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Research on the Evolution of Accounting
Thought and Accounting Practice

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AHJ EDITORIAL STAFF

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Volume 28, Number 2 **December 2001**

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ACCOUNTING HISTORIANS JOURNAL

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The *Accounting Historians Journal* is an international journal that addresses the development of accounting thought and practice. *AHJ* embraces all subject matter related to accounting history, including but not limited to research that provides an historical perspective on contemporary accounting issues.

Authors may find the following guidelines helpful.

1. Authors should provide a clear specification of the research issue or problem addressed and the motivation for the study.

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.

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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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ACCOUNTING HISTORIANS JOURNAL

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2. A limited number of content footnotes.

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

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Abdulmalik A. Al-Hogail
CASE WESTERN RESERVE UNIVERSITY
and
Gary J. Previts
CASE WESTERN RESERVE UNIVERSITY

RAYMOND J. CHAMBERS' CONTRIBUTIONS TO THE DEVELOPMENT OF ACCOUNTING THOUGHT

Abstract: Raymond J. Chambers was an internationally recognized scholar, influential theorist, as well as an important contributor to the study of the history of accounting thought. He was an advocate of the needs of financial statement users. He investigated what users, not accountants, considered important and what in fact was relevant to their decision-making. He challenged existing theoretical propositions which he believed were only rationalization of current practices. He argued that the lack of a rigorously developed theory of accounting led to contradictory and less relevant accounting practices. In his theory of continuously contemporary accounting (CoCoA), he demonstrated with logic and evidence that only an accounting system based on market selling prices is relevant to users' evaluation and decision-making process. Chambers dedicated a significant amount of his most recent work to his *Thesaurus* [1995] and to the origins and developments of conventional accounting. He endeavored to refute the widely held assumption that cost-based accounting is a superior rule. Besides launching *Abacus* in 1965, his works, *Accounting, Evaluation and Economic Behavior* [1966] and *An Accounting Thesaurus* [1995] are among Chambers' notable contributions to the accounting literature.

Acknowledgments: The authors express their appreciation to Robert Parker of Exeter University, John Ryan of the University of New South Wales, and to the participants of the Twelfth Accounting, Business & Financial History Conference, Cardiff, U.K., September 2000. We appreciate the valuable guidance of Graeme Dean and Peter Wolnizer during a tour of the Chambers' Archives at the University of Sydney. As well we acknowledge the timely critique and comments of the anonymous reviewers and the editor.

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A PERSONAL PROFILE

Raymond John Chambers was born on November 16, 1917 in Newcastle, New South Wales, Australia. He was a very private person devoted to his wife of 60 years, Margaret Scott Brown, and to his two daughters, Margaret and Rosemary, and son, Kevin, who graduated from the University of Sydney in languages, social work and medicine. Chambers had early interests in the study of the English language and literature, mathematics, and physics. He also shared similar interests in sociology, psychology, and the history and philosophy of science. His hobbies were once listed as reading, writing and arithmetic. He was known for his endless effort to help and support his colleagues and students and to encourage young academics and writers to produce high quality research and progress in their careers.

Chambers' journey in accountancy education commenced when he was awarded the University of Sydney Exhibition (scholarship) to study economics, whereafter he completed his undergraduate studies in 1939. After graduation, he undertook several professional examinations to qualify for membership in the Commonwealth Institute of Accountants and the Australian Institute of Cost Accountants. Chambers started his work experience as a junior clerk in the New South Wales' Attorney General's Office and later as a stock clerk with Shell Oil Company and as a materials controls supervisor and statistical officer at the Electricity Meter and Allied Industries Company. Next, he worked with the Australian Prices Commission during the period from 1943 to 1945. He also provided consultation to various companies and governmental and professional bodies.

Chambers' first academic assignment came in 1945 when he was appointed as a teacher in the School of Management of Sydney Technical College. In 1953, Chambers became the first full-time appointed senior accounting lecturer in the Faculty of Economics at the University of Sydney. He was later appointed as the University's Foundation Professor of Accounting when the Department of Accounting was established as a unit separate from the Department of Economics. During his long academic career, Chambers accepted various fellowships and invitations to teach and present lectures and seminars in numerous prestigious universities throughout the world including the United States, United Kingdom, New Zealand, Europe, Canada, Southeast Asia and South Africa. Chambers retired officially on December 31, 1982. He continued his academic work as an

Emeritus Professor at the University of Sydney and as an Adjunct Professor at Deakin University for over a decade.

After facing several episodes of challenge and frustration [Wells, 2000], Chambers launched in 1965 *Abacus*, a scholarly publication, to fill a gap that resulted from the discontinuance of *Accounting Research* in the U.K. which ceased publication in 1958. His main goal was to promote high quality research in accounting from a variety of perspectives. His commitment to *Abacus* and to accounting research resulted in worldwide recognition of this publication. He served as the founding editor from 1965 until 1975 and as an active consulting editor, thereafter.

In spite of his decision to devote himself to academic work, Chambers identified himself with the practicing accounting profession and sought to foster relationships between academics and practicing accountants. He accepted numerous invitations to address professional associations and served in professional and governmental committees as well as in advisory and editorial boards. He also served as a State, and later as a National, President of the Australian Society of Certified Practicing Accountants (formerly known as the Australian Society of Accountants).

During his career, Chambers received many honors and awards. In 1967, he was awarded the American Institute of CPA's Gold Medal for his contributions to accounting literature. He was also the first overseas invitee to be the American Accounting Association's Distinguished International Lecturer. In 1991, Chambers was awarded the American Accounting Association's prestigious Outstanding Accounting Educator Award and was also the first inductee into the Accounting Hall of Fame from Austral-Asia. He also earned three Citations from the Australian Society of CPAs and was elected as a Fellow of the Academy of the Social Sciences in Australia. Chambers was made a life member of many accounting organizations and was granted several honorary doctorates by various universities. He was named an Officer of the Order of Australia for his services and contributions to research and education.

Chambers' valuable contributions to accounting literature took the form of several books, numerous monographs, and more than 200 articles, conference papers, and submissions to governmental and professional bodies. His works were selectively published in Spanish, Italian and Japanese. His first publication was a book titled, *Financial Management* [1947], which was the outcome of the first two years of his teaching experience. His last published paper, "The Poverty of Accounting Disclosure," appeared in *Abacus* in October 1999. Chambers died in Sydney on September 13, 1999 at the age of 81.

He has been described as 'inspirational and visionary' [Wolnizer, 1999]; a 'philosopher' and 'reformer' [Barton, 1982]; 'one of the most influential theorists of his time' and 'a man for all seasons' [Lee, 1987]; an 'intellectual giant' [Mathews, 1982]; a 'determined seeker of truth and fairness' [Gaffikin, 1994]; and 'informal, gentle and a bit lonely' [Moonitz, 1982].

The reminder of this paper is organized as follows. First, the paper highlights the early influences on Chambers which led to his criticism of conventional accounting practices. Next, major phases in the development of Chambers' theory are outlined and its key characteristics are identified. Then, the paper reviews Chambers' effort to promote acceptance for his proposals and examines the criticism that his theory faced. In the next section, the paper considers Chambers' work as an historian and how he employed accounting history to explain and support his theory. The paper concludes with a summary and general comments on Chambers' significance and contribution to accounting literature and development of thought.

EARLY INFLUENCES

Prior to becoming intellectually committed to the accounting discipline as a field of knowledge, Chambers had the opportunity to view accounting from outside the profession and assess its value from the viewpoint of its jury, its users. During his undergraduate study of economics, Chambers' exposure to accounting was limited to two introductory classes of accounting and, thus, his knowledge of accounting when he commenced working was not substantial nor was he trained enough to absorb the obscurity of some conventional accounting practices, as he viewed them later. His early positions as a clerk accountant and materials controls supervisor provided him with a real world sense of how conventional accounting was performed. He was in a backstage position that enabled him to observe how actual financial reports were prepared using flexible methods that could be based on inconsistent assumptions, particularly where the issue of asset valuation was involved. He noted first hand that financial statements could, in fact, be misleading.

A later, and more significant, experience was with the Australian Prices Commission. Different from his previous involvement as a processor or transmitter of information, Chambers' responsibility at the Commission resembled the users of financial statements. Similar to that of a financial analyst, his task was to evaluate companies' financial statements and assess the appropriateness of their cost allocation methods and eventually to ensure the fairness of the calculated prices to consumers, especially during the critical period of war. During his years with the Commission, Chambers identified the inconsistency and incomparability of financial statements that he had to analyze to support his decisions. To him, such financial statements were incapable of producing the relevant financial view that he, as an analyst, needed. Combined with his brief educational background of what accounting was expected to provide and his experience of how accounting was actually practiced, his Commission experience led him to the view that accounting was far short of what it was presumed to be and what it was capable of providing.

