use of docketts and the subsequent "rushing" and cheapening of jobs were also perceived as stress-inducing and compromising the craftsman's pride in the quality of his work [Caxton Magazine, April 1919, p. 271; London Typographical Journal, October 1913, p. 9]. Time recording and the attendant "speeding up" of workers was considered to comprise an important element of the "dehumanization" of labor and a soul-destroying bondage to the machine [PKTF, Annual Report, 1912, p. 21]. Individual craftsmen lost their identity and personality within the organization. Their presence came to be represented instead by entries on "The Time Sheet:"

... labour's simple story, briefly told.
Sheet follows sheet — how gently glide the days
Life's span is short in Time's unceasing flight;
The end is reached at last, the parting of the ways,
Our time-sheet filled, we pass into the night.
[London Typographical Journal, July 1925, p. 12].

3The same terminology was employed in the Standard Cost-Finding System of American printers [see Berk, 1997, p. 241].
CONCLUSIONS

In 1913, the BFMP launched a concerted campaign to persuade each of its members to implement a uniform costing system in his works. This sector-wide endeavor to regenerate the fortunes of the industry through costing resulted in an unusually conspicuous dialogue concerning the perceived effects of accounting technology on employees. The documentary sources suggest that the attitudes of printing labor toward uniform costing were multifaceted. A number of conclusions can be drawn from the absence of a singular reaction.

The prescribed costing system and its component parts posed a dilemma for printing labor. At the national level, the ethereal promise of the strategic impact of uniform costing on pricing and the consequent lifting of the fortunes of the whole industry offered much to trade unionists and served to convince them of the merits of a costing solution. The prospect of improvements in profitability and advances in wages encouraged the positive support of labor officials and precipitated the mutual pursuit of the costing project with the employers. However, a central feature of the costing system was a technique for the detailed measurement and analysis of labor-time. At this juncture, the reaction of printing workers was characterized by suspicion and hostility. On the shop floor in particular, this specific component of the costing system engendered fear and misgivings about employers' motives. The extent to which master printers had been attracted to the emergent time-based, scientific management movement, with its attendant assurances of reductions in labor cost during the early years of the 20th century, fuelled the concerns of workers about the use and purpose of time dockets.

A study of employees in British printing demonstrates the limitations of generalizing from one theoretical perspective on the reactions of labor to accounting change and confirms the utility of recent calls for paradigmatic pluralization in management accounting history research. The direct participation of labor organizations in progressing strategic costing development was motivated by economic rationalism. There is considerable support for the notion that employees viewed accounting as a contrivance which might bring economic benefit by tending to improve both their job security and remuneration. The printing case thus provides an example of mutualism and of behavior described by Tyson [1995, p. 29] as “the co-operative arrangements that often evolve when competing parties realise...
that sacrifices must be made and co-operative endeavours must take place."

Conversely, there is evidence that the demand for cost information extended beyond its usage for pricing decisions and cost control. The association of doockets with speeding up, with labor efficiency and cost reduction, the assault on craft control, the degradation of the skilled artisan, and the enhancement of the power of those who engaged and could exploit labor lends support to the labor-process paradigm. Employees clearly recognized and feared the exploitative potential of time recording and, in some instances, were prepared to take industrial action to resist its introduction. Despite the existence of some propagandist pronouncements by the employers' organization and a few isolated examples of overt exploitation in practice, there is, however, little evidence to suggest that the uniform costing system or its specific time-docket element was advocated as "part of the search for new methods of control" over labor [Hopper and Armstrong, 1991, p. 433].

The printing industry case also provides evidence which adds credence to Foucauldian-based analyses. Employees recognized that the docket comprised a technique for watching, measuring, and monitoring performance. Time recording was perceived as a device which enabled surveillance and permitted comparisons between efficient and inefficient craftsmen. Doockets supplied information which permitted the governance of the activity of the individual worker and the exercise of discipline over the employee. The responses of labor to this prospect were, however, mainly characterized by fear and resistance as opposed to perceiving the enabling potential of calculation for employee advancement. Further, as mentioned in an earlier paper, the construction of a supranational organization by the trade association to monitor the implementation of the uniform costing system also introduced a mechanism for observing and admonishing the employer who resisted the costing movement [Walker and Mitchell, 1996].

Generalizations about the employees' support or opposition to accounting-based labor controls are not therefore warranted in the case presented in this study. It can be concluded that the responses of printing employees to costing were mixed, seemingly contradictory, and changeable. Their views and reactions reflect both the rational-economic motive, as well as reservations about managerial exploitation and the threat of scientific management techniques. Clearly, the complex and fragmentary
nature of the reaction of printing labor to uniform costing, as illustrated above, lends weight to the notion that no single theoretical perspective can provide an adequate explanation of its development.

The printing industry case illustrates the existence of factors which encouraged heterogeneity in the responses of labor to costing. Perceptions of the merits or demerits of costing systems changed over time in response to periods of recession or military crisis when both employer and employee organizations urged cooperation in the quest for economic improvement or "betterment." The paper has revealed the contrasting perspectives of union leaders and rank-and-file printing workers on the potentialities and threats posed by a costing "system" in its totality and in its particular aspects. It is suggested that such perceptions were conditioned variously by the radicalism or conservatism of the union leaders and their members (contrast old and new unions) and by the proximity of labor and its representatives to employers under different production processes and bargaining regimes (compare craft with mass production). For example, the tenacity of the binders on the question of dockets was reflective of "the adaptation of an old craft to skilled operations within a factory system of rationalized mass production" [Gray, 1976, p. 36] and an aggressive union. Moreover, the paper suggests that human behavior in a business context is, typically, complex, and this complexity can be more realistically mirrored in the multiple dimensions which different theories of cost accounting change can encapsulate.

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*Typographical Circular.*


THE DEVELOPMENT OF TAXATION IN THE BIBLE: IMPROVEMENTS IN COUNTING, MEASUREMENT, AND COMPUTATION IN THE ANCIENT MIDDLE EAST

Abstract: This paper traces the development of five taxation types in the Bible — income taxes, property taxes, special assessment taxes, poll taxes (all direct taxes), and indirect taxes. The development of these taxes is discussed within the context of Israel’s historical development. The impact of counting, measurement, and computation on the development of taxation is also considered.

Accounting historians have studied and narrated several accounting concepts mentioned in the Bible. Hagerman [1980, pp. 71-76] observed that many of today’s accounting concepts were already in use during Biblical times. Davis [1981, pp. 71-72] subsequently detailed the first recorded audit in the Bible. In this paper, an effort is made to analyze the development of taxation in the Bible over the many centuries of ancient Israel's existence in light of improvements in counting, measurement, and computation in the Middle East.

The Bible contains numerous references to taxation. This paper examines and analyzes the various types and instances of taxes in the Bible in light of political and economic developments. Sources outside the Bible are also referenced, such as Flavius Josephus [Whiston, 1960], a Jewish historian of the 1st century of the present era, and Schmandt-Besserat [1988].

The term “tax” is characterized more by its involuntary nature than its precise terminology; precise tax terminologies did
not exist in Biblical days. A tax is not a voluntary payment like a charitable contribution. The eminent jurist Learned Hand stated, "...taxes are enforced exactions, not voluntary contributions" [Commr. v. Newman, p. 851]. Webster's New World Dictionary [Guralnik, 1976, p. 1458] lists the following definitions of the noun "tax:" 1. a) a compulsory payment, usually a percentage, levied on income, property value, sales price, etc. for the support of a government; b) a special assessment, as in a society, labor union, etc.; 2. a heavy demand; burden; strain."

This distinction between taxes and contributions is clearly indicated in the Bible. Four types of direct taxes or involuntary payments (income taxes, property taxes, special assessment taxes, and poll or capitation taxes) to the governing authorities are mentioned. The Bible also references indirect taxes, such as custom duties or sales taxes. In contrast, contributions which provided for assembly of the tabernacle are discussed as nontax, free-will offerings.

This paper is not concerned with modern technical matters, such as the incidence of taxation on economic layers of society or the justiciability of a tax from the standpoint of horizontal or vertical equity. No discussion is made of exemptions or special stipulations since these do not appear in the Biblical record. For instance, the Bible refers to a 10% tithe, implicitly assuming that it applies to all owners of farmland and livestock.

In the theocracy of ancient Israel, tithing in a religious context was the same as taxation in a governmental context. It is impossible to distinguish religious and governmental taxation since religion and government were one and the same in ancient Israel. Hartman [1963, p. 2395] wrote, "In a strictly theocratic state there is no real distinction between the treasury of the sanctuary and the treasury of the government."

The various types of taxation mentioned in the Bible are discussed in the following section. Each of these five types is illustrated by Biblical passages. Subsequently, taxation is examined chronologically over six consecutive periods of Israel's history. The reader is referred to Appendix A, where types of taxes and chronological periods are cross-referenced.

Primary focus will be on Biblical accounts that illustrate the development of these five types of taxation in ancient Israel. The reason for discussion of sources apart from the Biblical record, such as Flavius Josephus and others, is to introduce the cultures surrounding ancient Israel in terms of their taxation methods, as well as their political and economic development. The processes of counting, measurement, and computation in
the Middle East (Iraq, Egypt, and Israel) contribute to the cultural milieu.

**TAXATION TYPES**

Income taxes, property taxes, special assessment taxes, and poll taxes are all mentioned in the Bible. Though tax terms, such as rate and base, are not technically discussed in the Bible, the tax attributes indicated by these terms are sufficiently implicit to distinguish these four types of direct taxation. Indirect taxes, such as custom duties or sales taxes, are also mentioned in the Bible.

*Income Tax:* An income tax is a levy based on the income of a person or the yield of property, such as farmland or herds of livestock. Genesis 47:26 mentions such a tax:

> So Joseph established it as law concerning land in Egypt — still in force today — that a fifth of the produce belongs to Pharaoh . . .

This was a 20% tax on the yield of property, a precursor to a government-imposed income tax. Other parties have also typified a levy based on property yield as an income tax. One author referred to this Egyptian practice as follows, "Agricultural production was taxed at a hefty 20%. This was . . . exactly like our income tax" [Adams, 1993, p. 3].

After the Hebrews left Egypt, the rate was dropped to 10%, the tithe rate [Leviticus 27:32]:

> The entire tithe of the herd and flock — every tenth animal that passes under the shepherd’s rod — will be holy to the Lord.

However, the reduction was actually less since the Hebrews were commanded to present their “firstfruits” to the priests, as mentioned in Deuteronomy 18:3-5:

> This is the share due the priests from the people who sacrifice a bull or a sheep: the shoulder, the jowls and the inner parts. You are to give them the firstfruits of your grain, new wine and oil, and the first wool from the shearing of your sheep, for the Lord your God has chosen them and their descendants out of all your tribes to stand and minister in the Lord’s name always.

¹Unless otherwise stated, all Biblical references are from the *New International Version of The Holy Bible*. KJV denotes *The Holy Bible, King James Version*. 

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One observer classified these obligatory payments as taxes even though a percentage is not stated [Oden, 1984, p. 169]. For purposes of this paper, “firstfruits” are grouped with tithes as income taxes in that their amount would presumably have been a function of the total amount of agricultural production.

**Property Tax:** Valuation of personal or real property is the basis for an assessment of a property tax. II Kings 23:35 discusses the property tax:

Jehoiakim paid Pharaoh Neco the silver and gold he demanded. In order to do so, he taxed the land and exacted the silver and gold from the people of the land according to their assessments.

The phrase, “he taxed the land,” should not be construed as a tax on the people. The tax object was the land, although the owners of the land were paying the tax. A literal word-for-word translation of the relevant Hebrew text is [II Kings 23:35]:

And the silver and gold gave Yehoiakim to Pharaoh. But he [Yehoiakim] taxed the land to give the money according to Pharaoh; each man according to his taxation he exacted the silver and the gold of the people of the land to give to Pharaoh Neco.

Note is made of the difference between the income tax and this property tax. The former was based on the increase or yield of property, whereas the latter was a function of the value of property. Since it was related to value, increase or yield was immaterial.

**Special Assessment Tax:** A special assessment tax is a tax levied to raise revenue for specific projects. II Chronicles 24:5 mentions a special assessment tax:

He called together the priests and Levites and said to them, 'Go to the towns of Judah and collect the money due annually from all Israel, to repair the temple of your God...'

The immediate purpose of this levy was to repair the temple that had been built by King Solomon in the United Monarchy (c. 1050-880 B.C.)\(^2\) at vast expense. II Chronicles 24:6-9 indicates that Moses had levied a tax for maintenance of

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\(^2\)The dates used for identifying Israel's historical periods are from F.F. Bruce [1963].
the tabernacle centuries previously in the days of the Tribal Confederation (c. 1300-1050 B.C.). Since this tax was not described as a set uniform sum per person, it is not treated as a poll tax. This new levy took place during the Divided Kingdom (c. 880-540 B.C.), when the temple had fallen into disrepair. Hence, it could be said that this levy mentioned in II Chronicles 24:5 was a special assessment tax for infrastructure repair.

Poll Tax: This tax is a flat sum levied on a per-capita basis. A poll tax is mentioned in Exodus 30:12. A tax was levied on each person 20 years old and older at the time of the departure of the Israelites from Egypt:

Then the Lord said to Moses, 'When you take a census of the Israelites to count them, each one must pay the Lord a ransom for his life at the time he is counted.'

Much later, a one-third shekel poll tax was established for maintaining public worship in the temple (Nehemiah 10:32): "We assume the responsibility for carrying out the commands to give a third of a shekel, each year for the service of the house of our God."

In Matthew 17:24-27, a New Testament poll tax is found:

After Jesus and his disciples arrived in Capernaum, the collectors of the two-drachma tax came to Peter and asked,

'Doesn't your teacher pay the temple tax?'
'Yes, he does,' he replied.
When Peter came into the house, Jesus was the first to speak. 'What do you think, Simon?' he asked. 'From whom do the kings of the earth collect duty and taxes — from their own sons or from others?'
'From others,' Peter answered.
'Then the sons are exempt,' Jesus said to him. 'But so that we may not offend them, go to the lake and throw out your line. Take the first fish you catch; open its mouth and you will find a four-drachma coin. Take it and give it to them for my tax and yours.'

The poll tax was presumably the type of tax that the Romans levied when Caesar Augustus decreed a census or taxing of "the entire Roman world" in Luke 2:1-3 at the time of Jesus' birth:

In those days Caesar Augustus issued a decree that a census should be taken of the entire Roman world.
[This was the first census that took place while Quirinius was governor of Syria.] And everyone went to his own town to register.

This census tax is treated here as a poll tax for sake of consistency. The census tax that was commanded for the Israelis upon their departure from Egypt was a poll tax, fixed at a set sum of one-half shekel per person. Of course, it might have involved the registering of property as well as of persons. If so, it would have been a property tax as well as a poll tax.

**Indirect Taxes:** These indirect taxes were of various types, such as custom duties or sales taxes. An excise tax on articles consumed was called “belo” in Hebrew, and a road toll or customs tax was termed “halakh.” In Ezra 4:20, these indirect taxes are termed “tribute” and “duty” respectively in the modern English version. Other words used in various places in the Old Testament were “mas” (forced labor) [I Kings 5:13; v. 27, Hebrew text], “massa” (burden) [II Chronicles 17:11], “mekhes” (measure) [Numbers 31:25-31], and “middah” (tribute) [Ezra 4:20]. These numerous terms were perhaps necessary because the Hebrew language had no general word corresponding to the English word “tax” [Orr, 1956, p. 2918].

Paul referred to the duty of paying indirect as well as direct taxes in Romans 13:6-7 during the time of New Testament Israel:

This is also why you pay taxes, for the authorities are God’s servants, who give their full time to governing. Give everyone what you owe him. If you owe taxes, pay taxes; if revenue, then revenue; if respect, then respect; if honor, then honor.

Two commentators, Lietzmann and Kuhl, have interpreted “taxes” and “revenue” in this passage as a reference to direct taxes and indirect taxes [Harmon, 1954, Vol. IX, p. 604]. In the original Greek of the New Testament, the word “phoros” is used for “taxes” and “telos” for “revenue.” Of the four duties of the citizen to his government mentioned in verse 7, “taxes” and “revenue” are the only ones denoting a transfer of assets. The comment by Lietzmann and Kuhl is plausible as a distinction between “taxes” and “revenue” in light of the definitions from a Greek dictionary [Strong, 1983, p. 76]:

‘phoros:’ a tax, properly an individual assessment on persons or property; whereas ‘telos’ is usually a general toll on goods or travel.
The first four types of taxes discussed in this paper are direct taxes, such as the "individual assessment on persons or property," referred to as "phoros" above. The indirect taxes, indicated by the term "telos," such as general tolls on goods or travel, were referred to by Jesus in Matthew 17:25: "From whom do the kings of the earth collect duty and taxes?" The term "duty" refers to indirect taxes and is a translation of a declined form of "telos" in the Greek text.

**STAGES OF TAXATION**

The above types of taxation can best be understood and appreciated when viewed in the context of Israel's historical development. This history can be divided into the following six general periods: Israel's Infancy in Egypt; the Tribal Confederation; the United Monarchy of Saul, David, and Solomon; the Divided Kingdom; the Period after the Babylonian Captivity; and New Testament Israel (see Appendix A). These periods are discussed below within the context of the five taxation types identified above.

**Israel's Infancy in Egypt (c. 1700-1300 B.C.):** The 20% income tax of Genesis 47:26, applied to the yield of property, was levied on the Egyptians, ironically by Joseph, the Israeliite prime minister appointed by Pharaoh during the seven years of plenty. During this time, the government ran surpluses so huge that they could not be measured [Genesis 41:49] as preparation for the seven famine years subsequently. It was these years of famine that brought the rest of the Israelites to Egypt from Palestine. The nation of Israel descended from the 70 members of Joseph's family protected in Egypt during this famine [Genesis 46:26, 27].

The breakdown of the means by which the surpluses could be measured evokes the deficiencies of the token system in dealing with large quantities. This brings up the primitive evolutionary development of accounting as described by Schmandt-Besserat [1986, pp. 32-39]. A system of clay counters or tokens represented "the first unequivocal evidence of accounting in the prehistoric Middle East." The use of tokens required a one-for-one correspondence with the items counted. For instance, one clay ball used as a token could represent one measure of grain, two clay balls could represent two measures of grain, etc.

The token system eventually developed into symbols
on clay tablets representing abstract quantities. Schmandt-Besserat [1988, p. 7] described the methodology:

The first state emerged in Sumer, present-day Iraq, about 3100 B.C. The new political system required citizens to deliver in-kind contributions to the temple, where the goods were stored and redistributed. The increased volume of accounting involved in registering the entries and expenditures of temple warehouses brought about the collapse of the archaic token system and its replacement by writing. At the same time, the clay tablets show the first evidence for abstract counting.

Conceivably, the huge surpluses in Egypt under Joseph could not be measured for some of the same reasons suggested by Schmandt-Besserat in connection with ancient Iraq. Both locales are of course in the Middle East, and there is a rough correspondence chronologically. The parallel between Egypt and Iraq is their shared lack of a ready computational means. Of course, there are differences. The token system disappeared over a thousand years before Israel's captivity in Egypt. The Egyptian system was based on a developed system of writing and abstract counting, whereas the token system was more appropriate to the needs of an illiterate society.

Some kind of rudimentary tallying system was supposedly used by the Egyptians to accumulate totals. Calinger [1995, p. 8] observed, "Homo sapiens sapiens (thinking humans) ... used tallying techniques widely." The Old Kingdom Egyptians had even developed a positional or place-value notation system for computational purposes that was similar to that of the Old Babylonian Dynasty, but was soon lost. Egyptian mathematics thus appears mainly to have been limited to recording amounts and distances accumulated by tallies. Manipulation of those amounts was [Calinger, 1995, p. 29]:

essentially additive, meaning that they reduced multiplication and division as children and electronic computers do, to repeated additions and subtractions.

Calinger [1995, p. 29] described a mathematical problem in the Rhind Papyrus, \(^3\) "The problem was solved by trial and error — as it has been suggested, the Egyptians solved all their

\(^3\)One of the oldest mathematical documents in recorded history, dating from around the Twelfth Dynasty (2000-1788 B.C.), was discovered in 1858 in Egypt and is now in the British Museum.
mathematical problems.” Though the measurement system had advanced to this tally stage from the token system of a one-for-one correspondence, following the developments in ancient Iraq, the lack of a ready computational means apparently caused the surpluses to overrun the means of tracking them.

An implicit development by Israel during the United Monarchy, centuries after the nation’s Infancy in Egypt, is very telling. An approximation of the mathematical “pi” (3.1416) as 3.0 is found in I Kings 7:23 [quoted in Calinger, 1995, p. 35]:

He made the Sea (a furnishing of the temple) of cast metal, circular in shape, measuring ten cubits from rim to rim and five cubits high. It took a line of thirty cubits to measure around it.

There is no indication that any such development by Israel occurred before this time, or even any indication that “pi” was used later in Israel for measurement of volume. The absence of this mathematical fundamental for ascertaining the volume of circular storage pots, bins, vats, or heaps of farm produce would make it completely understandable that the surpluses were unmeasurable from the standpoint of volume computations based on dimensions. Supposedly, volume computations based on weight would have been a help, but the greater the surpluses, the harder it would have been to estimate volume by weighing the produce. Thus, “pi”-based volume computations, based on dimensions, would have been all the more indispensable had the concept existed.

The observation of Schmandt-Besserat [1988, p. 7] about Sumer’s token system suggested a connection between taxation and economic development. As Sumer emerged, its new political system required increased taxes in the form of in-kind contributions. The method of accounting for mounting stocks of grains and produce had to be improved from the clay-token system of a one-to-one correspondence to abstract symbols recorded in writing. As the state began to be able to support the needs of the needy as well as the ambitions of a trader class, the door opened wider to commerce and a resulting division of labor which promoted economic development.

The development of a writing system in which abstract quantities were represented by symbols undoubtedly contributed to advances in taxation. A tax of 20% of a hundred measures of grain is infinitely easier to levy and record in symbols, such as “20% x 100,” on a papyrus than to subgroup 20 of 100 clay balls in rows on the ground in a token system. The asses-
sors might have even written numerals equivalent to "1 in 5," thus indicating an even simpler tax structure. Hence, the increased emphasis on taxation could be described as arising from two factors — 1) the needs of the state for sponsoring more of the infrastructure demands of society, and 2) the improvements of the tax system as the use of clay tokens gave way to abstract symbols recorded in writing. It does not seem that taxation caused economic development as much as better taxation allowed more economic development. Economic development became more possible as the use of abstract symbols in writing brought about more efficient and reliable methods of taxation.

In summary, Israel's Infancy in Egypt was accompanied by the first recorded tax in the Bible, described as an income tax of 20% levied under Pharaoh's authority by Joseph. This tax was imposed to accumulate food stocks for a predicted famine that became so huge as to be beyond measure. The development of counting from the token system to abstract symbols capable of representing large quantities, described by Schmandt-Besserat [1988] in connection with ancient Iraq, has been examined for any possible light. This theory of Schmandt-Besserat, perhaps aptly termed a "token/abstract symbol" theory, also suggests an intriguing connection between taxation and economic development since the use of symbols for recording quantities provides a means of levying and collecting taxes more conducive for an advanced economy than the token system. It even suggests that the additional efficiencies of a change to a numerical system "paid" for a drop in the rate from 20% to 10%.

_The Tribal Confederation (c. 1300-1050 B.C.):_ After remaining in Egypt for approximately 400 years, the Israelites left Egypt in the Exodus and made the long transition from a tribe into a nation. At this time a tithe of 10% on gross income was levied as a tax on the produce of the land and herds [Leviticus 27:32], only half of the earlier 20% tax in Egypt. Deuteronomy 26:10-11 describes it as a support for the priesthood:

> ... I bring the firstfruits of the soil that you, O Lord, have given me. Place the basket before the Lord your God and bow down before Him. And you and the Levites and the aliens among you shall rejoice in all the good things the Lord your God has given to you and your household.

_Exodus 35:5-11_ details the first major expenditure in the
tribal confederation, the building of the tabernacle, entirely from free-will offerings:

From what you have, take an offering for the Lord. Everyone who is willing is to bring to the Lord an offering of gold, silver and bronze: blue, purple and scarlet yarn and fine linen; goat hair; ram skins dyed red and hides of sea cows; acacia wood; olive oil for the light; spices for the anointing oil and for the fragrant incense; and onyx stones and other gems to be mounted on ephod and breastpiece.

All who are skilled among you are to come and make everything the Lord has commanded: the tabernacle with its tent and its covering, clasps, frames, crossbars, posts and bases.

In addition, during this era of Israel's history, the poor were allowed to glean around the corners of the fields of the landowners [Leviticus 19:9-10]:

When you reap the harvest of your land, do not reap to the very edges of your field or gather the gleanings of your harvest. Do not go over your vineyard a second time or pick up the grapes that have fallen. Leave them for the poor and the alien. I am the Lord your God.

There was no need for heavy taxation. The tithe supported the tabernacle worship and priests and was not expended for social welfare purposes. As the poor were left to glean for themselves, the need of taxation was decreased.

During this time period, the written numerical system was primitive compared to today. The Bible's Hebrew language used letters to represent quantities. The Hebrew letter for "A" represented the quantity one. The Hebrew letter for "B" represented two, etc. No effort was evidently made to group the letters by powers or orders to connote large quantities. Rather, larger amounts were expressed as words. For instance, in the Hebrew text of Numbers 1:46 in the Bible, the 603,550 Israelites that left Egypt in the Exodus are recorded, spelled out in words of Hebrew letters as "six hundred thousand and three thousand and five hundred and fifty," rather than written in numerals. Computation using these non-ciphered written amounts was probably cumbersome, if possible at all. Later translations expressed the amount in numerals.

The most ancient Hebrew letters are scarcely recognizable today, even to the native-born Israeli. Even in the very earliest forms of the Hebrew Bible, letters were used to represent
amounts. There is no evidence that the development of writing and abstract counting in Hebrew culture predated such developments in neighboring cultures in the Mediterranean Basin. As far as the evidence allows, it may be surmised that writing developed in Hebrew culture at least as early as the date of Israel’s exodus from Egypt, 1300 B.C., at a time when the first five books of the Bible are traditionally thought to have been committed to a written record. The use of numerals to symbolize abstract counting certainly took place centuries later, no earlier than similar developments in the neighboring cultures.

The implications are far-reaching for assessing and collecting the income and poll taxes which until this stage of Israel’s existence had been undertaken without abstract numerals and means of computation. It is unfathomable how the administration of any tax system would have been possible under such conditions.

A poll tax of one-half shekel per person was also instituted during this time. This tax of Exodus 30:12 was previously discussed. It may have been the first tax of ancient Israel for it is also described as a “crossing over” levy in Exodus 30:14. Israel was scarcely a nation before it crossed over the Red Sea.

*The United Monarchy of Saul, David, and Solomon (c. 1050-880 B.C.):* With Saul, the first king of Israel, there appeared a new emphasis on taxation in the full sense of enforced exactions. The prophet Samuel warned of this development [I Samuel 8:11, 15, 17]:

He said, ‘this is what the king who will reign over you will do . . .
He will take a tenth of your grain and of your vintage and give it to his officials and attendants.
He will take a tenth of your flocks.’

Building the temple required huge capital expenditures from concomitant tax revenues. The men of Israel were pressed into service as loggers in Lebanon cutting down timber [I Kings 5:13-14]:

King Solomon conscripted laborers from all Israel — thirty thousand men. He sent them off to Lebanon in shifts of ten thousand a month, so that they spent one month in Lebanon and two months at home.

As ruler of a vast kingdom, King Solomon’s court was supported by his subjects [I Kings 4:22-24, 27]:

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Solomon's daily provisions were thirty cors\(^4\) of fine flour and sixty cors of meal, ten head of stall-fed cattle, twenty of pasture-fed cattle and a hundred sheep and goats, as well as deer, gazelles, roebucks and choice fowl. For he ruled over all the kingdoms west of the River, from Tiphshah to Gaza, and had peace on all sides.

The district officers, each in his month, supplied provisions for King Solomon and all who came to the king's table . . .

The Divided Kingdom (c. 880-540 B.C.): Taxation of crops, herd yields, and other types of income was so heavy under King Solomon's son, King Rehoboam, that Israel split into two kingdoms, the northern kingdom (Israel) and the southern kingdom (Judah) [II Chronicles 10:10, 13-14, 18-19]:

'Your father put a heavy yoke on us, but make our yoke lighter . . .'

The king answered them harshly. Rejecting the advice of the elders, he followed the advice of the young men and said, 'My father made your yoke heavy; I will make it even heavier.'

King Rehoboam sent out Adoniram, who was in charge of forced labor, but the Israelites stoned him to death. King Rehoboam, however, managed to get into his chariot and escape to Jerusalem. So Israel has been in rebellion against the House of David . . .

The tithe continued to be levied in Judah as well as in Israel:

As soon as the order went out, the Israelites generously gave the firstfruits of their grain, new wine, oil and honey and all that the fields produced. They brought a great amount, a tithe of everything [II Chronicles 31:5].

. . . Bring your sacrifices every morning, your tithes every three years [Amos 4:4].

A property tax was levied by King Jehoikim to raise tribute money for the Pharaoh of Egypt. He "taxed the land" [II Kings 23:35]. In addition, a special assessments tax was levied in Judah by King Joash for repair of the temple [II Chronicles 24:5]: "Go to the towns of Judah and collect the money due annually from all Israel, to repair the temple of your God."

\(^4\) About 6 ¼ bushels. See entry "weights and measures" in Tenney [1967].

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In this period, the northern kingdom of Israel disappeared into Assyrian captivity, and somewhat later the southern kingdom of Judah was taken into Babylonian captivity.

The Period after the Babylonian Captivity (c. 540-100 B.C.): The people of Judah returned from Babylon after several decades. The primary development in this era was the specific exemption of the priests and other religious workers from taxes [Ezra 7:24]:

... you have no authority to impose taxes, tribute or duty on any of the priests, Levites, singers, gatekeepers, temple servants or other workers at this house of God.

They were the ones to whom the tithes were brought in earlier Israel, so their tax exemption was already implicit. In view of the importance of religion as a focus of nationhood to the returned people of Judah, it was probably very significant that the Persian King, Artaxerxes, issued the proclamation recorded in the above quotation.

The tax system was reformed as well, for the heavy exactions under King Solomon were partially replaced by contributions and firstfruits [Nehemiah 12:44] that were closer to the Biblical model for giving and less resembled forced exactions. But the tithe as a tax was still assessed, a “portion required by the Law,” as a full reading of the verse reveals. Presumably the rate of tax was the traditional 10%.

A new poll tax emerged in this period. It was a required annual payment of one-third shekel by each person to maintain temple worship [Nehemiah 10:32].

New Testament Israel: The poll tax, the tax paid by Jesus and Peter, was a principal tax in New Testament Israel comprised primarily of the descendants of Judah (1-70 A.D.). The tithe as a 10% levy on the increase of produce and herds is not mentioned in the New Testament. Its only serious mention as a revenue source to the temple or government is as a property tax based on a 10% portion of total holdings [Luke 18:12 KJV]: “I fast twice a week and give a tenth of all I possess.”

Josephus described a poll tax that the Romans assessed in Egypt. He addressed the Jews of Israel in the 1st century of the present era [Whiston, 1960, p. 489]:

What occasion is there for showing you the power of the Romans over remote countries, when it is easy to learn it from Egypt, in your neighborhood? This coun-
try is extended as far as the Ethiopians, and Arabia the Happy, and borders upon India; it has seven million five hundred thousand men, besides the inhabitants of Alexandria, as may be learned from the revenue of the poll tax. . . it pays more tribute to the Romans in one month than you do in a year.

Josephus also referred to the two-drachma poll tax, discussed by Jesus and Peter above at Matthew 17:24-27. Josephus [Whiston, 1960, p. 597] described how this two-drachma tax that each Jew had to pay to the temple in Jerusalem yearly until the time of its destruction in 70 A.D. was redirected by Caesar Titus in later years to the Roman government.

Gibbon [1903, p. 24] shed light on the particular details of the poll or capitation tax that the Romans levied on the Jews:

It is somewhat remarkable that the flames of war consumed almost at the same time the temple of Jerusalem and the Capitol of Rome; and it appears no less singular that the tribute which devotion had destined to the former should have been converted by the power of an assaulting victor to restore and adorn the splendor of the latter. The emperors [of Rome] levied a general capitation tax on the Jewish people; and, although the sum assessed on the head of each individual was inconsiderable, the use for which it was designed, and the severity with which it was exacted, were considered as an intolerable grievance.

It is noteworthy that of the four New Testament Gospel writers, Matthew, as a former tax collector and probable numeracy expert, was the only one who used a technical term for taxes, "didrachma," "two drachmas," in referring to the subject of taxes. This was equivalent to the half-shekel poll tax that was levied on each Israelite leaving Egypt at the time of the Exodus [Hartman, 1963, p. 2401]. The other three used general terms in their references to taxes, "kensos" (poll taxes) and "phoros" (generally, taxes).

The other principal tax in New Testament Israel was the indirect taxes included within the meaning of the term "telos." Sometimes these indirect taxes are denoted by the term "customs" or "duties" in modern English versions of the Bible. The ruling authorities in the Israel of this epoch certainly did levy such taxes, although the New Testament does not go beyond use of the term "telos" in description or discussion. Josephus reported that Herod the Great laid a tax on produce of the field, and that his son and successor Archelaus levied a sales tax on

The New Testament period of ancient Israel is exciting in that the primary methods of taxation had evolved somewhat from the Old Testament's income taxes, property taxes, and special assessment taxes to a poll tax and indirect taxes, such as customs duties. The fact that the Romans, through agents such as Herod the Great, levied some of those older taxes, such as the tax on land, does not diminish the significance of this shift.

**SUMMARY**

The five forms of taxation referred to in the Bible (income taxes, property taxes, special assessment taxes, poll taxes, and indirect taxes) developed over the 17 or 18 centuries that passed between Israel's Infancy in Egypt to Israel in New Testament times in the first decades of the present era. These types of taxation started with a 20% tax in Egypt based on yields of crops and herds. This tax was instituted by Joseph, the Israelite prime minister of Egypt.

However, after the exodus of the Israelites from Egypt, the rate of the income tax was halved to 10% in the form of a tithe. A poll tax as a one-time census charge also emerged in the time of the Tribal Confederation. By the time of the United Monarchy, special assessment taxes, as well as indirect taxes, were levied. So heavy was the burden of taxation that the United Monarchy split. By the start of the present era, poll taxes and indirect taxes had become the primary taxes in Israel referred to in the Bible. These developments in taxation were aided by improvements in counting, measurement, and computing, as the use of written abstract symbols supplanted the token system of a one-for-one correspondence.

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## APPENDIX A

### Some Tax References in the Bible Referred to in the Paper

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### Six general periods of Israel's Biblical existence

1. Israel's Infancy in Egypt (1700-1300 B.C.)
2. Tribal Confederation (1300-1050 B.C.)
3. United Monarchy of Saul, David, and Solomon (1050-880 B.C.)
4. Divided Kingdom (880-540 B.C.)
5. Period after the Babylonian Captivity (540-100 B.C.)
INCOME TAX ALLOCATION: THE CONTINUING CONTROVERSY IN HISTORICAL PERSPECTIVE

Abstract: The appropriate means of accounting for income taxes on financial statements has been among the most hotly debated and frequently recycled issues of the past 50 years. This retrospective account begins with the issuance of the first professional standards during the 1930s and 1940s, and illustrates how theoretical arguments, developed in professional and academic journals during the 1950s, were subsequently recycled and revised during later decades. The problems that led to reconsideration of the deferred tax issue by both the APB during the 1960s and the FASB during the 1980s and 1990s are discussed, as are the solutions offered by these standard setters.