As noted, Chambers' academic career started in 1945 when he was appointed to the Faculty of the School of Management of Sydney Technical College. Chambers' teaching responsibilities were not limited to accounting; in fact, he taught nearly all the subjects offered by this school, particularly those required in a special diploma program that he had designed. This influential experience had encouraged Chambers to explore the other disciplines of management, economics, and finance, thus, making him more acquainted with business behavior and decision-making process. With this broader view of the business world, Chambers was able to identify further limitations of accounting to meet the expectations of those users it was expected to serve. His teaching experience had indeed motivated Chambers to reconsider, more in depth, the value of accounting information, not from the narrowed traditional view of accountants, but from the viewpoint of users whose satisfaction is presumably the ultimate goal of accountants. He investigated the behavior of management as well as other users of financial statements. His focal point was on the economic behavior of businesses and especially how they made their decisions and what financial information was deemed necessary to make their decision-making process more effective.

In summary, Chambers became an advocate of those who use financial statements. He noticed the insufficiency and irrelevance of accounting information contained in financial statements and realized the resultant gap between what accounting was providing and what users actually needed.

THEORY DEVELOPMENT

Chambers' approach to theoretical investigation was to define the actual problem, identify its real causes, and then attempt to find an appropriate solution. His thorough understanding of the shortcomings in existing practices and identification of the underlying factors responsible for such deficiencies represented an important phase in the development of his accounting theory.

Criticism of Conventional Accounting: Based on his personal experiences, Chambers detected anomalies in accounting practices. Accounting's function was perceived to serve its users; yet the reality of Chambers' experience suggested otherwise. He believed that the information accountants provided fell short of fulfilling this function. Users expected certain relevant information, while accountants followed their self-prescribed procedures and supplied other information regardless of its actual relevance to users' evaluation and decision-making process.

Sharing similar concerns to those of MacNeal [1939] with regard to small investors, Chambers argued that the average user cannot fully understand the actual differences in income that might result from the application of different acceptable accounting methods. Conventional accounting practices had unjustifiably combined results from past, present, and future values leading to inconsistency which lacked any defense but custom. This explains why Chambers [1989] preferred to describe this system as 'higgledy-piggledy' accounting. He wondered if [1999b, p. 246] even accountants would think that Robert Sterling, for example, could manage to come up with "2,971,332,000 different book values that could be reported for inventory." He argued that, in many cases, some financial information was not only irrelevant, but also misleading. This phenomenon could have a serious impact on capital markets that were consequently composed of poorly informed participants. As he characterized it, "that today's securities markets are well informed is a myth" [1973, p. i]. In short, accounting practices involved too many anomalies and irregularities making the conventional accounting system flawed and unacceptable.

Several issues confronted Chambers. For example, if the failure to fulfill users' information needs is as serious a problem as Chambers viewed it, could existing accounting practices overcome such a challenge? Also, if this failure continued to exist despite the effort to overcome it, what was the proper remedy? Seeking answers to these questions dominated Chambers' work during the rest of his career. The obscurity of conventional accounting practices caused Chambers to investigate accounting literature and examine the theoretical grounds, if any, for such flawed practices.

He critiqued and challenged existing theoretical propositions as being poorly developed. In his view, they did not qualify to be considered a theory. They were rationalization and justification for current practices and were based on a set of inconsistent assumptions. This view provided Chambers a basis to attack misleading practices, their legitimacy, and their application. The fact that current practices did not conform to theoretically sound bases explains the increasing complexity in accounting rules and widening differences in acceptable methods.

The basic conclusion of Chambers' own experience and inquiry was that the lack of a sound, well developed theory of accounting had led to the contradictory and controversial accounting customs and procedures that distorted accounting information and made it less useful. This conclusion compelled him to find a solution to the problem and replace theoretically inconsistent propositions with a more dependable, self-defending theory of accounting.

Approach to Theory Development: An important characteristic of Chambers' work is his freedom from association with pre-existing conventional accounting schools of thought. Chambers was not committed to any single method or research community for developing and promoting his ideas. His approach was based on his exploration of the history and philosophy of science and his investigation of related and more developed fields. When Chambers' work is examined, his main arguments are remarkably consistent. This consistency is difficult to find in other scholars whose writings had been constructed over a period of five decades. Thus, when a new issue is brought up in a contemporaneous paper, one finds the underlying ideas consistent with the arguments presented decades earlier.

Chambers had great confidence in his orthodoxy and employed great energy to achieve its recognition. He avoided association to any particular school of thought that might limit his ability to accomplish his objectives. Instead, he would be "guided by what seemed to be practical problems and what seemed to be practicable and technically feasible ways of resolving them" [1991a, p. 24]. One observation by Zeff notes that Chambers "deserves to be known amongst his many achievements as the only accounting academic who includes in his bibliography, his own bibliography" [1982, p. 181]. Thus, it is not a surprise that Chambers also was described as a 'loner' and a 'his own man' [Stamp, 1982].

Chambers' next task was to explore the accounting literature, the literature of related disciplines and carefully investigate accounting practices and their actual role in the society, particularly their function in the business world. His attention was focused on theories of economics, language, communications, psychology, sociology, mathematics, and measurement. For example, he needed to better understand how general economic decisions were theoretically and practically made and to understand how users of financial statements actually behaved in the real world. He studied what users, not accountants, considered important and what in fact was relevant to their decision-making. He searched the literature of communications to determine how such information, once obtained, could be disseminated effectively to users.

Having determined his goal of fulfilling the function of accounting in terms of providing what users actually expected, Chambers attempted to discover the best methodology of constructing a system of accounting that would achieve this objective. He believed his approach should follow a successful, effective pattern which might replicate other well-developed disciplines. During this time, Chambers' work was directed towards methodological evaluation of current academic work and, eventually, the proposal of a more appropriate approach for developing a sound theory. This direction is clearly seen in a series of Chambers' articles beginning in 1955 with "Blueprint for a Theory of Accounting." In this article, he asserted what should be expected of theories in general, and of accounting in particular. Drawn from his management teaching experience and exploration of economics and social sciences, general and straightforward propositions necessary for developing a theory of accounting were outlined and justified. Further discussion of methods of theory construction was provided in another article, "Details for the Blueprint" [1957].

Chambers was very confident about the validity of his arguments and his determination and persistence led to an aggressive debating style. This not only strongly 'annoyed' [Gaffikin, 2000, p. 285] his opponents who held established, orthodox views, but also set up personality conflicts between the two camps. Whittington and Zeff [2001] observe that "Aged 39 and not yet a professor, Chambers had bearded one of the lions of

US academic accounting [Littleton . . . who] never came to terms with Chambers' criticism, which he took as an affront" [p. 212].

Chambers' ultimate goal was not simply to criticize the work of others. After describing how theories ought to be *scientifically* constructed based on his exploration of other well-developed fields of knowledge, Chambers' next step was to offer a theory of his own. In 1961, he introduced a proposal of his theory in "Towards a General Theory of Accounting." He followed the scientific approach that he previously outlined in his "Blueprint" to provide a system of accounting thought which was rigorously and consistently developed. He dedicated this paper to developing a set of postulates and assumptions that would later be used to derive his theory. His appeal for the employment of rigor, reasoning, and structure in developing accounting theory was indeed among Chambers' most significant contribution to the development of accounting thought. Further, his "Towards a General Theory of Accounting" was considered as the "watershed between the old style of pragmatic accounting and the new theoretically based accounting in which Chambers was to play such a dominant role in developing it during ensuing years" [Mathews, 1982, p. 177]. The complete version, except for few minor issues, of Chambers' solution to the deficiencies of conventional accounting was offered in his major work, *Accounting, Evaluation and Economic Behavior* (*AEEB*), published in 1966. *AEEB* has been considered by many as his *magnum opus* (e.g., [Brown, 1982]), a work for which he was awarded the AICPA's Gold Medal in 1967. The book demonstrates his thesis and reasonable premises which conformed to commonsense and intuition as well as his rigorous and logical development of propositions and foundations supporting his final conclusions.

It is important to note that the significance of *AEEB* stems not only from its conclusions, but also from how such conclusions were derived. Recognizing Chambers' significant contribution to the methodology of accounting research, Gaffikin [2000] states that "There is little doubt . . . that Chambers was the first in the English accounting literature to fully explicate such a rigorous scientific method and then consciously employ it in developing a theory" [p. 288].

In 1967, Chambers theory came to be popularized as "Continuously Contemporary Accounting", later identified by the acronym, *CoCoA*. Chambers initially used the abbreviation (CCA) to refer to this theory until 1975 when the Sandilands

Committee proposed its Current Cost Accounting system, and the same abbreviation (CCA) was used to refer to that particular system. As a result, Chambers preferred to use the new acronym (COCOA) and later (CoCoA) [1976].

CONTINUOUSLY CONTEMPORARY ACCOUNTING (COCOA)

A unique characteristic of CoCoA lies in its approach to the subsequent measurement of assets. Measurement is an essential task of accounting and thus considered a cornerstone of the development of any theory of accounting. Many of the deficiencies in accounting practices and reports, according to Chambers, relate to the application of inappropriate measurement approaches. Therefore, dealing with measurement issues, in addition to epistemic and methodological concerns, comprised the major and most critical component of Chambers' work.

In his theory, Chambers made an important distinction between measurement and valuation. Measurement is a function of accounting: accountants are to relate facts and communicate them to users. Valuation, on the other hand, is concerned more with expectations of future benefits that could be generated by the underlying asset; i.e., how such facts discovered by accountants are perceived by the user. While a specific asset should be measured equally by different accountants, it might as well be valued differently by two different users based on their unique perceptions of the utility of that asset. In short, while valuation by definition is subjective, measurement should be objective and independent from the influence of accountants or any group of users. The question then became: how to measure accurately?

During the early years of 1960s, Chambers addressed this question by exploring the literature of measurement, especially in physical sciences. He concluded that accurate measurement requires the observation of both the initial state and terminal state of the object under examination as well as the consideration of any necessary adjustments for changes in conditions during that period. Given this description of measurement, Chambers' criticism of conventional accounting practices focused on two issues. First, values at certain points of time were derived rather than observed. Accounting rules prescribed that measurement of assets at the end of the period be based on cost allocations and other calculations rather than on real observations and actual discoveries of the true and fair values of such assets. Chambers argued that accounting should use only factual or *observable* values and that the only scales of value that are discoverable and can be observed are market prices. Second, changes in the purchasing power of monetary units were not taken into consideration by current accounting rules. To measure the distance between two points, they both must share the same measurement unit; if not, the initial state must be adjusted to have the same common unit of the terminal state, i.e., share the same 'standardized' condition. It is generally accepted that adding U.S. $100 to D.M. 220 would be inappropriate for they do not share the same measuring unit. Correspondingly, an Y2K dollar should not be added to a 1973 dollar since they do not represent equivalent measurement units.

Chambers [1965], therefore, argued that if a true and fair view of the changes in financial position is to be obtained, market prices and changes in the general price levels should be reflected in financial statements and calculations of net income. Based on this extensive exploration and examination, Chambers reached the conclusion that "informed economic action is a derivative of a periodical accounting, based on the current cash equivalents of assets from time to time, periodical income calculations in dated real terms, and the authenticity of financial statements established by direct observation of prices from time to time" [Chambers and Dean, 1986, p. i].

Three major departures from conventional accounting identify Chambers' alternative system, continuously contemporary accounting, or CoCoA. First, assets should be stated at their monetary or money-equivalent values. Second, the value of non-monetary assets should reflect any changes in value specific to these assets. Only contemporary values are capable of reflecting the specific changes in asset values and, as a result, all other measures of value become irrelevant. Third, changes in the general purchasing power of money should be taken into consideration for they have impact on financial positions and results of operations.

An important question remained. What market values should be used: entry prices or exit prices? Chambers' view was that a firm exists within an environment that includes many constituents—related either contractually or socially to the firm. Based on economic theory and adaptive behavior, Chambers argued that firms typically have unlimited wants, possess limited resources, and exist in volatile environments. The extent to which a firm can grow and survive in such environments is influenced by its ability and readiness to adapt to the new changes in business conditions [1947]. Chambers observed that the entity's financial position should reflect its capacity at a specific point in time for engaging in exchange within its environment. A firm's financial position is based on its ability to adapt to the new environment and either maintain or alter its operations; that is, its capacity for buying new assets or paying off its current debts, when necessary. According to Chambers, *buying or entry prices*, although relevant to the decision of selecting new assets, are not capable of showing such adaptive ability. When a firm, for any reason, needs to generate a sum of money, i.e., adapt to a new environment, its ability to operate would be limited to the sum of the monetary assets that it possesses and what its other assets could bring in to the firm, e.g., *selling or exit prices*. Therefore, Chambers concluded that non-monetary assets should be restated to contemporary values using their net realizable value, what he classified as 'money equivalent.'

It is important to note that Chambers did not deny the significance of other valuation methods, but he always argued that a firm's adaptive capacity to change to a new environment could not be reflected in financial statements except when using contemporary, net realizable values. For accounting information to be useful and functional, it needs to be relevant; and for information to be relevant, it has to be current—that is, contemporary. Historical costs are relevant only at the time of initial transactions. Their relevance as indicators cannot be relied upon in subsequent periods. Likewise, discounted values are important and widely used as a method for choosing from certain projections of profitability for different alternatives. Yet they are still hypothetical in nature and are greatly influenced by their underlying assumptions and expectations that might vary broadly from one person to another [1979].

Chambers' premise was that accounting has to provide users, not with assumptions or hopes, but with facts—its function is fact-finding not decision-making [1966]. Accountants are to provide users with facts and information corresponding to reality, free from distortion. Such information may in turn be processed differently by users based on their varying needs and expectations. In short, Chambers demonstrated with logic and evidence that only market selling prices are relevant to users' evaluation and decision-making process.

Clarity, Simplicity, and Effective Communications: Chambers campaigned for a useful accounting system that was also straightforward. He called for simplicity in accounting methods, clarity in the forms of distributed information and argued that a clear and simple message is easier to communicate, comprehend, and be utilized. This emphasis persisted throughout Chambers' work and the title of one of his very last published papers, "The Case for Simplicity in Accounting" [1999a] confirms this view.

Clarity, simplicity and effective communication are among the key qualities of his theory. Chambers believed that the function of accounting information is to increase the knowledge of users and reduce their doubt [1966, p. 144]. He affirmed that the value and relevance of accounting information depends on the effective dissemination of such information. For various reasons, users practically are unable to observe all events and transactions of the firm. They rely on other specialists with certain skills, e.g., accountants, to process transactions and provide summarized, valuable information. The processor is an intermediary between the financial statement users and the transactions, with a responsibility of providing a substitute for a direct experience by users/decision makers. Chambers identified several qualities which should be satisfied to ensure the utility of the messages communicated to the user/decision maker. For example, a message should correspond objectively to the actual experience or object without any deliberate or unintentional biased influence by the processor. Other criteria include reliability, consistency, and comprehensibility (see [Lee, 1982] for further discussion). A message that fails to stand such a test and meet these qualities would lose some or all of its effectiveness and render the communication process unreliable. Therefore, these characteristics should be represented in the accounting information, which is the message, in order to maintain the perceived value and credibility of the accounting profession, that is the processor.

To ensure the effectiveness of the process, it is important to use signs that bear the same meaning to the processor as well as to the user/decision maker. To Chambers, clarity in the terms used in financial statements is a necessary condition required for effective communication between users and accountants. When signs are interpreted differently, the message loses its effectiveness and, hence, its value. In Chambers' view, the lack of mutual agreement on sign interpretation seems to persist openly in current practice. He noted that "Accounting is widely said to be a form of communication; yet the prime condition of communication—shared understanding between source and receiver—is nowhere considered" [1996, p. 129]. He argued that present accounting communication lacks effectiveness as a result of users/decision makers not receiving clear, undistorted messages that should resemble responses from direct involvement. For example, the unsophisticated recipient expects the value of an asset shown in the balance sheet to reflect its fair and true value on the date stated on such a report, yet this is not conventionally what the processor has in mind when preparing such a statement. With the continuing use of confusing technical jargon found in current financial statements combined with complicated, inconsistent accounting methods, Chambers identified further concerns about the declining utility and reliability of accounting information.

He observed directly many flawed practices that hindered the effectiveness of accounting communication. He argued against the use of supplementary statements with different valuation methods because that would confuse users and reduce the creditability of all reported information. He disagreed with the use of specialized accounting rules for different industries, noting that comparability of results across industries was vital for investors and for the efficiency of capital markets. Chambers also opposed the application of conservative rules in income calculations that were distorting facts, favoring future users at the expense of current ones. Some users, for various reasons, might prefer to understate the value of reported financial figures when making conservative decisions, while others would like to be more optimistic and place more values in these numbers. But accounting has a fact-finding function and is not to be directed by varying users' tastes or reactions to certain types of information. Chambers saw a double standard or 'doublethinking' with the treatment of certain transactions where overestimation of income was not allowed while overestimation of expenses was not only permissible, but also encouraged. Thus, he argued against the merit of the doctrine of conservatism. He believed that conservatism has no place in accounting as conservatism should be a quality of users and not a quality of facts or information. He disputed the validity of certain tax allocation practices which lead to the inclusion of artificial liabilities, resulting in misleading financial statements. Further, he rejected the practice of mixing facts with fiction where certain costs reflecting hopes for success, e.g., goodwill and deferred research and development costs, are treated as if they were actual assets contributing to the firm's current financial capacity. He never considered the various arbitrary cost allocation-depreciation methods as worthy approximations of any asset value, especially when they claimed to provide a true and fair view of a firm's financial position.