INTRODUCTION

The appropriate means of accounting for income taxes on financial statements has been among the most hotly debated and frequently recycled issues of the past 50 years. The Committee on Accounting Procedure (CAP), the Accounting Principles Board (APB), and the Financial Accounting Standards Board (FASB) have all addressed the issue. Nevertheless, critics of FASB’s most recent approach [Rosenfield, 1990; Defliese, 1991] provided evidence that agreement about the best solution to this problem is still lacking. This retrospective account of the ongoing debate is based on an examination of professional standards, research reports, and articles in leading academic and professional journals. General developments in accounting theory and the standards-setting process serve as a backdrop for examining accounting for income taxes. The paper attempts

Acknowledgments: The suggestions of Richard Fleischman, Hugo Nurnberg, and several anonymous reviewers are gratefully acknowledged.
to provide readers with an understanding of how the accounting issues and authoritative literature have evolved, thereby providing a basis for understanding current requirements.

A broader perspective is taken in this paper than in other recent histories of tax accounting, which have focused solely on the development of professional standards [Rayburn, 1986; Plunkett and Turner, 1988; Johnson, 1993]. It serves to update earlier works that considered the development of both theory and practice [Black, 1966; Nurnberg, 1971; Beresford et al., 1983]. The paper focuses on the debate about the extent to which income tax allocation is appropriate and which method should be applied. Aspects of the topic that are beyond its scope include discounting of deferred taxes and the information content of tax deferrals. Based upon a review of the literature, the authors focus on those writers who introduced or distilled the prevailing theory or presented cogent discussions of the issues. The chronological organization of the paper is based on the periods during which CAP, the APB, and FASB respectively were in existence.

THE CAP ERA (1936-1959)

Income taxes became a permanent part of the federal tax system with the passage of the Corporation Tax Law in 1909 and the ratification of the Sixteenth Amendment to the Constitution in 1913. However, the main source of tax revenues prior to World War II was local property taxes. During the World War II period (1939-1945), income taxes gained in importance because of an increase in the marginal corporate income tax rate from 19% to 38% [Sommerfeld and Easton, 1987, pp. 168-170]. Following World War II, there was an economic expansion and an increase in the number of shareholders. Measures such as earnings per share gained in importance, which led to pressures for more comparable income numbers [Carey, 1970, pp. 58-59]. The emphasis on the measurement of income tax expense reflected the general concern with income measurement during this era [Bailey, 1948, pp. 10-14; Shield, 1957, p. 53].

CAP had been formed in 1936 and was expanded and given the authority to issue pronouncements in 1938 [Davidson and Anderson, 1987, p. 116]. Its first pronouncements were issued in 1939, including one addressing an early tax allocation issue. This issue arose in the 1930s when a decline in long-term interest rates led many companies to refund bond issues. In
computing taxable income, firms deducted the unamortized discount and redemption premium on the bonds refunded. For financial reporting (book) purposes, these amounts were often charged directly to retained earnings or amortized over the remaining life of the original issue, practices that made reporting the associated tax benefit in book income seem inappropriate.

In ARB No. 2 (1939) and ARB No. 18 (1942), CAP recommended that bond discounts written off to retained earnings be reduced by the related tax savings, although the preferable treatment was to amortize the discount, reduced by the tax savings, over the original life of the bonds. The first approach is intraperiod tax allocation, the second interperiod tax allocation.

Another concern of accountants was the nature of the debit that offset the credit to taxes payable. Carey [1944, p. 425], the managing editor of the *Journal of Accountancy* and a noted chronicler of accounting history, questioned whether income taxes were an expense or a distribution of profits, and published a symposium [1944] on this issue. As Nurnberg [1971, pp. 8-14] later noted, viewing taxes as an expense was consistent with proprietary theory while considering them a distribution of earnings reflected entity theory. From the viewpoint of the proprietor, taxes, like interest, would be considered an expense necessary to achieve profitable operations. However, entity theory views both equity investors and creditors as suppliers of capital, and taxes, like interest, would be considered a distribution of income.

**ARB No. 23:** CAP concluded that income taxes were an expense in ARB No. 23 (1944), thus adopting the proprietary perspective. This viewpoint subsequently became widely accepted [Shield, 1957, p. 53]. ARB No. 23 recommended tax allocation to maintain a proportional relationship between tax expense and pretax financial reporting income when material and extraordinary differences between taxable income and financial statement income existed. Interperiod allocation was considered appropriate if an item was recognized in different periods on the tax return and financial statements, while intraperiod allocation was applicable when a taxable gain or loss was credited or charged directly to equity. ARB No. 23 passed with 18 assenting and 3 dissenting votes. One point of dissension was the requirement to apply an allocation method that presented accounts on a hypothetical rather than a factual basis.

According to ARB No. 23, interperiod tax allocation was considered appropriate when accelerated amortization on
defense facilities was allowed for tax purposes during World War II; when tax was likely to be paid in the future because of profit recognized currently from an installment sale or long-term contract; or when cash payments were deducted for taxes, but were not treated as an expense for book purposes. Allocation was not considered necessary when timing differences were expected to recur regularly over a comparatively long time period. Thus, CAP initially supported partial allocation, an approach in which only the tax effects of certain nonrecurring material timing differences were allocated. (In contrast, comprehensive allocation would allocate the tax effects of all timing differences.)

ARB No. 23 suggested the use of different accounts to record tax allocation and different tax rates to measure the amount. The tax effect of a depreciation timing difference might be recognized by debiting tax expense and crediting the depreciable asset, which would then be accounted for on a net-of-tax basis. Alternately, depreciation expense could be debited and an "appropriate reserve or other account" credited. Measurement of the deferred tax effect might be based either on the current tax reduction or on the estimated amount of tax payable in the future when the timing difference would reverse. Also addressed in ARB No. 23 was accounting for the tax benefit resulting from a loss carryback, which would be recognized in income during the loss year, or a carryforward, which would be recognized in the period realized.

As practitioners recorded tax allocation in different accounts and measured deferred taxes using different rates, three dominant allocation approaches evolved — the net-of-tax, liability (or asset-liability), and deferred methods. In the net-of-tax method, deferred taxes were treated as a valuation allowance offsetting the related asset or liability on the balance sheet. On the income statement, the adjustment might be either to tax expense or to the revenue or expense related to the timing difference, and the amount could be computed using either the current or a future tax rate.

Under both the liability and deferred methods, deferred taxes appear in a separate balance sheet account with the tax expense adjusted on the income statement. The deferred method considers the deferred tax account to be a deferred charge or credit, measured based on tax rates in effect when timing differences originated. Under the asset-liability method, the deferred tax account is considered an asset or liability measured by the tax rates expected to be in effect when differ-
ences reversed. Each of these viewpoints had its proponents in a debate that would be waged for decades to come. In the discussion that follows, support for the liability versus the deferred method is inferred if restatement of the deferred tax account for changes in tax rates is recommended.

**Subsequent Professional Standards:** The SEC, under Chief Accountant William Werntz (who served in this position from 1938 until 1947), initially opposed interperiod tax allocation. Accounting Series Release (ASR) No. 53 (1945) argued that, in most cases, the tax provision should reflect only the taxes actually payable for the current period. Despite the SEC's position, CAP continued to support interperiod tax allocation in ARB No. 27 (1946) and ARB No. 42 (1952), which recommended recognition of deferred taxes when the tax code allowed accelerated depreciation for emergency facilities during World War II and the Korean War. CAP permitted the net-of-tax treatment, but the preferred approach was to debit tax expense and credit a separate deferred tax account on the balance sheet.

In 1953, ARB No. 23 was revised for inclusion in ARB No. 43 (as Chapter 10B), and CAP added the suggestion that the current tax rate might be appropriate in some situations and an estimated future tax rate in others. Also, if tax allocation was not practicable, a disclosure was considered sufficient.

When the 1954 Internal Revenue Code allowed use of accelerated depreciation methods, many companies had significant recurring timing differences for the first time. CAP's response in ARB No. 44 (1954) was that "deferred income taxes need not be recognized in the accounts unless it is reasonably certain that the reduction in taxes during the earlier years of use of the declining-balance method for tax purposes is merely a deferral of income taxes until a relatively few years later, and then only if the amounts are clearly material" [ARB No. 44, par. 4]. Thus, tax allocation was not required for depreciation differences that were related to normal additions and replacements or ones that had an indefinite duration. Blough [1955, p. 68], at that time director of research for the AICPA, noted that CAP advocated partial allocation because, otherwise, firms replacing or expanding plant assets would build up a deferred tax liability that would not be reduced until a period of contraction or liquidation. (Blough had served as the SEC's first chief accountant in 1935 and would later serve on the APB during 1959-1964.)

Although the SEC had not officially rescinded or revised ASR No. 53, it began to require tax allocation for certain regis-
trants that used accelerated depreciation methods for tax purposes and straight-line depreciation for book purposes. Barr [1958, pp. 29-30], who served as the SEC's chief accountant from 1956 until 1972, noted that allocation was needed in some cases to avoid making the income statement seriously misleading. Subsequently, CAP changed its position and advocated comprehensive allocation for depreciation differences when ARB No. 44 was revised in 1958.

ARB No. 44 (revised) continued to allow flexibility in recognizing deferred taxes on the balance sheet, with either a separate deferred tax account or the net-of-tax approach considered acceptable. According to Rayburn [1986, p. 95], some accountants believed that ARB No. 44 (revised) permitted deferred taxes to be classified as earned surplus. To prevent this practice, CAP issued a letter clarifying that the deferred tax account was:

... to be shown in the balance sheet as a liability or a deferred credit. ... [It] should not at the same time result in a credit to earned surplus or to any other account included in the stockholders' equity section of the balance sheet [AICPA, 1959a].

CAP continued its support of interperiod tax allocation in ARB No. 51 (1959b), which required a parent company to recognize taxes on the undistributed earnings of subsidiaries included in consolidated income unless the earnings were likely to be distributed in a tax-free liquidation or to be invested permanently by the subsidiary. Thus, an exception to comprehensive allocation was created based on an indefinite reversal criterion.

**Accounting Theory Develops:** Deferred taxes were increasingly reported on financial statements during the 1950s. Consequently, articles in academic and professional journals proliferated on the appropriate means of accounting for income taxes. By the end of the decade, the arguments for partial versus comprehensive allocation, as well as for use of the net-of-tax, deferred, and liability methods, had been well-formulated. As Graham [1959, p. 14], a member of CAP, noted, "almost everything that can be said about income tax allocation has already been said — by someone." Exhibit 1 illustrates how the arguments already extant in Graham's day were recycled and refined during subsequent decades.
EXHIBIT 1
Representative Proponents of Different Tax Allocation Approaches

<table>
<thead>
<tr>
<th>NO ALLOCATION</th>
<th>PARTIAL ALLOCATION **</th>
<th>NET-OF-TAX METHOD</th>
<th>DEFERRED METHOD</th>
<th>LIABILITY METHOD **</th>
<th>DEFERRED TAXES AS EQUITY</th>
<th>COMBINED METHODS</th>
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</thead>
<tbody>
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<td>Trumbell [1963]</td>
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<td>Perry [1966]</td>
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<td>Grady [1964]</td>
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</tbody>
</table>

* Also considered comprehensive allocation acceptable.
** Most proponents of partial allocation favored its application using the liability method.
*** Support for either the liability or deferred method might be inferred.

Two articles that appeared in 1957 laid out many of the basic theoretical concepts and concerns. Moonitz, an academic who would later serve the AICPA as director of accounting research and as a member of the APB, distinguished between permanent differences and timing differences. Permanent differences do not create a tax measurement problem since they impact either taxable income or financial reporting income, but not both. However, for timing differences, Moonitz [1957, p. 177] advocated matching to let “the tax follow the income.” Four different types of timing differences were identified by both Moonitz [1957] and Shield [1957]. Shield [1957], a practitioner, dichotomized these differences based on whether they had a past or a future tax impact. In the current paper, transactions with a past tax impact are designated as tax earlier-book later (TEBL) differences, while those with a future tax impact are designated as book earlier-tax later (BETL) differences. Ex-
hibit 2, adapted from Shield [1957, p. 60], illustrates these four types of timing differences.

**EXHIBIT 2**
 ****Four Types of Timing Differences****

<table>
<thead>
<tr>
<th>Tax Earlier - Book Later (TEBL)</th>
<th>Book Earlier - Tax Later (BETL)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>REVENUES</strong></td>
<td></td>
</tr>
<tr>
<td>EXAMPLE: REVENUE RECEIVED</td>
<td>EXAMPLE: INSTALLMENT SALE</td>
</tr>
<tr>
<td>IN ADVANCE</td>
<td></td>
</tr>
<tr>
<td>DEFERRED TAX DEBIT BALANCE</td>
<td>DEFERRED TAX CREDIT BALANCE</td>
</tr>
<tr>
<td><strong>EXPENSES</strong></td>
<td></td>
</tr>
<tr>
<td>EXAMPLE: DEPRECIATION</td>
<td>EXAMPLE: WARRANTY EXPENSE</td>
</tr>
<tr>
<td>DEFERRED TAX CREDIT BALANCE</td>
<td>DEFERRED TAX DEBIT BALANCE</td>
</tr>
</tbody>
</table>

TEBL revenues arise when recognition in taxable income precedes recognition in book income, as when revenue is received in advance. The tax paid on the revenue is debited to a deferred tax account. Later, when the revenue is reported for financial reporting purposes, the deferred tax debit is reduced and tax expense is increased. TEBL expenses arise when recognition in taxable income precedes recognition in book income, as when tax depreciation is more accelerated than book depreciation, or when a capitalized expenditure is treated as an expense for tax purposes. When these costs are deducted for tax purposes, the tax reduction gives rise to a deferred tax credit. Later, as the expense is recognized for financial reporting purposes, the deferred tax credit is decreased and tax expense reduced.

BETL revenues are recognized in book income before taxable income, as when an installment sale is recognized on the accrual basis for book purposes and on the cash basis for tax purposes, or when a long-term contract is accounted for using the percentage-of-completion method for book purposes and the completed-contract method for tax purposes. When revenue is recognized on the books, the related tax expense is also recognized, with a corresponding credit to deferred taxes. As the revenue is reported in taxable income, taxes payable increases and the deferred tax credit decreases. BETL expenses are recognized in book income earlier than taxable income, as when estimated expenses (for product warranties, deferred compensation, uncollectible accounts, etc.) are recognized on the
accrual basis for financial reporting and the cash basis for tax purposes. Tax expense is reduced when the estimated expense is accrued in book income, resulting in a deferred tax debit. When the costs are paid, taxes payable and the deferred tax account are both reduced.

Differences between the four types of timing differences were acknowledged. Moonitz [1957, p. 182] argued that accruing a deferred tax credit was not as important in the TEBL expense case as in the BETL revenue case because "the revenue in the second case has not yet been reported for tax purposes, whereas the deduction in the earlier case has already been taken."

Although Moonitz advocated measuring deferred taxes in all four cases using current tax rates, he acknowledged the uncertainty introduced into the measurement because future taxable income and future tax rates were unknown. Shield [1957, p. 60] similarly noted a measurement difference between the TEBL and BETL cases: "In situations of past tax impact the amount of the tax impact has been definitely established. . . . In situations of future tax impact the amount can only be estimated."

The propriety of recognizing the future tax benefit associated with a BETL expense was also a concern. Shield [1957, p. 57] argued for recognition only if a possible future tax loss could be offset against taxable income during the two-year carryback period. He did not consider recognition appropriate if realization of the tax benefit was contingent upon subsequent earnings.

Various viewpoints on the nature of deferred taxes were voiced. Some accountants opposed interperiod tax allocation, arguing that calculating tax expense based on book income "produces a meaningless figure not descriptive of any past, current, or future applications of funds" [Hill, 1957, p. 358]. Because deferred taxes did not really represent amounts currently payable to, or receivable from, another entity, some accountants argued that deferred taxes should be considered deferred credits rather than liabilities or equities. According to Graham [1959, p. 23], deferred taxes "should be interpreted as the deferment to future periods of a credit to income tax expense rather than as the deferment of the payment of a tax liability. Under this concept questions relating to the existence of future taxable income and to future tax rates are irrelevant." MacPherson [1954, p. 358], another advocate of the deferred method who was director of research for the Canadian Insti-
tute of Chartered Accountants, noted that accelerated tax de-
preciation would not lead to a future tax liability if "tax rates 
are reduced, or there is no taxable income in later years, or the 
increase in taxes is indefinitely postponed by continued expan-
sion of investment in depreciable assets, or the business is not 
continued as a going concern."

Some accountants considered the liability method prefer-
able to the deferred method because the creation of deferred 
charges and credits "denies one of the fundamental premises of 
accounting, that assets minus liabilities equals ownership eq-
uity" [Sands, 1959, p. 588]. The net-of-tax approach also had it 
adopts. Dohr [1959, p. 20], a former AICPA director of re-
search then in academe, considered it the most "simple, 
straightforward, factual and understandable" approach. Powell 
[1959, p. 27] characterized the net-of-tax approach as an at-
tempt:

to find a basis of realism in both the income statement 
and the balance sheet . . . within the framework of ex-
isting concepts. . . . Tax deductibility gives value to an 
asset . . . The fair value of an asset whose cost is not 
tax-deductible is less than the fair value of an other-
wise identical asset whose cost is tax-deductible.

However, Powell, a member of CAP and later the first chair of 
the APB, did not personally support the net-of-tax approach 
because it would base the carrying value of a depreciable asset 
on the profitability of the firm. He generally opposed 
interperiod tax allocation except when needed to avoid an obvi-
ous distortion of income, as would occur in the case of a mate-
rial, nonrecurring BETL revenue.

The argument against allocation in the depreciation case 
based on the indefinite reversal of aggregate depreciation dif-
fences for a static or growing firm was developed by Davidson 
[1958], an academic who would later debate the income tax 
issue as a member of the APB, and Hill [1957]. Graham [1959] 
rejected this argument because, taken to its logical conclusion, 
it would imply that a firm need not recognize any liabilities 
since maturing liabilities would always be replaced by new 
one.

THE APB ERA (1959-1973)

CAP has been criticized for taking a piecemeal approach to 
setting accounting principles, with specific topics considered 
only as the need arose [Carey, 1970, p. 18]. Its pronouncements
on accounting for income taxes are illustrative of that approach. Specific issues were addressed in a number of different ARBs, which bore little relationship to each other and led to a variety of interpretations in practice. Furthermore, many of the ARBs were phrased to allow for exceptions, with firms free to deviate from CAP’s recommendations when departure could be justified [Carey, 1970, pp. 87-88].

As a result, there was “pressure for reasonable comparability of earnings . . . from the SEC, the universities, the analysts, the press, and from within the profession itself” [Carey, 1970, p. 80]. Jennings [1958], then president of the AICPA, responded to the calls for comparability by proposing an accounting research organization that would examine basic assumptions and identify generally accepted accounting principles. Subsequently, the AICPA replaced CAP with the APB and its semi-autonomous Accounting Research Division (ARD) in 1959. The expectation was that accounting principles issued by the APB would be based on the studies done by the ARD [Carey, 1970, p. 94].

Income taxes was the subject of APB Opinion No. 1 (1962). It extended the requirements of ARB No. 44 (revised) to timing differences arising when shorter depreciable lives were permitted for tax purposes. Under Chief Accountant Barr, the SEC formally advocated comprehensive tax allocation in ASR No. 85 (1960), which called for the recognition of deferred taxes whenever costs were deducted for tax purposes more quickly than for book purposes. The SEC permitted either a debit to tax expense and a credit to a non-equity balance sheet account, or a debit to depreciation expense and a credit to accumulated depreciation.

continued Theoretical Controversy: As Exhibit 1 illustrates, academics recycled and refined the arguments advanced in earlier years during the 1960s. Miller [1962], an academic who served on both CAP and the APB, considered both the non-allocation and comprehensive allocation positions supportable and concluded that the inability to reach a solution to the deferred tax problem resulted from a lack of agreement on basic theoretical issues. The view of deferred tax credits as a source of government investment in the firm was advanced by Jaedicke and Nelson [1960] and Keller [1962]. This was an atypical investment, however, since “there is no expectation of interest or dividend payments” [Keller, 1962, p. 64].

Drake [1962] and Bierman [1963] opted for the net-of-tax method in the depreciation case and initiated a discussion of the relationship between tax allocation and present value depre-
ciation. Raby and Neubig [1963, p. 568] believed “the underlying problem is the difference between the tax basis of an asset and its accounting basis” and considered the net-of-tax method appropriate for all situations in which an asset had a different basis for book and tax purposes.

Johnson [1961] opposed allocation since deferred tax credits were neither liabilities nor equity. Fremgen [1963] and Drinkwater and Edwards [1965] also opposed interperiod tax allocation, arguing that the matching principle should not be applied to taxes, a view reminiscent of the entity theorists’ position that income taxes were not an expense. Hicks [1963], however, found support for income tax allocation based on the matching and going-concern concepts. He favored the deferred method, arguing that providing deferred taxes based on originating period tax rates was appropriate since tax allocation was a process of deferring a current tax reduction to future years rather than a process of providing for a future tax liability. Nurnberg [1969] argued that the deferred method was an aberration of the liability method because the basic accounting equation did not acknowledge the existence of miscellaneous deferred credits and charges. He favored classifying deferred taxes as liabilities and assets on the balance sheet but measuring them using the tax rate in the originating period.

Combined Approaches To Deferred Tax Accounting: During the 1960s and subsequent decades, several combined approaches to deferred tax accounting were proposed. Exhibit 3 expands upon Exhibit 1 by describing the methods advocated by proponents of the various combined approaches. Trumbell [1963, p. 47], an academic, considered the sources of deferred tax credits and concluded that a liability exists in the installment sales case but not in the depreciation case. With regard to BETL revenues, he reasoned that taxable revenue would result from the collection of receivables already recognized. However, with TEBL expenses, taxable revenue would only result from a future disposition of depreciable assets. Thus, the event creating the liability has already occurred with installment sales, but not with depreciation.

When the 1964 tax act reduced the basic corporate tax rate (from 52% to 50% for 1964 and to 48% thereafter), the issue of adjusting deferred tax balances for changes in tax rates was rekindled. Grady [1964, p. 26], the AICPA director of research, concluded that only deferred tax balances related to BETL expenses should be restated for rate changes because they “may
### EXHIBIT 3

**Combined Approaches**

<table>
<thead>
<tr>
<th>PROPONENTS</th>
<th>METHODS ADVOCATED</th>
</tr>
</thead>
</table>
| Trumbell [1963]  
Bierman [1991] | **ASSET-LIABILITY**  
**BETL REVENUES** *  
**DEPRECIATION** |
| Grady [1964] | **ASSET-LIABILITY**  
**BETL EXPENSES**  
**ALL OTHER TIMING DIFFERENCES** |
| Perry [1966]  
Gilles [1976]  
Arthur Andersen & Co. [1983]  
2nd rule  
Wyatt et al. [1984] | **ASSET-LIABILITY**  
**BETL DIFFERENCES**  
**TEBL DIFFERENCES** * |
| Black [1966] | **ASSET-LIABILITY**  
**DEFERRED TAX CREDITS**  
**DEFERRED TAX DEBITS** |
| Graul & Lemke [1976] | **ASSET-LIABILITY**  
**ADMINISTRATIVE DIFFERENCES**  
**ECONOMIC INCENTIVES** |
| Schwartz [1981] | **ASSET-LIABILITY**  
**SHORT-TERM DIFFERENCES**  
**LONG-TERM DIFFERENCES** |
| Arthur Andersen & Co. [1983]  
1st rule | **ASSET-LIABILITY**  
**NO RELATED BALANCE SHEET ACCOUNT**  
**RELATED BALANCE SHEET ACCOUNT** |
| Beresford et al. [1983]  
These authors described, but did not advocate, this approach. | **ASSET-LIABILITY**  
**BETL DIFFERENCES**  
**TEBL DIFFERENCES** |
| Kissinger [1986] | **ASSET-LIABILITY**  
**REVENUES**  
**EXPENSES** |

*Acronyms used: BETL stands for book-earlier tax-later and TEBL for tax-earlier book-later.*
not cover long periods, do not necessarily involve repetitive transactions, may be susceptible of fairly accurate estimates, and the tax effect represents an estimate of future effect rather than being currently determinable." This conclusion apparently ignored the fact that some firms might accrue bad debt or warranty expense repetitively but report installment sales on an isolated basis.

Perry [1966, pp. 29-30], a practitioner, clarified and extended the distinction between TEBL and BETL transactions and related it to the use of different tax rates and different balance sheet accounts. He reasoned that taxable revenues or expenses would result when BETL differences reversed, so the related deferred taxes should be reported as liabilities or assets. For TEBL differences, he reasoned that revenues taxed currently do not result in a tax receivable nor do expenses deducted currently produce a tax payable. Since they did not qualify as assets and liabilities in their own right, Perry considered the deferred taxes attributable to TEBL differences to be valuation allowances under the net-of-tax method. Further, he believed that reporting depreciable assets on a net-of-tax basis would prevent the erroneous conclusion that deferred taxes were a source of government investment in the firm. Perry [1966, pp. 29] argued that, on the contrary, "the failure to use accelerated methods in computing depreciation deductions is equivalent to making an interest-free loan to the government."

Standards and Studies Preceding APB Opinion No. 11: Use of the net-of-tax method was curtailed when APB Opinion No. 6 (1965, par. 23) restricted the allowable methods:

Provisions for deferred income taxes may be computed either (a) at the tax rate for the period in which the provision is made (the so-called 'deferred credit' approach) or (b) at the tax rate which it is estimated will apply in the future (the so-called 'liability' approach).

The SEC was putting increasing pressure on the APB to move towards greater uniformity in financial reporting during the mid-1960s. Before the APB could resolve the income tax issue, the SEC took limited action to narrow differences in reporting practices [Carey, 1970, pp. 130-135]. In ASR No. 102 (1965), the SEC required deferred taxes related to installment sales receivables to be classified as liabilities.

Black's Accounting Research Study No. 9 set the stage for the APB's deliberation of the deferred tax issue. Black [1966, p.
5], an academic, noted that continuing disagreement about the appropriate method of accounting for deferred taxes stemmed from the diverse interpretations of the ARBs. CAP had not made it clear whether tax allocation should be applied to all or only to some timing differences, and the ARBs provided support for more than one method of allocating taxes. As part of Black's study, Steiner [1961], a practitioner, reviewed the treatment of deferred taxes in almost 400 annual reports and concluded that tax allocation was often handled in an unclear manner with confusing terminology.

Black [1966] took as a given that taxes were an expense to be allocated. He examined the arguments for and against the three basic approaches, as well as the combined methods of Grady [1964] and Perry [1966]. He rejected the indefinite postponement idea used to defend partial allocation and concluded that interperiod allocation should be applied comprehensively. He found the net-of-tax method unacceptable and advocated a combination approach in which the liability method was applied to deferred tax credits and the deferred method was applied to deferred tax debits. Thus, both Black [1966] and Perry [1966] concluded that BETL revenues resulted in deferred tax liabilities to be measured using future rates. Black also concluded that depreciation timing differences resulted in liabilities to be measured based on future tax rates, while BETL expenses resulted in current tax payments to be measured using current rates. In contrast, Perry [1966] argued that BETL expenses led to future tax savings, which would be measured using future tax rates, while TEBL expenses led to current tax savings, which would be measured using current rates.

**APB Opinion No. 11 and Subsequent Opinions:** The text of APB Opinion No. 11 (1967) made no mention of any combined approach, although a discussion of the three basic methods of accounting for deferred taxes was included. Defliese [1991, p. 90], a member of the APB at the time the income tax issue was considered, recalled that the APB was "hopelessly split on which rationale to apply to tax allocation." (Defliese had earlier chaired CAP and would go on to chair the APB in its final years.) APB Opinion No. 11 passed with 14 assenting votes and 6 opposing votes. Opponents cited the requirement for comprehensive rather than partial allocation as their primary concern. According to Arthur Andersen [1983, chap. II, p. 11], many APB members preferred the net-of-tax and liability methods, but there was insufficient support for either method to obtain the
necessary two-thirds vote. The deferred method was selected as a practical compromise. As Perry [1981, pp. 25-26] noted, the deferred method:

- does not require deferred tax charges and credits to be deemed receivables and payables [and thus] . . . has the practical advantage of not requiring assumptions as to future taxes, does not require adjustments of prior deferred tax balances when tax rates change . . . and avoids the issue of the need for discounting. . . . Finally, the effects of applying interperiod tax allocation are more simply presented by showing deferred taxes as separate items in the financial statements than by showing them net-of-tax.

APB Opinion No. 11 allowed some flexibility in computing the tax effect of timing differences. Under the gross change method, the tax rate in effect when a difference originated was applied upon reversal as well. Under the net change method, the current year's tax rate was applied to both originating and reversing differences.

APB Opinion No. 11 required classification of deferred taxes on the balance sheet based on the current or noncurrent status of the related asset or liability. It addressed the recognition of deferred tax debits only with respect to net operating losses. The tax benefit of a net operating loss carryback, which could be realized by a refund of taxes previously paid, would be recognized in the loss year. The tax benefit of a net operating loss carryforward would only be recognized if realization was assured beyond any reasonable doubt. Hence, recognition was generally deferred until realization occurred.

APB Opinion No. 11 considered several transactions leading to book-tax differences that might not reverse for an indefinite future period because the taxpayer controlled the events that would result in future taxable amounts (e.g., the undistributed earnings of subsidiaries, an issue that had been addressed in ARB No. 51). Ultimately, the Board decided not to modify ARB No. 51 and deferred any conclusion on the other indefinite reversal cases. Subsequently, APB Opinion No. 23 [1972a] required recognition of deferred taxes for several such cases (including the undistributed earnings of subsidiaries), but nevertheless permitted an exception to tax allocation when differences were not expected to reverse for an indefinite future period. APB Opinion No. 24 [1972b] required tax allocation for earnings from equity method investees.
THE FASB ERA (1973 TO PRESENT)

APB Opinion No. 11 effectively narrowed the areas of difference in accounting for income taxes. However, despite the progress towards consistency made in this and other areas, the APB continued to be the subject of criticism. "Few APB pronouncements escaped opposition from some corporations or industry groups" [Carey, 1970, p. 124]. Based on the recommendations of the Wheat Study Group, the AICPA replaced the APB with FASB in 1973. During the same year, the SEC issued ASR No. 149, requiring registrants to improve disclosure of the components of income tax expense, the causes of timing differences, and the items reconciling the difference between the effective and statutory tax rates.

New Combination Approaches: During the FASB era, academicians continued to voice support for partial allocation [Wheeler and Galliart, 1974], the net-of-tax method [Bierman and Dyckman, 1974], and Perry’s combined approach [Gilles, 1976]. Several new combination approaches to accounting for income taxes were proposed as well. Graul and Lemke [1976] distinguished between timing differences intended to create an economic policy incentive (e.g., accelerated depreciation) and those developed as a matter of administrative convenience (e.g., taxing revenues and expenses when cash flows occurred). The tax effects of differences resulting from economic policy incentives were deemed a constructive source of funds that would be credited to equity, while those resulting from policies based on administrative convenience would be accounted for using the liability method. Schwartz [1981] argued that the tax effects of long-term timing differences whose reversal was indefinite, such as depreciation, should be considered interest-free loans from the government, while the tax effects of short-term differences, such as installment sales, should be considered liabilities. Kissinger [1986] advocated the asset-liability method for the two revenue cases and the net-of-tax method for the two expense cases.

Arthur Andersen & Co. [1983, chap. III, p. 24] found that the “apparent desire for a single exclusive theory is an unnecessary and unwarranted limitation” on accounting for income taxes. They supported a combined approach based on either of two rules. The first rule would apply the net-of-tax method to those differences related to a particular asset or liability and the liability method to those timing differences unrelated to a spe-
specific balance sheet account. The second rule represented Perry's [1966] approach. Ernst & Whinney partners, Beresford et al. [1983, p. 65], reported that a variant on Perry’s approach, in which the deferred method was applied to TEBL differences and the asset-liability method to BETL differences, was considered “more acceptable to those who object to the net-of-tax approach under any circumstances.”

Thus, accountants continued to recognize that all timing differences were not the same. Exhibit 3 illustrates that although each combined proposal was based on a different rationale, all but three led to the conclusion that a liability results in the installment sales case, but not in the depreciation case. (Grady [1964], Black [1966], and Arthur Andersen’s [1983] first rule are the exceptions.) Moonitz [1957] and Trumbell [1963] had previously distinguished between the installment sales case, in which the event triggering the liability had already occurred, and the depreciation case, in which it had not.

The Legacy of APB Opinion No. 11: In FASB’s early years, various pronouncements amended or clarified the application of APB Opinion No. 11. SFAS No. 9 [1975] extended interperiod allocation to intangible development costs of oil and gas companies. In 1976, the SEC’s Staff Accounting Bulletin (SAB) No. 8 (restated in SAB No. 40, topic 5C) conservatively recommended recording deferred tax charges only if it was likely that a future tax benefit would result. FASB Interpretation No. 22 [1978] limited the applicability of the indefinite reversal concept to the specific items mentioned in APB Opinion No. 23, but SFAS No. 31 [1979] extended the concept to a U.K. tax deduction. SFAS No. 37 [1980] amended APB Opinion No. 11 by requiring that deferred taxes unrelated to a specific asset or liability be classified according to the expected reversal date.

Over time, concerns with APB Opinion No. 11 mounted. Based on a review of professional standards and 1975 annual reports, Ditkoff [1977, p. 79] concluded that:

financial tax accounting is now a bewildering amalgam of theoretical anomalies, inconsistencies and specious assumptions. On most contemporary financial statements ... the current tax liability, which is the single verifiable income tax consequence of the period’s operations, cannot be determined.

Widespread disagreement on the part of financial analysts as to the character of deferred tax balances was reported
[Wheeler and Galliart, 1974, p. 135; Arthur Andersen & Co., 1983, chap. IV]. At the same time, deferred tax credits were growing on firms’ balance sheets and becoming increasingly material in relation to assets and equity [Davidson et al., 1977, 1984; Beresford, 1982; Skekel and Fazzi, 1984].

Critics maintained that professional pronouncements in this area were difficult to comprehend, internally inconsistent, and subject to different interpretations [Beresford et al., 1983, p. 3]. Furthermore, APB Opinion 11 was inconsistent with recently adopted U.K. and international accounting standards that permitted partial allocation and a choice of alternative methods. Some accountants believed that Statement of Financial Accounting Concepts (SFAC) No. 3 (1980), which excluded deferred charges and credits from its definitions of balance sheet assets and liabilities, ruled out deferred tax accounting. FASB responded that “both the liability method and the net-of-tax method are compatible with the definitions in this Statement. Only the deferred method that is prescribed by APB Opinion No. 11 . . . does not fit the definitions” [SFAC No. 3, par. 163-164].

According to Beresford [1982], the issue that finally forced FASB to reconsider deferred tax accounting was the introduction of the Accelerated Cost Recovery System (ACRS) as part of the 1981 tax act. At that time Beresford, who would chair FASB between 1987 and 1997, was chair of the AICPA’s Accounting Standards Executive Committee (AcSEC). Under ACRS, the recovery period for most depreciable assets was between 3 and 15 years. This shortened period meant that companies that had previously used the same depreciation method for book and tax purposes could no longer do so and would have to provide deferred taxes on depreciation timing differences. The 1981 tax act also extended the carryforward period for net operating losses to 15 years, affecting the likelihood that carryforward benefits could be realized.