Chambers confidently argued that CoCoA would provide a far simpler and more useful message. It is the message that he believed would correspond to economic reality; be easily comprehended; be free from distortion; and be general and relevant to all users. It is easier for an individual, unsophisticated user to understand the actual current market price of an asset than to accept, for example, that the value of an asset might legitimately vary depending on the method of calculation, which after all would not necessarily have to correspond to the actual value of this particular asset. In short, Chambers' objective was to provide a simple message that is easier to understand and to be acted upon.

The previous discussion was constructed as a summary of Chambers' theory and its key qualities. He recognized the importance of these qualities when he developed CoCoA and believed that their relevance and importance would play a key role in his effort to sell his theory.

THEORY PROMOTION AND CRITICISM

Chambers was determined and fully confident about the soundness of his theory and validity of its arguments. After developing CoCoA, his next task was to seek its endorsement by others. A major opportunity to promote CoCoA and influence public policy occurred during the inflationary period of the 1970s. Inflation led to discomfort with existing financial statements. Serious doubt was cast on the usefulness of conventional accounting. As a result, many valuation alternatives were proposed. Chambers believed this was a great opportunity to demonstrate the superiority of CoCoA over all other valuation systems and gain its acceptance. To achieve this goal, he studied extensively other recommendations, wrote numerous papers and made several proposals to various governmental and professional bodies in Australia, the U.K. and the U.S., comparing all alternatives and demonstrating how all competing systems provided only partial solutions to the problem (see Appendix 1).

There were several episodes in his effort to influence public policy including the 1975 Sandilands Committee. As noted earlier, this Committee favored a Current Cost Accounting system and recommended an approach identified with the acronym 'CCA,' which Chambers had previously used for his theory. This 'theft' [Clarke, 2000, p. 279] of his CCA nomenclature and rejection of his proposal did not stop Chambers from continuing to promote his theory at official levels. Another public policy opportunity occurred in 1978 when Chambers, as the head of Accounting Standards Review Committee, proposed changes to accounting standards in Australia, following from his theory. However, ease of application and cost-benefit tradeoffs favored the selection of other means, such as indexing. Chambers' somewhat indulgent analysis of this is found in an acronym made from the latter portion of the title words of his paper "NOD, COG, AND PUPU-See How Inflation Teases" [1975]. However, the superior rationality of CoCoA did not seem to be *the* deciding factor in determining policy applications by regulators and standard setters during this period.

Subsequent to the inflationary period of the 1970s, public and professional interest in CoCoA and in inflation accounting declined among many academics and professionals. So as to understand the reasons behind the lack of official support for CoCoA, one must understand the criticism that the theory faced and the concerns that were raised about its validity.

Criticism Of CoCoA: One sign of a worthy theory is an abundance of critics and CoCoA drew its fair share. Critics asserted chiefly that CoCoA was inconsistent by allowing for different valuation measures; contradicted the assumption of going concern; underestimated the problem of limited availability of market prices; and ignored the 'other side' of the balance sheet.

Chambers argued for the superiority of market selling prices as the only appropriate means of measuring asset values. However, in the early stages of his theory development, he had accepted the use of current replacement costs for inventories and index prices for some durables, due to his recognition of the unavailability of market selling prices. It was never intended to be a change of principle but only as an accommodation. From the outset, Chambers made it clear that these substitutes were approximations allowed only temporarily to overcome practical difficulties [1966]. Shortly thereafter in "Second Thoughts," he clarified this issue and retracted support for the use of all such approximations [1970].

Other critics of Chambers argued that his ideas contradicted the going concern assumption. Given such an assumption, changes in prices of assets, critics argued, should be disregarded since assets are bought to be held over time and not resold. They claimed that his accounting system was based on a liquidation value orientation, which would undervalue the firm as an entity whose sum value is greater than its parts. Chambers, on the other hand, argued that the going concern assumption was widely misunderstood [1981]. Regardless of the original intentions that firms have when acquiring new assets, changes in technological and economic environments would definitely influence the decision of keeping, discontinuing, or replacing such assets. There is no acceptable justification for assuming that when an asset is acquired, it must be kept for its entire life. Assets are changed because business plans are also changed in response to shifts in the environment. To Chambers, a going concern assumption was based on the firm's ability to adapt to new environments and to survive in a dynamic future. Such a concept implies that the firm will not cease operations immediately, but that it may transform its operations. Its future is not necessarily aligned with the property or service life of assets, but with their usefulness to contemporary market needs. Further, Chambers pointed out that there is a difference between market selling prices under duress by creditors, e.g., in the case of liquidation, and market prices under normal, day-to-day business conditions [1973]. CoCoA does not assume that liquidation values are identical to current market prices. Market prices can be, and normally are, obtained from various sources during the normal course of business. CoCoA requires periodic updates of assets' values by consulting newly obtained market information and the current values of such assets.

Operating the CoCoA model in the face of unavailability of market selling prices was, and continues to be, another area for criticism. Chambers maintained and attempted to demonstrate that market prices for most assets are discoverable [1971, 1973]. While some prices might be more easily obtainable than others, he argued that firms have always been successful in finding the prices of their assets when they persisted. Yet, where CoCoA had failed to demonstrate itself effectively was in the ability to make operational sufficient sources of market value information to readily and inexpensively facilitate accession of exit values across a broad spectrum of asset classes other than traded investment securities. Even with current advancements in information technology, it remains difficult to immediately obtain market prices for, say, uniquely constructed assets. Nonetheless, CoCoA, as a theory, Chambers insisted, does not concern itself per se with how market prices are discovered and thus should not be rejected on theoretical grounds, simply because issues of application are being developed or resolved [1974].

While Chambers might have fully presented his case for the 'left-side' of the balance sheet, some critics argue that the right-side received less attention and justification from Chambers. Critics' claims of possible inconsistency in Chambers' treatment of liabilities overlook basic assumptions of CoCoA. Assets and liabilities should be stated at their monetary values. When such values are not immediately available, they are approximated by their money-equivalent values, i.e., market values. Liabilities already have contractually stated monetary values and the amounts that the firm owes to its vendors or bankers are immediately determined. The firm does not have to revaluate the cash it has on hand nor does it need to revaluate the loan it has borrowed from the bank. Given that liabilities almost always have explicit contractual monetary values, the explanation of their treatment did not exhaust as much effort as the treatment of non-monetary assets required.

Judging CoCoA: The fact that policy makers withheld official support should not lead to the conclusion that CoCoA is logically invalid or irrelevant. Gaffikin's [1989] analysis of Chambers' work concludes that that CoCoA's rejection was the result of other behavioral, political, philosophical and sociological factors. The history of science suggests that paradigm shifts and advancements of knowledge take extended periods of time in overcoming the extant habits of thoughts. To fully understand and appreciate Chambers' significant contribution to the accounting discipline may require us to admit for now that a "lack of recognition seems to be the fate of the academic ahead of his or her time" [Bedford, 1982, p. 113]. Also, our "history might be too young" to provide for the understanding and appreciation needed [Gaffikin, 1994, p. 1].

Despite evidence indicating general agreement on the relevance of money equivalents for valuing non-monetary assets [e.g., Chambers et al., 1987], Chambers knew that, 'old habits die hard' [1970]. This difficulty had been well anticipated by Chambers in the very early stages of the development of CoCoA. He argued that, as in the case of medicine, advancements in accounting might take time before they could be actually used [1966, p. 3]. He never lost faith in the validity and future of his theory. For instance, following the inflationary experience of the 1970s he was asked if CoCoA would have a future. Chambers replied, "Certainly" [English, 1989, p. 15]. However, his confidence about the future of his theory does not deny his disappointment with how his ideas were received by others. He appreciated that the logic presented in an argument does not always guarantee its acceptance. For example, when commenting on his experience with the Australian Society of Accountants, Chambers noted that "Over the sixteen years I served as a councillor, I proposed many changes in the technical, educational and research business of the society; I can't recall that any one of them became adopted" [2000, p. 323].

From the analysis of Chambers' work over the course of five decades, one can observe two major themes. In the first, Chambers used observations as a way to discover anomalies in accounting theory and practice and then he introduced his solution to such anomalies by the formulation and refinement of CoCoA. This theme can be clearly seen in the subject matter of his outputs during the first half of his career. In the second half, another theme was reflected in his effort to gain acceptance for his position as well as to explore accounting history to explain the development and persistence of conventional cost-based accounting systems. Obviously, these two efforts overlap and represent a natural transition in focus and emphasis. After Chambers developed and refined his theory to his satisfaction, he employed history not only to explain and justify the rationality and legitimacy of CoCoA, but also to understand the reasons behind its lack of endorsement. This major theme of Chambers' work suggests a move in this analysis from Chambers the *theorist* to Chambers the *historian*.

CHAMBERS THE HISTORIAN

Chambers has been internationally recognized as an eminent theorist and dedicated researcher. However, his work as an historian does not always receive similar attention. A significant portion of Chambers' work was devoted to employing case study and historical material to demonstrate the validity of his arguments.

Some of CoCoA's critics accused Chambers of being abstract, normative, and lacking empirical support. His first defense argued that CoCoA was developed based on observations of real world behavior and its objective was to solve actual day-to-day problems. Chambers' attempts to satisfactorily refute such accusations included first "Evidence for a Market Selling Price Accounting System" [1971] and then *Securities and Obscurities* [1973], later republished under the title of *Accounting* *in Disarray*. Chambers provided ample evidence supporting the conclusions of *AEEB* based on large collections of court cases, governmental and professional inquiries, and reports of financially troubled companies in Australia, the U.K. and the U.S. A common theme that Chambers found in these data was that companies published financial statements that were "seriously deficient in quality" and were based on accounting practices that were "inadequate, uninformative, and obscurantist" [1973, p. i]. He showed how cases of financial distress and corporate failure were linked to misleading accounting practices and insufficient financial reports. This was used to illustrate the dissatisfaction with the products of conventional accounting practices as well as to demonstrate the validity of his arguments and the superiority of CoCoA over all alternative systems.

In more recent writings, Chambers used a great number of references to textbook authors who over hundreds of years had 'endorsed' the use of current selling prices as the basis of valuation [1989]. His investigation led him to conclude that "from the time of Pacioli onwards there are bookkeeping manuals, constitutive documents of partnerships and companies, and judicial dicta, to the effect that assets were or were expected to be presented by the currently dated market prices or selling prices" [1991b, p. 14]. For example, in a 19th century case, Chambers and Wolnizer [1991] found evidence that banking partnership deeds for the period 1827-1843 either required the use of current values or clearly proscribed asset's valuation based on original costs.

More importantly, Chambers dedicated a significant amount of his most recent work to exploring the accounting literature and investigating the development of conventional cost-based accounting. During the early years of accounting and well before the separation of ownership from management, owners had shown a tendency towards keeping their financial affairs secret from outsiders as well as from their employees. This secrecy was presumed to enable owners to obtain a better position in business negotiations. Chambers described this phenomenon as the 'cult of privacy' [1987, p. 98]. Consequently, owners used a dual system of accounting where two sets of financial records were usually carried. First, a nominal ledger was responsible for keeping track of all business transactions with other merchants. Second, there was also concurrent undisclosed *libro segreto,* secret or private ledger, occasionally containing locks and keys. The latter type of records had very limited access and contained confidential information such as partners' capital contributions and real or current values of the business' assets. Owners were able to extract a real and complete view of their actual financial affairs by combining these two sources of information. Therefore, Chambers argued that current prices were in fact used, although not always explicitly, as the basis for assessing the financial position of businesses and their results of operation.

However, when the widely used form of public incorporated ownership emerged in the 19th century, this dual system was abrogated and an intrusion to the traditional privacy of owners occurred because of public ownership and information rights related thereto. In order to meet the reporting requirements of public companies laws, only the available nominal ledgers were used to produce published financial statements. This was also the case given that, as businesses continued to grow in size and complexity of operations, there was an increasing reliance by managers and outsiders upon large amounts of processed information. Accountants were not well prepared for this fast shift from a dual system of accounting to a more comprehensive one that would include the type of information found in private ledgers. Perhaps for reasons of facility alone, historical information became the dominant if not the sole source of information used to prepare external financial statements, whereas the information needed to extract the true and fair view of the firm's financial affairs became less complete.

While accountants continued to keep nominal ledgers, Chambers asserted that contemporary information that once appeared in private ledgers became available only to one group of users: professional management and other insiders. Given that accounting is not intended to exclusively serve one group of users, other users of accounting information deserve similar contemporary information. This can be accomplished, Chambers argued, through the use and disclosure of market selling prices in the accounting system. Stated differently, a fair and equal treatment of users requires that access to private information which owners used to have and managers and other insiders continue to have as to the contemporary aspects of an accounting system should be provided to a broader set of users to provide such a true and fair view of the business.

Furthermore, the laws of the 19th century which allowed for the limited liability form of corporations demanded a price for trading under this legal privilege by requiring the disclosure of all relevant information. The purpose was to provide additional protection to creditors whose risk increased greatly with this new form of business. Such provisions, however, compelled accountants and managers to become more conservative when reporting financial statements in order to protect themselves against possible lawsuits by creditors and shareholders. Consequently, a tendency towards undervaluation of assets resulted and was increasingly implied if not endorsed, occasionally by judicial opinions. An example could be found in the following court decision: "The purpose of the balance sheet is primarily to show that the financial position of the company is at least as good as there stated, not to show that it is not or may not be better" [Buckley as cited in Chambers, 1989, p. 18].

Similarly, tax laws clearly influenced accounting practices and how income was determined based on multiple arbitrary methods that favored the convenience of cost-based valuation at the expense of contemporary values. Also, rapid development at the turn of the 19th century coupled with the increasing complexity in business operations resulted in the limited availability of market prices for unique capital-intensive, specialized assets especially in industries such as railroads. As a result, U.K. companies legislation allowed companies in those cases to use cost allocations in the determination of net income. This provision was subsequently used to justify the application of the same treatment to all other types of expenditures and eventuated the increasing application of the cost doctrine [1999a].

Chambers also identified 'debt supposition' as a contributing factor to the conventional use of cost-based accounting. 'Personification' of the accounts was practiced in early centuries when accounting instructors illustrated the double entry system by describing different ledger accounts as if they were different persons having interrelationships among themselves as accounts. As a result, the business was seen to be composed of different persons: a cash person, an inventories person, a stock person and so on. Collier illustrated this idea saying, "These clerks mind their own business and do not interfere in another's department. Thus, if perchance 'Goods' received some money, he instantly hands it over to 'Cash' because he himself has no business with money" [cited in Chambers, 1994, p. 78]. Chambers argued that this approach, however, was later used to associate asset valuation with their original costs. Later in the eighteenth century, Donn, a mathematician, expanded this approach in the following logic: "As I may expect to make of my goods as much as they cost me, they are in effect the same to me as if their value was due to me from some person; and, as in such case, that person would be debtor, so I may make the goods in my possession debtor for their first cost" [cited in Chambers, 1994, p. 78]. Therefore, subsequent valuation of assets based on their original costs was followed based on the assumption that assets could be valued as such 'first costs.' This notion was later used to endorse the use of the cost doctrine in accounting practices, especially with the official endorsement of this approach by the company law, as discussed earlier. Also, additional support for the cost-based accounting came from the regulated accounting practices in utilities companies. A double accounting system was prescribed for such companies where capital was required to be kept at cost for monitoring and rate setting purposes. Subsequently, this notion of valuing capital expenditures at cost was further applied to other unregulated companies, based on the authoritative support of such practices.

In sum, to Chambers the unambiguous message of this extensive investigation of accounting history refuted the widely held assumption that cost-based accounting is a superior rule, while accounting based on market selling prices was nothing but an anomalous departure from this norm. Hence, Chambers argued that conventional accounting practices based on the cost-based doctrine should not be considered the only method of traditional accounting. According to him, the term 'conventional accounting' rather than 'traditional accounting' is more descriptive to cost-based accounting systems. He also argued that until relatively recently the cost doctrine did not actually constitute an accepted accounting practice. For example, he believed that:

> It seems highly probable that the realization and cost doctrines became entrenched in the pedagogical literature, and thence in practice, through the Tentative Statement of Accounting Principles of the American Accounting Association (1936), reinforced by the proscription of upward revaluation by the SEC shortly thereafter [1989, p. 13].

Further, Chambers' work as an historian includes his important recent contribution to accounting literature, *An Accounting Thesaurus: 500 Years of Accounting* [1995]. This seminal work can be fairly described as his second *magnum opus*, after his *Accounting, Evaluation and Economic Behavior*. This

'Treasury of Accounting Thought,' as Clarke [1996] appropriately prefers to describe it, represents a comprehensive literature review of the development of accounting thought over more than five centuries delivered in a well-designed, easy-to-access structure. It also provides a valuable reference for exploring the historical development of meanings and the usage of terms and concepts that are part of the existing accounting literature. This collection of varying perspectives on a wide variety of issues also provides a rich background that can enhance our appreciation of how accounting thought has developed. Indeed, this significant contribution to the accounting literature is "a necessary aid to an intellectually curious and inquiring mind in our discipline" [Previts, 1996, p. 115]. A peerless study, which has been less than a decade in print, it has only begun to enter the employment of contemporary theorists and historians.