SFAS No. 96: In 1982, FASB added accounting for income taxes to its agenda. The Board’s deliberations were based on input that included an Ernst & Whinney Research Report by Beresford et al. [1983], an FASB Discussion Memorandum [1983b], and studies by Arthur Andersen & Co. [1983] and Coopers & Lybrand [1983]. As in earlier decades, various opinions on the optimum resolution of the deferred tax problem were offered in the literature. Rosenfield, director of the AICPA’s Accounting Standards Division, and Dent, a former...
AcSEC member [1983], argued for eliminating deferred taxes. Defliese [1983], the former APB chairman, favored the net-of-tax method. Academics Nair and Weygandt, the latter also a member of AcSEC [1981], opted for partial allocation and the liability method. Arthur Andersen partners, Wyatt et al. [1984], preferred Perry's combined approach, advocated in Arthur Andersen & Co. [1983].

Meanwhile, prior to the issuance of a new statement on income taxes, a number of FASB Technical Bulletins were issued to address accounting issues raised by provisions in the tax acts of 1978, 1981, 1982, 1984, and 1986. (These bulletins were later superseded by the new statement.) After its inception in 1984, FASB's Emerging Issues Task Force (EITF) was also called upon to address similar questions.

FASB [1986] eventually issued an Exposure Draft that supported comprehensive allocation under the asset-liability method. In the same year, corporate tax rates were reduced from 46% to 34%. As Nurnberg [1987] noted, a change to the liability method would require firms to reduce deferred tax credits to reflect the lower tax rates, with a corresponding increase in earnings. Not surprisingly, FASB's proposed change to the asset-liability approach found favor with the business community. In SFAS No. 96 [1987], FASB argued that this approach was consistent with the asset and liability definitions in the conceptual framework and would produce the most useful and understandable information. The choice of the asset-liability method reflected a shift "away from the matching concept and income statement focus under the deferred method to a balance sheet focus" [Wolk et al., 1989, p. 1]. As Parks [1988, p. 24] noted, "this conceptual preference for the balance sheet dovetails philosophically with the trend of other standards issued by the FASB in recent years."

FASB rejected the net-of-tax approach, citing the practical problem of determining the tax effect on each asset or liability and the difficulty in understanding an enterprise's overall tax situation. The deferred method was rejected as inconsistent with the conceptual framework asset and liability definitions. The combined approaches were also rejected, partly because use of the net-of-tax and deferred methods had been ruled out as single methods and partly because of the increased complexity and balance sheet confusion that might result [SFAS No. 96, par. 180-196].

SFAS No. 96 introduced the concept of temporary differences, which included not only APB Opinion No. 11 timing
differences (arising from recognition of revenues or expenses in different periods for tax and book purposes), but also other circumstances that would cause the tax basis and financial reporting basis of assets to differ. Such differences might arise when assets values were adjusted as a result of a business combination accounted for as a purchase or when a tax jurisdiction permitted assets to be indexed for inflation. In 1969, AICPA Accounting Interpretation 8 of Opinion No. 11 had concluded that permanent differences would result when assets had a different basis for accounting and tax purposes. However, SFAS No. 96 concluded that all basis differences were temporary. Thus, under SFAS No. 96, deferred tax liabilities or assets could result regardless of whether the item creating the difference was a BETL difference, a TEBL difference, or what some accountants would consider to be a permanent difference in depreciable basis.

FASB considered temporary differences to be either taxable differences, which would lead to deferred tax liabilities, or deductible differences, which would lead to deferred tax assets. SFAS No. 96 [par. 14] provided that “the recognition and measurement of a deferred tax liability or asset shall not assume any taxable or deductible amounts in future years as a result of events that have not been recognized in the financial statements at the end of the current year.” Thus, the tax benefits of deductible temporary differences and net operating loss carryforwards could be recognized only to the extent that they offset future reversals of taxable temporary differences or could be realized by carryback to offset taxable income of a prior year. The existence of future taxable income from other sources could not be assumed, and firms had to prepare hypothetical tax returns to schedule the year-by-year reversal of temporary differences. In a special report, FASB staff members provided guidance for determining the reversal pattern for specific temporary differences [Simpson et al., 1987].

SFAS No. 96 was adopted with five affirmative votes. The limitation on the recognition of deferred tax assets was the primary concern cited by the two dissenters. Businesses were also concerned about the lack of symmetry that resulted from recognizing all deferred tax liabilities but not all deferred tax assets. After the issuance of SFAS No. 96, the Board began receiving requests to change the criteria for recognition of deferred tax assets to anticipate the tax consequences of future income and to reduce the complexity of scheduling the future reversals of temporary differences [SFAS No. 109, par. 283].
Because of the controversy engendered by SFAS No. 96, its effective date was postponed by SFAS No. 100 (1988), SFAS No. 103 (1989), and SFAS No. 108 (1991) while FASB reconsidered the deferred tax issue.

Theoreticians Respond: Articles in professional journals described the application of SFAS No. 96 and criticized its complexities and its rigid and mechanical approach to deferred tax accounting [Parks, 1988; Knight et al., 1989]. Although SFAS No. 96 treated deferred tax assets differently than deferred tax liabilities, BETL and TEBL differences were not distinguished. Parks [1988, p. 28] noted that nonrecognition of deferred tax assets for TEBL revenues is counterintuitive:

Because these assets represent deferred tax expenses that should be allocated to future periods to match the financial reporting of . . . income, realization of the assets isn’t a relevant consideration. The FASB should have made a conceptual distinction between those deferred tax assets that require future taxable income for realization and those that represent a deferral of taxes paid currently.

Accounting academicians continued to suggest alternatives to FASB’s asset-liability method, comprehensively applied as Exhibit 1 illustrates. Wolk et al. [1989, p. 1] complained that SFAS No. 96 “ignores an extensive body of empirical evidence which clearly indicates that permanent deferral of tax obligations occurs far more frequently than their payment.” Chaney and Jeter [1989, p. 12] preferred partial allocation because “the deferred tax liability on the balance sheet would conform more closely to the definition specified by the FASB . . . of a probable future sacrifice of economic benefits.” Bierman [1990, p. 45] noted that “the FASB implicitly assumes the use of the tax deduction is the critical event giving rise to a tax liability . . . [but] there is not a tax liability until the depreciable asset is converted by a sale transaction into cash or a receivable.” He continued to prefer the net-of-tax method in the depreciation case, but acknowledged that a deferred tax liability should be recognized in the installment sales case. Defliese [1991, p. 90] also found that “the net-of-tax approach is easier to fit into the current conceptual framework.” On the other hand, Rosenfield [1990, p. 100] preferred to live with the deferred method, despite its inconsistency with the conceptual framework, rather than to adopt the liability method, which “represents an at-
tempt to fit an income statement principle into . . . a balance sheet mold." Thus, the same arguments were again recycled in professional and academic journals, with no apparent consensus about the best method of accounting for income taxes.

**SFAS No. 109**: The Exposure Draft preceding SFAS No. 109 [FASB, 1991a] was generally "viewed as a significant improvement over Statement 96" because it addressed the concerns about complexity and the limited recognition of deferred tax assets [Stepp and Petzing, 1991]. SFAS No. 109 [1992], adopted by a unanimous vote, ultimately superseded SFAS No. 96. It retained comprehensive allocation and the asset-liability method, but significantly relaxed the limitations on the recognition of deferred tax assets and the requirement for detailed scheduling of future taxable and deductible amounts. Under SFAS No. 109, an enterprise would measure the total deferred tax liability for taxable temporary differences and the total deferred tax asset for deductible temporary differences and for operating loss and tax credit carryforwards. Then, deferred tax assets would be reduced by a valuation allowance:

if, based on the weight of available evidence, it is *more likely than not* (a likelihood of more than 50 percent) that some portion or all of the deferred tax assets will not be realized. The valuation allowance should be sufficient to reduce the deferred tax asset to the amount that is more likely than not to be realized [SFAS No. 109, par. 17e].

Realization of a deferred tax asset would depend on the existence of sufficient taxable income during the carryback and carryforward periods. Unlike SFAS No. 96, SFAS No. 109 did not preclude consideration of sources of future taxable income other than reversals of existing temporary differences. Scheduling the reversal of taxable temporary differences would be unnecessary if a firm could provide positive evidence to support assumptions about future taxable income. Adequate positive evidence, such as a sales backlog, would be needed to justify the conclusion that a valuation allowance was not needed for a firm also having negative evidence, such as recent cumulative losses. Thus, SFAS 109 required firms to exercise considerable judgment in weighing the relative effects of positive and negative evidence, giving consideration to the objective verifiability of different types of evidence.

The objectives of SFAS No. 109 were to recognize the
amount of taxes payable or refundable for the year and the deferred tax assets and liabilities for the expected future tax consequences of events that had been recognized in a firm's tax returns or financial statements. Deferred tax assets and liabilities would be measured based on the enacted tax law and adjusted for the effect of a change in tax law or tax rates. Total income tax expense would be the sum of taxes currently payable or refundable plus deferred tax expense or the change during the year in the firm's deferred tax assets and liabilities.

For classification purposes, SFAS No. 109 reverted to the same rule used in APB Opinion No. 11. Deferred taxes were considered current or noncurrent based on the classification of the balance sheet account related to the temporary differences. Deferred tax amounts with no related balance sheet account would be classified based on the expected reversal date of the temporary differences. In contrast, SFAS No. 96 had required classification of all deferred taxes as current or noncurrent based on the scheduled reversal date.

SFAS No. 109 finally eliminated the exceptions to comprehensive allocation for the indefinite reversal situations from APB Opinion No. 23 on a prospective basis. Earlier, FASB [1986] had sought to eliminate these exceptions in the Exposure Draft preceding SFAS No. 96. However, constituents' comments caused the Board to modify its position at that time, and these exceptions had been allowed to continue in the final version of SFAS No. 96.

Subsequent to the issuance of SFAS No. 109, application questions were addressed in a special report by FASB staff members Perry and Simpson [1992]. (Perry had joined the FASB staff after retiring from public accounting.) Also, specific income tax accounting issues were addressed in a number of EITF abstracts, including several occasioned by provisions of the 1993 tax act.

With the controversy engendered by SFAS No. 96 finally quelled by the issuance of SFAS No. 109, the normative debate about the best tax allocation method to apply under U.S. GAAP waned. More recent articles in the professional journals have focused on applying the provisions of SFAS No. 109 [Read and Bartsch, 1992; Leahey, 1993; Petree et al., 1995] and evaluating its impact on subsequent accounting standards [Cocco et al., 1994; Munter and Ratcliffe, 1996]. Articles in academic journals have focused on deferred tax issues that can be investigated empirically [Gupta, 1995; Chandra and Ro, 1997]. This may reflect saturation with the income tax accounting issue after so
many decades of debate as well as current trends in academic and professional journals.

SUMMARY AND CONCLUSIONS

This paper serves to illustrate the ebb and flow of opinions on the "best" method of accounting for income taxes, given differences between taxable income and book income. The issue arose in the 1930s and 1940s as CAP began to promulgate professional standards to address the problem. During the 1950s, a debate was waged in professional and academic journals concerning the need for interperiod tax allocation, the extent to which it should be applied, and the best single method of applying it. In the 1960s, several combined approaches were discussed in the literature. The APB considered the income tax problem and issued Opinion No. 11. The 1970s brought new combined proposals and various amendments to that opinion. FASB reconsidered the problem during the 1980s and issued the ill-fated SFAS No. 96. During the 1990s, SFAS No. 96 was superseded by SFAS No. 109 and the debate about normative issues started to wane.

During these decades, the arguments for the various approaches to accounting for income taxes have been recycled with many accounting firms, rule-making bodies, and academic institutions represented in the discussion, but no particular group dominating the debate. A true consensus about the best method of accounting for income taxes does not seem to have evolved, probably due to the sheer variety of accounting alternatives available and the discrepancy between the theoretical consistency of allocation methods and the ease with which they can be applied in practice. Practicality within the constraints imposed by the conceptual framework appears to be the approach taken by the present standard setters.

Nevertheless, continued differences between taxable income and financial statement income guarantee that the issue will not go away. Future accounting standards and tax acts will raise issues about new book-tax differences, and the profession will be called upon to assess their impact on financial reporting. Whether the debate will be restricted to practical implementation questions or veer back towards broader theoretical questions remains to be seen.
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THE FIRST WISCONSIN ACCOUNTANCY BILL: AN HISTORICAL PERSPECTIVE

Abstract: Wisconsin's first attempt to pass legislation certifying accountants occurred in 1901, the beginning of the La Follette era. Overwhelmed by the issues of the day, this first bill died and another was not introduced until the incorporation of the Wisconsin Association of Accountants in 1905. Subsequent legislation failed to pass each year until 1913 when a bill was finally signed by Governor Francis McGovern. The details of these efforts hint at political rivalries and professional dedication. This paper attempts to relate not only the documentary history of these bills, but also to convey a sense of the underlying debates.

The first successful CPA legislation in the U. S., the 1896 New York law which granted accountants the right to limit entry to their profession through a written exam, can be viewed as the beginning of the American accounting profession. However, by 1901, when Wisconsin initiated its first attempt at CPA legislation, only two additional states had joined New York. Over the 12 years it took to obtain statutory recognition for the profession in Wisconsin, another 19 states passed accountancy legislation.

1901: A CASE OF BAD TIMING

The first bill to regulate accounting in Wisconsin was introduced in the state legislature in 1901. Wisconsin had just entered a period of unity and relative political calm. "No man could have been inducted into high office under conditions favoring him more than those that attended the inauguration of Governor Robert M. La Follette" [Philipp, 1973, p. 24]. In his inauguration speech on January 9, 1901, "Fighting Bob" restated his position supporting a direct primary law and railroad taxation [Plumb, 1930, p. 133]. Believing that he had a mandate from the people of the state to proceed, the governor caused the Direct Primary Bill to be introduced simultaneously in both houses of the legislature on January 28, 1901.
A week earlier, on January 21, James McGillivray, president pro tem of the Wisconsin Senate, had introduced Senate Bill 31S calling for the certification of public accountants in the state. This bill provided that:

Any citizen of Wisconsin residing or having place for regular transaction of business in the state, being over the age of twenty-one years and of good moral character, and who shall receive from the board of examiners a certificate of his qualifications to practice as a public expert accountant as hereinafter provided, shall be styled and known as a certified public accountant.

The bill was referred to the Judiciary Committee for consideration. By February 12, however, the unity of the La Follette camp had begun to break apart and political maneuvering on the governor's part had led to suspicion and dissent [Philipp, 1973, p. 32]. Many of La Follette's supporters had defected because of what they perceived as an air of secrecy and backroom politics [Plumb, 1973, p. 27]:

It is an interesting fact, that with three noteworthy exceptions, no man connected with the faction that subsequently fought Governor La Follette so bitterly can put his finger on the specific act of the governor that first aroused his ire .... But conditions had changed now. As the days passed it was noticed that an air of mystery was beginning to gather about the capitol building. Men were called to the executive chamber for conferences, it is true, but they were carefully selected from among their fellows and the consultations were always held behind closed, guarded doors.

On February 12, the Milwaukee Sentinel reported a heated discussion between Senator McGillivray and Senator Andrew Kreutzer, chair of the Judiciary Committee and a former La Follette man. The tenor of the discussion as reported seemed to indicate that McGillivray was admonishing Kreutzer for improper or inefficient handling of Judiciary Committee business. Perhaps anticipating some "revenge" for his words, McGillivray reintroduced another accountancy bill, number 191S, later that same day and requested that it be directed to the Senate's State Affairs Committee.

Bill 191S was similar to 31S but for three significant exceptions. First, 191S referred to "any citizen of the United States residing or having place for regular transaction of business in Wisconsin," while 31S referred to "any citizen of Wisconsin
residing or having place for regular transaction of business in the state.” Although perhaps not actually representing a difference in intent between the two bills, it may have been interpreted as significant by some legislators. In subsequent years, the issue of whether or not to limit certification of accountants in Wisconsin to state residents became pivotal in the debate over later bills, including the 1913 bill which eventually became law. Requiring U.S. citizenship was important in protecting the fledgling American profession from overwhelming competition from its British counterpart. Citizenship and state residency played a part in the political process that preceded passage of the 1913 Certified Public Accountant Act.

Second, Senate Bill 191S expanded the definition of which individuals would be certified without examination to include public accountants who had practiced in Wisconsin for two years prior to passage rather than the one year of “practicing in this state on his own account” as mandated by 31S. The concept of “practicing on one’s own account” was very restrictive, requiring an individual to be self-employed in an accounting or bookkeeping practice. Many potential CPAs were negatively impacted by this requirement including many employees of large, foreign firms. This bill also extended certification without examination to individuals certified in other states. Both provisions were consistent with McGillivray’s anti-trust leanings, but may not have been restrictive enough for some of his protectionist colleagues.

Finally, Bill 31S allowed certified accountants themselves to elect a Board of Examiners of their peers, while Bill 191S provided for the regents of the University of Wisconsin (UW) to appoint a three-person board, consisting of the dean of the Department of Commerce and two public accountants who had practiced in the state for at least two years. It is interesting to note that, perhaps to curry UW support, 191S also required the establishment of a correspondence course to prepare candidates for the examination. The reader is advised that the characteristics of the various proposed accountancy bills discussed in this paper are compared across 11 parameters in Appendix A.

Both 191S and 31S were referred out of Committee with the recommendation to postpone indefinitely. Perhaps because the animosity generated by the Direct Primary Bill and the railroad taxation issue absorbed so much legislative energy, the certification issue was not brought up again for three legislative sessions.
THE WISCONSIN ASSOCIATION OF PUBLIC ACCOUNTANTS

On February 19, 1906, the Board of Directors of the nascent Wisconsin Association of Public Accountants (WAPA) met in special session "for the purpose of discussing the features of an accountancy bill to be proposed to the legislature of this state." After discussing the features of such bills passed by various states, the meeting was adjourned. Subsequently, at a meeting on February 28, 1906, the Board of Directors composed an outline of a bill for discussion by the whole membership. Interestingly, the minutes of the Board of Directors meeting note that "this outline was taken down in shorthand by a stenographer who is to furnish a copy to each of our members." This implies that the directors were, in fact, composing the draft bill in committee. The proposed bill was discussed in depth on March 5 and May 7 by the whole membership before being approved on June 13, 1906.

The Accountancy Bill approved by the WAPA (see Appendix B for a transcription of the complete text) had two major provisions. The first, relating to the characteristics of individuals desiring to be styled Certified Public Accountants, required an individual to be a U. S. citizen, to be a resident of or to have had a place of business in the State of Wisconsin for three continuous years, to be of good moral character, and to be over 25 years of age. The second, relating to the establishment of a Board of Examiners, created a board of three members "conversant with the scope of accountancy, which embraces the fields of commerce, finance and accounts." The Board, comprised of one appointee each by the governor, the president of UW, and the WAPA, was to establish examination fees and a fund for the certificates to be maintained by the Association. Individuals who had been practicing accountancy in the state for three years prior to the act and who could obtain the endorsement of five resident public accountants were to be certified without examination. Later meetings of the Association [WAPA, October 1, 1906] added the requirement that the members of the Board of Examiners be "skilled accountants actively engaged in the practice of accountancy in the State of Wisconsin," extended the practice requirement for certification with-

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1The minutes book of the WAPA is owned by its successor organization, the Wisconsin Institute of Certified Public Accountants, which has graciously allowed me extensive access to its records.
out examination to five years, and added a courtesy acceptance of equivalent examinations taken in other jurisdictions.

The Association was extraordinarily active in pushing passage of this proposed bill. In response to an invitation to attend the National Conference of the American Association of Public Accountants, the minutes of the Association [WAPA, October 1, 1906] reflected the sentiment that “it was unlikely that any of our members would avail themselves of the pleasure of attending that meeting, as all our energies were directed toward accomplishing the passage of a C.P.A. bill in this State.” The Association printed 1,500 copies of the proposed bill for distribution to help garner support [WAPA, October 15, 1906]. Support was also solicited from the Merchants and Manufacturers Association of Milwaukee, whose secretary, Mr. Bruce, was reported as being “very favorably impressed with the accountancy bill” to the degree that he “promised to give it his support and to interest his association in the measure” [WAPA, December 3, 1906].

On December 27, 1906, the final version of the proposed bill was drafted and approved. This version added a provision for an examination to be administered whenever the Board had five applications for certification. The examination included sections on “Theory of Accounts,” “Practical Accounting,” “Auditing,” and “Commercial Law as affecting accountancy.” The Association’s bill further modified the grandfather provision to reduce the practice requirement to three years for accountants in the state prior to passage of the bill, while maintaining the five-year requirement for nonresidents.

1907: CLOSE BUT STILL UNSUCCESSFUL

On January 22, 1907, Julius Roehr, a state senator from Milwaukee, introduced Senate Bill 10S, which was referred initially to the Committee on State Affairs. The bill was subsequently referred to the Committee on the Judiciary on March 7. Senator Roehr’s bill was identical to the one proposed by the WAPA with the single exception of specifically allowing CPAs to administer oaths. This unusual provision was subsequently deleted by amendment.

The Judiciary Committee proposed an amendment to Senate Bill 10S which redirected the authority to certify accountants from the secretary of state to the regents of the University of Wisconsin. It further required that individuals who desired to take the examination would [Senate Bill 10S, 1907]:

https://egrove.olemiss.edu/aah_journal/vol25/iss2/18
be a graduate from the course in commerce of the university of Wisconsin or shall for a period of at least three years have been employed in the office of a public accountant as an assistant, or shall have been practicing as a public accountant on his own account.

This may have been done to draw support from those senators who supported the University. On May 24, 1907, the amended bill passed the Senate and was sent to the State Assembly. The Assembly received the bill and rushed it into the Judiciary Committee, where nonconcurrence was recommended with two dissenting votes. The Assembly accepted the Committee’s recommendation on June 7, 1907. Not to be discouraged, the Assembly Committee on University Affairs, undoubtedly interested in enhancing the prestige of UW, immediately introduced an identical bill (1028A) which unfortunately was again referred to the Judiciary Committee. Not surprisingly, the Committee again recommended indefinite postponement and the bill died on June 27, 1907. Opportunity had passed for another year.

1909: BACKLASH TO THE UW’S POWER

On February 4, 1909, Assembly Bill 173A was introduced by Representative D.C. Coolidge. This bill resembled the Senate bill of 1907, but attempted to resolve several controversial issues which may have contributed to the Assembly’s rejection. Bill 173A placed the power to appoint the Board of Examiners firmly in the hands of the governor. In a Populist reaction to the increasing power of the UW system, it also removed the option for a graduate of the UW’s course of commerce to sit for the examination without experience. In addition, 173A removed the grandfather provision for individuals certified in a foreign country, probably addressing the “British problem,” and required Wisconsin CPAs to be residents of the state.

On April 23, 1909, the Judiciary Committee recommended passage of Substitute Amendment No. 1, A. to 173A, which created a new class of CPA referred to as a “junior accountant;” that is, one with less experience than an individual entitled to be called a CPA. This substitute bill was apparently designed again to appeal to UW’s supporters who foresaw a problem with highly trained university graduates being unable to take the examination immediately upon graduation.

A series of political maneuvers ensued in the Assembly, including attempts to refer the bill to the Committee on Claims
and a motion on the floor of the Assembly to indefinitely postpone, which was offered at a time when major supporters of the bill, including the proposer, were absent. Although this motion passed on a roll call vote, it was decided the next day to reconsider the postponement. It was then narrowly decided to engross the bill and read it a third time.

On May 5, 1909, it was again moved to postpone the bill indefinitely. The motion failed, and the bill subsequently was passed and moved on to the Senate. In the Senate, the Committee on State Affairs recommended nonconcurrence, primarily due to the clause which permitted certification for individuals who had practiced in the state for a number of years. One month later, a substitute amendment to remedy this defect was refused adoption, and the Senate formally voted to nonconcure.

There was apparently some further maneuvering in the Senate. A parallel bill 303S had been introduced on February 16, which removed reciprocity for individuals certified in another state, instituted a $5,000 performance bond requirement, and removed the state residency requirement. This bill was indefinitely postponed on June 4, 1909, and the certification attempts had failed for another session.

Clearly, the legislature's interest was not focused on accounting regulation. The issues of La Follette's control of the state, even when he was elected to the U.S. Senate, resulted in severe personal rivalries which may have hurt the bill's chances.

1911: ONE MORE TRY

Two bills were introduced in 1911 in the Assembly. These bills 337A (introduced on February 7) and 676A (introduced on February 22) differed only in the composition of the Examining Board (three versus five), the issue of intention to apply for U.S. citizenship versus actual citizenship, the qualifications to take the exam (337A had none), and the individuals who qualified to be certified without examination (676A only allowed for individuals who had been certified in another state or territory). Both bills were indefinitely postponed on May 13, 1911. Other issues, primarily the investigation of the process of nomination of a candidate for the 1912 senatorial election, absorbed the legislature's attention and the effort again failed.

1913: SUCCESS

Three bills were introduced in 1913 — 302A on February 11, 244S on February 18, and 755A on March 3. Assembly Bill
302A was recommended for indefinite postponement almost immediately on March 5, 1913. Possible causes of this rejection may have included the omission of the intention to seek U.S. citizenship as a criterion for eligibility and extensive language empowering the CPA as an officer of the state with rights similar to lawyers regarding administration of oaths and client privilege.

Assembly Bill 755A, as had been the case with similar bills in previous years, was referred to the Committee on State Affairs which, again, recommended indefinite postponement. This time, however, there were three dissenting votes reported. When the bill came up for a vote on March 15, David Jennings, speaking on behalf of Representative O. F. Roessler who had been vigorously supporting the accountancy bills introduced in 1911 and earlier in 1913, requested that the bill be laid over to March 20. On March 20, Mr. Roessler moved to refer the bill to the Joint Finance Committee of the Senate and Assembly. His motion lost.

At this point, the speaker, for some unspecified reason, called upon Mr. Roessler to chair the meeting during the vote on indefinite postponement. That vote resulted in a 46 to 46 tie, and Mr. Roessler was able to cast the tie-breaking negative vote. On April 3, the bill was referred to the Finance Committee which already had Senate Bill 244S under consideration. This bill was identical to 755A except in the age required to be certified (244S lowered the age to 23 from the 25 required by every proposed accountancy bill since 1907) and the omission of the requirement to have practiced "on one's own account" at passage in order to be certified without examination.

Relatively rapidly, 244S was recommended out of committee, passed the Senate and the Assembly, and was sent on to Governor Francis E. McGovern for signing. On May 29, 1913, along with a substantial number of other unrelated bills, the governor signed Wisconsin's first accountancy act.

HISTORICAL SIDELIGHTS AND QUESTIONS

The Wisconsin Session Laws, a record of bills signed by the governor, organized "acts resolutions and memorials passed at the biennial session of the legislature, 1913 ... in consecutive chapters in the order in which they are received from the Governor." The Accountancy Act was Chapter 337. Interestingly, Chapter 772 amended this chapter significantly. Chapter 772 mandated that merely being required to have practiced in Wis-
consin for one year prior to passage of the act in order to be eligible for certification without sitting for the exam was insufficient. One was also required to have been a resident of the state. Garland Cherry, in reminiscences addressed to the Wisconsin Association of Accountants on his fiftieth anniversary as an accountant,\(^2\) indicated that the original bill passed by the legislature had this residency requirement in it. However, Cherry, as a friend and employee of Arthur Young, CPA of Chicago and an acquaintance of the governor, convinced the governor to delete this requirement so that Mr. Young could be certified in Wisconsin. What really happened?

The *State Assembly Journal* indicates that Mr. Roessler voted against 244S both in the Joint Finance Committee and on the floor of the Assembly. Was it personal, part of a power struggle between the Senate and Assembly, or part of the battle with La Follette? Does the fact that members of the WAPA are listed as agents with regard to 755A, but not 244S, change our interpretation of these events? Were these parties really convinced that “practicing on one’s own account” was important for the profession?

In fact, the questions raised in this investigation outnumber the answers obtained. Since neither official record was maintained nor was an unofficial record found of the debate surrounding these bills, it becomes necessary to draw unsubstantiated conclusions. The risk here is that in retelling this history, we rewrite history.

The duty of the historian is to discover and report sequences of actions, show how those actions arose from past events, and demonstrate how they lead to future events. Further, a historian will give shape and form to bare events by placing them in a cultural and/or emotional context. This process involves choosing critical events, such as those discussed in this paper, from the confusion of ordinary time and placing them in some logical sequence.

However, the events chosen as critical do not have significance apart from the historian’s biases. Frequently, the act of choosing a context does not rely as much on the relationship of the context to the historical action as on the serendipity that moved the researcher to consult a particular source at a par-

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\(^2\)This unpublished letter, addressed to the Wisconsin Society of Accountants (now the Wisconsin Institute of Certified Public Accountants), is maintained by the Institute in its member records. Again, I am grateful to the Institute for permitting me access to these historical documents.
ticular time. In the researcher’s mind, the details appear to order themselves even though it is the researcher’s peculiar mental receptiveness that creates the order.

Thus, chosen facts achieve their own importance and become, in turn, the subjects of historical analysis and debate. Meanwhile, discarded events are consigned to an historical oblivion from which only a renaissance of interest can rescue them.

The very act of juxtaposing two events creates a connection between them which clearly exists, but which may not be defining. For example, it is not known whether or not Senators McGillivray and Kreutzer’s disagreement had anything to do with the submission of Bill 191S in 1901. It cannot be proved today what effect the Progressive’s victory and subsequent disillusionment had on the time frame for passage of an accountancy bill in Wisconsin. Nor can it be shown that Garland Cherry’s reminiscence accurately reflects what really happened.

Thus, it is important, in both reading and writing history, to keep in mind that the thread of individual life is woven into a cloth of culture and existence in which each thread, each section, is related but perhaps not in a causative manner.

It is clear, however, that in the State of Wisconsin, the struggle to obtain state recognition of accountants as professionals deserving of special protection was not an easy one. Perhaps further investigation can yield additional insights into the personalities of the people surrounding these events and the environment in which this struggle occurred, but we can never be sure that we understand what really happened and why.

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Cross: First Wisconsin Accountancy Bill


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Wisconsin, State of (1901), Senate Bill 191S.

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Wisconsin, State of (1907), Substitute Amendment 1A to Senate Bill 10S.

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Wisconsin, State of (1913), State Assembly Journal.

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APPENDIX A

Comparison of Wisconsin Accountancy Bills to 1913

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### APPENDIX A (Continued)
Comparison of Wisconsin Accountancy Bills to 1913

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<td>$5,000 bond</td>
<td>Junior Acct. if passed exam but less experience</td>
<td>May administer oaths. Certified report is presumptive evidence of facts. Are state officers.</td>
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APPENDIX B
Accountancy Bill

AN ACT to regulate the practice of the profession of public accountants in the State of Wisconsin.

The people of the State of Wisconsin, represented in Senate and Assembly, do enact as follows:

Section 1. Any citizen of the United States, or person who has duly declared his intention of becoming such citizen, having resided and having had a place for the regular transaction of the business of a professional accountant in the State of Wisconsin for the continuous period of three years, next preceding the passage of this act, being over the age of twenty-five years, of good moral character, and who shall have received from the Secretary of State of the State of Wisconsin a certificate of his qualifications to practice as a public accountant, as hereinafter provided, shall be styled and known as a “Certified Public Accountant,” and no other person shall assume such title, or use in any manner the name, title, or style of Certified Public Accountant, Chartered Accountant or any abbreviation or abbreviations of said words, or any other words, letters or figures to indicate that the person using the same is such Certified Public Accountant.

Section 2. There shall be appointed, within sixty days after the passage of this act, a Board of Examiners, consisting of three persons, who shall be skilled accountants actively engaged in the practice of accountancy and residing in the State of Wisconsin. The Governor of Wisconsin, the President of the University of Wisconsin and the Wisconsin Association of Public Accountants shall each appoint one member of said Board. Said appointees shall serve for one year from the date of appointment. Upon the expiration of said term, and each term thereafter, their successors shall be appointed from among the Certified Public Accountants of this state by the President of the University of the State of Wisconsin, for the term of one, two and three years respectively; provided, however, that no member of said Board shall serve for more than two consecutive terms. Any vacancy occurring in the first Board by death, resignation or otherwise, shall be filled, for the balance of the term, by the original appointer. Any vacancy occurring by reason of death, resignation or otherwise in the second or succeeding Boards, shall be filled, for the balance of the term, by the then existing Board; such appointment to be confirmed by the President of the University of Wisconsin.

Section 3. (a) Each member of the Board of Examiners shall be paid ten dollars per day while said Board is in session for the time expended in the performance of duties imposed upon them by this act, and one railroad fare each way coming and going to and from the agreed place of meeting; but the compensation for each member of said Board shall not exceed thirty dollars per session. A day shall consist of six hours.

(b) Said Board shall hold an examination of applicants within sixty days after not less than five applications have been filed in the manner provided for in this act, and shall mail each applicant a notice of the time and place of holding such examination thirty days prior thereto.

The examination shall be on “Theory of Accounts,” “Practical Accounting,” “Auditing,” and “Commercial Law” as affecting accountancy.

(c) Each application for examination must be made to the said Board in writing and be accompanied by a fee of twenty-five dollars. Such fee shall not be returned to the applicant if he fails to pass the examination, but such
applicant shall have the privilege of re-examination within two years without
the further payment of a fee.

Section 4. (a) The said Board shall, within thirty days after each examina-
tion held by it, certify the name of each successful applicant for a certificate to
the Governor, who thereupon shall direct the Secretary of State to issue, and
said Secretary of State shall thereupon issue, the certificate mentioned in the
first section of this act, for the issuance of which certificate the said applicant
shall pay to the Secretary of State a license fee of one dollar.

(b) Every qualified person shall take, and subscribe to an oath substan-
tially as follows, to-wit: I do solemnly swear (or affirm) that I will support the
Constitution of the United States and of the State of Wisconsin, and that in all
matters submitted to me for examination I will endeavor to act justly, care-
fully, impartially and uprightly. That I will not divulge any business secrets of
the persons, firms and corporations who shall have entrusted their affairs to
me, unless directed to do so by a court of justice, or other competent authority,
so help me God.

(c) He shall also provide an engraved official seal, bearing his name,
county and state, and the words “Certified Public Accountant,” and shall file an
impression of the same with his said oath, his autograph and a statement of
his postoffice address, with the Secretary of State and with the Clerk of the
Circuit Court in the county in which he resides. The Clerk of the Circuit Court
shall thereupon, under seal, acknowledge that the law has been complied with.

(d) The Governor shall revoke any certificate issued under the provisions
of this act whenever the Board of Examiners shall certify to said Governor that
any person holding such a certificate has been guilty of unprofessional con-
duct or has been convicted of a felony. But no such action shall be taken by
said Board except after written notice stating the complaint made against any
holder of such certificate shall have been first given to said holder and a full
and fair hearing of said complaint shall have been had by said Board.

Section 5. The Board of Examiners shall waive the examination of any
such person possessing the qualifications mentioned in Section 1 hereof who
shall have been at the time of the passage of this act practicing in this state as
a public accountant on his own account for the term of three years, and who
shall have applied in writing to said Board for a certificate within six months
after the passage of this act; provided, that such applicant shall be fortified
with the endorsements of five public accountants, residents of the State of
Wisconsin, and the certificate shall issue as hereinbefore provided. This provi-
sion shall also apply and extend to any person who shall have been actively
engaged in practice as a public accountant for not less than five years next
prior to the passage of this act, outside of the State of Wisconsin, and shall
have passed an examination equivalent, in the opinion of the Board of Examin-
ers, to the examinations to be held under the provisions of this act.