CONCLUDING COMMENTS

Raymond J. Chambers was an eminent scholar, influential theorist, prominent educator, dedicated researcher, and an important contributor to the study of the history of accounting thought. His compassion for and commitment to his view of our discipline led him to seek a more relevant theory of accounting. His seminal contributions to accounting thought stem from his effort to introduce a systematic approach to construct a sound and consistent theory of accounting and replace the popular dominant explanation which he demonstrated against for providing less relevant accounting. In addition to his criticism of conventional thinking of accounting, he sought to understand and explain accounting in a multidisciplinary context that recognizes the links between accounting and other social disciplines.

We have argued that Chambers should be recognized not only for his notable contributions to accounting thought but also for his important contributions to accounting history. The majority of non-historian accountants may perceive that the demands for incorporating current values into accounting are a relatively recent phenomenon. Chambers' research established evidence from centuries of accounting practices and a considerable number of references to refute this notion. This evidence clearly shows the use of current prices to have been acceptable business practice in much earlier times. He also explored accounting history to better understand and explain the origins and development of cost-based accounting. Chambers showed original cost-based valuation to be basically the product of certain legal developments, tax laws, regulatory influences, and recent corporate traditions. He was critical of describing the cost-based accounting system as *the* traditional system of accounting for it represents only one of several traditional methods, including current value accounting.

In addition, we have argued that as the study of the history of science would suggest, the validity and relevance of CoCoA should not be considered disproved because of limited initial acceptance. The rigorous development of this theory and its conformity to real needs and decision values will continue to warrant support and experimentation, and potentially will ensure greater understanding and then acceptance. The failure to achieve official endorsement of CoCoA may be understood in terms of three dimensions: its nature, timing, and misconception. First, Chambers' theory seemed revolutionary in nature and required establishing a basis of support not easily won from the dominant practice approach, especially from regulators. For to adopt CoCoA would require gradual acceptance in a discipline known for its reluctance to change, and an evolutionary approach conducive to incrementalism. Second, CoCoA came into the literature in the late 1960s, a period that witnessed the advent of market-based accounting research. This new stream of research did not relate to Chambers' work, and consequently created a form of resistance to his ideas, especially as the former became increasingly dominant in academic research in 'leading' U.S. scholarly journals and institutions. Third, many misunderstood CoCoA thinking that it was merely another inflation accounting alternative; hence, they believed that once inflation abated, so did the need for CoCoA. However, Chambers never intended CoCoA to be solely a solution to the inflation issue. CoCoA is a comprehensive accounting system and inflation was simply one of the many deficiencies that CoCoA was capable of overcoming.

For now, the future of Chambers' theory is unsettled-so soon after the death of its principal advocate. It could be maintained that Chambers' arguments in CoCoA are *logically* superior to those of other alternative systems and that its major deficiency is that it lacks the facility of application. Yet one of the aspects of his work that requires attention is the need to continue a level awareness as advances in technology improve the information base from which relevant contemporary data are made available on global terms. The speed, ease, and low cost of more market price data will lead to increased operational application.

Another key issue is CoCoA's treatment of knowledge assets or intellectual capital. Chambers' focus was on the *valuation* of intangible assets, not simply additional descriptive *disclosures* about them, as supported for example in the recent writings of Arthur Levitt (e.g., [Levitt, 2001]). There is a fundamental difference between making disclosures and performing valuations. On the latter, Chambers' views continue to be a valid expression about the problem associated with current valuation attempts for such asset items. Chambers' theory recognizes the value of assets only when they have obtainable market values; thus, intellectual assets do not qualify as assets until their market values can be established. He argued that intangible assets are based on assumptions and hopes, rather than facts, and thus should not be recognized in the balance sheet. While this argument might have been less controversial in an industrial economy during the 1950s and 1960s when CoCoA was developed, the role of intellectual capital and other intangibles has become increasingly significant in the information-based, technology-oriented economy of the 21st century, and therefore bodes well for overcoming objections based on such assets' primacy.

Finally, it is important to forestall Lee's [2000] observation that "To the large [number] of the accounting community . . . [Chambers] was and is unknown except, perhaps, as a name listed in a library index" [p. 71]. While our paper seeks to provide scholars and researchers with a survey discussion of Chambers' contributions to accounting literature as well as a summary of several high points of accomplishment, a full study of such contributions cannot, of course, be satisfied in a single essay. It is hoped that with the newly established Chambers' Archives at the University of Sydney, scholars will be attracted to consider the manuscripts and materials now available at this facility. For it will not be sufficient merely if Chambers is recalled, but rather that his work is emulated and his contributions are understood. His significant work merits this well deserved place as a fundamental theory, and as an important element and contribution in our discipline's history of thought.

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APPENDIX 1

Comparison of Five Accounting Systems

		Original Cost	Price Level	Dis-counted Value	Replace-ment Cost	CoCoA
A1	Is it, in principle, a double entry system?	Yes	Yes	Yes	Yes	Yes
A2	Are its transaction inputs, in principle, facts?	Yes	Yes	Yes	Yes	Yes
A3	Are its transformations (depreciation, inventory valuations, etc.), in principle, facts?	No	No	No	Yes	Yes
A4	Are its transformed magnitudes measures?	No	No	No	Yes	Yes
A5	Are its transformed magnitudes contemporary?	No	No	Yes	Yes	Yes
A6	Do its transformations give prompt effect to relative price changes?	No	No	No	Yes	Yes
A7	Does it give a comprehensive history of relationships and transactions of the firm? (Is it isomorphic?)	No	No	No	No	Yes
A8	Is aggregation of measures of items logically possible?	No	Yes	Yes	Yes	Yes
A9	Is it a representation of facts, or, alternatively, does its theory provide for other ways of getting contemporary facts?	No	No	No	No	Yes

. . . / continued

Comparison of Five Accounting Systems / . . . continued

		Original Cost	Price Level	Dis-counted Value	Replace-ment Cost	CoCoA
B1	Are the results neutral as to specific future actions?	Yes	Yes	No	No	Yes
B2	Are individual measures relevant at stated dates to choice or adaptation?	No	No	No	No	Yes
B3	Is income a measure of general command of goods and services?	No	No	No	No	Yes
B4	Do magnitudes provide a basis for comparison of present operations with future potential variants?	No	No	No	No	Yes
B5	Is a valid current ratio given?	No	No	No	No	Yes
B6	Is a valid debt to equity ratio given?	No	No	No	No	Yes
B7	Is a valid rate of return given? (Is rate of return comparable with rates of return on pure money contracts and other opportunities?)	No	No	No	No	Yes
B8	Are interfirm comparisons of ratios valid?	No	No	No	Yes	Yes
B9	Do balance sheets and income accounts fairly present positions at stated dates and changes between those dates?	No	No	No	No	Yes

Source: Chambers, R. (1967), "Foundations of Financial Accounting," Berkeley Symposium on the Foundations of Financial Accounting (Berkeley: University of California): 26-44.

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Richard K. Fleischman
JOHN CARROLL UNIVERSITY
and
David Oldroyd
UNIVERSITY OF NEWCASTLE

AN IMPERIAL CONNECTION? CONTRASTING ACCOUNTING PRACTICES IN THE COAL MINES OF NORTH-EAST ENGLAND AND NOVA SCOTIA, 1825-1900

Abstract: The archives of the General Mining Association (GMA), a London-based enterprise with substantial holdings in the Nova Scotian coal-mining industry during the 19th century, are investigated in this paper. The historical record was examined with particular reference to the degree to which industrial costing techniques were transplanted via engineers/managers within the British Empire. The findings support the hypothesis that linkages to Newcastle were evident in Canadian coal mining, but that the accounting emphases differed somewhat between the two locales. In Nova Scotia, there was a great attention to day-to-day expense control. A similar concern was apparent also in the North-East of England, but here there appeared the additional sophistications of costing capital improvement projects and estimating the profitability of new workings. With regard to labor, the managers of the GMA's Canadian operations, like their counterparts in the North-East Coalfield, seemed disinterested in tracking the efficiency and productivity of individual miners. We hypothesize that this inattention typified an environment wherein labor was scarce and employment alternatives existed for the work force.

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INTRODUCTION

The types of costing information utilized by the General Mining Association (GMA) in the Nova Scotian coal industry during the 19th century are detailed in this paper. As an absentee owner situated in London, the GMA required a flow of accounting information in order to manage its substantial properties, particularly the Sydney Colliery on Cape Breton Island, Nova Scotia.[1] Comparisons were made to findings, both published and unpublished, which the authors have advanced from earlier archival research into north-east coal mining during the industrial revolution in Britain [Fleischman and Parker, 1997; Fleischman and Macve, 2001; Oldroyd, 1996, 1999]. The GMA archive was examined with reference to the additional question of whether or not costing methods were exported across the Atlantic because of the imperial connection resulting from Canada's position within the British Empire.