Section 6. Any person who shall violate any provision of this act shall be
deemed guilty of a misdemeanor, and, upon conviction thereof in any court
having criminal jurisdiction, shall be punished by a fine of Two Hundred
Dollars, or by imprisonment for a term of six months in the county jail, for the
first offense, and on second or further conviction for a second or further
offense, shall be punished by a fine of Five Hundred Dollars, or by imprison-
ment in the county jail for a term of twelve months.

Section 7. (a) The Wisconsin Association of Public Accountants, a corpora-
tion duly organized and existing under and by virtue of the laws of the State of
Wisconsin, shall within thirty days from the passage of this act deposit with
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the Secretary of State of the State of Wisconsin the sum of One Hundred Dollars.

(b) The said deposit of One Hundred Dollars shall remain with the Secretary of State as a guarantee fund, out of which he shall defray any deficiencies which may arise in the session or other necessary expenses provided for in this act.

(c) The fees paid to the Board of Examiners for certificates shall be paid over to the Secretary of State of the State of Wisconsin.

(d) The Secretary of State of the State of Wisconsin shall keep these fees, together with the guarantee fund herein mentioned, in a fund called "The Certified Public Accountant Fund."

(e) The compensation of the Board of Examiners, as provided for in this act, as well as the expenses for printing, stationery, books and certificates, shall be paid out of this fund, upon warrants of said Secretary of State, signed by the Chairman and Secretary of said Board.

Section 8. This act shall take effect and be in force from and after its passage and publication and the deposit of the guarantee fund by the Wisconsin Association of Public Accountants, as herein provided.
FROM ACCOUNTING TO NEGATIVE NUMBERS: A SIGNAL CONTRIBUTION OF MEDIEVAL INDIA TO MATHEMATICS

Abstract: The major object of this paper is to present evidence for arguing that the highly developed Hindu accounting tradition, beginning with Kautilya's Arthaśāstra about 300 B.C., or even earlier, may have had a part in the more receptive attitude of medieval Indian mathematicians, compared to Europeans, in accepting negative numbers. The Hindus justified this attitude by arguing that having a debt is the inverse of possessing an asset; thus, attributing a negative number to a debt but a positive one to an asset. To advance the argument, the paper shows that the accounting aspect of debt is at least as basic as its legalistic one. Indeed, the former can be traced to the 4th millennium B.C. or earlier, while the first known legal codes go back only to the 3rd millennium B.C. However, there are other angles from which to examine the relation between accounting and negative numbers. Some accountants [e.g., Peters and Emery, 1978] believe that the long-standing hesitation of European mathematicians to accept negative numbers contributed to the accountants' debit/credit scheme, while others [e.g, Scorgie, 1989] deny this view. But this controversy concerns rather the influence of negative numbers upon accounting. It neglects to investigate the reverse possibility; namely, the influence of accounting upon the Indian mathematicians' early acceptance of negative numbers. Thus, this paper first reviews concisely, for the sake of contrast, the arguments between Peters and Emery [1978] and Scorgie [1989]; then it elaborates on the long-standing resistance of Western mathematicians to legitimizing negative numbers (which, in its entirety, did not happen before the 19th century); and, finally, it discusses the very different attitude of medieval Indian mathematicians, who were the first to accept negative magnitudes as numbers (e.g., Brahmagupta, 7th century A.D., Bhāskara, 12th century A.D.). Their interpretation of a negative number as representing "debt" as a basic accounting and legal notion may have been conditioned by the long-standing accounting tradition of India since the 3rd century B.C. or before.

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Probing more deeply into mathematical history shows that accounting aspects may have played an important role in medieval India through the earliest acceptance of negative numbers. This deserves at least as much attention as did the controversy between Peters and Emery [1978] and Scorgie [1989] as to whether or not the avoidance of negative numbers by Western mathematicians influenced the development of double-entry bookkeeping in Renaissance Europe. Peters and Emery [1978] tried to show that due to the rejection of negative numbers by Renaissance mathematicians, account balances had to be kept positive; e.g., relying on the “basic balance sheet equation” \( A = L + OE \), instead of \( A - L = OE \). One might counter this argument by pointing out that the balance sheet equation \( A = L + OE \) is more likely to have resulted from entering every transaction twice, and on opposite sides, via the trial balance because mathematicians and even accountants of this time were already sophisticated enough to know that the equation \( A - L = OE \) is an equivalent transposition of \( A = L + OE \). But neither of these equations, nor a balance sheet, are mentioned in Pacioli’s *Summa* [1494]. There one encounters merely the Profit and Loss account and the trial balance as well as the inventory, which also served as a starting basis for opening the accounts, thus approaching the notion of balance sheet. This “need for a bookkeeping system free of negative balances,” in turn, was supposed to have led in commerce and in Fra Luca Pacioli’s *Summa* [1494] to the notions of debits (Per) and credits (A) instead of regarding the values of assets as positive and those of all equities as negative. Scorgie [1989], quite correctly, refuted such an interpretation by pointing out the following three “critical evidential errors” contained in the argument by Peters and Emery:

1. Omar Khayyám’s (ca. 1048 - ca. 1131) rejection of negative numbers, introduced in India by Brahmagupta, b. 598, was supposed to indicate that the use of negative numbers “died out in India,” if it really did at that time. Scorgie [1989, p. 317] claimed this to be invalid because a comment contained in Colebrooke [1973, p. iii], accompanying his translation of Brahmagupta together with that of Bhāskara II (b. 1115, Bhāskara hereafter), demonstrated that the work of the latter “was in the hands of both Mahammedans and Hindus between two and three centuries ago.”

2. Peters and Emery’s [1978, p. 425] assertion, claimed to be based on Cajori [1919, p. 107], that “the Arabs also rejected negative numbers, in spite of knowledge of their use in India”
was shown to be invalid by Scorgie [1989, p. 317] because Cajori referred to the mathematician Abu'l-Wafa (b. 940) who authored a text that “termed the result of the subtraction of the number 10 - 5 [which is 5] from 3 a ‘debt (dayn) of 2’” as quoted from Youschkevitch [1970, Vol. 1, p. 41]. Scorgie also referenced Vogel [1970, Vol. 4, p. 611], who pointed out that Leonardo Pisano (Leonardo da Pisa, also called Fibonacci, c. 1170-1250) “recognizes negative quantities and even zero as numbers.”

(3) Peters and Emery’s [1978, p. 426] further assertion, that “there is no question that Pacioli rejected negative numbers” was called “nonsense” by Scorgie [1989, p. 318] because Pacioli [1494, ff. 114 v.-115 r.] stated 12 rules for subtraction with an example of subtracting 16 from 4 which gives a pure negative number called by Pacioli [1494, f. 114 v.] “puro me­no.”

As the argument between Peters and Emery, on one side, and Scorgie, on the other, related accounting to negative numbers, it creates an inverse parallel to the main objective of this paper, thus offering a contrasting background as well as “counterpoint.” This objective lies in the search for evidence supporting the hypothesis that the highly developed Hindu accounting
tradition, beginning with Kautilya's *Arthaśāstra* about 300 B.C. or even earlier, may have had a part in the earliest acceptance or legitimization of negative numbers by mathematicians. The latter happened in India during medieval times [Brahmagupta, 7th century, Bhāskara, 12th century — see translations by Colebrooke, 1973]. But to understand the long-lasting resistance of Western mathematicians to negative numbers, it is necessary to provide in the next section an overview of this particular development. Only then, in the third section, is it possible to discuss and appreciate the Indian achievement in its relation to accounting.

THE MATHEMATICIANS' CONUNDRUM WITH NEGATIVE NUMBERS

In relating negative numbers to accounting, or vice versa, it must be noted that the status of negative numbers in mathematics from ancient times to the 19th century experienced many twists and turns in the West as well as in the Orient. This development was not as straightforward as one might believe from reading Peters and Emery [1978] or even Scorgie [1989]. Despite my agreement with the latter's objections to Peters and Emery, from a more global-historical point of view, the different attitude of Indians to negative numbers as well as to accounting ought to be considered. Thus, this paper shows, among other things, that in medieval India the important connection between negative numbers in mathematics and the debtor-creditor aspects of bookkeeping point in the direction from the latter to the former rather than vice versa. If historians of mathematics found this worth remarking, then accountants should be even more interested because it confirms the wide cultural impact of accountability notions. To recognize this, two insights, formulated in the third section as auxiliary hypotheses, are necessary — (i) a debt relation is not merely a legalistic but also a basic accounting concept, and (ii) debt relations and many other basic accounting notions were conceived and described, not merely used, in India long before medieval times, thus establishing an early and relatively advanced accounting tradition.

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*An example of varying attitudes in Asia toward negative magnitudes is, on one side, the acceptance of negative numbers by such leading mathematicians as Brahmagupta (7th century) and Bhāskara (12th century), while other Oriental scholars (e.g., many Arabs — see footnote 2), possibly even the Persian poet and astronomer Omar Khayyám may have rejected negative numbers.*
The earliest records of negative numbers, as Peters and Emery [1978, p. 425] mentioned, point to the Chinese, particularly to the mathematician Sun-Tsu [see Sun-Tsu Suan-ching or Arithmetical Classic of Sun-Tsu, 1st century], who not only presented different mathematical units by different positions and combinations of rods, but also distinguished positive numbers by using red rods and negative numbers by black rods [cf. Cajori, 1919, p. 72]. But the statement by Peters and Emery [1978, p. 425] that, "according to Cajori [1919, p. 72], the earliest reference to negative numbers is found not in mathematics, but, surprisingly, in commerce," is a puzzling misinterpretation as Sun-Tsu Suan-ching is undoubtedly a mathematical work. Above all, there is no pertinent reference in Cajori [1919, pp. 71-73] to commerce, merely to a possible derivation of this practice from the red and black beads of the abacus, which also is a mathematical device. According to Boyer [1989, p. 227]:

The idea of negative numbers seems not to have occasioned much difficulty for the Chinese since they were accustomed to calculating with two sets of rods — a red set for positive coefficients and a black set for negatives. Nevertheless, they did not accept the notion that a negative number might be a solution of an equation.

Thus, even if the Chinese used negative numbers, the mathematical status of those numbers need not have been much higher than it was in ancient Greece. Even Cajori [1919, p. 93] agreed that the "Indians were the first to recognize the existence of absolutely negative quantities." Thus, it is generally

Of course, negative numbers must not be confused with the operation sign for subtraction; indeed, an ideogram for minus can already be encountered in ancient Babylonia; i.e., thousands of years before the earliest known use of a negative number as a magnitude. Or as Kline [1980, p. 116] pointed out, "Both Girard and Harriot used the minus sign for the operation of subtraction and for negative numbers, though separate symbols should be used because a negative number is an independent concept whereas subtraction is an operation." This reference refers to Albert Girard (1595-1632) [1629] and Thomas Harriot (1560-1621) [1631].

Cajori's [1919, p. 93] expression "absolutely negative quantities" might refer to the recognition and treatment of negative quantities as genuine numbers; i.e., as those "equally important" to any other numbers presently known and in the future to be recognized. He may even have referred to the belief that reality itself possesses negative quantities, representable through negative numbers, etc.

The above qualification, "presently known and in the future to be recognized," may indicate that the legitimization of negative numbers in medieval
acknowledged that the first known use and legitimization of negative numbers in mathematics is in Brahmagupta's *Brahma-Sphuta-Siddhānta* [628, partly translated and commented on, together with some work by Bhāskara, in Colebrooke, 1973].

But why did negative numbers come so late to be generally accepted in European mathematics? In a way, our number system goes back to ancient Greece where the natural numbers (i.e., the positive integers, such as 1, 2, 3, . . . etc.) formed an almost sacred basis. The Pythagoreans deemed the phenomena of the universe to be reducible to those whole positive numbers or their ratios. In refining their notions, they may have come to regard numbers in a more abstract way, but for them and other ancient Greek mathematicians, a number was always something positive. Even when such notions as the square root of 2 or the notion of π (i.e., the non-ratios, or what we today call the irrational numbers) were discovered, the Greeks refused to con-

India did not require knowledge of the entire gamut of our modern number system, from natural numbers to complex numbers or even transfinite ones. For medieval European mathematics, it would have been an immense step forward had its disciples accepted negative and irrational numbers in the same way as they accepted natural numbers and fractions.

For the reader interested in the achievements of eastern vs. western mathematicians in other areas of the number system, I refer to the internationally known text by Aleksandrov et al. [1963] which stated that "the concept of an irrational number simply did not originate among them [i.e., the Greeks]. This step was taken at a later period by the mathematicians of the East" [pp. 26-27]. "The Greeks discovered irrational magnitudes but considered them geometrically, as linear segments. . . . In this way the Greeks were already in possession of much of the material of contemporary elementary algebra but not, however, of the following essential elements: negative numbers and zero, irrational numbers abstracted entirely from geometry, and finally a well-developed system of literal symbols. It is true that Diophantus made use of literal symbols for the unknown quantity and its powers....but his algebraic equations were still written with concrete numbers" [p. 37]. Furthermore: "Omar Khayyam (about 1048-1122), and also the Azerbaijani, Nasirreddin Tsui (1201-1274), clearly showed that every ratio of magnitudes, whether commensurable or incommensurable, may be called a number; in their work we find the same general definition of number, both rational and irrational. . . . The magnitude of these achievements becomes particularly clear when we recall that complete recognition of negative and irrational numbers was attained by European mathematicians only very slowly, even after the beginning of the Renaissance of mathematics in Europe" [p. 39]. This last quote might possibly contradict what Peters and Emery [1978] assumed to be Omar Khayyám’s attitude toward negative numbers.

"In Colebrooke [1973], Brahmagupta is spelled as "Brahmegupta" and Bhāskara II as "Bhāscara." But here we shall adhere to what seem to be the
consider them as numbers. The Greeks "never succeeded in uniting the notions of numbers and magnitudes, e.g., dots on a continuous line. The term 'number' was used by them in a restricted sense. What we call irrational numbers was not included under this notion. Not even rational fractions were called numbers" [Cajori, 1919, p. 22]. Since that time, every step of extending the number system, be it in the direction of the full-fledged integer system, rational numbers, and even real and complex numbers, constituted a very uneven and mixed "progression." Surprisingly enough, one of the last categories to be generally accepted by European mathematicians was that of negative numbers, even though from the 13th century until the second half of the 19th century, some aspects of negative magnitudes were at certain times accepted by some eminent European mathematicians.

Negative numbers became known in Europe via the Arabs and Leonardo da Pisa [e.g., his well-known Liber Abaci, 1202]. According to Cholerus [1944, p. 143], Leonardo da Pisa is said "to have accepted negative solutions of equations, and remarked that the solution would be meaningless if regarded as an 'asset' (Vermögen) but quite meaningful if regarded as an expression of 'debts'" (translated). Unfortunately, Cholerus did not tell us where Leonardo da Pisa made this remark. But if it was actually Leonardo's, it would confirm Scorgie's second argument against Peters and Emery [1978]. But it hardly meant a definite victory in the recognition of negative numbers in general. Most European mathematicians did not accept them as genuine numbers until the second half of the 19th century. Eminent mathematicians, such as Nicholas Chuquet (1445?-1500?) and Michael Stifel (1486?-1567) called them "absurd;" Jerom Cardan (1501-1576) regarded negative roots (of equations) as mere symbols; François Vieta (also Viète, 1540-1603) abandoned negative numbers altogether; and Gottfried W. Leibniz (1646-1716) recognized them only from a formal point of view. On the other hand, Raphael Bombelli [1526-1572 or later] and Albert Girard (1595-1632) put negative and positive numbers on a par, as did Thomas Harriot (1560-1621). However, Harriot did not accept negative roots of equations in his posthumous work Artis analyticae praxis [1631]. John Wallis (1616-
1703) also accepted negative numbers as equal to positive ones. Yet, Jean d'Alembert (1717-1783) published an article in the famous *Encyclopédie*, edited by Denis Diderot and himself [1751-1759], under the title “Negative,” which stated that “a problem leading to a negative solution means that some part of the hypothesis is false but assumed to be true” [quoted in Kline, 1980, p. 118]. Only Leonhard Euler (1707-1783) shared the Indians' position of vindicating negative numbers by reasserting that “we denote what a man really possesses by positive numbers, using, or understanding the sign +; whereas his debts are represented by negative numbers, or by using the sign -.” [Euler, 1770, Ch. 2, item 17; p. 4 in the English reprint edition, 1972/1989].

At the end of the 18th century and the beginning of the 19th, mathematicians still continued to object to negative numbers. William Frend (1757-1841) [1796, preface] stated that a number “submits to be taken away from a number greater than itself but to attempt to take it away from a number less than itself is ridiculous;” Lazare Carnot (1753-1823) [1797/1970] affirmed that the idea of something being less than nothing is absurd; August De Morgan (1806-1871) [1831] likewise voiced his objections to negative numbers. William R. Hamilton (1805-1865) was hardly more favorably disposed toward negative numbers. Only toward the end of the 19th century was the mathematicians' conundrum with negative numbers, and rational and complex numbers in general, slowly resolved, as seen from the following quote from Kline [1980, p. 179]:

The logic of the rational numbers was still missing. Dedekind realized this and, in *The Nature and Meaning of Numbers* [1888], he described the basic properties that one might use for an axiomatic approach to the rationals. Giuseppe Piano (1858-1932), utilizing Dedekind's ideas and some ideas in Hermann Grassmann's *Textbook on Arithmetic* [1861] succeeded in *Principles of Arithmetic* [1889] in producing a development of the rational numbers from axioms about the positive whole numbers. Thus, finally, the logical structure of the real and complex number systems was at hand.

By then, it was high time for mathematics to have caught up with humankind's perception of social and physical reality as, by the end of the 19th century, innumerable empirical applications for negative numbers had already been conceived (in
fields from accounting and geography to thermodynamics and electricity).

THE HINDUS' ACCEPTANCE OF NEGATIVE NUMBERS
AND THEIR INTERPRETATION AS DEBTS

The conservative European attitude toward negative numbers did not hold sway over Indian mathematicians who were not restrained by foundational considerations and proved to be more venturesome in operating with such magnitudes. Colebrooke's [1973] book and translation of two of Brahmagupta's chapters, "Gaṇitād'haya" and "Cuttacād'hyaya," are usually taken as evidence that Brahmagupta [628] was the first to have accepted negative numbers and operated with them.\(^9\) Colebrooke's book also contains translations of two chapters, "Vijagaṇīta" and "Lilāvati," by Bhāskara [1151] from which we can formulate our main hypothesis that Indian mathematicians, possibly due to a long-standing accounting tradition, seem to have been the first to give empirical meaning to negative numbers by interpreting them as debts (i.e., in terms of a basic accounting notion), while interpreting positive numbers as the possession of assets. The crucial evidence comes from two footnotes in Colebrooke's translation of Bhāskara's work. One of these, expressing the "rule for addition of affirmative and negative quantities," states: "For a demonstration of the rule, the [medieval] commentators, Śūryadāsa and Črīșnī, exhibit familiar examples of the comparison of debts and assets" [Colebrooke, 1973, p. 131, note 2]. The other, the "rule for the subtraction of positive and negative quantities," said: "So in respect of chattels, that, to which a man bears the relation of owner [possession], is considered as positive in regard to him: and the converse (or negative quantity) is that to which another person has the relation of owner" [Colebrooke, 1973, p. 132, note 3].\(^{10}\)

\(^9\) See particularly item 17 and Statement of item 18 of Section I of Chapter XVIII on "Cuttacād' hyaya,"("Algebra") of Brahmagupta's book Brahmasphuta-siddhānta [628], as well as items 31 and 32-33 of Section II of the same book and chapter.

\(^{10}\) As to the modern usage of assigning minus signs in accounting, they are, of course, not only assigned to debt claims but also to ownership claims. But beware, the word "ownership" is often used in an ambiguous way, meaning either possession of an asset (the value of which would be expressed by a positive number) or the claim represented by an owner's equity (represented by a negative number).

It may also be noted that "debts" were not the Hindus' only interpretation...
As to a better comprehension of the influence of Hindu accounting on the mathematical acceptance of negative numbers, the first section mentioned two prerequisites that might be formulated as auxiliary hypotheses. First, basic accounting notions, including asset, debt, revenues, expenses, and income, were first described in India in Kautilya's *Arthaśāstra* [ca. 300 B.C.], establishing a cultural climate that may ultimately have facilitated the association between a debt and a negative number. This claim can be verified from various presentations and translations of or commentaries on the *Arthaśāstra*, such as Shamasasstry [1967], Kangle [1960, 1963, 1965], and Rangarajan [1992]. Relevant accounting interpretations and further commentaries can be found in Choudhury [1982], Bhattacharyya [1988], and Mattessich [1997, 1998b].

Kautilya's treatment of accounting was sophisticated enough to include (i) various types of income, including aspects of accounting for price and price-level changes and a possible distinction between what modern accountants call real vs. fictitious holding gains and their potential relations to other accounting concepts; (ii) classifications of expenditures or costs, including possibly fixed and variable costs; and (iii) some notions of assets, debts, and capital. Thus, the description of accounting seems to have been more advanced in India than anywhere else at the time, with the possible exception of China. In consequence, the existence of cultural prerequisites for relating accounting to mathematics, particularly for attributing positive numbers to the possessions of assets but negative numbers to debts, seems to be more likely in such a sophisticated environment. This supposition is reinforced by a relative social stability and continuity in India from the 3rd century B.C. to early medieval times. Despite many terrible conflicts, it seems that during this time India did not experience anything comparable to the decline of the Roman Empire in the wake of devastating wars of negative numbers. The note to Bhāskara's "Līlāvati" [par. 166], referring to a segment on a line or geographical direction, states: "The segment is negative, that is to say, is in the contrary direction. As the west is contrary of east; and the south the converse of north" [Colebrooke, 1973, p. 132, note 3].

11A fictitious holding gain merely appears to be a gain; it refers to holding a (non-monetary) commodity during an inflationary period in which, for example, the general price level increased equally or more than the specific price level pertaining to this commodity. Obviously, it is not possible to derive from mere inflation any real gain by holding a non-monetary asset (in contrast to owing a debt during such an inflationary time which, indeed, may result in a genuine holding gain).
and mass migrations. Thus, Indian insights into accounting during the 3rd century B.C., or even before, are likely to have been preserved until medieval times.

The second prerequisite or auxiliary hypothesis is that assets and debt claims are among the most basic accounting concepts. Debt claims, one of the earliest accounting notions, constitute the very pivot on which Sumerian token accounting of the 4th millennium B.C. hinged. This ancestry may be taken as further support that the accounting aspect of debt claims is at least as fundamental as its legalistic one. There exists incontrovertible archaeological evidence that the accounting notion of a debt — manifested by a kind of IOU in the form of a clay envelope (and, at times, more perishable receptacles) containing clay tokens that represented the items owed — preceded not only the codification of laws and legal regulation of debts, but even the invention of writing by at least 500 years. While archaeological findings of token accounting, i.e., clay tokens and envelopes representing debt and ownership claims, go back to the middle of the 4th millennium B.C., proto-cuneiform writing developed around 3000 B.C. [see, for example, Schmandt-Besserat, 1977, 1992; Mattessich, 1987, 1995, 1998b; Nissen et al., 1993; and Galassi, 1997]. The first known legal codes appeared about a millennium later; they are those of the kings of Isin and Shulgi (third dynasty of Ur, ca. 2000 B.C.) and King Lipit-Ishtar (2100 B.C. to 2092 B.C.) [see Ceram, 1949, p. 421], all of them precursors to the much better known code of Hammurabi, nowadays attributed to the 18th century B.C.

Even if the moral or quasi-legalistic aspect of a debt is a prerequisite to its accounting aspect, the former is so closely intertwined with the latter that in most social settings they occur conjointly.\textsuperscript{12} What would a debt practically be without

\textsuperscript{12}There is no evidence that five thousand years ago the Sumerians conceived of such distinct disciplines as law, accounting, and business administration. Thus, I wholly agree with one of the reviewers that historians should beware of attributing present circumstances to ancient times. But, it is quite a different matter when it comes to such basic human notions as having a "claim" on something or somebody, corresponding directly to our notions of assets and debts, liabilities and ownership. To deny that those relations existed among the Sumerians does not only run counter to the pertinent archaeological evidence, but also against the insights of anthropology and the behavioral sciences in general. Nietzsche [1887] traced even the origin of conscience to "the contractual relationship between creditor and debtor." Though this may be an interesting explanation, I suspect that the notion of conscience has older and deeper roots.
the two major ingredients of accounting — accountability and counting? The recording of a debt becomes indispensable for at least two reasons: (i) to provide for the limitations of human memory and (ii) to substantiate the existence and magnitude of the debt at due-date. This may explain why some accounting tokens go back as far as 8000 B.C., five thousand years before the invention of writing. Yet, I have no objection to one reviewer's suggestion that "the glory of negative numbers should go to 'law' as much as 'accounting'." I might even go beyond and extend the "glory" to geography as well (cf., see the second paragraph of footnote 10). However, in this venue, I deem it reasonable to concentrate on accounting aspects. The major point of this paper is unaffected; namely, that in medieval India the "existence" and use of negative numbers were justified, though not exclusively, by interpreting them as "debts," which in turn were conceived as "negative assets." Whether "debts" and "assets" have further commercial and legal connotations is here beside the point.

Perhaps there is a third prerequisite to comprehending the significance of accounting for this particular historical impact on mathematics. Only those familiar with the enduring resistance of European mathematicians to negative numbers can fully appreciate the early Indian achievement of giving the concept of negative numbers its proper place in the pantheon of mathematical concepts. Accounting seems to have played its part in this achievement. Of course, had this taken place in Europe, or had the Arabs and Leonardo da Pisa succeeded in transferring this need for a mathematical legitimization of negative numbers, Western mathematics might well have advanced more rapidly.

Admittedly, the first part of my hypothesis is supported by nothing but two short footnotes in a medieval mathematical or astronomical manuscript. Some readers might consider this fairly "slim" evidence. Accounting historians, in contrast to archaeologists, dealing with later periods are used to much more abundant evidential material and, thus, might be prone to disparage the support for the hypothesis here advanced. Yet comparing this with the diminutive evidential basis on which major advances in modern palaeontology frequently rests, one must admit that disregarding any kind of genuine evidence, be it as unobtrusive as
the one supporting my hypothesis, may deprive any science of worthwhile insights.\textsuperscript{13} As to evaluation of this evidential support, it must ultimately lie with the reader. Measurement of such support is still elusive and subjectively tainted, particularly as far as hypotheses concerning early historical or prehistoric events are concerned. Here the decisive criterion for accepting a specific hypothesis is not the “absolute” strength of evidence, but how the support compares to the evidence propping the counter-hypothesis. The latter would consist, in our case, of the two-part view that, first, “debt” is \textit{not} a basic accounting notion and, that second, the concept of “debt” did \textit{not} have a part in facilitating or justifying the acceptance of negative numbers by major medieval Indian mathematicians.\textsuperscript{14}

\begin{footnotesize}
\textsuperscript{13}Just as the DNA of a single human hair may constitute decisive forensic evidence in a criminal court, so a single medieval footnote or two may constitute evidence that “flips” the preference for a traditional hypothesis (e.g., the counter-hypothesis) to that for a new hypothesis. Thus, it is not so much the quantity but the quality of evidence that ultimately counts.

\textsuperscript{14}I am reluctant to offer here any methodological recapitulation, but it seems necessary due to some misunderstanding raised during the review process of this paper. So far, neither Carnap [1950] nor anyone else has succeeded in establishing an \textit{objective} measure of the “degree of confirmation” for measuring the strength with which a piece of specific evidence supports an hypothesis. Thus, it seems that one has to rely on Popper’s [1935] assumption that a plausible hypothesis is accepted as long as no refutation is provided. As to “plausibility,” it is rooted in a subjective “degree of belief” [cf., Ramsey, 1931] based on tangible evidence. The alternative of an “objective” measurement as, for example, the “degree of confirmation,” first developed by Neyman and Pearson [1937] and widely used in statistical hypotheses testing, is restricted to statistical mass phenomena and, therefore, is not applicable to such historical hypotheses as advanced above. For further details see Mattessich [1978, Chs. 5 and 6, pp. 141-248].

Applying these insights to the present paper, one reaches the following twofold conclusion. First, the “link” between the evidence that relatively sophisticated accounting thoughts had existed in India since 300 B.C. and the hypothesis that it was the familiarity of medieval Indians with accounting which led them to interpret a debt as a negative asset, leading ultimately to the use of negative numbers in mathematics, cannot be established objectively but merely subjectively. Second, to invalidate this hypothesis, one has to show it impossible that the relative accounting sophistication of early Hindu society could have led to the pertinent influence upon medieval Indian mathematicians. Hence, this paper may well stimulate historians to continue their search for a genuine refutation of one or more of my hypotheses.
\end{footnotesize}
CONCLUSION

In mathematics it is not always the formal consistency alone that is decisive. In many situations the “Authority of Nature,” as Kline [1980, p. 308] called it, is no less important. Although the empirical existence of a structure or relationship is not a prerequisite for its acceptance as a mathematical concept, it often happens that such existence stimulates the formulation of a concept. This seem to have happened in Sumeria and ancient Egypt when special cases of the “Pythagorean theorem” were formulated on the basis of experience, perhaps in large construction projects. Something similar may have happened when the Indians conceived the legitimacy of negative numbers on the basis of either debts as an inverse to the possession of assets or of opposite geographical directions (see footnote 10). Of course, one may also cite examples of reverse cases where mathematics was leading and empirical science following; e.g., the formulation of non-Euclidean geometry many decades before the discovery of the gravitational curvature of space by Einstein and Minkowski. But in the case of legitimizing negative numbers in Europe, the delay by many centuries showed its mathematicians limping much behind man’s perception of reality.

The Arabs, and through them Leonardo da Pisa, might have transmitted to the West some knowledge about negative quantities; but the subsequent circumstances (greater “logical scruples” of European mathematicians and a more foundational-deductive orientation than the pragmatic one of their Indian counterparts [cf., Kline, 1980, pp. 110-112]), indicate that neither the Arabs nor Leonardo da Pisa succeeded in conveying the need for legitimizing negative numbers, though they did transmit such Indian achievements as the decimal place-order system and a symbol for zero.15

As demonstrated, it seems likely that the centuries-old accounting tradition of the medieval Hindus [see, e.g., Choudhury, 1982; Bhattacharyya, 1988; Mattessich, 1997, 1998a] facilitated this crucial achievement of accepting negative numbers. From an historical point of view, the fascinating details of the centuries-long struggle over the general acceptance of negative numbers and their first mathematical recognition

15The text by Aleksandrov et al. [1963, p. 14] pointed out that in “a rudimentary form, zero already appears in the late Babylonian cuneiform writings, but its systematic introduction was an achievement of the Indians.”

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by the Indians seem hardly less significant than other relations between accounting and negative numbers (e.g., those that Peters and Emery asserted and Scorgie refuted).

Many centuries after the Indians had justified the use of negative numbers to represent debts, a quite similar justification can be found in the writings of the eminent mathematician Leonhard Euler [1770]. Regrettably, this interesting cultural contribution, of which our discipline has partaken through such a basic accounting notion as that of “debt,” has hitherto received scant attention from accountants, even though mathematicians have occasionally reminded us. Aleksandrov et al. [1963, p. 39], for example, observed that the “Indians invented our present system of numeration. They also introduced negative numbers, comparing the contrast between positive and negative numbers with the contrast between property and debt or between two directions on a straight line.” Likewise, Kline [1980, p. 110] concluded: “The Hindus have added to the logical woes of mathematicians by introducing negative numbers to represent debts. In such uses positive numbers represent assets.”

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UNIVERSITY OF BRITISH COLUMBIA

FOLLOW-UP TO: “RECENT INSIGHTS INTO MESOPOTAMIAN ACCOUNTING OF THE 3RD MILLENNIUM B.C.:” CORRECTION TO TABLE 1.

In the following, the corrected version of Table 1 to the above-mentioned paper [Mattessich, 1998] is shown. The author apologizes for having supplied (on p. 16) an obsolete version (based on incorrect conversion rates). In consequence, the figures of this table did not match with the figures of the first 17 lines of the commentary in the subsequent section, “UNEXPLAINED DISCREPANCIES AND OTHER ITEMS TO BE CLARIFIED” (p. 17). The present version does match this original commentary (a proof that two versions of the table got switched erroneously). However, I ask the reader to regard my interpretations of Nissen et al. [1993] as a preliminary attempt by an accountant, hardly familiar with the intricacies of Sumerian language and measurement systems. As was repeatedly hinted at, this area is worthy of continuing research.

The figures of the new Table 1 conform to the original conversion rates (for translating such Sumerian volume measures, such as gur, barig, bán and sila, into each other and into liters) and to the conversions of various types of raw material and various finished products (types of flours) into their barley equivalents [for both types of conversion rates, see Mattessich, 1998, fn. 10, p. 14]. Above all, the new table matches with the commentary in Mattessich [1998, p. 17]. This commentary may require (on p. 17, four lines from the bottom) the insertion of the following addition after the expression “of Table 1”:

For editorial reasons it was not possible to include here a reprint of the original table from Nissen et al. [1993, p. 85] of which my Table 1 is an “accounting interpretation.” However, for the sake of checking and comparison, I intend to include a reproduction of the original table in the planned book [Mattessich, 1999] that is to contain, among other papers, Mattessich [1998] including the revised Table 1.
However, those discrepancies vanish if one takes the 10,755 liter (35 gur, 2 barig, 1 bán, 5 sila) of "pounded' flour" (listed in Section II, line 10) to be sig flour (which, perhaps, should have been emphasized in Nissen et al. [1993, p. 85]). This then has to be added to the 5,594 liter (18 gur, 3 barig, 1 bán, 4 sila) in Section II, line 9. The sum of these two figures, 16,349 liter (sig flour) or 32,698 liter in barley equivalents, is the same as the corresponding figure (of 54 gur, 2 barig, 3 bán minus 1 sila) shown in the total (of sig flour) in Section IV, line 7. As to "ground bread," there no longer seems to be any discrepancy between the individual listing (Section II, line 15) and its total (in Section IV, line 9).

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TABLE 1

The Author’s Accounting Interpretation of Nissen et al.
1993, pp. 84-93

<table>
<thead>
<tr>
<th>Inputs/From Ir:</th>
<th>Debit Side (in ltr.)</th>
<th>Credit Side (in ltr.)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>in barley equiv.</td>
<td>in barley equiv.</td>
</tr>
<tr>
<td>barley</td>
<td>59,925</td>
<td>Produced and distributed:</td>
</tr>
<tr>
<td>emmer</td>
<td>11,400</td>
<td>dabin flour</td>
</tr>
<tr>
<td>wheat</td>
<td>9,940</td>
<td>55,905</td>
</tr>
<tr>
<td>From Lugal-usur:</td>
<td></td>
<td>sig flour</td>
</tr>
<tr>
<td>barley</td>
<td>1,155</td>
<td>16,349</td>
</tr>
<tr>
<td>spelt</td>
<td>525</td>
<td>32,698</td>
</tr>
<tr>
<td>emmer</td>
<td>100</td>
<td>esa flour</td>
</tr>
<tr>
<td></td>
<td></td>
<td>701</td>
</tr>
<tr>
<td>From Bida: barley</td>
<td>900</td>
<td>fine gr.bread</td>
</tr>
<tr>
<td>From Nin-melam:</td>
<td>525</td>
<td>44</td>
</tr>
<tr>
<td>spelt</td>
<td>104</td>
<td>11</td>
</tr>
</tbody>
</table>

Total in barley equiv.: 94,618
unexpl. discrepancy: (2,000)

Total (from Nissen et al.): 92,618

Budgeted Work (in FLD):
Processing flour, etc.: 11,304 FLD

Actual Work (in FLD):
Allow. for free time: 1,884 FLD
For flour filling: 7,226 FLD
For gr. bread: 37 FLD
For excav. work: 280 FLD
For winnowing barley: 238 FLD
For loading flour
signed: Še-šani: 30 FLD
signed: Šara-zame: 19 FLD
For other work
signed: Šara-zame: 188 FLD
For bala(-service): 270 FLD
For weaving mill work
signed: ADU: 96 FLD
For sieving flour
signed: Ur-zu: 30 FLD
For ar<za>na fl. proc.: 240 FLD
Allowance for FLD of deceased labourer: 187 FLD
Actual. labour total: 10,408 FLD
unexpl. FLD-discrep.: 304 FLD

Total (according to Nissen et al.): 10,715 FLD
Lab. budget variance: 620 FLD

Deficit (to be br. forward in ltr.) 2,542

Total (in ltr.): 92,618

Note: For lack of better information I have identified “sig” (top Cr-section) as “zi-sig\textsubscript{15}” (which is double the barley value equivalents versus “ninda àr-ra-sig\textsubscript{5}” which is only 1.5).
The contemporary purpose, character and perceptions of a particular craft are often illuminated and elucidated when its pursuit is implicated in a crisis. Social scientists have often considered that the functioning of a technique together with the values and relationships which surround its practice, are most observable when its deficiencies are located as the source of a calamitous event. Discourses also surface when practices are impacted upon by exogenous adversities. Accounting historians have recognised that change in accounting practice and regulation has often been instigated by high profile failures, frauds and ensuing litigation. The role of accounting has also been made visible when the discipline and its practitioners have been perceived as repositories of possible solutions to problems which have emerged during periods of severe economic and military crisis. Total war, for example, has been a catalyst for considerable change in the accounting profession and cost accounting. These changes, in turn, have had consequences for wider organisational and social functioning. The inter-war depression saw accounting feature in the search for solutions to a crisis of capitalism. The nature of accounting and the vocation has also been laid bare at times of crisis within the discipline itself.

The object of this special issue of Accounting History is to focus on crisis and change and on crisis and making accounting visible in contemporary contexts. Submissions are sought which explore themes such as:

- The impact of particular crises on accounting development and its practitioners
- Crisis, identity and legitimacy in accounting
- Crisis and causality in accounting history
- Crisis and continuity in accounting history
- Crisis and opportunity in accounting
- Crisis and revelations of the functioning of accounting
- The profession and the management of crisis.

The above list is not intended to be exhaustive and contributions are encouraged which examine accounting in crises in a variety of times and locales. This special issue will appear in November 2000. Submitted papers will be refereed in the usual way.

Submissions (three copies) should be forwarded by 1 February 2000 to:

Stephen P. Walker  
Department of Accounting and Business Method  
University of Edinburgh  
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Edinburgh EH8 9JY  
UNITED KINGDOM
THE FASB'S ACCOMPLISHMENTS TO DATE: ONE PARTICIPANT'S VIEWS

PROLOGUE

When the editor of this journal wrote me in mid-1997, he invited me, as the Financial Accounting Standards Board's (FASB) most recent former chairman, to write a retrospective of the Board's activities to date. The 25th anniversary of the FASB in 1998 just happens to coincide with the 25th anniversary of The Academy of Accounting Historians so it seemed logical to publish an overview of the FASB's history at the same time that The Academy itself was celebrating. I told the editor that such an effort was probably beyond my capabilities (I am not an historian!) and available time. So I agreed to take on a more modest project of reviewing the FASB's activities during "only" my ten and one-half years as chairman (January 1987-June 1997).

Surely that would not be too hard a job. All I had to do was organize the few boxes of materials I had moved from my FASB office to The University of Georgia. I am not a compulsive saver by nature, but I had tried to keep some of the "good stuff" from my FASB experiences. Because I had a vague plan to organize that material in order to help recall my experiences many years hence, the chance to write the article was a good excuse to get organized earlier. I assumed that the article would virtually write itself through merely assembling bits and pieces of various documents from my files. I now have a much greater appreciation for the work of historians as my good intentions failed miserably. I have only just begun getting organized after a year away from the FASB. The demands of teaching, speaking, other writing, professional committee work, and an occasional (too rare) golf game have made it clear that organizing my personal archives will not be done soon.

Acknowledgments: The editor thanks now Professor Beresford for undertaking this retrospective for the benefit of AHIJ and The Academy.
Hence, Plan C. I was asked to participate in a conference in June 1998 at New York University that recognized the FASB's anniversary. My assigned topic was "The Board's Accomplishments." This was a lot more doable than the earlier two ideas, and, in fact, I did it! This paper, thus, began with my outline for that conference and it develops the points I made there in more detail. It is not a history of the FASB or even of the 40% or so of its life that I spent there. But it is a start upon which others and I can build in years to come.

I greatly appreciate the editor's patience with me and I hope that readers will consider this modest effort to be useful. I would be very interested in having discussions with accounting historians who can suggest ways on which this beginning can be built.

INTRODUCTION

Before getting into specifics, I want to cite two relatively recent comments by influential parties about the current state of accounting standards. First, Deputy Secretary of the Treasury Lawrence Summers had the following to say in an op-ed piece published in the Financial Times (London) on March 11, 1998:

If one were writing a history of the American capital market, it is a fair bet that the single most important innovation shaping that market was the idea of generally accepted accounting principles.

That statement expresses very broad support for the accounting requirements developed in the United States over many years. But Securities and Exchange Commission Chairman Arthur Levitt was more specifically supportive of the FASB's efforts to establish and improve generally accepted accounting principles (GAAP) when he said in a speech to the Conference Board on October 8, 1997:

The Financial Accounting Standards Board has filled the role of impartial standard-setter admirably for a quarter century. As you know so well, these same years have witnessed an astonishing evolution and expansion in the techniques of raising capital in our markets. In a climate where change has become a constant, the FASB has consistently sought to ensure the accuracy of financial information, protecting the basic rights of the investor and strengthening public confidence in our markets.
It is comforting to have such distinguished individuals acknowledge the overall success of accounting standard setting in the United States. However, the purpose of this paper is to review the FASB's *specific* accomplishments, so let me move now to my own evaluation of the FASB's work to date.

**WHAT WAS EXPECTED**

In trying to judge accomplishments, I thought I should first consider what were the expectations for the FASB. So I decided to do just a little research to see what others seemed to have expected when the Board was established. In particular, I was interested in seeing what were some of the major concerns about the new system. There are many possible sources, but I limited myself to rereading the 1972 American Institute of Certified Public Accountants' (AICPA) *Report of the Study on Establishment of Accounting Principles* (Wheat Committee report), some speeches by Leonard Savoie, then executive director of the AICPA, and a presentation that helped kickoff the FASB by Reginald Jones, chairman of the board of General Electric Company.

What I found was a good deal of cautious optimism about the new Board. The major criticism of the new structure seemed to have been the one expressed by Savoie who observed that the structure involved what he called "responsibility without authority." He was particularly concerned about whether the FASB could actually be independent of the SEC or would become explicitly subservient to it. He also was worried about whether other interested parties would truly be supportive. For example, he noted in one 1973 speech, "By their actions and attitudes, businessmen and professional accountants seem to be saying: 'We want accounting rules to be set in the private sector, only if we agree with the rules.'"

Jones had some of the same concerns about whether the business community would support the FASB, but he argued that it would be in its best interests to do so. One of the most famous quotes in the world of GAAP is the following statement by Jones: "We must recognize that with its *first* decision the new Board is going to gore somebody's ox — and *that* will be

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the time for us to pull together — not to splinter apart” (emphasis in original).²

In its report the Wheat Committee talked about each of the above matters although it believed the new FASB would meet those challenges. The Wheat Committee added its expectation that the FASB’s work would be research-based in most cases, and it had some mild words of encouragement for a conceptual framework.

ACCOMPLISHMENTS

Given those concerns and expectations that I have just reviewed, I am tempted to say that the Board’s singular accomplishment is that it has survived for a quarter century, longer than either of its predecessors. Rather than leaving it at that, however, let me now list what I believe to be the more important specific accomplishments in the 25 years to date. Please note that I will cover only what I will call overall institutional matters. I will leave it to others to comment on the general quality of the Board’s technical output to date or what they believe are the “best” individual standards.

In summary, my personal list of major accomplishments is as follows, not necessarily in order of importance:

1. The Board has been able to achieve reasonable independence and has not become subservient to the SEC, the business community, or the accounting profession.

2. The Board has dealt with most of the major accounting issues that were identified as such when it began, and it has not shied away from controversy.

3. A conceptual framework has been developed that has actually been used in setting standards.

4. An exhaustive set of due-process operating procedures has been established and continues to evolve as needs arise.

5. The Board communicates well so that all interested parties are informed and are encouraged to participate.

6. Great strides have been made to internationalize financial reporting in general and the Board’s activities in particular.

7. The Board exercises its leadership role with restraint by relying on the AICPA’s Accounting Standards Executive Committee (AcSEC) and the FASB’s Emerging Issues Task Force (EITF) when appropriate.

8. The FASB's financial position is sound.

I am sure that other commentators would disagree with me on some of these points but might add others. Nevertheless, this is my list, so let me say something more about each of these points now.

*Independence*: As I mentioned, Savoie, in particular, expressed concern about "responsibility without authority," which may well be seen as a fundamental weakness of the current system. But it is also a strength because the Board can succeed *only* if others allow it to, and that forbearance must depend on perceived satisfactory performance.

Thus, there is a sort of market test of the Board's activities constantly being performed rather than a mandate that it must succeed. In a way, the Board must create its own independence and the crucial point here, I believe, is striking the right balance. In particular, if either the SEC or the AICPA lost confidence in the Board, vital support would evaporate. But if the Board is seen as merely doing the bidding of the SEC or even the AICPA, then other important support would be lost, most notably that of the business community.

While the FASB has no direct legal or other authority, actions taken early in its life by the AICPA and SEC provided considerable support. In spring 1973, just as the FASB was beginning to operate, the AICPA adopted Rule 203 of its Rules of Conduct that requires auditors expressing opinions on financial statements in conformity with GAAP to ensure that those statements comply with all applicable FASB pronouncements. And in December 1973, the SEC issued Accounting Series Release 150 that said it would look to the FASB to take the leadership role in establishing and improving accounting principles and that FASB pronouncements would be considered by the SEC to have "substantial authoritative support."

These endorsements from the AICPA and SEC were important in establishing initial credibility for the Board. But the trustees of the Financial Accounting Foundation (FAF), the FASB's parent organization, and the FASB itself made early, important decisions to design a structure that would make the FASB clearly independent from its sponsors and other interested parties. For example, the decision to establish and build a professional staff was particularly important. It showed that the new organization would do its own research and other initial thinking on new standards rather than rely solely on task forces.
of practitioners and others as had been the usual approach until then.

Striking the right balance has often been described as getting everybody mad at you in approximately equal proportions. For the FASB, that is inevitable to a large degree because the interests of the various constituencies (e.g., companies, auditors, users, regulators) are so diverse. The SEC is the key player, and it is remarkable that there have been only a couple of instances where the Commission allowed itself to be so influenced by the political process that it used its own influence on the Board. The original FAF trustees were very wise in establishing the structure that they did, and I believe that this structure is fundamental to achieving the necessary degree of independence that is the true lifeblood of the FASB.

**Major Issues:** As a result of that independence, the Board has been able to take on and find reasonable solutions to most of the major accounting controversies that existed in the early 1970s, as well as those that have arisen since then. This included projects on the original FASB agenda such as segment reporting, contingent losses, research and development, leases, and foreign currency translation. It also included later topics such as pensions, financial instruments, stock compensation, other post-employment benefits, and income taxes. To the best of my knowledge, the Board has never avoided an issue because it was too controversial or was too much of a political hot potato.

Some observers have said that the Board used poor judgment in deciding to address certain topics (most notably oil and gas accounting and stock compensation) where it seemed obvious that political considerations would be so intense. While there may have been a certain amount of political naiveté involved in those and a few other projects, I doubt that many can argue that the Board has shirked its responsibilities.

Of course, some believe that certain answers did not go far enough, were too much of a compromise, or otherwise represented a noncourageous outcome. In that regard, I have noted that there now seem to be many more supporters of recording expense for stock options than was evident at the time the FASB was working on that controversial project. With their 20:20 hindsight, these Monday morning quarterbacks are criticizing the FASB for backing down.

Some parties have even said recently that much of the political activity on the derivatives project is the Board’s own
fault. They say that the Board weakened itself and invited more
government inroads when it compromised its beliefs on the
stock options project. Those who say that conveniently forget
that if the Board had not reached what I continue to believe
was a very appropriate compromise on stock options, the FASB
probably would not be in existence today. Furthermore, many
of those same parties were among the ones urging the Board to
seek a compromise solution on stock options when the battle
was being waged.

I still have the front page from an issue of Accounting To­
day that pictured me as General Custer with many arrows in my
back. That depiction aptly illustrates the point that, while cou­
rageous leadership is necessary, you cannot get too far in front
of your “followership.”

Conceptual Framework: Two questions that I was asked fre­
quently while chairman, particularly when speaking to acade­mic audiences, were:

- Are the Concepts Statements actually used when estab­
  lishing standards for specific accounting issues?
- Does the Board plan to revisit the Concepts Statements
  at some point in order to improve their usefulness in
  resolving issues?

The present Concepts Statements were completed before I
became chairman in 1987 (Concepts Statement No. 6, the most
recent one, was issued in December 1985). So, all credit for
them goes to earlier Board and staff members, and I do believe
that considerable credit is deserved. Some parties may be dis­
appointed that the various Statements did not go far enough,
that they did not prescribe answers for basic accounting ques­
tions such as when to recognize income and whether assets and
liabilities should be measured at historical cost or fair value.
But I believe the conceptual framework did accomplish what
the Board intended, and that it has been a significant step in
advancing the thinking on financial accounting matters. As
stated in the preface to Concepts Statement No. 1:

Statements of Financial Accounting Concepts are in­
tended to establish the objectives and concepts that the
FASB will use in developing standards of financial ac­
tounting and reporting. The Board itself is likely to be
the major user and thus the most direct beneficiary of
the guidance provided by the new series. However,
knowledge of the objectives and concepts the Board
uses should enable all who are affected by or interested
in financial accounting standards to better understand the content and limitations of information provided by financial accounting and reporting, thereby furthering their ability to use that information effectively and enhancing confidence in financial accounting and reporting.

In fact, the Board now uses the Concepts Statements in virtually every project. How they are used was described well in a 1985 speech by then FASB Chairman Donald J. Kirk to a forum on the harmonization of accounting standards sponsored by the Organization for Economic Cooperation and Development. Don said, “The framework serves as a common language and a common starting point for solving problems — not as a black box for quick answers.” I agree with that approach. One thing I did was to make sure that we had continuing programs to educate new Board members and staff in the framework’s background so that it would be a “living document.”

Will the framework be revisited? I can safely say “yes” as a Concepts Statement on “Using Cash Flow Information in Accounting Measurements” (providing guidance on the use of present value) is scheduled for completion in late 1998 or 1999. Other active projects that seem to have a conceptual thrust include the use of fair value for measuring financial instruments and a possible framework for financial statement footnotes. However, those and other possible refinements are designed to build on the concepts already established, not to change them dramatically.

Don Kirk had another interesting comment on the framework in a speech he gave shortly after leaving the Board. He said, “I would discourage the FASB from readdressing the conceptual issues in the near future and suggest they await further insights from their current laboratory test — the project on disclosing and accounting for financial instruments.” That “laboratory test” is still in process as the Board continues to work on the financial instruments project. I would similarly urge the Board to continue to experiment with using the framework rather than consider wholesale changes.

While the framework has benefited primarily the FASB itself, as was its intent, I believe many of its fundamentals now

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are well-accepted by most constituents. In particular, the basic objective of financial reporting ("... to provide information that is useful to present and potential investors and creditors and other users in making rational investment, credit, and similar decisions") is a solid part of our reporting system as few would challenge. Even FASB critics routinely use the Concepts Statements to support their own point of view in comment letters in response to exposure drafts.

I also am pleased that the Board generally has chosen to keep practical considerations in mind rather than to try to apply "pure theory" from the framework blindly. I was particularly pleased during my tenure to see our framework adopted with little modification by certain other countries and the International Accounting Standards Committee (IASC).

Operating Procedures: The development of strong operating procedures has been another key accomplishment. The openness of the process, in particular, contributes greatly to both credibility and communications. While the open Board meetings sometimes created more heat than light, we never hid anything. It truly was always upfront and in public. It was and is a classic example of "what you see is what you get." Even when CNN cameras showed up unannounced at a public meeting when we were discussing the accounting for stock options, it was business as usual for the Board.

Of course, due process takes time. It seemed to be a common strategy of some corporate executives and public accountants to suggest more and more process as a way of delaying or preventing certain rule changes. However, while I cannot prove this with hard evidence, I have always felt that the main reason it took so long to complete many projects was not the extensive due process. Rather, it was simply the inability of Board members to reach agreement. While that can be frustrating to both FASB insiders and some constituents, perhaps it is the inevitable consequence of dealing with controversial issues where there usually was no clear-cut solution.

What I think is particularly great about the due process is that the Board has been quite open-minded about reasonable recommendations to improve its operations. Suggestions have
been actively solicited, and FAF oversight reviews and outside initiatives have resulted in a steady stream of ideas. Of course, some suggestions were judged to be inappropriate for one reason or another, including more than a few that would have emasculated the Board's independence.

Many of the suggestions were good ideas that actually contributed to the best possible standards. For example, field testing of proposals has been useful in many cases, and even the simple step of sending a draft of a final statement to task force members for a "fatal flaw" review has helped as well.

Before leaving the topic of operating procedures I want to comment on voting requirements. Frankly, I am not uncomfortable with the super majority requirement (at least five of seven Board members must be in favor for a Statement to be issued). However, the most recent adoption of this requirement by the FAF trustees in 1991 was done for the wrong reason. A super majority requirement does not cause the work of the Board to be perceived as more acceptable as the trustees asserted. It just makes it more difficult to reach agreement, thus assuring that new standards are issued at a somewhat slower rate, as many in the corporate community had desired. How much slower is impossible to prove.

I think this issue will have to be revisited in the relatively near future, but not because the present FASB requirement is necessarily wrong. It is because I think there is no justification for the FAF to have conflicting requirements for the FASB and its sister organization, the Governmental Accounting Standards Board, which issues pronouncements based on a simple majority requirement.

Communications: The FASB's very open process helps those who are most interested in staying informed to do so. Strong communications are necessary to reach the many parties who may be affected by new accounting standards but are not directly connected to the regular process. This is a never-ending battle. Every chief financial officer or corporate controller who is new to his or her position needs to become informed about the Board's process and projects. The same is true for new independent auditors, financial analysts, SEC commissioners, members of Congress, and so on.

Every reasonable effort has been made to get the word out early and often. For example, just a few of the numerous communications tools developed by the Board over the years are as follows:
1. Periodic newsletters (Status Report) give the status of technical projects and other developments at the Board, including a detailed description of all major projects once each quarter.

2. Notes from the Chairman, included in the regular issues of Status Report, provide more informal information about the people and the process involved in setting standards.

3. Action Alert lists the agenda for each weekly public meeting and reports on decisions at the last meeting (available by mail or telephone).

4. A web site repeats some of the information noted above and includes other valuable data, such as the text of recent exposure drafts.

5. Three hundred or so speeches are made each year to a wide variety of audiences throughout the country.

6. Board meetings are available to the public by telephone so that interested parties can listen in without having to incur the cost of travel to Connecticut.

In short, the development of new techniques to communicate as effectively as possible is limited only by the imaginations of the Board and staff members. The FASB has truly taken to heart the adage, "you can never communicate too much."

Internationalization: Almost all of the accomplishments I have already mentioned have occurred throughout the 25 years of the Board’s existence. But one of the most important activities is a comparative newcomer to the list of accomplishments. That is the effort to play a leading role in the internationalization of accounting, formally recognized as one of the Board’s objectives through a 1991 amendment to the Mission Statement. Part of the Mission Statement now reads, “Promote the international comparability of accounting standards concurrent with improving the quality of financial reporting.” The period since 1991 has seen an incredible increase in international activity, most notably in the form of FASB Statements on earnings per share (No. 128) and segment disclosures (No. 131), which were joint projects with bodies in other countries.

In addition to those joint standards, nearly everything the Board does now has an international component. In the past, other countries often looked to the FASB to take a leadership role by dealing first with contentious issues. While many countries continue to follow the Board’s lead, it is now much more
common for the Board to learn from the experience of others. On projects such as comprehensive income, business combinations, and financial instruments, information is shared regularly between FASB staff members and their peers in other countries.

The Board also has formed an alliance with standard setters in Australia, Canada, and the United Kingdom (along with the IASC) to consider topics of common interest. This “G4-1” organization is not a standard setter per se, but it has developed research papers on several topics that may lead to new or updated standards in the individual countries. A somewhat broader alliance has been formed recently in order to arrive at a uniform, comprehensive approach to the vexing financial instruments project.

Other international initiatives include staff exchanges with other countries’ standard setters, foreign representatives on FASB technical project task forces, much more travel to overseas locations for speeches or other exchanges of information, and ongoing monitoring of financial reporting developments in many other countries. Of course, not all countries share the FASB’s objective of financial reporting — to serve primarily investors and creditors who do not otherwise have direct access to company information. However, more and more countries do share that “user focus” as financial markets are increasingly globalized. This is a subject that is sure to become even more important in the near future.

The IASC is working hard to finish a set of global standards that could be acceptable when any company in any country sells its securities to the general public. If this IASC activity is successful (and that remains a big if at this point), it could have profound effects on the FASB and financial reporting in the United States in general. FAF trustees and FASB members currently are carefully considering the appropriate role for the Board in these future global activities. While almost anything is possible, I believe that the FASB will continue to be the world leader in accounting standard setting for the foreseeable future.

AcSEC and EITF: While the proper relationship with the IASC is still to be determined, I am pleased that the FASB has excellent working relationships with both the AcSEC and the EITF. I referred to this earlier as the Board exercising its leadership with restraint. By that I meant that, while the FASB needs to act clearly as the primary authority on GAAP, there is room to accommodate some assistance on certain issues through the
AcSEC and the EITF. To put this another way, the Board can leverage its limited resources by relying on those other groups to develop guidance for some issues, while retaining an oversight responsibility. In particular, specialized industry accounting issues (e.g., insurance, construction contracting) and narrow topics that apply only to a limited number of companies are the types of issues with which these other groups can assist.

The FASB's relationships with these other groups have been rocky from time to time, particularly with respect to the AcSEC. In the early years the Board felt compelled to go through a process of "extracting" guidance from certain AICPA Statements of Position (SOPs) and Industry Guides. That was viewed by many, including me as an outsider at that time, as the Board's way of defending its turf in order to be seen as the sole authority on GAAP. At least some FASB insiders had similar turf reservations when the EITF was set up in the mid-1980's.

Around 1990, it appeared that the AICPA was seeking to reestablish its position in standard setting when it threatened to issue SOPs without the FASB's review and approval. But reason prevailed and for most of the past decade there has been excellent cooperation between the Board and the AcSEC.

The same certainly has been true for the EITF. Board members do not always agree with EITF consensus positions, but, by and large, it has played an invaluable role in dealing with narrower issues that need relatively prompt solutions. When the EITF completed ten years of service in 1994, I appointed a special task force to review its work and suggest improvements. In general, the conclusion of the task force was that the EITF was working extremely well and only minor improvements were suggested (and made). As a further validation of the EITF's effectiveness, similar groups have been formed in the last several years in Australia, Canada, and the United Kingdom. The IASC recently established its own equivalent committee.

Financial Position: The last accomplishment I listed is the Board's solid financial position. It is essential to have reasonable financial resources to achieve the Board's mission, and FAF trustees had the foresight to build up a reserve fund in some of the earlier years. That foresight came in handy when the Board incurred operating losses for several years at the end of the 1980s in connection with the move to new offices and certain other matters. The excess of expenses over revenues
amounted to a cumulative total of over $4 million for the years 1988-1990, but by 1991 revenues and expenses were back in balance.

In more recent years much of the reserve fund has been invested in equity securities, which has allowed the Board to increase the fund even though contributions from the corporate community have been slowly declining for several years. For 1997, revenues for the FASB were about $3 million in excess of expenses for the year. All of that excess was due to very favorable investment gains from the surging stock market. The net assets for the FASB at year-end 1997 were approximately $23 million.

While the Board has been very prudent in its expenditures, I am delighted that there has been sufficient financial support from the outside, particularly the major accounting firms. Standard-setting activities have not had to be curtailed because of economic considerations.

Of course, dollars tell only one part of the story. A closely related success story has been the Board's ability to receive and utilize the contributed services of hundreds, if not thousands, of talented individuals. Highly capable people serve on the Financial Accounting Standards Advisory Council, the EITF, technical project task forces, and in many other capacities. An even larger number of people contribute to the process by writing comment letters, testifying at public hearings, field testing certain proposals, and in other ways. The value of the time spent by these people to improve financial reporting is a significant multiple of the actual dollars recorded in the FASB's financial statements.

AREAS FOR IMPROVEMENT

The accomplishments I have just reviewed add up to an impressive track record to date, and I am proud that at least some of these achievements occurred during my time as chairman. Of course, there continue to be opportunities to improve. In fact, further improvements are essential for the Board to continue its success.

In that regard, when new people joined the organization, I always gave them one key bit of advice. I said that it was critical they remember that there is no mandate that the FASB must survive and succeed. Rather, every employee must work hard each day with the objective of continuing to earn the support that is needed.
So I now would like to mention briefly two areas where I feel improvements are needed for the Board to achieve continuing success. Again, these are my personal choices, and I am sure that others would have additional suggestions.

Building Trust: First, I believe that greater trust must be built between the FASB and all of its constituents, particularly the corporate community and the accounting firms. In a speech late last year, William Allen, the chairman of the new Independence Standards Board (ISB), expressed concerns about trust as it related to the ISB. With respect to auditor independence issues, he said, "...there seems to be a measure of suspicion and mistrust between the profession and the SEC." Unfortunately, that suspicion and mistrust pervades the accounting standards-setting arena as well. And, to again use Mr. Allen's words, "...suspicion exists on all sides...."

I used to say to FASB Board and staff members that we should always exercise appropriate professional skepticism. On occasion that may have deteriorated into cynicism about the activities or motives of outsiders. I am sure that many of those outsiders were and are cynical about the FASB as well. I do not have an easy answer to this problem, but I truly believe that this is an issue that deserves special consideration by all interested parties.

Strategic Planning: My other prerequisite for continuing success relates to the Board's strategic planning. In 1992, the Board developed the first notion of a strategic plan when it decided to address many of the concerns of constituents through a new program called "The Three S's." The Three S's were Selectivity, Simplicity, and Speed. Selectivity meant dealing with the highest-potential issues first; simplicity involved keeping accounting standards simpler and shorter; and speed referred to dealing with issues more quickly. Unfortunately, while Board members all agreed on those goals, they did not change their day-to-day behavior very much.

The first formal strategic plan was completed in 1996, and it included some of the same goals from the Three S program along with many other good ideas. That strategic plan was up-

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dated in early 1998, and it is an excellent set of objectives. But while the FASB has often criticized the resistance to change by many of its constituents, the Board itself has been slow to embrace the important changes inherent in the strategic plan. The sincerity of the Board's commitment to improve could be challenged if progress continues to be at a snail's pace. I know that many other organizations have had similar problems in operationalizing their strategic plans, but I hope that the FASB gives this the very high priority that it deserves.

CONCLUSION

In wrapping up, I believe that the Board has accomplished a great deal, perhaps even more than might have been reasonably expected 25 years ago. It is an excellent system already, clearly the best in the world. And with the adoption of a strategic plan to prepare for the new century, there appears to be a commitment to get better.

In the final analysis, while the FASB has accomplished much in its life to date, I sincerely believe that the best is yet to come.
Abstract: This paper describes the evolution of The Academy of Accounting Historians from 1989 through 1998. It is a continuation of a history of the first 15 years of The Academy that appeared in the December 1989 issue of this journal by the same authors.

INTRODUCTION

This ten-year history of The Academy of Accounting Historians (The Academy), covering the period 1989 through 1998, is a continuation of an earlier 15-year history of The Academy covering the period from formation in 1973 through 1988 that was published in the Accounting Historians Journal. The primary purpose for writing a history of The Academy is to provide a source of information about The Academy and the people who have contributed to its formation, growth, and success. This history, when combined with the earlier installment, may be helpful in evaluating the progress of The Academy over a quarter century (1973-1998) and in planning its entry into the 21st century. While the materials that follow relate to the pe-
period 1989-1998, occasionally pre-1989 materials are presented to enhance clarity, and late 1998 details are not included because activities were not completed prior to publication.

The methodology used to construct this history consists of a review of source materials such as the minutes of the trustees, officers, key members, and business meetings; the audit reports and publications of The Academy; and the recollections of persons involved with The Academy over the years. Following an initial overview section which contains a year-by-year synopsis for the past decade, the paper presents a discussion of the various activities of The Academy, followed by a final section containing concluding commentary.

AN OVERVIEW OF THE DEVELOPMENT OF THE ACADEMY OF ACCOUNTING HISTORIANS

In addition to its annual business meetings, The Academy has held meetings of trustees, officers, and other key personnel to transact the affairs of the organization. Beginning in 1992, the annual business meeting of The Academy was moved to the fall and held in conjunction with The Academy's fall research conference. Prior to this time, the business meeting was held in conjunction with the annual meeting of the American Accounting Association (AAA) in August. Holding the meeting in the fall rather than the summer is more in line with The Academy's fiscal operating period which is the calendar year. Coordinating the annual business meeting and the fiscal operating period had been suggested by several members over the years, particularly the late Andrew Barr, in order to avoid loss of momentum after an August meeting.

Since 1989, spring meetings of trustees, officers, and/or key members have been held. These meetings have generally been held in conjunction with a regional meeting of the AAA. At the meeting of trustees and officers on December 8, 1991, it was agreed that the general format of meetings held after 1991 should attempt to follow a pattern suggested by Barbara D. Merino and Lee D. Parker that spring meetings focus on major items of strategic importance, summer meetings on administrative business, and fall meetings on committee reports. A past presidents' luncheon or dinner is usually held in conjunction with the August annual meeting of the AAA not only to honor the presidents of The Academy but to seek their counsel. The dates and locations of the annual business and other meetings of The Academy are listed in Table 1.
At the 1986 annual meeting in New York City, the trustees approved the creation of the office of chairman of the Board of Trustees. Edward N. Coffman was elected to this position for a three-year term (January 1, 1987 - December 31, 1989). It was not until the annual business meeting on August 15, 1988 that The Academy’s bylaws were amended to create both the office and the term of office. The elected chairman would serve a term to be specified, but limited to nonsequential three-year terms. With regards to trustees, the bylaws at this meeting were also amended to provide the required balance between officer-trustees and nonofficer-trustees since the number of elected officers had increased since the bylaws were first written.

Richard G. Vangermeersch was elected at the meeting of trustees on August 13, 1989 to serve as chairman of the Board of Trustees for the calendar years 1990-1992. Eugene H. Flegm served as chairman on an exceptional basis for the years 1993-1998 in recognition of his key role developing external and financial support for The Academy’s research activities. The names and terms of service of those who have served as officers and trustees during the period 1989-1998 are presented in Tables 2 and 3 respectively.