A DEVELOPING LITERATURE

Our study of the transfer of accounting techniques within an empire is explored through the example of the coal industry. From the British perspective, there is a rapidly emerging literature on coal-mining accounting during the 19th century. Studies focused on the first half-century during which the industrial revolution in Britain was running its course include Edwards et al. [1995], Edwards and Newell [1994], Fleischman and Macve [2001], Fleischman and Parker [1997], McLean [1997], and Wale [1989a]. Works by Boyns [1993], Boyns and Edwards [1997], Boyns and Wale [1996], Edwards et al. [1995], and Wale [1989a, b] have commenced the process by which the second half-century is now under the scrutiny of accounting historians. These investigations complement earlier work by economic historians, including Bulman and Redmagne [1951], Church [1986], Flinn [1984], Harris [1976], Hirsch and Hausman [1983], Mendlicott [1981], Rowe [1923], and Walters [1975].

The above-mentioned works run the gamut from limited investigations of individual coal-mining enterprises, to regional studies of various U.K. locales, to national surveys. For the pur-

[1]All Canadian collieries mentioned are located in Nova Scotia. Sydney, Low Point Barrasois, Bridgeport, Lingan, Cornhill, Point Aconi, Spanish River, and Victoria are all situated on Cape Breton Island. Albion in the Pictou Coalfield and Joggins and Springhill in the Cumberland Coalfield are on the Nova Scotian peninsula.

poses of the comparison to Nova Scotian mining undertaken here, the authors propose to concentrate on Tyneside[2] operations, in the Great North Coalfield centered on Newcastle. Costing at the collieries of the Great North coal measures stood at the forefront of practice in Britain. Access to London via the sea made Northumberland, Durham, and Newcastle the largest and best-developed coalfield in Britain from the 17th century [Ashton and Sykes, 1964, p. 194; McCord, 1979, p. 36]. According to Flinn and Stoker [1984, p. 18], the north-east's collieries enjoyed a high reputation for technical progress and business organization, techniques that mine owners elsewhere copied. Potentially the greatest contribution of the region to the historical development of costing practice was in the dissemination of knowledge by Tyneside viewers (mining engineers/managers). Among the tasks they performed was the provision of cost data for forecasting the profitability of mine workings and for evaluating the relative advantages of capital improvement projects. A body of costing practice was already well developed on Tyneside by the 1730s [Oldroyd, 1996]. As the 18th and 19th centuries progressed, the notability and expertise of particular viewers caused them to be surrounded by schools of apprentices, who in turn moved out from Tyneside to other regions, countries, and related industries, such as iron and lead [Flinn and Stoker, 1984, pp. 57-59; Hiskey, 1979, pp. 8-9]. Tyneside viewers were, for example, employed on the Duke of Norfolk's estates in South Yorkshire [Medlicott, 1981, pp. 183-188]. They also prepared costings for the Bowes family's lead-smelting operations in County Durham [Oldroyd, 1999, p. 191].

Recent studies of Tyneside accounting techniques include those of McLean [1997], who examined the costing records of the Tanfield Moor Colliery in County Durham, 1800-1850, and Oldroyd [1996, 1999], who looked at the earlier records of the aristocratic coal cartel in the north-east known as the "Grand Allies." Both authors found evidence of sophisticated costing practice, which directly assisted management in a range of activities, including decision making. Fleischman and Parker's [1997, p. 115] subsequent research revealed a level of sophistication in north-east colliery costings during the industrial

[2]One reviewer has noted that "Tyneside" as used in this paper is not geographically accurate since County Durham does not front the River Tyne. However, we have maintained the term to be consistent with the labeling in Fleischman and Parker [1997] and Fleischman and Macve [2001].

revolution that transcended what they had found in other British industries, such as textiles and iron.

Given the volume of research on British coal mining in the second half of the 19th century, the issue might be raised that these materials would afford a better contrast to Nova Scotian developments because of a greater chronological correspondence, notwithstanding the overlap between the formative period prior to 1850 and previous research on Tyneside. However, there are numerous reasons why somewhat earlier Tyneside methods are more directly pertinent even apart from the obvious perspective that the authors' expertise in this region is derived from primary source material. As Fleischman and Parker [1997, ch. 5] and Fleischman and Macve [2001] have endeavored to demonstrate, mining techniques in North-East England were quite different from other U.K. venues. These differences, not to be restated here in great detail, include the use of the "bord and pillar" method of mining as distinct from the "longwall," the utilization of direct hire rather than the "butty system" (subcontracting) for labor recruitment, and the managerialism of the "viewers" to a much greater extent than elsewhere. These inheritances were reflected in Nova Scotian mining operations as the following pages will attempt to detail. Aside from these aspects of the industry's basic structure, there were a number of other similarities between north-eastern and Nova Scotian coal mining. As Brown [1871, p. 82] pointed out, the coal mined in Nova Scotia was closer to the Tyneside product in terms of combustibility, carbon content, and ash residue. Mining depths were great at both venues, at least post-1854 in the case of Sydney, mandating large capital expenditure. Coal mining in the Newcastle vicinity and Nova Scotia was not linked to a native iron industry as elsewhere in the U.K., giving rise to the expectation that greater attention would be paid to distribution networks, particularly overseas transport.[3] In both North-East England and Nova Scotia, the industry was impacted by external control mechanisms — in Canada it was governmental control, while on Tyneside it was the coal-owners' cartel.

Work by Boyns et al. [1997a, b] has not only featured comparative archival research for the U.K. and France, but has also

[3]Trevor Boyns has pointed out to us that post-1860, the South Wales coal industry's growth depended more upon expanded export than the local iron industry. Hence, subsequent to that date, owners might have been expected to pay greater attention to distribution networks.

urged that accounting and business historians follow the lead. Variously they have suggested that "the need for such work [comparative accounting history] is receiving increased recognition," that comparative history is a "valid methodological tool," and that accounting historians should begin to think beyond the box of their own native methodologies [Boyns et al., 1997b, pp. 7, 8, 13]. It is within this framework that the following study is undertaken, but with the additional parameter that the imperial connection aided and abetted the spread of accounting. We are also following the lead of Boyns et al. [1997a, b] in focusing on what they defined as "industrial" accounting. Our emphasis here is more specifically directed toward costing, although we do touch upon the financial reporting necessitated by the GMA's absentee ownership of its Nova Scotian mining operations.

There has been a wealth of recent literature on the export of British accounting structures to former colonies [Annisette, 1999; Briston and Kedslie, 1997; Carnegie and Parker, 1999; Chua and Poullaos, 1998; Parker, 1994]. However, the emphasis of this research has been limited to the transfer of accounting professionalization. Within the context of the 20th century, Briston and Kedslie [1997, p. 194] wondered the degree to which the Chartered Institute of Management Accountants attempted to export "its training, educational and examining processes." Pre-20th century accounting links between metropolis and periphery are featured in work by Carnegie [1997], Neu [1999], and Spraakman [1999], but this literature does not deal with the export of industrial accounting methods. Even though Canada was identified by Parker [1994, p. 609] as an "active importer" of accounting exports from the U.K., we have not seen any research that focuses on costing issues. Vent and Milne [1997] have done a comparative study of precious metals mining, but since the mines were American and Australian, the impact of an imperial connection would not have been present. This paper proposes to begin an examination of these linkages.

Two main archives were visited. The Public Archives of Nova Scotia (PANS) in Halifax houses mineral and mining records, 1800-1868, as well as the Richard Brown collection. The Beaton Institute (BI) at the University College of Cape Breton in Sydney contains the records of the GMA, 1827-1901. Additionally, comparative data were obtained from the Carlisle Record Office (CRO), housing the estate records of the Lowthers of Whitehaven, and the Northumberland Record

Office (NRO), which contains the records of the North of England Institute of Mining and Mechanical Engineers.

Narrating the story of the Sydney Mines is greatly facilitated by the longevity of key personnel, both in Nova Scotia and the GMA in London. The Richard Browns, father and son, served in an unbroken tenure of some 70-odd years as managers of the mines. Similarly, J.B. Foord and C.E. Swann served for most of the century as Secretaries to the GMA proprietors.

The paper proceeds with a brief historical overview of the history of the GMA's coal-mining operations in Nova Scotia, followed by an extensive analysis of the surviving accounting records. Featured here are sections on expense control, capital estimations, regulation, and accounting for labor. The paper concludes with an assessment of the perceived linkages between Nova Scotian and Tyneside coal-mining practice.