**TABLE 1**

**Dates and Locations of Annual and Other Meetings of The Academy of Accounting Historians 1989-1998**

<table>
<thead>
<tr>
<th>Date</th>
<th>Attending</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>April 8, 1989</td>
<td>Trustees, Officers, and Key Members</td>
<td>Wilmington, Delaware</td>
</tr>
<tr>
<td>August 13, 1989</td>
<td>Trustees</td>
<td>Radisson Hotel</td>
</tr>
<tr>
<td>August 14, 1989</td>
<td>Business</td>
<td>Honolulu, Hawaii</td>
</tr>
<tr>
<td>December 1, 1989</td>
<td>Trustees, Officers, and Key Members</td>
<td>Hilton Hawaiian Village</td>
</tr>
<tr>
<td>March 3-4, 1990</td>
<td>Trustees, Officers, and Key Members</td>
<td>Ilikai Hotel</td>
</tr>
<tr>
<td>August 8, 1990</td>
<td>Trustees</td>
<td>Atlanta, Georgia</td>
</tr>
<tr>
<td>August 8, 1990</td>
<td>Trustees, Officers, and Key Members</td>
<td>Atlanta Hilton (Downtown)</td>
</tr>
<tr>
<td>August 9, 1990</td>
<td>Business</td>
<td>Denton, Texas</td>
</tr>
<tr>
<td>November 18, 1990</td>
<td>Trustees, Officers, and Key Members</td>
<td>Sheraton Hotel</td>
</tr>
<tr>
<td>March 16, 1991</td>
<td>Trustees, Officers, and Key Members</td>
<td>Toronto, Canada</td>
</tr>
<tr>
<td>August 11, 1991</td>
<td>Trustees and Officers</td>
<td>Denton, Texas</td>
</tr>
<tr>
<td>August 12, 1991</td>
<td>Business</td>
<td>Sheraton Hotel</td>
</tr>
<tr>
<td>December 8, 1991</td>
<td>Trustees and Officers</td>
<td>Houston, Texas</td>
</tr>
</tbody>
</table>

https://egrove.olemiss.edu/aah_journal/vol25/iss2/18
<table>
<thead>
<tr>
<th>Date</th>
<th>Attending</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>May 3, 1992</td>
<td>Trustees and Officers</td>
<td>Columbus, Ohio</td>
</tr>
<tr>
<td>August 9, 1992</td>
<td>Trustees and Officers</td>
<td>Ohio State University</td>
</tr>
<tr>
<td>November 22, 1992</td>
<td>Trustees</td>
<td>Faculty Club</td>
</tr>
<tr>
<td>November 22, 1992</td>
<td>Business</td>
<td>Washington, DC</td>
</tr>
<tr>
<td>April 24, 1993</td>
<td>Trustees, Officers, and</td>
<td>Sheraton Washington Hotel</td>
</tr>
<tr>
<td>December 4, 1993</td>
<td>Key Members</td>
<td>Columbus, Ohio</td>
</tr>
<tr>
<td>December 4, 1993</td>
<td>Business</td>
<td>Hilton Inn—North</td>
</tr>
<tr>
<td>April 30, 1994</td>
<td>Trustees, Officers, and</td>
<td>Atlanta, Georgia</td>
</tr>
<tr>
<td>August 10, 1994</td>
<td>Key Members</td>
<td>Georgia State University</td>
</tr>
<tr>
<td>December 10, 1994</td>
<td>Officers and Key Members</td>
<td>Oxford, Mississippi</td>
</tr>
<tr>
<td>December 10, 1994</td>
<td>Business</td>
<td>University of Mississippi</td>
</tr>
<tr>
<td>April 8, 1995</td>
<td>Officers and Key Members</td>
<td>Louisville, Kentucky</td>
</tr>
<tr>
<td>August 13, 1995</td>
<td>Officers and Key Members</td>
<td>Galt House</td>
</tr>
<tr>
<td>November 4, 1995</td>
<td>Trustees and Officers</td>
<td>New York, New York</td>
</tr>
<tr>
<td>November 4, 1995</td>
<td>Business</td>
<td>New York Marriott Marquis</td>
</tr>
<tr>
<td>April 20, 1996</td>
<td>Trustees, Officers, and</td>
<td>Atlanta, Georgia</td>
</tr>
<tr>
<td>August 14, 1996</td>
<td>Key Members</td>
<td>Atlanta Hilton and Towers</td>
</tr>
<tr>
<td>December 7, 1996</td>
<td>Trustees and Officers</td>
<td>Dearborn, Michigan</td>
</tr>
<tr>
<td>December 7, 1996</td>
<td>Business</td>
<td>Hyatt Regency</td>
</tr>
<tr>
<td>April 26, 1997</td>
<td>Trustees and Officers</td>
<td>Orlando, Florida</td>
</tr>
<tr>
<td>August 17, 1997</td>
<td>Trustees, Officers, and</td>
<td>Marriott's Orlando World Center</td>
</tr>
<tr>
<td>December 6, 1997</td>
<td>Key Members</td>
<td>Urbana, Illinois</td>
</tr>
<tr>
<td>December 6, 1997</td>
<td>Business</td>
<td>Jumer's Castle Lodge</td>
</tr>
<tr>
<td>April 18, 1998</td>
<td>Trustees and Officers</td>
<td>New York City</td>
</tr>
<tr>
<td>August 16, 1998</td>
<td>Trustees, Officers, and</td>
<td>Grand Hyatt Hotel</td>
</tr>
<tr>
<td>November 14, 1998</td>
<td>Key Members</td>
<td>Chicago, Illinois</td>
</tr>
<tr>
<td>November 14, 1998</td>
<td>Business</td>
<td>Hyatt Regency Hotel</td>
</tr>
<tr>
<td>November 14, 1998</td>
<td>Trustees and Officers</td>
<td>Cleveland, Ohio</td>
</tr>
<tr>
<td>November 14, 1998</td>
<td>Business</td>
<td>Cleveland Marriott</td>
</tr>
<tr>
<td>November 14, 1998</td>
<td>Trustees and Officers</td>
<td>Society Center</td>
</tr>
<tr>
<td>November 14, 1998</td>
<td>Business</td>
<td>Nashville, Tennessee</td>
</tr>
<tr>
<td>November 14, 1998</td>
<td>Trustees and Officers</td>
<td>DoubleTree Hotel</td>
</tr>
<tr>
<td>November 14, 1998</td>
<td>Business</td>
<td>Dallas, Texas</td>
</tr>
<tr>
<td>November 14, 1998</td>
<td>Trustees and Officers</td>
<td>Wyndham Anatole Hotel</td>
</tr>
<tr>
<td>November 14, 1998</td>
<td>Business</td>
<td>Richmond, Virginia</td>
</tr>
<tr>
<td>November 14, 1998</td>
<td>Trustees and Officers</td>
<td>Omni Richmond Hotel</td>
</tr>
<tr>
<td>November 14, 1998</td>
<td>Business</td>
<td>Winston-Salem, N.C.</td>
</tr>
<tr>
<td>November 14, 1998</td>
<td>Trustees and Officers</td>
<td>Adam's Mark Winston Plaza Hotel</td>
</tr>
<tr>
<td>November 14, 1998</td>
<td>Business</td>
<td>New Orleans, Louisiana</td>
</tr>
<tr>
<td>November 14, 1998</td>
<td>Trustees and Officers</td>
<td>New Orleans Hilton</td>
</tr>
<tr>
<td>November 14, 1998</td>
<td>Business</td>
<td>Riverside</td>
</tr>
<tr>
<td>November 14, 1998</td>
<td>Trustees and Officers</td>
<td>Atlanta, Georgia</td>
</tr>
<tr>
<td>November 14, 1998</td>
<td>Business</td>
<td>Westin Peachtree Plaza</td>
</tr>
</tbody>
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## TABLE 2
Officers of The Academy of Accounting Historians
1989-1998

<table>
<thead>
<tr>
<th>Year</th>
<th>President</th>
<th>President-Elect</th>
<th>1st Vice President</th>
<th>2nd Vice President</th>
<th>Secretary</th>
<th>Treasurer</th>
</tr>
</thead>
<tbody>
<tr>
<td>1990</td>
<td>Barbara D. Merino</td>
<td>Lee D. Parker</td>
<td>Tonya K. Flesher</td>
<td>Peter L. McMickle</td>
<td>Ashton C. Bishop</td>
<td>Rasoul H. Tondkar</td>
</tr>
<tr>
<td>1991</td>
<td>Lee D. Parker</td>
<td>Thomas J. Burns</td>
<td>Maureen H. Berry</td>
<td>Michael F. van Breda</td>
<td>Ashton C. Bishop</td>
<td>Rasoul H. Tondkar</td>
</tr>
<tr>
<td>1992</td>
<td>Thomas J. Burns</td>
<td>Tonya K. Flesher</td>
<td>Maureen H. Berry</td>
<td>James Don Edwards</td>
<td>Doris M. Cook</td>
<td>Michael F. van Breda</td>
</tr>
<tr>
<td>1993</td>
<td>Tonya K. Flesher</td>
<td>Ashton C. Bishop</td>
<td>James Don Edwards</td>
<td>Rasoul H. Tondkar</td>
<td>Doris M. Cook</td>
<td>Sarah A. Reed (Holmes)</td>
</tr>
<tr>
<td>1994</td>
<td>Ashton C. Bishop</td>
<td>Maureen H. Berry</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1995</td>
<td>Maureen H. Berry</td>
<td>Doris M. Cook</td>
<td>Rasoul H. Tondkar</td>
<td>Elliott L. Slocum</td>
<td>Doris M. Cook</td>
<td>Sarah A. Reed (Holmes)</td>
</tr>
<tr>
<td>1996</td>
<td>Doris M. Cook</td>
<td>Rasoul H. Tondkar</td>
<td>Elliott L. Slocum</td>
<td>Tom A. Lee</td>
<td>William D. Samson</td>
<td>Sarah A. Reed (Holmes)</td>
</tr>
<tr>
<td>1998</td>
<td>Elliott L. Slocum</td>
<td>Tom A. Lee</td>
<td>Kathleen E. Sinning</td>
<td>O. Finley Graves</td>
<td>William D. Samson</td>
<td>Sarah A. Holmes</td>
</tr>
</tbody>
</table>
TABLE 3
Past and Present Elected Members of the Board of Trustees of The Academy of Accounting Historians 1989-1998

<table>
<thead>
<tr>
<th>Name</th>
<th>Term**</th>
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</thead>
<tbody>
<tr>
<td>Maureen H. Berry</td>
<td>1987-89, 1996-98</td>
</tr>
<tr>
<td>Ashton C. Bishop</td>
<td>1995-2000</td>
</tr>
<tr>
<td>Thomas J. Burns</td>
<td>1977-79, 1993-95</td>
</tr>
<tr>
<td>Doris M. Cook</td>
<td>1985-87, 1997-99</td>
</tr>
<tr>
<td>John R. Edwards</td>
<td>1995-97</td>
</tr>
<tr>
<td>Eugene H. Flegm</td>
<td>1990-98</td>
</tr>
<tr>
<td>Tonya K. Flesher</td>
<td>1994-96</td>
</tr>
<tr>
<td>Michael J. R. Gaffikin</td>
<td>1997-99</td>
</tr>
<tr>
<td>Dahlie Gray</td>
<td>1988-90</td>
</tr>
<tr>
<td>Yoshihiro Hirabayashi</td>
<td>1990-95</td>
</tr>
<tr>
<td>Barry W. Huff</td>
<td>1992-97</td>
</tr>
<tr>
<td>H. Thomas Johnson</td>
<td>1984-89</td>
</tr>
<tr>
<td>Tom A. Lee</td>
<td>1994-96</td>
</tr>
<tr>
<td>Patti A. Mills</td>
<td>1991-93</td>
</tr>
<tr>
<td>Thomas J. Nessinger</td>
<td>1989-91</td>
</tr>
<tr>
<td>Hiroshi Okano</td>
<td>1996-98</td>
</tr>
<tr>
<td>Lee D. Parker</td>
<td>1985-87, 1992-94</td>
</tr>
<tr>
<td>Alan J. Richardson</td>
<td>1997-99</td>
</tr>
<tr>
<td>Alfred R. Roberts</td>
<td>1978-80, 1989-94</td>
</tr>
<tr>
<td>Elliott L. Slocum</td>
<td>1987-92</td>
</tr>
<tr>
<td>Mary S. Stone</td>
<td>1985 - present*</td>
</tr>
<tr>
<td>Richard G. Vangemeersch</td>
<td>1988-99</td>
</tr>
<tr>
<td>Murray C. Wells</td>
<td>1975-79, 1990-92</td>
</tr>
<tr>
<td>Michael Wilk</td>
<td>1998-2000</td>
</tr>
<tr>
<td>Mervyn W. Wingfield</td>
<td>1983-85, 1987-89</td>
</tr>
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*Corporate Agent for The Academy. The position has trustee status but is non-elective.

**Trustee terms are three years. Longer periods will indicate re-election to successive three-year terms.

1989: President Eugene H. Flegm, the first nonacademic president of The Academy, brought a perspective to the office that reflected 40 years of active participation in both public and business accounting. His perspective reflected the pragmatism of a businessman/accountant who had directly supervised the global financing reporting activities of one of the world's largest...
companies (General Motors Corporation) for more than a decade. President Flegm made significant advances in achieving his goals for the year, including support for the study of accounting history as an integral part of the accounting curriculum, encouragement of research on contemporary accounting history (e.g., uses and limitations of accounting), and bridge building between academia and preparers of accounting data in order to improve the accounting profession and financial reporting. The Education Committee, chaired by Abdel M. Agami, organized panel discussions at the annual and regional meetings of the AAA dealing with “adding historical perspective to the accounting curriculum,” embarked on a project to develop a list of historical materials that could be used in teaching accounting history, and published the second edition of the booklet, *Biographies of Notable Accountants* (1989). The booklet, edited by Agami, consisted of 18 biographical profiles prepared by Academy members. The profiles were developed to provide accounting instructors materials helpful in adding an historical perspective to the accounting curriculum, to increase students’ curiosity about the history of the accounting profession and the major events and personalities that helped shape the profession. This publication was distributed by Random House, Inc. (and McGraw-Hill Book Company which acquired Random House, Business Division) on a complimentary basis to accounting instructors upon request.

President Flegm also led an initiative which developed into the Corporate Accounting Policy Seminar of the AAA. These seminars bring financial accountants and executives from business together with members of academia in a workshop atmosphere to deal with real-world problems. At the August 13, 1989 meeting of the trustees, a motion was passed that The Academy contribute $300 ($100 per year for three years) to help sponsor the seminars. The first seminar was held in New Orleans on October 4-6, 1990.

On December 1-2, 1989, the Fourth Charles Waldo Haskins Accounting History Seminar was hosted by The Academy’s Accounting History Research Center in Atlanta, Georgia. In addition to the presentation of a number of papers, President Flegm spoke at the luncheon on “Concerns and the Profession of Accountancy.” At the meeting of trustees, officers, and key members on December 1, 1989 in Atlanta, it was decided that the 1990 membership directory should be expanded to include such things as a listing of committees and their members, past presidents, and bylaws. In addition, the directory should be
distributed during May 1990, reflecting members in good standing as of April 1, 1990, at a cost not to exceed $2,000.

As a result of discussions at the meeting of trustees, officers, and key members on April 8, 1989, it was determined that the secretary of The Academy would establish a yearly "calendar of responsibilities and events" to aid in communicating and coordinating activities helpful to those individuals who assume new duties each year. Also at this meeting, Edward N. Coffman, chairman of the Board of Trustees, presented "A Strategic Plan for The Academy of Accounting Historians" that had been developed by the trustees over the prior year and a half. After extensive discussion, significant changes were made to the organizational structure of The Academy that included the establishment of standing committees (Accounting History Research Committee, Accounting History Education Committee, Membership Committee, Program Committee), the formation of two new committees (Endowment Committee and Public Relations Committee), and the realignment of responsibilities reflecting a hierarchical structure designed to increase the involvement of the vice-presidents in the administration of The Academy. The position of archivist was also created with Alfred R. Roberts appointed the "first official archivist of The Academy."

While standing committees of The Academy were established, the committee structure and task forces appointed varied during each president's term. This was particularly true during the early years of The Academy's existence when committees operated on an ad hoc basis.

In 1989, a bibliography of published references on historical research methodology and historical method, prepared by the Accounting History Research Methodology Committee, was published by Garland Publishing, Inc. under the title, Methodology and Method in History: A Bibliography. The volume, edited by Lee D. Parker and O. Finley Graves, represented the efforts over several years by the Research Methodology Committee to prepare a comprehensive reference source on methodological issues as a guide for those desiring to do research in accounting history. The committee, chaired by Lee D. Parker, was also instrumental in The Academy's hosting an "Accounting History Research Methodology Conference" at the University of Mississippi on December 6-7, 1991.

1990: Leading The Academy into the decade of the 1990s, President Barbara D. Merino fostered increased interaction between Academy members and others in academia with those in the
profession interested in accounting history. President Merino appointed four research committees and task forces to develop a new, long-range strategy for programs that would increase Academy members' visibility and interaction with researchers in other areas. During the year, Academy members participated in and interacted with other groups through joint sponsorship of conferences. The Academy cosponsored a history session at the annual international conference of the Center for International Education and Research in Accounting at the University of Illinois on March 29-31, 1990. Papers presented in the areas of Financial Reporting Practices, German Accounting: Theory and Practice, and Development of Accounting: British and American Perspectives brought out the common interests shared by accounting historians and international accounting researchers. Maureen H. Berry, Hanns-Martin W. Schoenfeld, and Vernon K. Zimmerman were instrumental in this effort. President Merino felt that "as we enter the decade of the 1990s, internationalization of the world economy should foster more comparative research and The Academy is in a unique position to provide leadership in this area" [The Accounting Historians Notebook, Vol. 13, No. 1: 2].

At the meeting of trustees, officers, and key members on March 3-4, 1990, in Denton, Texas, it was decided that The Academy would become an institutional member of the International Association for Accounting Education and Research (IAAER). Institutional membership enables Academy activities to be publicized in the Cosmos Accountancy Chronicle, the IAAER newsletter, and allows Academy members to keep abreast of global accounting research and education activities.

On November 15-17, 1990, in Denton, Texas, The Academy cosponsored with Accounting, Organizations and Society and the Department of Accounting, University of North Texas, a conference titled "History of the Accounting Present." One objective of the conference was to encourage debate and interaction among people with divergent approaches to historical research.

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2The IAAER is a global organization that seeks to promote all aspects of international accounting education and research that includes providing a forum for individuals and organizations through publications and conferences, working with international standard-setting groups, and forming alliances with national and regional organizations.
A CPE workshop on accounting history, "Is History Critical?," was presented on August 8, 1990, in Toronto, Canada in conjunction with the AAA's annual meeting. The objectives of the workshop were to enable participants to discuss and evaluate historical methodology and use of historical data in contemporary research, and to increase interaction and stimulate debate among historical, critical, and empirical accounting researchers. Topics considered by the 36 participants included literary criticism, deconstruction, postmodernist analysis, and critical theory. The program was organized and developed by Anthony M. Tinker, Ross E. Stewart, Paul Rubinoff, and Marilyn D. Neimark. In addition to offering the workshop, several accounting history research papers were presented by Academy members at the AAA meeting during August 8-11, 1990. Academy members were also active in 1990 in presenting accounting history papers at regional meetings of the AAA.

Also on August 8, 1990, The Academy hosted a reception to celebrate S. Paul Garner's 80th birthday (August 15, 1990) and to recognize his many contributions to accounting history. President Merino extended congratulations to Garner and expressed the deep appreciation from the many people who have been touched by his kindness and generosity. In addition to receiving a birthday card signed by the approximately 100 people in attendance, Peter L. McMickle, representing The Academy, presented Garner with a copy of Soulé's New Science and Practice of Accounts, 1897, enlarged, fifth edition. Kathleen R. Bindon, representing the international section of the AAA, recounted the many contributions of Garner to that section. Other members of The Academy also recalled Garner's contributions to accounting history and thanked him for his many efforts. Also in recognition of this occasion, The Academy published in 1991 Monograph No. 6, The Costing Heritage: Studies in Honor of S. Paul Garner, O. Finley Graves editor, containing a collection of studies that deal primarily with the history of cost accounting.

1991: The year 1991 was an active and high-profile period for The Academy. President Lee D. Parker was the first Academy president from an institution outside the U.S. His theme, "Expanding and Intensifying Research," represented a commitment to maintaining some consistency of momentum across different presidencies. Considerable attention was also given to the development and streamlining of strategic structures and processes within The Academy. For example, procedures to be
followed for proposed Academy conferences, general meeting formats, and focus for the spring (strategic planning), summer (urgent business), and fall (committee reports) meetings were adopted at the December 8, 1991 meeting of trustees and officers.

At the meeting of trustees, officers, and key members on March 16, 1991, President Parker's proposal to establish a Graduate Research Grant in Accounting History was approved. The $1,000 grant would be made annually, starting in 1992, to a doctoral or masters student to encourage research in accounting history in graduate programs. A three-year trial of this grant was administered but then discontinued.

The Academy hosted the "Accounting History Research Methodology Conference" at the University of Mississippi on December 6-7, 1991. The conference provided a forum for the exchange of ideas on research methodologies. The more than 65 participants and attendees represented seven countries, 20 states, and 40 universities. The 12 conference papers, which were printed and distributed to registrants prior to the conference, were classified under the headings: Critiques of Accounting History Research I; Critiques of Accounting History Research II; Antipodean Critiques; Michel Foucault and Accounting History; and On the History of the Profession. The speaker at the conference dinner, Charles R. Wilson (Associate Professor, History and Southern Studies, University of Mississippi), provided an introduction to "southern tacky" collectibles. President Parker, O. Finley Graves, and the organizing committee of C. Edward Arrington, Thomas J. Burns, Roxanne T. Johnson, and Geoffrey T. Mills planned this successful conference. Laurie J. Henry (a doctoral student at the University of Mississippi) was given a gift of a leather briefcase in appreciation of her outstanding assistance in helping Graves with conference administration.

The Academy proposed and helped obtain funding from the Deloitte & Touche Foundation to support the first Doctoral Consortium in the Southwest Region which was held in Houston, Texas on March 12-13, 1991. The goals of The Academy were that doctoral students be exposed to historical methods and research, and that a mechanism be established to have a continuing consortium each year. Doctoral-granting institutions from the states of Arkansas, Louisiana, Mississippi, Oklahoma, and Texas were represented by 25 students and 12 faculty. The presenting faculty were A. Rashad Abdul-Khalik, Don N. Kleinmuntz, Barbara D. Merino, Patti A. Mills, Lee D...
Parker, and Wanda A. Wallace. The success of the consortium was due to the foresight and efforts of Immediate-Past-President Merino and President Parker and their respective appointed Southwest Region Task Force (1990 and 1991) consisting of Alan G. Mayper (chair), Urton L. Anderson, Vahé Baladouni, Doris M. Cook, Robert C. Ricketts, and Philip H. Siegel. While The Academy was involved in only the initial consortium, its success is reflected in the fact that the eighth consortium was held in March 1998 in San Antonio, Texas.

The Academy held a continuing professional education session entitled, "A Critical History Workshop on Relevance Lost and the New Management Accounting," on August 11, 1991, in Nashville, Tennessee, in conjunction with the AAA's annual meeting. The workshop provided an in-depth review of the historical and social underpinnings of the Johnson and Kaplan (Relevance Lost, 1987) critique of conventional management accounting. The more than 50 participants discussed the lineage of thought from Chandler to Williamson, to Johnson, to Johnson and Kaplan, and appraised the emerging paradigm with alternative accounts and interpretations. Anthony M. Tinker chaired the session, and Cheryl R. Lehman, Fahrettin Okcabol, Lee D. Parker, and Ross E. Stewart served as discussion leaders.

After over a decade of being responsible for The Academy's display booth at the annual meeting of the AAA, Peter L. McMickle indicated at the August 8, 1990 meeting of trustees, officers, and key members that he would like to be relieved of these duties and responsibilities after the next year. After discussing the future of the display booth at the meeting of trustees and officers on December 8, 1991, it was decided that it should be continued as the responsibility of an Academy member who resides in the vicinity of the location of each year's AAA annual meeting. Also at this meeting, a motion was passed to acknowledge formally and thank Peter L. McMickle and his wife, Joanne, who had performed a valuable service and had done an excellent job over a long period of time. Sharon M. Moody managed the display booth at the 1992 annual meeting of the AAA in Washington, D. C. Starting in 1993, the Public Relations Committee assumed responsibility for the display booth which continues to provide national and international visibility for The Academy during the annual meetings of the AAA.
1992: During the year 1992, Thomas J. Burns served as president of The Academy. While President Burns maintained The Academy on a steady course forward, he often presented the membership with challenging issues that he felt should be addressed in order for the organization to progress further. For instance, “Should The Academy establish a permanent office and hire an administrator?” “Should the present organizational structure [independent organization] be maintained or should The Academy change to a Beta Alpha Psi type relationship with the AAA or possibly even section status with the AAA?” The general feeling of those at the meeting of trustees and officers on August 9, 1992 concerning AAA sectional affiliation was that The Academy should study the feasibility of hiring its own executive director versus AAA affiliation. While President Burns made several changes in the chairs of certain committees, he continued the prior year’s committee structure and membership in order to allow for continuity and continued progress on the undertakings of the committees.

The highlight of President Burns’ year as head of The Academy was the 1992 research conference held on November 20-21, 1992, in Columbus, Ohio, a city that was also celebrating the 500th anniversary of the discovery of America by Christopher Columbus. The theme of the conference was “U.S. Accounting History: 1965-1990.” It consisted of three panel discussions from differing perspectives on U.S. accounting history — academic, industrial, and professional. The distinguished panelists who helped create much of this history included ten Accounting Hall of Fame members: Robert N. Anthony, Norton M. Bedford, Sidney Davidson, Philip L. Defliese, Yuji Ijiri, Charles T. Horngren, Robert K. Mautz, Herbert E. Miller, Maurice Moonitz, and David Solomons. Other panelists included the principal financial executives of five large corporations: Eugene H. Flegm (General Motors), Gaylen Larson (Household International), Michael Sullivan (Sun Oil), Christopher Steffen (Honeywell), and John Quindlen (DuPont). Panelists from the profession included leaders from five of the “Big Six” firms: J. Michael Cook (Deloitte & Touche), Robert Elliott (KPMG Peat Marwick), Duane Kullberg (Arthur Andersen and Co.), Raymond Lauver (Price Waterhouse), and Philip L. Defliese (Coopers & Lybrand). James Don Edwards, Robert K. Mautz, and Stephen A. Zeff served as moderators of the sessions.

Each of the three sessions of the conference was videotaped and placed in The Academy’s Video and Audio Tape
Library. Also, a proceedings representing the written version of the oral history presented at the conference was edited by President Burns and published under the title, *The Proceedings of Accounting Hall of Fame Conference: U.S. Accounting History 1965-1990*.

The Academy held an initial members reception August 9, 1992 in conjunction with the annual meeting of the AAA in Washington, D.C. The reception provided a venue for Academy members to gather given the shift of the annual business meeting to coincide with the fall meeting of The Academy, held November 22, 1992 in conjunction with The Academy's 1992 research conference in Columbus, Ohio.

Also during 1992, the Sixth World Congress of Accounting Historians was held August 20-22, in Kyoto, Japan.

1993: In addition to the normal committee assignments made by President Tonya K. Flesher in 1993, two new task forces were established. A Centers Task Force, chaired by Richard G. Vangermeersch, was to evaluate options, risks, opportunities, and costs of operating The Academy-sponsored centers now and in the future. The Strategic Organizational Task Force, chaired by Gary J. Previts, was to identify a future organizational structure and operating options for The Academy. The report of the Centers Task Force was presented by Chair Vangermeersch at the meeting on December 4, 1993 of trustees, officers, and key members. Valuable recommendations for the centers, Video and Audio Tape Library, and National EDP Auditing Archives were made, ranging from publicizing their activities to awarding research fellowships. Also at this meeting, Previts, chair of the Strategic Organizational Task Force, presented the task force’s report which identified future structure and operating options for The Academy. It included such options as seeking sectional status in the AAA or remaining an independent organization, locating at a university, and hiring an individual (half-time basis) to serve as administrator.

Early in 1993, President Tonya K. Flesher, with the assistance of Tommie Singleton, obtained for The Academy a collection of historical materials relating to EDP auditing from the early 1950s to 1990. The materials are now held in the National EDP Auditing Archives housed on the University of Mississippi campus and sponsored by The Academy.

The 1993 research conference, “Accounting Biography Conference,” was held on December 3-4, at the University of Mississippi. The conference focused on the importance of studying
and assessing the influence of individuals on the development of accounting thought and practice. Twenty-two of the 29 papers presented were dedicated to individuals who have made significant contributions to the accounting profession. Stephen A. Zeff, David Solomons, and Hiroshi Okano were invited to present their biographical research. At the conference dinner, Darden Pyron, a noted biographer and author, spoke on "Biography Methodology." Abstracts of papers accepted for presentation were printed and distributed to registrants prior to the conference. More than 80 persons were in attendance, representing approximately 50 colleges and universities, including representatives from Australia, Canada, Denmark, England, France, and Japan. President Tonya K. Flesher and Dale L. Flesher served as co-coordinators of the conference.

1994: Accounting history education was a major emphasis of Ashton C. Bishop during his 1994 term as president of The Academy. As with previous Academy administrations, President Bishop devoted considerable attention to organizational matters. President Bishop continued the Strategic Organizational Task Force established by President Tonya K. Flesher in 1993. The 1994 task force, chaired by Gary J. Previts, was charged to evaluate the risks and costs associated with the various options for the organizational and operating structures of The Academy that were identified by the 1993 task force. At the annual business meeting on December 10, 1994, Previts reported that the results of a questionnaire sent to members indicated that members favored seeking affiliation with an academic institution where a central office could be maintained with part-time administrative support.

President Bishop also formed the Strategic Planning Task Force to be chaired by Rasoul H. Tondkar. Due to the many changes that had taken place in the environment since The Academy's current strategic plan was adopted in 1989, the task force was to begin work on a strategic plan that would carry The Academy into the 21st century. President Bishop felt that The Academy's organizational structure and the strategic plan under which it operated must ensure that The Academy is recognized as an international history organization for research, publication, teaching, and personal exchange.

The International Research Task Force was also established in 1994 by President Bishop to study how The Academy might better serve members located in other countries to stimulate cooperative research efforts among accounting historians of
different nationalities and viewpoints, and to identify international conferences to be held in the next few years that might be receptive to offering a history session. Alan G. Mayper was selected to chair the task force.

The year 1994 marked the 500th anniversary of the 1494 publication of Luca Pacioli’s enduring treatise, *Summa de Arithmetica, Geometria, Proportioni et Proportionalita* (*Summa*). To commemorate this anniversary, The Academy, The British Academy, and The Institute of Chartered Accountants of Scotland (ICAS) organized a one-day history conference. The conference, held at the Royal College of Physicians in Edinburgh, Scotland on March 3, 1994, focused on the development of accounting and technology since Pacioli’s time. Nigel Macdonald, president of the ICAS, introduced the conference and President Bishop of The Academy chaired the conference. Tom A. Lee, a trustee of The Academy and a convenor of the Scottish Committee on Accounting History, had envisioned the conference and through his efforts it became a reality. Over 150 individuals from 17 countries attended the conference. A collection of selected papers presented at the conference was published in 1996 as *Accounting History from the Renaissance to the Present: A Remembrance of Luca Pacioli* (edited by Tom A. Lee, Ashton C. Bishop, and Robert H. Parker) by Garland Publishing. This conference was part of a two-day Festival of Accounting organized by the ICAS which examined the contemporary impact of information technology on the accounting profession.

To commemorate the Pacioli treatise quincentennial, Richard G. Vangermeersch prepared a paper on Pacioli’s *Summa* that was part of an AICPA’s executive office display in New York. Also during 1994, the Institute of Management Accountants (IMA) celebrated its 75th anniversary. At the IMA’s annual conference in June of 1994 in New York, Vangermeersch, representing The Academy, presented a plaque from The Academy to IMA President Leo M. Loiselle in recognition of the history of service and professional contributions of the IMA to the profession of accountancy.

The 1994 research conference, “Historical Perspective and Analysis: An Integral Component of Accounting Education in the 21st Century,” focused on using history to add value to accounting education. It provided suggestions and materials to facilitate the integration of historical materials into existing accounting courses. In addition to a number of presentations during concurrent sessions, three plenary sessions were held. The first plenary session on “Using History in the Classroom”
included Louis Galambos and a commentary by Ronald J. Patten. The second plenary session, entitled "Integration of Capital Market and Regulation History," included Ernest Englander, Alan Kaufman, and Lawrence Zacharias. The third plenary session on "The AICPA 1980-1995" included speaker Philip B. Chenok (president, AICPA), and discussants J. Clarke Price (executive director, Ohio Society of CPAs) and Doyle Z. Williams. Edward N. Coffman, Marilyn Collins, Eugene H. Flegm, Paul J. Miranti, Gary J. Previts, Alfred R. Roberts, and Kathleen E. Sinning provided valuable assistance in organizing the conference which was held on December 9-10, in Atlanta, Georgia. Plenary sessions and other selected portions of the conference were videotaped by Tommie Singleton for the Video and Audio Tape Library of The Academy. Approximately 80 registrants representing more than 50 universities participated in the conference. Collected abstracts of the papers presented at the conference, edited by Ashton C. Bishop, Edward N. Coffman, and Gary J. Previts, were distributed to attendees.

To assist accounting educators who wish to add historical perspective to their courses, the Education Committee, chaired by Kathleen E. Sinning, prepared and distributed to Academy members a computer disk entitled "A Guide to Integrating Accounting History into the Accounting Curriculum." The disk contained 25 syllabi, reading lists, or projects used by Academy members in accounting history courses they taught or in courses where accounting history is integrated (15 are for graduate courses, nine for undergraduate courses, and one for either a graduate course or an undergraduate honors course). The disk also contains an article on the integration of accounting history into financial accounting courses and information about The Academy's Video and Audio Tape Library, including a list of videos that can be borrowed.

In 1993 and 1994, The Academy became aware of the potential importance of acquainting accrediting agencies, the AACSB in particular, with the role of historical perspective in management and accounting education. It was noted that international studies, as well as over the years computer technology, had become subject matter considered so important that they had become required areas of coverage. In order to monitor developments in accreditation, a motion was passed at the meeting of trustees, officers, and key members on April 30, 1994, that The Academy subscribe to the publications of the AACSB and that Gary J. Previts serve as the person to monitor such developments.
The prior year's Research Committee, chaired by Haim Falk, initiated a continuing professional education session that was held on August 9, 1994 in conjunction with the annual meeting of the AAA in New York. Kumar N. Sivakumar conducted the session entitled "Use of Capital Markets Research Methodologies in Historical Accounting Research." The object of the session was to familiarize participants with the properties of capital markets research methodologies and publicly available sources of historical data useful in historical accounting research.

1995: Globalization of The Academy and a strengthening of ties between members internationally characterized the term of President Maureen H. Berry. Building upon a study conducted by the prior year's International Research Task Force that investigated ways of reaching out to overseas members so as to facilitate their increased involvement in Academy activities as well as further their research opportunities, President Berry appointed an Overseas Outreach Committee, co-chaired by Garry D. Carnegie and Lee D. Parker, to put together an action plan to expand Academy services to overseas members and increase their involvement in Academy activities. Additionally, a Committee on Worldwide Accounting History Research, chaired by Moyra J. M. Kedslie, was charged with looking into building awareness of research projects, both potential and in progress, that would provide opportunities for joint efforts among researchers in accounting history worldwide. President Berry's globalization theme was further reflected in the 1995 research conference, "Across Space and Time: Exploring International Dimensions of Accounting History Research and Education," held in Urbana, Illinois on November 2-4, 1995. The conference included a wide range of speakers and participants. The 60 registrants represented about 25 colleges and universities in the U. S. and 12 institutions in other countries. The general format of the conference consisted of six plenary sessions. One plenary session, entitled "Research in Historiography," consisted of panel presentations by Peter Fritzsche, Donald Crummey, and Diane Koenker, members of the Department of History faculty at the University of Illinois. In addition, 12 papers were presented during the following six plenary sessions by the speakers noted in parentheses: "Pre- and Post-Pacioli Literature" (Esteban Hernández-Esteve and David A. R. Forrester), "The Movement of Accounting Across Borders" (Wai Fong Chua and Chris Poullaos), Peter J. Clarke, and Leslie S. Oakes), "Account-
In light of the many changes taking place, including technological changes, a task force was established by President Berry to study The Academy’s system of communicating with its members. The task force was chaired by O. Finley Graves. A questionnaire relating to communication issues was sent to The Academy’s general membership; however, it was felt that the response rate of only 10 percent did not constitute adequate feedback to warrant instituting any changes in policy.

An Academy-sponsored program was presented in Orlando, Florida prior to the AAA’s annual meeting in August 1995. O. Finley Graves initiated, organized, and moderated “The Accounting and Modernity Conference” held at the University of Central Florida on August 12, 1995. The program explored accounting as an expression and instrument of modernity. For purposes of the conference, modernity was defined as confidence in rationalism, science, and technology to solve mankind’s material and social problems. Paul M. Goldwater served as coordinator of the conference which was dedicated to the memory of Anthony G. Puxty, who had been involved in the planning of the conference but had passed away earlier in 1995.

On August 13, 1995, Eamonn J. Walsh conducted a continuing professional education workshop on “Accounting History as Social Science” in conjunction with the annual meeting of the AAA in Orlando. The workshop introduced the participants to sources and examples of archival materials and described research methods and approaches that might be used to analyze the data for purposes of achieving broader appeal.

Operation of The Academy’s web site (http://weatherhead.cwru.edu/Accounting) was initiated in the summer of 1995 at Case Western Reserve University under the direction of Gary J. Previts.

A major achievement in 1995 was the establishment of The Academy’s administrative office at the Garner Center for Current Accounting Issues in the Culverhouse School of Accountancy on the campus of the University of Alabama in
Tuscaloosa. With the valuable assistance of William D. Samson, the opening ceremony was held at the Garner Center on November 13.

In another item relating to The Academy and the University of Alabama, Tom A. Lee proposed at the meeting of trustees and officers on November 4, 1995 that The Academy establish an Accounting History Research Center at the University of Alabama in Tuscaloosa. The center would focus on accounting and auditing policymaking and professionalization of public accountability. The Research Center at Alabama would complement the work and holdings of the other Academy-sponsored centers — the Accounting History Research Center at Georgia State University and the Tax History Research Center at the University of Mississippi.

1996: The year 1996 was the 100th anniversary of the first CPA legislation enacted in the State of New York on April 17, 1896, and the first CPA examination which was given December 15 and 16, 1896 in Buffalo and New York City. Many of the activities of The Academy during this year of the presidency of Doris M. Cook focused on the centennial celebration of these events.

In celebration of the 100th anniversary of the first CPA law, the Northeast Region of the AAA combined with the Accounting, Taxation and Business Law Department of New York University and the New York State Society of CPAs for their regional meeting in New York City on April 17-20, 1996. Many of the members of The Academy participated in the program. The spring meeting of the Academy trustees, officers, and key members was also held on April 20, 1996 in conjunction with this regional meeting, with Richard G. Vangermeersch as the liaison.

The Seventh World Congress of Accounting Historians was held August 11-13, 1996 at Queen's University in Kingston, Ontario, Canada.

The theme of The Academy's 1996 research conference was "The Centennial Anniversary of the First CPA Examination: A Century of Professional Progress." The conference was held on December 5-7, in Cleveland, Ohio, a city that was celebrating its bicentennial. While the papers presented were related to the central theme of the conference, the plenary sessions focused on the past, present, and future of the CPA exam. In the first plenary session on "Historical Development of the CPA Examination," William D. Samson presented a paper on "The Early
CPA Examinations: Content and Influence Upon the Profession and Education.” Three members of the Accounting Hall of Fame, Norton M. Bedford, Sidney Davidson, and Philip L. Defliese served as a panel of discussants. The second plenary session on the “History of New York Society of CPAs” included speakers Julia Grant, James L. Craig, Jr. (managing editor, The CPA Journal), and Robert L. Gray (executive director, New York State Society of CPAs). Speakers in the third plenary session, “Expectations for the Future of CPA Examinations,” included Robert Mednick (chairman, AICPA Board of Directors), Doyle Z. Williams, and Joseph J. Schultz (president, AAA). These three plenary sessions were videotaped by Tommie Singleton for The Academy’s Video and Audio Tape Library. Other speakers included luncheon speaker Harold Q. Langenderfer. Chair of the program committee was Kathleen E. Sinning and chair of hotel arrangements was Marilynn Collins. Approximately 80 participants representing 37 institutions and several firms and professional organizations attended the conference. Collected abstracts of the papers presented at the conference were edited by Kathleen E. Sinning and distributed to those in attendance.

New projects were developed under the leadership of President Cook. The first silent book auction was held at the 1996 research conference with great success under the guidance of Jeanette M. Sanfilippo, chair of the Public Relations Committee. A primary purpose of the auction was to provide an opportunity for those attending the conference to obtain classic or out-of-print books and publications at a low cost. The auction, patterned after a similar event regularly conducted at the Business History Conference, generated over $800.

Another activity was the planning of a new publication on historical methods to provide guidance to those doing research in accounting history. The publication to be developed by Paul J. Miranti and Paul A. Shoemaker, co-chairs of the Research Committee, is to be titled “Historical Methods for Accounting Researchers.” A motion supporting the concept of this project was approved at the meeting of trustees, officers, and key members on April 20, 1996, with the project proposal receiving approval at the August 14, 1996 meeting. This project represents a continuation of the contributions of the Research Committee over the years to provide materials that will help guide those desiring to do research in accounting history.

At the meeting of trustees and officers on December 7, 1996, in Cleveland, Ohio, William D. Samson, secretary of The
Academy, was nominated and approved as a director of the Alabama Corporation which serves as the tax locus and entity for The Academy. Samson replaced S. Paul Garner who died in October 1996. These corporate amendments were filed in the Tuscaloosa County Courthouse in 1997. Other directors of the corporation are Maurice S. Newman and Mary S. Stone. (The Academy was incorporated as a not-for-profit organization under the laws of the State of Alabama on December 28, 1973.)

During the latter part of 1996, Richard G. Vangermeersch contributed $5,000 to an endowment fund in memory of Professor D. D. Ray and his wife, Mrs. Eula Ray, in appreciation of Professor Ray’s guidance as his program and dissertation chair at the University of Florida (1965-1970) and of Mrs. Ray’s kindness during this time. Interest earned on the endowment is to be used to help reimburse visiting scholars for lodging while using The Academy’s research centers, thus hopefully generating interest in accounting history and use of the centers.

The year 1996 might also be noted for the additions made to The Academy’s web site. S. Paul Garner’s 1954 classic book, *The Evolution of Cost Accounting to 1925*, was included on the web site, the first full-length accounting book on the web. The project was funded by Walter J. Kennamer, a University of Alabama alumnus, with matching funds supplied by Microsoft Foundation. The Academy’s web site was expanded to include The Academy’s membership directory, committees, trustees, officers, and bylaws, with Kevin C. Carduff engaged as a contractor to support the web site.

1997: The activities of The Academy during the 1997 presidency of Rasoul (Ross) H. Tondkar emphasized membership, public relations, operations, and the fall research conference.

Early in 1997, President Tondkar became aware of a distribution problem in that members had not received copies of the June and December 1996 issues of the *Accounting Historians Journal (AHJ)*. After extensive discussion at the meeting of trustees and officers on April 26, 1997, it was decided that the printing and mailing of the *AHJ* should be separated with the production editor to be responsible for mailing future issues of the *AHJ*.

A highlight during Tondkar’s presidency was the research conference held on December 4-6, 1997, in Richmond, Virginia. The title of the conference, “The Past, Present, and Future of Accounting History as it Relates to Methodology, Education, Technology, and International Organizations,” reflected the
broad conference objectives of covering selected traditional areas of accounting history such as research methods and accounting history’s integration into the curriculum. Additional topics were the investigation of the impact of technology on accounting history and the role of accounting history in dealing with future accounting issues.

Two plenary sessions set the tone for this multi-theme conference. Arthur R. Wyatt spoke on “The International Accounting Standard-Setting Process: Past, Present, and Future” and Miklos A. Vasarhelyi presented “The Role of Technology in Researching, Teaching, and Communicating Accounting History and Accounting Information.” During the second plenary session, Edward J. Perkins spoke on the “Evolution of the Capital Markets in the United States” and William G. Shenkir spoke on “Accounting History: The Best of Times or the Worst of Times?” In addition to the plenary sessions, 33 papers were presented. Ninety participants from seven countries attended the conference. Collected abstracts of the papers presented at the conference were edited by Rasoul H. Tonkdar and Edward N. Coffman and distributed to conference registrants. Also during the conference, the second silent book auction was successfully engineered by Jeanette M. Sanfilippo, chair of the Public Relations Committee, generating over $900.

During the year, the Public Relations Committee and President Tondkar contacted library members of The Academy to offer them a complimentary copy of the bound volume containing volumes 1-3 of the Accounting Historians Journal. Eighty libraries (50 in the United States and 30 in other countries) requested complimentary copies of the volume.

A front-page column featuring William D. Samson and The Academy appeared in the July 16, 1997 issue of The Wall Street Journal. The article told of Samson’s passion for accounting history and mentioned The Academy secretary’s goals of increasing membership and plans for expanding the attendance at the Eighth World Congress of Accounting Historians scheduled for Spain in the year 2000. Several new memberships in The Academy were recorded following the article. To share this exceptional exposure of Secretary Samson and The Academy, a reprint of the article was sent to members.

In December 1997, Peter L. McMickle made a valuable donation of 1,640 rare and collectible accounting books to The Academy. The collection, named “The Peter L. McMickle Accounting History Library,” is housed at the University of Missis-
1998: During the year 1998, President Elliott L. Slocum, like previous Academy presidents, undertook a variety of activities to ensure that The Academy achieves its objective as an international organization for the study of accounting history.

On August 16, 1998, Richard K. Fleischman, Barbara D. Merino, and Vaughan Radcliffe presented a continuing professional education session on "Accounting History: Theory and Practice" in conjunction with the annual meeting of the AAA in New Orleans. The presenters provided an introduction to accounting history as a discipline, reviewed the body of extant historical work, and discussed how research into accounting history can best be conducted. Presenters walked participants through the research process as they have themselves done, going from an idea for a historical project, through mobilization of theoretical and empirical materials, to the mechanics of bringing a manuscript to successful publication.

At the August 16, 1998 meeting of trustees, officers, and key members, the contract to employ Kathy Rice as administrator of The Academy was approved. The Academy will provide a subvention to the Culverhouse School of Accountancy at the University of Alabama for compensation paid to Rice for up to half-time employment for the foreseeable period. Rice's assignments will be overseen by an administrative committee consisting of President Slocum, Tom A. Lee, William D. Samson, and Gary J. Previts through 1999. A review of the administrative appointment will take place at the end of 1999.

The Fifth Charles Waldo Haskins Accounting History Seminar was held on November 12-14, 1998 at the Westin Peachtree Plaza in Atlanta, Georgia. The theme of the conference was "The Evolution of Business Disclosures." The keynote address for the conference was given by Edmund L. Jenkins, chair of the Financial Accounting Standards Board (FASB). The theme of the conference honored the 25th anniversary of the formation of the FASB and focused on the historical consideration of business disclosure's relevance to the Board's activity during this period as well as previous eras. The program coordinators were Ram S. Sriram and Kumar N. Sivakumar.

MEMBERSHIP

General: Academy membership levels have been sustained at totals exceeding 800 members during the past decade. The mix of individual and institutional members, however, has shifted with the latter increasing and the former decreasing. The
composition and trend of The Academy's membership is illustrated in Exhibit 1.

The professed goal of leadership groups over the last decade has been to attempt to achieve and maintain a level of up to 1,000 members. However, the marketing resources required to sustain a long-term membership campaign have not been developed. In part, the annual leadership term, short-term issues, and the voluntary nature of the administrative process have precluded a more sustained growth effort.

To encourage practitioner interest in history, a motion was passed at the meeting of trustees, officers, and key members on August 14, 1996 that abstracts of selected articles from the AHJ be distributed to CPA societies and other practitioner groups, such as the IMA, for possible inclusion in their publications. The chair of the membership committee, Jean E. Harris, was to select the abstracts of appropriate papers and distribute them to practitioner outlets.

As a general rule, each year the president of The Academy sends a letter to encourage those individuals who did not renew their memberships to reconsider. The appointment of an Academy administrator is expected to permit new emphasis on membership growth.
Honorary Life Membership: At the 1989 annual meeting, the Board of Trustees elected Louis Goldberg to life membership. Goldberg was widely regarded as one of the founding Australian contributors to academic work in accounting and accounting history. The nomination for life membership of Andrew Barr for his many contributions to The Academy was unanimously approved at the August 8, 1990 meeting of trustees, officers, and key members. At the trustees and officers meeting on August 11, 1991, Williard E. Stone was elected to life membership for his long service to The Academy and to the community of scholars in accounting history. For his many contributions to accounting history, Richard V. Mattessich was selected for life membership in The Academy at the August 9, 1992 meeting of trustees and officers.

In 1994, life membership was approved by the Board of Trustees for Thomas J. Burns and Eugene H. Flegm for their contributions to accounting history and service to The Academy, both having served as president.

Alfred R. Roberts, a long-time contributor, friend, and founder of The Academy, was elected to life membership in 1995. The nomination of Roberts for life membership at the August 13, 1995 meeting of officers and key members was approved unanimously. In recognition of her many accomplishments and tireless effort of service to The Academy and accounting history, Doris M. Cook was confirmed as the thirteenth life member at the April 26, 1997 meeting of officers and trustees. Cook was the first woman to be selected for honorary life membership in The Academy. At the meeting of trustees, officers, and key members on August 16, 1998, Mervyn W. Wingfield was elected to life membership for his service to The Academy and his contributions to accounting history.

Since 1981, when four distinguished individuals were first approved for honorary life membership in The Academy, the number of life members had increased to fourteen by the end of 1998. It is with sorrow and a sense of great loss that six of these most prominent individuals have passed away (year deceased indicated in parentheses) — Andrew Barr (1995), Thomas J. Burns (1996), S. Paul Garner (1996), Louis Goldberg (1997), Osamu Kojima (1989), Kojiro Nishikawa (1990). Their wisdom, leadership, dedication to accounting history, and friendship will be greatly missed for many years to come.
FINANCING

Having served as treasurer of The Academy for four years (1985-1988), Kenneth O. Elvik turned over the duties and responsibilities of the treasurer to Rasoul H. Tondkar beginning January 1, 1989. Tondkar served as treasurer through 1992 and Michael F. van Breda assumed the responsibilities of treasurer on January 1, 1993. Treasurer van Breda reported at the meeting of trustees, officers, and key members on April 24, 1993 that arrangements had been made with a bank to receive Academy dues by credit card. Due to other commitments, van Breda resigned as treasurer in May 1994, and Sarah A. Reed (Holmes) assumed the treasurership on that date.

Financial statements of The Academy for the year ended December 31, 1994 and prior years reflected the cash basis of accounting. Starting in 1995, a change to accrual accounting was undertaken with accrual accounting being fully reflected in the financial statements for the year ended December 31, 1997.

The Academy has been most fortunate over the years in being able to generate sufficient revenues and volunteer talent to support the costs of general operations which include, among other things, the publication of the Accounting Historians Journal and The Accounting Historians Notebook, the maintenance of two research centers (Accounting History Research Center and Tax History Research Center), and more recently an administrative office with a part-time administrator. Establishing the dues is part of the budget process conducted annually at meetings of trustees, officers, and key members. Dues are the principal source of revenue and a breakeven budget is the initial operating goal. Since 1989, individual member dues have changed from $25 to $40 per year, institutional dues from $35 to $50, while doctoral student dues have remained at $7.50.

In 1989, the Endowment Committee was established to assist in raising funds to help support The Academy's research programs, special activities, and general endowment. Eugene H. Flegm has chaired the Endowment Committee since its formation. During the period 1989-1998, The Academy has sponsored or cosponsored nine major research conferences as discussed in previous sections of this paper. In conjunction with cost-effective administration by conference hosts, the fund-raising efforts of the Endowment Committee, particularly Eugene H. Flegm, have permitted conferences to be self-sustaining. Conference funding has been provided over recent years by
Arthur Andersen & Co., Deloitte & Touche, Ernst & Young, General Motors Corporation, KPMG Peat Marwick, and Price Waterhouse.

The generous contributions received from a number of Academy members throughout the years resulted in the establishment of several endowments to support certain activities of The Academy.

The first audit of the financial statements of The Academy was conducted in 1984 by Ernst & Whinney (now Ernst & Young) in Providence, Rhode Island and covered the four-year period January 1, 1980 through December 31, 1983. Each year since, the financial statements of The Academy have been audited. The independent auditors, the office location, and the years that they audited the records of The Academy are as follows: Ernst & Young, Des Moines, Iowa — 1984-1987, Richmond, Virginia — 1988-1991; Deloitte & Touche, Richmond, Virginia — 1992; Larkin and Scott, Dallas, Texas — 1993; Brewer, Eyeington & Company, Bryan, Texas — 1994-1998.

ACADEMY ACTIVITIES

The Working Paper Series: The Working Paper Series (WPS) was established in 1974, when there were few outlets for historical research, to provide Academy members a means to expose historical research to a wider audience, exchange ideas, and provide feedback from other qualified persons interested in research. The results of a questionnaire mailed to the authors of the first 76 working papers indicated that the series was accomplishing the objectives for which it was established.3

During 1989, four working papers were issued, bringing the total number of working papers issued to 80 since inception of the series. Also in 1989, a fourth volume, consisting of working papers 61-80, was published, edited by Rasoul H. Tondkar and Edward N. Coffman.

In January 1989, Horace R. Givens took over the editorship of the series from Tondkar, who had served as editor since September 1985. In early 1990, Givens reported that the paper entitled “The Boston Bookkeeping Schools: Comer’s Commercial College 1840-1924” by Williard E. Stone had been accepted for publication. On several occasions, Editor Givens requested


Published by eGrove, 1998
Academy members to encourage their colleagues to submit papers.

After a discussion of the status and future of the WPS during the meeting of trustees, officers, and key members on March 16, 1991, it was determined that the WPS had fulfilled an important objective of The Academy, but that the series had served its purpose. A motion was passed that the WPS be discontinued.

A review board for the WPS was established during the latter part of 1982. Edward A. Becker, Doris M. Cook, Hans J. Dykxhoorn, O. Finley Graves, Dahli Gray, Harvey Mann, Patti A. Mills, and Owen B. Moseley served from 1982-1991. Charles E. Wuller was on the WPS review board from 1982-1985.

President's Hourglass Award: The President's Hourglass Award was established in 1974 with the first presentation being made that year to Michael Chatfield at The Academy's second annual business meeting in New Orleans. At that time, Stephen A. Zeff was recognized as the 1973 recipient. The retroactive recognition was done to have the date of the first Hourglass Award coincide with the founding year of The Academy. Every year since, this prestigious award has been given to honor a person (or persons) in recognition of significant contributions to the literature of accounting history. Of the individuals that have received the award, four have been twice honored — Michael Chatfield (1974 and 1996), Esteban Hernández-Esteve (1984 and 1995), Basil S. Yamey (1976 and 1992), and Richard G. Vangermeersch (1988 and 1996). The President's Hourglass Award recipients for the past nine years and their recognized works are presented in Table 4.

### Table 4
**President's "Hourglass Award" Recipients and Their Recognized Works 1989-1997**

<table>
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<tr>
<th>Year</th>
<th>Recipient</th>
<th>Recognized Work(s)</th>
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### TABLE 4 (cont’d)

**President’s “Hourglass Award”

**Recipients and Their Recognized Works

1989-1997

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<thead>
<tr>
<th>Year</th>
<th>Recipient</th>
<th>Recognized Work(s)</th>
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<tr>
<td>1993</td>
<td>James Don Edwards</td>
<td>For contributions to accounting history including articles, several books, and editing the May 1987 commemorative centennial issue of The Journal of Accountancy.</td>
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_The Richard G. Vangermeersch Manuscript Award:_ At the trustees’ meeting on August 20, 1986, Barbara D. Merino presented a proposal for an Accounting History Manuscript Award. The purpose of the award was to encourage accounting faculty with a recently earned doctorate degree to conduct historical research in accounting. The proposal was endorsed by the trustees. The award was to be given annually starting in 1988.

Full-time accounting faculty members, who had received a doctorate within seven years prior to date of submission, are eligible for the award. Historical manuscripts, broadly defined, are appropriate for submission. Manuscripts must conform to the style and length requirements of the Accounting Historians Journal, be the work of one author, and not have been previously published or under review for publication. Barbara D. Merino was selected chair of the first (1988) Manuscript Award Committee (MAC). The MAC receives and evaluates the submitted manuscripts and selects a recipient each year unless the committee determines that no submission received warrants...

At The Academy's business meeting on August 15, 1988, in Orlando, Florida, the announcement was made that Jan R. Heier had been selected as the first recipient of the Manuscript Award. The Manuscript Award has been given each year since 1988 except for the year 1995. The recipients and their recognized manuscripts are presented in Table 5.

In late 1990, Richard G. Vangermeersch made a second contribution of $3,000 to support the Manuscript Award. At the meeting of trustees, officers, and key members on March 16, 1991, it was decided that the Manuscript Award be named in honor of Richard G. Vangermeersch. In 1995, eligibility for the award was extended to include full-time accounting faculty holding a masters degree, when such a degree is considered a terminal degree. At the trustees, officers, and key members meeting on April 18, 1998, a proposal was made and approved to increase the monetary component of the award to $1,000 effective 1998.

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<tr>
<th>Year</th>
<th>Recipient</th>
<th>Manuscript Title</th>
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<tr>
<td>1988</td>
<td>Jan R. Heier (Auburn University at Montgomery)</td>
<td>&quot;Thomas Affleck and His Cotton Plantation Record and Account Book: A Study in the Reasons and Origins of Accounting Principles&quot;</td>
</tr>
<tr>
<td>1989</td>
<td>Sarah A. Reed (Texas A&amp;M University)</td>
<td>&quot;A Historical Analysis of Depreciation Accounting - The United States Steel Experience&quot;</td>
</tr>
<tr>
<td>1990</td>
<td>Moyra J. M. Kedslie (University of Hull)</td>
<td>&quot;Mutual Self Interest - A Unifying Force; The Dominance of Societal Closure Over Social Background in the Early Professional Accounting Bodies&quot;</td>
</tr>
<tr>
<td>1991</td>
<td>Anne Fortin (University of Quebec in Montreal)</td>
<td>&quot;The 1947 French Accounting Plan: Origins and Influences on Subsequent Practice&quot;</td>
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### TABLE 5 (cont’d)

**Richard G. Vangermeersch Manuscript Award Recipients and Manuscript Titles 1988-1998**

<table>
<thead>
<tr>
<th>Year</th>
<th>Recipient</th>
<th>Manuscript Title</th>
</tr>
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<tbody>
<tr>
<td>1994</td>
<td>Fernando Gutiérrez-Hidalgo (University of Seville)</td>
<td>“Enlightenment and Accounting in the Royal Tobacco Factory of Seville”</td>
</tr>
<tr>
<td>1998</td>
<td>Michael P. Schoderbek (Rutgers University, New Brunswick)</td>
<td>“Robert Morris and Reporting for the Treasury under the U.S. Continental Congress”</td>
</tr>
</tbody>
</table>

*The Monograph Series: In 1989, O. Finley Graves became the fourth editor of the Monograph Series, succeeding James L. Boockholdt (1987-1988). Monograph number six was published in 1991, honoring S. Paul Garner for his contributions on the occasion of his eightieth birthday. The monograph consists of two tributes to Garner and a collection of ten studies dealing primarily with the history of cost accounting. In the process of producing the Garner monograph, Graves obtained an ISBN prefix for The Academy. At the time an ISBN was assigned to the Garner monograph, Graves retroactively assigned ISBNS to all monographs except the first, which was out of print. The Garner monograph was the last monograph to be funded and published through The Academy.

After a discussion of the Monograph Series at the meeting of trustees, officers, and key members on March 16, 1991, it was suggested that Editor Graves investigate the possibility of having the Monograph Series published through another party such as Garland Publishing, Inc. or distributed through Dame Publishing. In 1991, Graves negotiated with Richard P. Brief, accounting editor of Garland Publishing, Inc., to have future issues of the Monograph Series published by Garland. The Academy would retain academic editorial control while Garland would publish and market the volumes. The Academy...*
would not receive any royalties. The arrangement with Garland was approved at The Academy’s trustees and officers meeting on August 11, 1991. The first Academy monograph to be published under the arrangement with Garland was monograph number seven in 1993. The monograph (two volumes) provides a bibliography of Russian language publications on accounting covering the period from 1736-1917. Monograph number eight presents the English translation of the history of the German public accounting profession. At the meeting of trustees, officers, and key members on August 16, 1998, the motion was made and approved to establish a coeditor for the Monograph Series. The titles, authors, and editors of the monographs are listed in Table 6.

### TABLE 6
Monograph Titles, Authors, and Editors
1989-1998

<table>
<thead>
<tr>
<th>Monograph Number</th>
<th>Title</th>
<th>Publication Date</th>
<th>Author</th>
<th>Editor</th>
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<tr>
<td>8</td>
<td>The History of the German Public Accounting Profession</td>
<td>1997</td>
<td>H. B. Markus</td>
<td>O. Finley</td>
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The Accounting History Classics Series: The Classics Series had been established in 1976 to reprint on an irregular basis notable contributions to accounting history that were no longer in print. In 1987, arrangements were completed with Garland Publishing, Inc. to publish the Academy’s Classics Series. Gary J. Previts, editor of the Classics Series, announced in 1989 that the following two titles were added to the series published through Garland Publishing:

- Studies in Accounting (1950) by William T. Baxter

The Spacek work, selected for the President’s Hourglass Award in 1986, was previously available only in a limited paper-bound
version. These two titles increased the number of volumes in the series to six. After discussing the future of the Classics Series at The Academy's meeting of trustees, officers, and key members on March 16, 1991, the series was suspended, given that past volumes were out-of-stock or nearly so. Editor Previts was to monitor events and make recommendations as to whether to continue or discontinue the series in light of current demand and the availability of works from other sources.

**Accounting History World Congresses:** Academy members have provided leadership and support for the world congresses of accounting historians. The Sixth World Congress of Accounting Historians was held in the ancient city of Kyoto, Japan on August 20-22, 1992. Kyoto celebrated its 12th centennial anniversary in 1994. The theme of the Congress was "Accounting History: Tradition and Innovation for the 21st Century." Papers presented at the Congress were published in *Collected Papers of the Sixth World Congress of Accounting Historians* (3 volumes), edited by Atsuo Tsuji (Japan: Accounting History Association, 1992). Atsuo Tsuji served as convenor and was assisted by Yoshihiro Hirabayashi and Hiroshi Okano, all of Osaka City University. There were over 200 participants from 15 countries.

Selected papers presented at the Sixth World Congress were also included in *Studies in Accounting History: Tradition and Innovation for the Twenty-First Century* (Greenwood Press, 1995), edited by Atsuo Tsuji and Paul Garner.

During August 11-13, 1996, the Seventh World Congress of Accounting Historians was held at Queen's University in Kingston, Ontario, Canada. Alan J. Richardson (Queen's University) served as convenor. This was the first time that the congress had been held in Canada and only the second time that the congress had been held in North America. Over 60 papers were presented around the theme "Disorder and Harmony: Contributions of 20th Century Accounting." Selected papers (15 papers) from the congress and Daniel Wren's (University of Oklahoma) plenary address, entitled "Connections: The Shared Heritage of Accounting and Management History," were published in Research Monograph Number 23 of the CGA-Canada Research Foundation, entitled *Disorder and Harmony: 20th Century Perspectives on Accounting History* (1996), edited by Alan J. Richardson. Abstracts of the papers presented at the Congress were also included in an appendix to the monograph.

The first congress was held in Brussels, Belgium in 1970, followed by the only one held in the U.S. at Atlanta, Georgia.
Subsequently congresses have been held at London, England (1980), Pisa, Italy (1984), Sydney, Australia (1988), Kyoto, Japan (1992), and Kingston, Canada (1996). The eighth congress is scheduled for July 2000 in Madrid, Spain. The Academy has served as a cosponsor for each of the congresses, except for the first, which was held prior to the formation of The Academy. The venue and identity of the congresses have varied somewhat to reflect the individual preferences of the host country. The congresses provide a forum for the dissemination of research and the generation of interest in accounting history. Moreover, they have provided a link among various accounting historians around the world.

Accounting Historians Journal: The Accounting Historians Journal (AHJ) has continued to gain acceptance as a major accounting research journal. To provide guidance regarding the retention of manuscript files by the editor of the AHJ, the policy was established at the meeting of trustees, officers, and key members on March 16, 1991 that the AHJ editor, upon completion of his/her term of service, would forward all copyrights and author release forms to the Accounting History Research Center where a file will be maintained by volume. Other materials in the manuscript files (e.g., reviewed manuscripts and letters to authors) may be destroyed after two years from the date of decision unless there is a working complaint. At the trustees and officers meeting on May 3, 1992, Coeditor Dale L. Flesher made a motion that The Academy accept a nonexclusive offer by University Microfilms International to microfilm all issues (back and future) of the AHJ. The motion passed unanimously.

The Board of Trustees at its meeting on April 24, 1993 approved the termination of the arrangement with Nihon-Shoseki, Ltd. as the exclusive wholesale distributor for the AHJ in Japan. A special letter of thanks was sent to Nihon-Shoseki for its help in assisting The Academy's development in Japan over a 15-year period (1977-1991). After a discussion on the budget for the AHJ at the meeting of trustees, officers, and key members on April 30, 1994, a page budget for each issue was set at an upper limit of 200 pages or $10,000.

At the meeting of trustees, officers, and key members on April 20, 1996, a proposal that the submission fee of the AHJ be reduced from $15 to $0 for members and from $38 to $25 for nonmembers was approved. The latter change would mean that authors who were not members would no longer automatically be given membership status following a paid submission. At the
meeting of trustees and officers on December 6, 1997, it was decided that the $25 submission fee for nonmembers would also be eliminated, thus ending the charge of a submission fee which had begun at the beginning of 1987.

At the meeting of trustees, officers, and key members on August 14, 1996, a motion was passed that starting after 1997, the AHJ editorship would be a fixed three-year term. The editor would be authorized to appoint an associate editor to direct distribution. Except for the year 1996 when some distribution problems were encountered, issues of AHJ have appeared with a minimum of delays.

Editors and Editorial Board: On June 1, 1989, coeditors of AHJ, Gary J. Previts and Mary S. Stone, turned over the editorship duties to Dale L. Flesher and William D. Samson. The first issue of the AHJ for which editors Flesher and Samson were responsible was the June 1990 issue. In 1989, the publication dates of the AHJ were changed from spring and fall to June and December in order to establish firmly calendar date timetables. Flesher and Samson continued to use the concept of associate editors that had been implemented by prior editors. Associate editors during the editorship term of Flesher and Samson were: J. Richard Williams (June 1990-December 1990), Laurie J. Henry (December 1990-June 1992), Tommie Singleton (December 1992-June 1994), and Patti A. Mills, who edited the Review of Books and Other Publications (June 1990-June 1994). Mills succeeded Barbara D. Merino who had served as editor of Book Reviews since the beginning of 1986. A little over two years after assuming the coeditorship, Flesher reported at the annual business meeting on August 12, 1991 that the number of submissions had decreased slightly but that the quality had improved.


The nomination of Richard K. Fleischman as managing editor-elect for 1997 for AHJ and editor beginning in 1998 was approved at the December 7, 1996 meeting of officers and trust-
ees. To assist in the transition of editorial teams, the managing editor-elect was authorized to appoint an editorial board and production editor. On January 1, 1998, Richard K. Fleischman and A. J. Cataldo (production editor) assumed the editorship of the *AHJ* from Barbara D. Merino and Patti A. Mills. Victoria K. Beard continued on the editorial staff as Book Review Editor. Current and former members of the Editorial Board are listed in Table 7.

**The Charles Waldo Haskins Accounting History Seminar:** Approximately ten years after the Third Charles Waldo Haskins Accounting History Seminar was held in Atlanta, Georgia, the seminar was again held in Atlanta. The Fourth Charles Waldo Haskins Accounting History Seminar was held on December 1-2, 1989 at the Atlanta Hilton Hotel. The fourth seminar was hosted by The Academy, the School of Accountancy at Georgia State University, and The Academy's Accounting History Research Center located at Georgia State University. Alfred R. Roberts and Elliott L. Slocum coordinated the seminar. The theme of the seminar was “Research in Accounting History: People, Issues, and Trends.” In addition to the 13 papers presented, a luncheon presentation on “Concerns and the Profession of Accountancy” was made by Eugene H. Flegm and a dinner presentation on “Insight into the Recent Proposals to Change the CPA Exam” was made by Wilbert Schwotzer. The Fifth Charles Waldo Haskins Accounting History Seminar was held in Atlanta on November 12-14, 1998.

**TABLE 7**

**Current and Former Members of the Editorial Board**


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**The Accounting Historians Journal**  
**1989-1998**

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x = both issues  
d = December issue only (inadvertently labeled Fall issue)  
j = June issue only

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**The Accounting Historians Notebook**: Dale L. Flesher served as editor of *The Accounting Historians Notebook* during the period 1980-1989, at which time Elliott L. Slocum assumed the responsibilities of editorship. During Flesher’s 10-year editorship, the *Notebook* continued to grow not only as a newsletter for members but also as an outlet for short historical articles. Editor Slocum continued the established general format and content of the *Notebook*, consisting basically of news items, messages from The Academy’s president, official business such as minutes from meetings, and several short historical articles. A new section of the *Notebook*, “Notes about Academy Members,” started appearing in the fall 1990 issue in an effort to keep up with the activities of Academy members and the recognitions they had received.

To help in containing costs, it was decided at the meeting of trustees, officers, and key members on November 18, 1990 that future issues of the *Notebook* should follow a page budget...
of no more than 36 pages (or 72 pages per year). Inclusion of articles was to be a lower priority. At the March 16, 1991 meeting of the trustees, officers, and key members, Slocum indicated that future issues of the Notebook would emphasize news items up front, followed by short articles (historical nugget types) if needed. In relation to a question raised at the meeting of trustees and officers on December 8, 1991 regarding copyright procedures followed by the Notebook, Editor Slocum indicated that the Notebook would adopt the form and procedure followed by AHJ.


At the December 7, 1996 meeting of officers and trustees, Editor Slocum was authorized to appoint Kumar N. Sivakumar as coeditor of the Notebook. Since the semiannual publication schedule of the Notebook (spring and fall) might overlap with the publication dates of the AHJ, the publication dates of the Notebook were changed from spring and fall to April and October in 1997 in order that members of The Academy might receive published materials on a quarterly basis.

Accounting History Research Center: Established in 1982 at Georgia State University, the Accounting History Research Center (AHRC) has served as a repository for limited collections of accounting books, annual reports, collections of personal correspondence and documents, and as a cornerstone for many of The Academy’s functions and administrative operations.

At the meeting of trustees and officers on August 9, 1992, Co-director Elliott L. Slocum reported that the AHRC would be moving to a new location as the result of a move to another building by Georgia State’s School of Accountancy. Co-director Alfred R. Roberts reported at the business meeting on November 22, 1992 that the new location of the AHRC would consist of a separate conference room and a separate stack area for collections.

Over the years, significant contributions have been made to the AHRC including contributions from Andrew Barr (retired chief accountant, Securities and Exchange Commission), Andrew D. Braden, James Don Edwards, Salvatore A. Gambino (Commercial Technical Institute “Leonardo da Vinci” of Milazzo), and S. Paul Garner. In 1993, Elmer G. Beamer (retired partner, then Deloitte, Haskins & Sells) donated files regarding education issues with which he had been involved. In
1990, the AHRC received from Mrs. Frank C. Slingerland texts used by her husband during the 1920s, and in 1997 Mrs. Virginia Jones made a substantial contribution of publications from the estate of her husband, James W. Jones (CPA, Baltimore, Maryland).

It was reported at the meeting of trustees on August 14, 1988 that during the spring, records of the Federation of Schools of Accountancy (FSA) were received at the AHRC. Elliott L. Slocum, as chair of the FSA's Historical Materials Committee, was charged with cataloguing these materials, which were to be housed in the AHRC.

At the annual business meeting on December 10, 1994, Co-director Slocum noted that the AHRC, like the Tax History Research Center, would offer research fellowships for individuals wishing to conduct research there. Slocum reported at the annual business meeting on December 7, 1996 that the holdings in the AHRC had been catalogued.

Alfred R. Roberts and Elliott L. Slocum served as co-directors of the AHRC from 1987 to June 1995 when Roberts retired from Georgia State University. At the meeting of officers and trustees on December 7, 1996, the motion was approved for Director Slocum to appoint Kumar N. Sivakumar and Ram S. Sriram as associate directors of the AHRC. Roberts, in recognition of his contributions to the AHRC, was named director emeritus.

Academy Video and Audio Tape Library: The holdings of the Video and Audio Tape Library (VATL) at the University of Mississippi have increased significantly since it received its first donation, consisting of the Distinguished Accountants Series on videotape from Michigan State University in 1980. Expansion of the VATL includes contributions of Leonard Spacek's history of Arthur Andersen & Co. (circa 1988), additional tapes of Leonard Spacek's fireside chats from the 1960s, Eugene H. Flegm's tape on the standard-setting process, three tapes on Lee D. Parker's interview with Louis Goldberg, and tapes that Thomas J. Burns prepared in 1981 on the AAA's outstanding educators. In 1993, Tonya K. Flesher, then president of The Academy, announced that Gerald D. Searfoss of Deloitte & Touche arranged to have 127 videotapes of the Dingell Commission hearings donated to the library. Richard G. Vangermeersch's interview with Ruth S. Leonard and interviews of Dale L. Flesher and Gary J. Previts with Andrew Barr and S. Paul Garner are also available. As previously mentioned, the video of
The Academy’s 1992 research conference and the videos of selected portions of the 1994 and 1996 research conferences are in the library. It was decided at the August 11, 1991 meeting of trustees and officers that the Academy’s 3/4-inch, U-matic format video tapes would be converted to 1/2-inch, VHS tapes to help facilitate their use. The VATL tapes (except those of the Dingell Commission) are available for loan. Requests have been received from all over the world.

**Tax History Research Center:** Since the establishment of The Academy’s Tax History Research Center (THRC) in 1987 at the University of Mississippi, it has matured into a national repository for archival tax materials. While the core of the holdings of the THRC is the E. Louis Raverta collection (over 500 volumes), a number of valuable contributions have been made over the years, including contributions by Joe Black (CPA, Water Valley, Mississippi), Howard Davidson (Booneville, Mississippi), Dale L. Flesher, S. Paul Garner, Deloris Heniser (public accountant, Albany, Indiana), Thomas Hodge, Ronald J. Huefner, Donald C. Marshall, Alfred R. Roberts, BDO Seidman (Memphis office), Frank Stabler, Price Waterhouse, and Dwight Young, Jr. (CPA, Oxford, Mississippi).

In 1991, the THRC moved into new quarters, doubling the floor space of the original tax history center. A number of new bookcases were added mainly to house the substantial donation in 1990 from the Memphis office of BDO Seidman. Many of the items were the personal research materials used by P. K. Seidman in coauthoring the important work on the legislative history of the income tax.

The THRC has an extensive collection of tax services, congressional committee reports, books, journals, and other publications, dating back to 1909, dealing with the federal income tax. Some state materials, primarily theoretical or policy oriented, are also available. The valuable historical resources of the THRC, combined with the modern collection of tax materials at the University of Mississippi, makes the university an ideal place for tax history and policy research.

At the meeting of trustees, officers, and key members on April 30, 1994, a motion was passed to offer research fellowships for individuals wishing to conduct research at the THRC. The grant can be used only for lodging at the Alumni House Hotel at the University of Mississippi during the time the researcher is working at the THRC. Both pre-doctoral and post-doctoral fellowships are considered. It was announced at the
business meeting of The Academy on December 6, 1997 that one grant had been awarded and that a catalogue of the THRC's holdings had been placed on disk. Tonya K. Flesher has served as the director of the THRC since it was established in 1987.

**Academy Administrative Office:** In 1995, The Academy established its administrative office in the Garner Center for Current Accounting Issues at the Culverhouse School of Accountancy at the University of Alabama. The dedication ceremony to establish the administrative office was held on November 13, 1995, in Bidgood Hall, where the Garner Center is located. Featured speaker, Gary J. Previts, addressed approximately 50 in attendance on the subject of "Accounting History Evolution and the Future." William D. Samson, who assumed the duties of The Academy secretary as of January 1, 1996, directs many of the administrative functions.

At the dedication ceremony, S. Paul Garner, a founder and life member of The Academy, was honored for his lifetime contributions to accounting history and to The Academy. Alfred R. Roberts, also a founder of The Academy, was recognized for his many contributions to The Academy with the award of life membership and the presentation of a bound volume of letters of congratulations and appreciation from his Academy friends and colleagues.

**National EDP Auditing Archives:** Early in 1993, President Tonya Flesher, with the assistance of Tommie Singleton, obtained for The Academy a collection of historical materials relating to EDP auditing from the early 1950s to 1990. The materials are held in the National EDP Auditing Archives, housed on the University of Mississippi campus and sponsored by The Academy. Significant contributions have been made to the archives over the years, including contributions by Harold Weiss (Automation Training Institute), Don Adams (AICPA), Stan Halper (Coopers & Lybrand), and Robert Parker (historian, Electronic Data Processing Auditors Association, now Information Systems Audit and Control Association). Dale L. Flesher has served as director of the National EDP Auditing Archives since its formation.

**The Peter L. McMickle Accounting History Library:** In late 1997, Peter L. McMickle contributed a major collection to The Academy of approximately 1,640 rare accounting books, dating back to 1655, of which about 400 were published prior to 1900. The collection is considered to be one of the most complete as to
19th century works on accounting. Such a collection provides an archive of great potential for historical research. The collection, housed at the University of Mississippi, was named "The Peter L. McMickle Accounting History Library."

CONCLUDING COMMENTARY

The Academy of Accounting Historians was established in 1973 to facilitate the study of accounting history. It is a service organization of dedicated volunteers who give generously of their time and talents. Over time, it has attracted the support of professional groups as well, including the financial commitment of members, other individuals, and firms.

The Academy's existence presumes that, in a rapidly changing business environment, awareness of the origins and evolution of accounting issues enables the professional accountant, academic and practitioner, to make better decisions. The Academy encourages dissemination and publication of research, and continues to review and amend research programs and communication processes.

A major focus of The Academy is to encourage younger academics to direct their research talent toward historical inquiry. Evidence of the success of this effort is shown by the recipients of the Richard G. Vangermeersch Manuscript Award.

The Academy continues today as an independent organization having established an administrative office at the University of Alabama in 1995. It continues to expand the areas where historical materials can be preserved, as with the establishment of the National EDP Auditing Archives at the University of Mississippi.

Over the years, The Academy has become recognized globally as an institution which has positively influenced the course of historical scholarship. With the anticipated involvement of new members and the continued contribution of established members, there is every indication that it will continue on this course.
DESCRIPTION, OBJECTIVITY, AND A ROBUST PLURALISM: A REPLY TO FLEISCHMAN AND TYSON

If more than welcome in intent, Fleischman and Tyson's article "Archival Researchers: An Endangered Species?" [1997] prompted for me another question, "With friends like this, . . . ?." It is a sad commentary on our field if their contributions are so apt to be "minimalized" that it may "embarrass[s]" mainly descriptive accounting historians [Fleischman and Tyson (F&T), 1997, pp. 102, 102 fn.] to be so cited. It is probably not coincidental that other accounting scholars are likely to deem historical study more intellectual the more it is "interpretive" in a mode intellectualist. In any case, as an unembarrassed predominantly descriptive author I challenge the assumptions made that we as a class have "a [less] theoretical bent" than other historians and (by declared relativists) are prone to overstating the "objectivity" of our work [F&T, 1997, pp. 97, 102 (quoted)]. Follow-up conciliatory remarks [F&T, 1997, pp. 103-105] do not offset a gratuitous depreciation that has more broadly infected express Accounting Historians Journal (AHJ) editorial policy.

Concerning objectivity, I personally have long known of possible "selection" [F&T, 1997, pp. 97, 99, 102] and other biases or pitfalls conventionally cited [Barzun and Graff, 1957, pp. 159-166 (principally); Dray, 1964, pp. 21-22]. In a 1989 philosophical lecture, I reviewed individually my publications, acknowledging:

Prepared in respectful memory of historian Henry Borzo, who introduced me to historiography and historical method in a 1961 course using Barzun and Graff's [1957] text, and philosopher of history Maurice Mandelbaum, whom I as a student knew still better as an historian of philosophy, I thank the subject authors for inviting this critique.
presentations, and current projects in accounting history as of that time for problematic factors regarding objectivity, usually citing from four to eight points varying materially from one case to the next, and my efforts to surmount or contain them. For my companion books [Sheldahl, 1982, 1986] covering the accounting fraternity Beta Alpha Psi over 65 years, for example, I listed [Sheldahl, 1989, p. 2] mostly joint concerns regarding eight factors:

a. Periodization
b. Independence from sponsor, especially in covering scandal
c. Interviewing design and reliability
d. Limitations of minutes and other official sources
e. Random availability of files
f. Displacement of postal by telephone communication
g. Perspective on recent events
h. Pragmatic aspects.

Such a piecemeal approach seems sounder than a bald assertion of “[t]he impossibility of historical objectivity” (or of any contrary position) based on proof texting that excludes any sources of counter-arguments [F&T, 1997, pp. 97 (quoted), 98-99]. This particular question-begging appeal to authority uncritically cites for example, principally [F&T, 1997, p. 97] from Ricoeur, the contention that historical selection is “value guided” as such [Dray, 1964, pp. 23, 24 (quoted), 27-29]. Dray has argued [1964, pp. 24 (quoted), 29-35] that this “ancient argument” has “often been [too] quickly dismissed,” only to suggest [pp. 39-40], anticipating Haskell [1990], that it attacks a straw-person concept of objectivity.

Fleischman and Tyson’s wholly one-sided treatment reflects none of the complexity of an issue discussed by Passmore [1958] in terms of eight alternative criteria1 for objectivity. That

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1As possible sources or bases for “objective” inquiry, Passmore [1958] critically discussed (1) a “mathematical-deductive” structure [pp. 98 (quoted), 99], (2) observational data [pp. 99-100], (3) such data exclusive of “testimony” [pp. 100 (emphasis deleted), 101-102], (4) expressibility in language inviting substantially uniform interpretation [p. 102], (5) logically independent “atomic facts” [pp. 102 (emphasis deleted), 103], (6) non-arbitrary selectivity [pp. 103-105], (7) more than ad hoc testability or confirmability [pp. 106-107], and (8) conduciveness to general consensus [pp. 108-111]. Passmore [1958, p. 109] concluded in particular that

if the test … is that there are regular ways of settling issues, by the use of which [persons] of whatever party can be brought to see what actually happened, then … one can[not reasonably] doubt the objectivity of history.
nature is abundantly clear from historian Novick’s *That Noble Dream* [1988], a philosophically informed study of a century of objectivity discussion and debate among, most prominently, American historians, credited by a British philosopher of history [Walsh, 1965, p. 436] as having long preceded their trans-Atlantic colleagues in such a concern. Novick’s rhetoric, befitting [1988, pp. 259, 269] a primary title drawn from Charles Beard, is much more relativist than I would myself favor. As is shown in detail, however, by a commentator with a pointed and perhaps insightful title [Haskell, 1990] of his own likewise [*Books in History*, [1998], p. 1] adopted for a book, it ultimately does not conceal a generally moderate outlook on his topic.

Fleischman and Tyson [1997, pp. 97-100, 100 fn.] are attracted to a putative form of “cognitive” relativism in discussing a “paradigmatic” historiography linked at least nominally to Kuhn’s [1964] philosophy of science [Audi, 1995, s.v. “paradigm,” “relativism;” Krausz and Meiland, 1982, pp. 11-146; Novick, 1988, pp. 526-535]. Their sample paradigms from Marx, Foucault, and Neoclassical economics [F&T, 1997, p. 91] tend to suggest reductionist, ideological, or scientistic thinking, the freedom from which is for me a major attraction of descriptive work. An historical paradigm must not become a “blik” — a presupposition with which we view experience, spectacles through which all data will be viewed’ [Rolston, 1997, p. 11], subject only to ad hoc adjustment as needed to accommodate “refractory facts.”

Keenly sensitive to such a pitfall, and to negative associations of the kind just offered for their examples, Fleischman and Tyson [1997, p. 100] distinguish between writing “to” (blik) and “within” (non-blik) a paradigm. It may often be a formidable task effectively (that is, clearly) to draw that distinction in practice, however, as more than casual or isolated reference to a range [F&T, 1997, p. 103] of independent factors risks intruding and/or casting doubt on the theory’s assumed explanatory import.

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2R. M. Hare [1955; my thanks to Holmes Rolston, III for the reminder] coined the term “blik,” italicizing it throughout, in defending religious belief understood as nonfalsifiable. A co-discussant [Flew, 1955, pp. 107-108] replied that religious doctrine on Hare’s analysis could lend no rationale for religious practices, and a later critic [Blackstone, 1963, pp. 77-78] argued incisively that no distinction can be sustained between bliks good or sane, and bad or delusional.
I do not doubt, even so, that paradigmatic work in accounting history may be insightful or instructive, or wish otherwise to disparage it. To the contrary, my ideal is a robust pluralism in the field, inviting the broadest range of subjects, methods, and styles in keeping with a respected colleague's advice [Graves, 1998, emphasis retained] that we assess research primarily for "quality" and, surely assuming a rich diversity of more than idiosyncratic interests (existing or prospective) in our midst, "whether or not [it] is interesting." The stated editorial policy of AHJ over the past ten years is in these terms regrettable.

As foreshadowed in a Notebook entry [Previts, 1986], AHJ in 1988 introduced ["Guidelines on Research," 1988-1994] seven submission "guidelines" embodying in the main a loosely scientific model with an invitation [no. 3] to present-day applications (absent due caution against presentist bias [F&T, 1997, p. 93]). In particular, it was assumed ["Guidelines on Research," 1988-1994, no. 1] that papers would primarily address a specifiable "issue [not just topic], problem, and/or hypothesis," that is, a matter to be solved or resolved, the (re)solution to be stated [no. 6] in a "conclusion/interpretation." Coverage of a period of time [no. 4] should include reference to an array of "environmental factors."

A distinctly problem-solving orientation, one pragmatic or purposive beyond simply addressing scholarly curiosity, is certainly appropriate for an accounting historian, but why should it be (all but) required? Successor editors Flesher and Samson [1990, p. 1] only begged the question in defining "research" accordingly. Their belated defense of the guidelines [pp. 1-2, 3 (quoted)] similarly ignored such key qualitative variables as originality, difficulty, depth, and range of description while generalizing all too sweepingly that only relatively "new" fields of study lend themselves to noteworthy work of that kind. In addition, a "plodding piece of 'research' which is of no significance to the researcher or anybody else, undertaken simply because the idea of research has become fashionable" [Raphael, 1994, p. 36], may surely be as problem-structured as it is trivial.

This perspective relates only marginally, in any case, to my own broad experience as a bibliographer and organizational historian, and for that matter, for an area expressly ["Guidelines on Research," 1988-1994, intro. par.] "encouraged," to biographical work that I have underway. Even the hypothesis reflected in the title of my article [Sheldahl, 1985] on Thomas Sarjeant was secondary to direct coverage of the subject text,
and I am unaware of hypothesis testing or problem solving within a subsequent paper [Sheldahl, 1994] intended significantly to expand bibliographic work in our field through a full century's coverage ill-suited to environmental references. I, of course, routinely reason hypothetically in purposeful scholarly pursuit of facts and sources (discovery), but that is quite another matter.

The final original specification ["Guidelines on Research," 1988-1994, no. 7] abruptly changed course, to allow that

[p]urely descriptive papers continue to be of importance[,] but must be carefully and completely developed so that they are dealing with original materials as principal sources.

"Pur[e]" description was left to the reader's prior comprehension, but would properly exclude "interpretation" of a non-intellectualist kind, as represented I think, outside any pragmatic context beyond everyday understanding, within my Beta Alpha Psi [Sheldahl, 1982, 1986] and American Accounting Association [Shedahl, 1992] studies. At any rate, this seemingly ad hoc concession was dropped in a 1994 revision ["Statement of Policy," 1994-1998, emphasis added] most notable otherwise, and welcome, for so modestly introducing the seven current numbered planks as guidelines that "may . . . [be] helpful."

As illustrated by then editor Previts' coauthored 1989 history [Coffman et al., 1989] of the sponsoring body, actual content of AHJ over the past ten years has been broader than the editorial guidelines would lead one to suppose. Still, continued advancement of a pragmatic or problem-solving "paradigm" can only divide accounting historians, and perhaps offend some of them; discourage submissions from able scholars working outside such a framework, and possibly even lead them to question such endeavor; and otherwise tempt authors to frame their coverage in ways that may be unsuited to their topics or to their own styles or talents. The very publication of guidelines not consistently reflected in print raises, itself, a legitimate question of their intended point.

One possible rationale for (and motivant of) a problem-solving model is its potential appeal to mainstream non-historical accounting scholars. With or without prominent critiques [Ingram, 1991, pp. 121-122, 124-126, from a noted contributor; Sheldahl, 1992, p. 135, citing several examples, one of them partly from Previts] of contemporary academic research itself, or its dominance, there is no logical reason to look
toward it for guidance for our own work. Nor, relatedly, should reputed commonly restrictive policies [Fleischman, 1998] of accounting journals outside our field regarding historical material deter us from ourselves seeking maximal breadth. In building on a reported base [Graves, 1998] of “better and better” Academy of Accounting Historians meetings or sessions, attracting “all sorts of papers — all kinds of approaches,” we could set a worthy example for other contributors to accounting research.3

Logical analysis of historical study is important, intrinsically and (for possible guidance in conducting or assessing first-level work) instrumentally alike. I would urge in closing that we stress constructive analysis in place of judgmental subject-matter polemics of the kind that has gravely damaged [Allen, 1998] notable philosophy, literature, and, possibly [Alland, 1998, p. 7, in rebuttal], anthropology departments. In contributing to “a detailed unpacking” of an elusive concept of historical interpretation [Levich, 1965, pp. 338-340, 341 (quoted)], for example, our focus should be on diversity and inclusion, not the reverse.

An overall inclusionary perspective would promise an enriched research corpus potentially benefiting all accounting historians in the course of ending the marginalization (or worse) of contributors, so rightly condemned by Fleischman and Tyson [1997, pp. 101-105], based simply on their particular historical interests, aptitudes, and, yes, values. For my own beleaguered class, I wish for a day when if descriptive accounting historians are called “chroniclers” or [F&T, 1997, p. 103, opposing such a use] “antiquarians”4, it is with due respect to books 13 and 14

3Among others — possibly even including the general American historical profession. In his 1997 work The Degradation of American History, David Harlan is said to find therein [History: New and Selected Titles, 1998, p. 1], “in the disillusionment following the 1960s,” a dominant turn to “the methodology of the social sciences.” His commitment instead to a “redemptive potential” recalls a grand humanistic interpretive tradition to which I would relate Michael Mepham, whose 18th century interests [1988 a,b] materially overlapped my own.

4Fleischman and Tyson [1997, p. 103] stated that “the ‘antiquarian’ label conveys a greater pejorative connotation among North American historians ... than in U.K. academic circles.” If so, then either Elton [1987, pp. 151, 152 (quoted), 153-154] is a striking British exception, or the Americans would discredit even beyond disowning narrow specialists in antiquarian bailiwicks such as “parish history, local archaeology, genealogy, [and] lawyer’s history of the law.” My plain intent in the final sentence is in any case far more rhetorical than argumentative.
of the Old Testament; a 275-year compilation begun during the reign of Alfred the Great [Savage, 1988]; and a learned society founded by Isaiah Thomas late in President Madison's first term [American Antiquarian Society, 1987, pp. 17-19].

REFERENCES

Graves, O. F. (1998), personal correspondence, quoted with contributor's kind consent.


Reviewed by
Jan R. Heier
Auburn University at Montgomery

The history of Australia is a mystery to the average reader. Most see the country's history as nothing more than a shipload of convicts being deposited at Botany Bay and left to fend for themselves. In this book, Carnegie has lifted some of that mystery away from the history of Australia and has placed the development of the country in its proper perspective. More important to this review, he has traced the role that accounting and accountants played in taking Australia from a colonial backwater to a modern country. Carnegie also has showed the importance of the development of accounting principles to the development of a modern economy.

The book, which came from the author's doctoral dissertation, contains a thorough literature review and a methodology chapter that outlines the archival sources and the way they were used in the study. A short historical background of the societal, political, and legal nature of colonial Australia provides the basis for the sound analysis of accounting development used by the author in later chapters of the book. Finally, the author gives short biographies of the people who owned the sheep stations and a review of the contents of each of the 23 manuscripts of business records used for the study. This gives the book a very personal touch and makes the people who compiled the manuscripts more than a century ago very real.

Using the information from the manuscripts, Carnegie tells the story of sheep ranching in the Western District of Victoria before the federation of Australia, a period from about 1834 to 1901. These manuscripts include both accounting data and personal accounts of the proprietors of the stations. The archival research helps to track the development of accounting usages and practices among the sheep stations and related businesses and their effect on the development of the accounting profession in Australia.
In later chapters, the author discusses the nature of colonial pastoral records. In brief summary, the accounting on the sheep stations primarily involved record keeping for wool production. In the early part of the 19th century, this record keeping was largely non-financial in nature and dealt with such matters as the number of bales of wool produced and number of sheep shorn. Although records were also kept on wool sales, most of financial records about the stations’ expenses and debts were kept in what the author called personalized ledgers. Though the term “ledger” was used, the author indicated that neither double-entry accounting nor periodic financial statements were the norms until the 1890s. Finally, as the political nature of the colony changed post-1870, the influence of professional accountants became important to the stations and affected the direction of accounting change.

Simply put, in the 1870s a colonial government, based on colonial liberalism, instituted a death duty or estate tax on sheep stations. Such a law resulted in the need for better accounting records compared with “bare essential” records described by the author for the earlier period under study. Besides legal and political considerations, the author indicated that cultural and environmental factors also influenced the development of accounting. Economic changes in the colony put an end to the original barter system as money became more plentiful. Finally, as the educational level of the people of the colony rose, the ability to understand financial texts made the adoption of double-entry accounting easier.

Carnegie’s book is a very good example of the power of archival research and its ability to trace accounting change over time. His story of the development of pastoral accounting in colonial Australia is well-researched and the conclusions he puts forth to explain the nature of and reasons for accounting change are very sound. The research presented in the book is a very good addition to the accounting historian’s knowledge and understanding of why and under what conditions accounting principles develop.

Reviewed by
Peter Foreman
Deakin University

Clarke, Dean, and Oliver have gathered convincing evidence from three decades of corporate collapses in Australia to question the role played by the accounting profession and the accounting regulators in most of these financial disasters. Although this is a book about Australian corporate history, it should be of interest and relevance to readers in other countries, particularly those countries that espouse an Anglo-American accounting philosophy. Reference is also made to similar collapses and therefore similar problems in the U.K. and U.S. The first sentence in the preface sets the agenda and leaves the reader in no doubt as to the authors' thesis: "Over more than three decades of corporate collapse, continued criticism of accounting is the result of ineffective action by regulators in general and the accounting profession in particular" [p. xii].

In the first of five parts, the authors develop their argument that current accounting standards and regulations do not provide useful information for investors or creditors and particularly do not predict impending collapse. Strict adherence to standards has, in fact, enabled directors to confuse and mislead about the true state of financial affairs of the corporation. The hue and cry after every major collapse blames incorrect application, not the system itself. However, the authors observe that "virtually none of the commentaries attack the organisational and accounting fundamentals — virtually all imply that current standards have not been applied adequately. None observe that even if they had been, it would not have solved the problem" [p. 12]. The reaction of regulators is inevitably the prescription of more rules. Such a response is not new; the Royal Mail collapse in the 1920s evoked a similar reaction.

The middle three sections of this book are devoted to a history of major corporate collapses. Each of the nine chapters covers the events of a single corporate collapse. The collapses included are Reid Murray, Stanhill, H. G. Palmer, Minsec, Cambridge Credit, Associated Securities, Adsteam, Bond, and Westmex. All had highly complex group structures which
contributed to the misleading information published in their accounting reports. The authors have analyzed the contemporary materials and given a commentary on these data and reactions at the time. These are engrossing reading for all those interested in accounting and corporate history. History is not, however, the authors' main concern. Each tale is a liturgy of blaming the individual, the high-flying entrepreneur, and sometimes the auditors. The system is never at fault; problems arise because individuals fail to apply the accounting standards with enough rigor.

The final section is devoted to addressing the problems inherent in the current regulatory structure and advancing possible solutions. The authors contend that all the collapses discussed display very complex structures and that the accounting standards for consolidations have created misleading information. Regulations encouraged more complex groups which resulted in more confusing reports and the failure to differentiate between public and private interests.

The authors' solution is "(i) proscribe wholly-owned subsidiary companies and account for the decentralised operations as if they were branches; or, failing that, (ii) require an aggregation of group assets based on the market price of assets" [p. 225]. Thus, they support Chambers' exit-pricing approach as the resolution to defects in current accounting standards. The question of control becomes irrelevant if market prices are used to value assets, including shares in partly owned subsidiaries. This approach requires "an accounting mechanism in which period balance sheets contain data from which aggregations of the money and money's worth (selling prices) of the physical assets and the amount of the liabilities can be determined and articulated income statements produced" [p. 230].

The authors conclude with something of a warning to the accounting profession. They have thus far failed to provide serviceable financial information to stakeholders. Suggesting that the problem lies with the reader's inability to recognize the limitations of published accounts or a retreat into yet greater prescriptive regulations is not the answer. The increase in litigation against auditors is not likely to decrease; indeed, actions under the Trades Practices Act open up a new area of concern. The way to reduce this litigatory deluge is to adopt the mark-to-market approach; thus, providing stakeholders with useful and reliable financial data on which they can make informed decisions.

Reviewed by
Gweneth Norris
Deakin University

This book investigates the cost accounting and cost management practices in the three dominant industries of the British Industrial Revolution (BIR): the iron, textile, and extractive industries. It provides an overview of these practices and industries, before exploring "the relationship between technological change and cost management" and examining "the paradigmatic approaches that have predominated in recent costing history" [p. 4].

Many of the chapters draw heavily from previously published papers of the authors, both jointly and separately with other colleagues, while adding much original data. Followers of this literature through various journals will benefit from the consolidation of the evidence and the coherent picture that this book presents. The further development and discussion of the Neoclassical versus Foucauldian (Chapters 7 and 9) and Marxist (Chapter 9) arguments provides an added interest.

Working through the book, the material gradually becomes more detailed. The first chapter introduces the reader to the environment from which the source data originate. The rapid developments of the BIR are explicated, illustrated with staggering statistics. This chapter also describes, and seeks to explain, the former misrepresentation of the cost accounting history of this period.

Chapter 2 provides "The Big Picture" by summarizing the authors' "findings of managerial accounting techniques in 25 major BIR enterprises" [p. 21]. After brief detail of the firms and the basis for analysis, the techniques of the period are discussed under eight headings: expense control; responsibility management; product costing; overhead allocation; cost comparisons; costs for special decisions; budgets, forecasts, and standards; and inventory control. Within these categories, the degree of sophistication occasions surprise in view of the previous assertions by accounting historians of lack of management accounting applications at this time in Britain. Evidence from the 18th century of cost center allocations, as well as cost analyses for repair-or-sell, outsourcing, and transfer-pricing...
decisions, whet the reader's appetite for the more detailed later chapters.

Chapters 3, 4, and 5 examine the three industries more closely, focusing on the iron, textile, and extractive industries respectively. The evidence on management accounting practices in the iron industry provides an interesting background to the study of the less sophisticated textile firms. This is then followed by the more advanced management accounting practices evidenced in the extractive firms. The presentation of analysis in these chapters is not constrained by an attempt at consistency in format. Based on data from 24 iron firms, Chapter 3 presents data from 11 individual case studies (seven briefly and four in more detail), before consolidating the evidence and analyzing the "relationship between iron industry cost management and its environmental influences" [p. 50].

Chapter 4 presents data from the "archival survivals" [p. 81] of 30 textile firms, categorized according to four different uses of the information produced: expense control, product costing, responsibility accounting, and non-routine decision making. While the subsequent analysis relates management accounting techniques to technological changes of the period, the conclusion specifically compares the cost accounting activities in the iron and textile industries during the BIR. Chapter 5 disproves the authors' earlier contention [Fleischman and Parker, 1991] that cost accounting would be more important and highly developed in a factory environment: "This chapter is presented in an effort to rectify our former short-sightedness" [p. 116]. Here data are classified according to the geographic location of the sites to which they relate. Whereas the influences on management accounting practices in the iron industry were shown to be predominantly external, and those on the textile industries internal, the influences on such practices in the extractive industries are found to be both external and internal to the industry. These are, primarily, financial resourcing issues and the magnitude of operations.

Chapters 6 and 7 demonstrate the range and depth of management accounting techniques by presenting two in-depth case studies. Chapter 6 focuses on "costing practices" [p. 191] in the Carron iron firm, using seven of the categories of Chapter 2 as subheadings. Of particular interest is the inverse relationship found between management accounting and financial accounting sophistication over the lengthy period studied. Chapter 7 takes a different approach. By focusing on the development and
use of labor standards within the Boulton and Watt steam engine firm, there is an attempt to "shed light on the labour control issue." However, this gives rise to an analysis that centers on the conflict, and possible resolution of the debate, between the Neoclassical economic rationalist and the Foucauldian views of the stimuli for using labor standards and performance measurement to control human behavior. A point of interest here is the disclaimer of one of the authors with regard to the argument developed within the chapter.

In parts of the early chapters, readability suffers from the heavy detail that is presented. However, respect for both the weight of evidence that supports the authors' arguments and their full discussion of other related literature outweighs the occasional laboriousness of the prose. While the assiduous attention to detail continues through Chapter 8, it is presented within the historical setting that this reader had sought in earlier chapters. Briefly revisiting much of the evidence from earlier chapters, this chapter presents a flowing account, and a fascinating picture, of the use of management accounting techniques for informed decision making with regard to, for example, selecting, procuring, and running new technological applications. Would this industrial revolution have occurred, or taken a different direction, were it not for the micro-level analyses that directed individual decisions? This argument challenges the narrow arguments that macro-level factors, such as population growth and expanding overseas markets, completely dominated financially uninformed, or reckless, entrepreneurs. Was the survival of the fittest firms a matter of lucky or of intelligent decision making?

Chapter 9 appears to attempt the impossible. The first section provides an overview of extant methodologies and the paradigm paralysis that inhibits the development of the pluralistic and synergistic approach that the authors believe is vital to an understanding of accounting's role in history in general [p. 276] and, more specifically, its role during the BIR [p. 241]. The chapter progresses to deeper coverage of what are claimed to be the "three major schools" represented in the literature on industrial revolution cost accounting: Neoclassicism, Foucauldianism, and Marxism. The chapter represents compulsory reading for both would-be accounting historians and current "participants [protagonists?] in these theoretical debates" [p. 241]. The authors conclude that the coexistence of competing theoretical perspectives is necessary so that each may bring a
contribution to a synergized whole. What appears to be missing at present is the necessary mutual respect between different schools of thought that is a prerequisite for useful dialogue and debate among them.

The final chapter highlights the major findings with regard to the industry studies, firm case studies, the relationship between costing and technological change, and "the perspectives yielded by differing theoretical and methodological paradigms" [p. 281]. It encourages further investigation of the period by reference to the archives of other firms, especially those in other industries (e.g., railways). However, it does not address some issues relating to both met and unmet objectives of the book. First, the intended demonstration that British cost accounting methods predated American costing methods is not mentioned, although achieved. Second, there are claims early in the book that it would show that the BIR was a "formative period for the development of sophisticated management accounting methods" [p. 17], that it was a pioneering epoch in the development of cost accounting [p. 23], and that the authors seek the foundations of "purposeful" cost accounting [p. 23]. This view is also both mentioned and inferred elsewhere. However, the evidence is not convincing that either these methods were first developed during this period in history or that they are the basis of current management accounting knowledge and practice. Indeed, the concluding chapter states that many of the cost accounting and cost management practices later temporarily vanished from view. Further, due to lack of documentation we may never know what drove the choice and use of innovative methods (some mechanical) during the earlier agricultural revolution. Can we confidently exclude their use during the days of the Roman Empire, or by the early Egyptians or Mayans? Any claim of a period of first use is brave indeed. Is it not possible that certain members of man[kind] are capable of determining what information is relevant to a particular decision in an isolated fashion? Notwithstanding this, anyone with a deep interest in history would find the methods actually employed in historic decision making quite fascinating.

A useful addition to the book would be a chronological chart, placing this period and its developments into context. For an holistic appreciation of the period and the place of the phenomena under study within that period, a chart that positions the developments and inventions of the period (e.g., the spinning jenny, the laying of the first railway, the Davy lamp,
and the widely different dates for the introduction of stationary and mobile steam engines) against the criteria that otherwise serve as reference points to our knowledge of the environment (e.g., the sovereign, principal wars and battles, military and political leaders) would be invaluable. Much of the contextual information that would add to an appreciation of the content of Chapters 2 to 7 does not appear until Chapter 8, and some readers with little knowledge of British history may find it easier to read Chapter 8 first. The discussion within the chapters would thus be easier to follow since they jump backwards and forwards through the era under study.

Concurrently, the authors have synthesized previous literature (both their own and that of others) on the research topic and considerably extended our knowledge of cost accounting techniques and usage during the BIR. The evidence is presented in detail, while summaries of the findings are comprehensive yet succinct. Such a useful analysis of the extensive data would have been a mammoth task. The collection of data and its analysis extended over ten years but proves well worth the effort. Reading the book from cover to cover, one is aware of the necessary repetition. However, it would definitely meet the needs and satisfy the interests of a wide variety of readers. At the same time as being a research document of high academic merit, reporting on extensive original research, this book would be useful as a research resource, a reference text for teaching management accounting history, and as a general interest reader.

REFERENCE


Reviewed by
Gary P. Spraakman
York University

The authors state their purpose, viz.:

This book documents a highly significant development in the history of costing practice in the U.K. — the
uniform costing system designed for the members of the British Federation of Master Printers . . . during the early twentieth century. Shortly after the launch of the printers’ system, industry based uniform costing schemes became popular in the U.K. From 1913 to 1939, 26 such systems appeared, covering key industrial sectors . . . Thus uniform costing technology was potentially a prime influence on early twentieth century costing practice in several industries [p. v].

That purpose gets addressed with four sections based almost entirely on reproduced historical documents from the British Federation of Master Printers (BFMP) and related organizations. The book is actually a bundle of primary documents tied together with an introduction of 14 pages, four one-page section overviews, and a two-page postscript. Although these are important documents for the intended purpose, it was unexpected to be presented with them. In view of their stated purpose, the authors should have incorporated the 50 articles into a coherent analysis rather than reproducing them.

BFMP’s system of uniform cost accounting was intended to provide U.K. printers with accurate costs which, in turn, were expected to reduce competition and increase profitability. In the introduction the authors briefly describe the geneses of uniform costing and the forces that affected it. Most importantly, they discuss the economic conditions that encouraged the members of the BFMP to seek uniform costing as a means of combating fierce price competition. The assumption was that, if printers knew their “true” costs, prices would rise.

The first section, “The Emergence of a Costing Panacea,” traces the uniform costing system from 1873 to 1912. The major document themes are the importance of accounting records, cost accounting, and pricing. In one document, “An A.B.C. System of Cost-Keeping,” the authors refer to a complete set of books that was “in the room.” As those books and forms were “in the room” and not in the book as an attachment, a large part of that document made little sense to a reader.

The second section, “The Launch of Uniform Costing,” presents documents from the 1913 Cost Congress of the BFMP where the uniform costing system was presented to 1,200 attendees. Some of the documents were transcriptions of actual speeches and subsequently punctuated with audience comments in brackets, e.g., “here, here,” “loud here, here’s,” and “loud laughter.” Accordingly, documents often contained sub-
stantial rhetoric. One important document, "The System Explained," from the first day of the Congress, referred to forms which had been excluded from the book.

"The Costing System" was the title of the third section. It consisted largely of the "pamphlet" for the uniform costing system, complete with specimen forms, except form 16 was omitted. The pamphlet provided detailed explanations on how to allocate direct and indirect costs to printing jobs. The last section entitled, "Selling the Costing Solution," provided selected documents from 1913 to 1963 about promoting the uniform costing system. These documents, many of which came from the BFMP Costing Committee and its Propaganda Subcommittee, discussed the difficulty in encouraging members to adopt the uniform costing system. A 1934 circular said the problem was due to a "lack of salesmanship."

In conclusion, this is not the book promised by the authors. They claim on page v to document a "highly significant development." The word document implied to trace or analyze in regard to the development of uniform costing. However, the book consists largely of copies of documents (i.e., 207 of the 227 pages); few pages (20 of 227) are devoted to analysis. This conclusion recognizes, as has Garland editor Richard Brief for 40 years, that primary materials are essential for historical accounting studies. First, they provide rich evidence for studies that analyze or compare accounting practices. Second, there are advantages to books consisting of copies of historical documents or the transcription of those documents. Such books allow other researchers to build on that work. Trade Associations and Uniform Costing in the British Printing Industry, 1900-1963 is largely of the second type.

Based on their stated purpose, the authors wasted their book-length opportunity to make a significant contribution. Their recent publications indicate that they knew more than that presented [Mitchell and Walker, 1997; Walker and Mitchell, 1996]. Think of the minimal impact that Chandler [1962] and Johnson and Kaplan [1987] would have had if those books had been mere bundles of documents. If Mitchell and Walker are not willing to undertake a serious analysis, it is recommended that other accounting historians undertake the task. Such analysis should be pursued with Walker and Mitchell's stated purpose. Furthermore, the impact on the cost accounting profession should be added. And, as implied, the task must go beyond merely bundling documents.
REFERENCES


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