THE GMA IN NOVA SCOTIA: AN OVERVIEW, 1826-1901

The systematic exploitation of coal in Nova Scotia began with the formation of the GMA in 1826. Coal had been mined in the province since at least 1715, but the early proprietors had insufficient capital to engage in large-scale operations [Brown, 1871, pp. 100-101; Martell, 1945]. The GMA was formed by the jewelry firm, Rundell, Bridge & Co., which acquired a 60-year monopoly over all of the province's mineral rights in commutation of the debts of Prince Frederick, Duke of York. The monopoly only lasted 30 years as the GMA agreed to its revocation on December 31, 1857 in return for a new lease of its existing holdings on preferential terms. The company also reserved the right to expand into designated new sites [Brown, 1871, pp. 100-110; McKay, 1983, p. 20; Wylie, 1997, p. 15].

The Earl of Lowther must have had connections with the company as it was at his behest that one of his stewards, Richard Brown, was sent to examine and report on the coal mines in Cape Breton Island. Brown had trained as a viewer in the Earl's coal mines in Westmorland, England, a county heavily influenced by Newcastle practice. In Canada he became manager of the Sydney Mines and chief engineer of the whole operation. As the paper will relate, Newcastle viewers did consultancy work for the Lowther estates and were well known to Brown. It is probably through these connections, plus the fact that the north-east was internationally renowned for its mining expertise, that the London-based company also employed them in Canada. The GMA's lack of previous mining experience is probably significant; there would be an incentive to hire the best people for this enterprise, taking into account the scale of the investment.

In his later book, Brown [1871, p. 91] noted that the chief objective of the GMA was to establish an extensive trade with the U.S. In 1827, 20% of the coal consumed in Boston and New York came from Great Britain, 34% from Pennsylvania, and 46% from Virginia [Brown, 1871, p. 93]. The GMA was unsuccessful in its attempts to penetrate this market, partly due to the opening of the Schuylkill Canal in 1825, which provided Pennsylvanian coal with an outlet to the sea. The company was also impeded by U.S. trade tariffs that were only temporarily relaxed between 1854-1866 [Forsey, 1926, p. 5; Macnutt, 1965, p. 215]. Most of the GMA's expansion was fed by increased demand from the Canadian provinces. Coal production under the GMA expanded from about 20,000 tons per year in 1825 to about 100,000 tons in the 1850s. The period following the rescission of the GMA's monopoly saw the largest increase, with production in Nova Scotia rising from about 600,000 tons in 1867 to 8 million tons in 1913. New entrepreneurs were attracted into the market, with most of the investment coming from Britain, the U.S., and Montreal, resulting in a decline of the relative position of the GMA [McKay, 1983, p. 13; Wylie, 1997, pp. 15-16]. The GMA sold its interests in Pictou to the Halifax Coal Company in 1872 and the Sydney Mines to the Nova Scotia Steel and Coal Company in 1901. The Sydney Mines in Cape Breton and the Albion Mines in Pictou were the GMA's major holdings, but there were also secondary workings at Bridgeport, Lingan, Joggins, and elsewhere [McKay, 1983, p. 18]. Despite the large number of operations, Sydney was the flagship installation and the focal point of most surviving accounting records. It is to this archival material that we now turn.

THE COMPARATIVE ACCOUNTING RECORD

In this section, the accounting practices of the GMA will be considered across four parameters: expense control, capital estimations, regulation, and accounting for labor. Comparisons will be made to corresponding techniques found in northeastern coal mines during the industrial revolution.

Expense Control: From the outset, the Directors of the GMA were interested in economy. In a report to the GMA's Directors in 1834, John Buddle, the foremost Tyneside viewer, emphasized the need for economy [NRO: 3410/BUD/19/270]. When Brown, Jr. was appointed to succeed his father in March 1864, Foord, on behalf of the GMA, emphasized this responsibility:

> . . . hence it becomes of the utmost importance that the cost of raising and shipping it [coal] should be reduced as low as possible. Your recent visit to the Collieries of the North of England, and the practical information you have doubtless acquired in those Collieries where economy is studied as closely as possible, will enable you to apply that information with advantage in your future management of the Sydney Mines, so far as it might be susceptible of solid and useful improvement [PANS: MG1/158/37].

In 1880, when Brown's managerial duties were extended to the Low Point Barrasois and Lingan Mining Company, he agreed to the following covenant:

> Brown shall and will at all times observe the strictest economy in all expenses he may incur on account of the said company and keep or cause to be kept just and true accounts of all his receipts, payments, transactions, and dealings on account of the said Company [PANS: MG1/158/35-36].

While these contractual statements have the ring of boilerplate verbiage, the Browns apparently believed that expense control was an utmost responsibility. In 1870, Brown, Sr. wrote to his son, congratulating him for reducing costs at Sydney and opining that ". . . the cost of working is the grand test of the competence of the manager and will speak for him in the strongest language" [PANS: MG1/151/109].

The desire to reduce costs was reflected in the costing procedures adopted. Expenses were analyzed monthly and yearly and subjected to *ex post* rationalization. The system went beyond the tracking of expenditure and constituted a genuine system of cost control, the basis of which was the calculation of unit cost. R.H. Bridge, who is described in one of the documents as "accountant," forwarded a retrospective estimate of the cost per ton at the Sydney Mines for March 1870 to Foord. In the letter, he referred to similar reports for January and February, indicating regular monthly returns. Bridge also sent Foord an annual return of the cost per ton at the Sydney Mines for 1869 [BI: MG1419/83-110-1870/D8c]. Another annual return has survived for the Albion Mines in 1841. Here, the annual expenditure was analyzed and grouped under subheadings of raising charges, shipping charges, new works, and royalties. The various shipping charges were divided by the numbers of chaldrons shipped, whereas the other charges were divided by the number of chaldrons raised, the sum producing a grand total. The chaldron was a traditional output measure based on the volume of a coal wagon. This particular report was designated number 15, indicating that it was part of a sequence [PANS: RG1/463/46].

A complete set of monthly cost returns has survived for the Albion Mines for June 1868 in the papers of Thomas E. Forster, the Newcastle viewer [NRO: 3410/FOR/3/2/131]. As well as including inventories of plant and analyses of employees and rates of pay, these returns provided a detailed analysis of the monthly expenditure converted into unit cost. The average cost per ton for each expense was listed beside the average cost per ton for the year to date and the average cost per ton to the same point in the previous year. The report also included a summary of the cost per ton of the various expenses for each of the five previous years. Correspondence in August 1868 between Brown, Jr. and Foord indicates that by this time the company was using pro-forma cost sheets designed by Forster. Brown complained that Forster's monthly cost-per-ton sheets were more detailed than those which the company had used previously [NRO: 3410/FOR/3/2/140]. The fact that this letter was also found among Forster's papers shows that Foord must have sent it to Forster for his comments.

The 1870s saw an upsurge in costing activity at Sydney. Comparative costings per ton for the Sydney and Lingan Mines for 1872 were carried to tenths of a cent [PANS: MG1/159/52]. Perhaps the surviving record most reflective of sophisticated costing is an 1874 document of Brown, Jr. in which he calculated the price of sales necessitated at various production levels. First, Brown reckoned that the "fixed charges" for a relevant range from 75,000 to 150,000 tons amounted to $62,972. He then calculated the unit cost per ton at different levels to which he added a variable cost component of $0.97. To generate the profit required, Brown established a per-ton price ranging from $2.75 at the 75,000 tons volume level to $2.00 at 150,000 tons. He then performed a sensitivity analysis on the impact of a $0.50 price advance per ton [PANS: MG1/159/75].

Correspondingly, the calculation of unit cost in the Tyneside coal industry had a long ancestry. In a letter to the Duke of Northumberland in 1617, Hugh Bird computed the unit cost of working and leading (overground haulage) Newburn Colliery

[Hatcher, 1993, p. 265]. By 1730, unit cost calculations were common practice in the region [Oldroyd, 1996]. There are strong indications that the types of calculation which had been devised on Tyneside in the 17th and 18th centuries were still being practiced in the British coal industry in the nationalization era following World War Two. They certainly featured in government statistics showing the unit cost, unit selling price, and unit profit for the industry as a whole and in the pro-forma costing forms used by individual collieries in the 1940s and 1950s. They were remarkably similar in design to the ones devised by Forster for the GMA some 80 years previously [Bulman and Redmayne, 1951, pp. xxiii-xxiv, 116, 121; Clement, 1951, pp. 38-41].

The pattern of survival of costing documents in Nova Scotia is sporadic, with high points occurring in the 1840s, 1870s, and 1890s. Whether this pattern reflects the creation of records or is merely a function of the vagaries of record survival is difficult to tell. In some cases the peaks do correspond to initiatives taken by particular officials.

In 1842, one George Wightman was sent to investigate the GMA mining operations and to write a report on why the Albion Mines were suffering losses [PANS: RG21/A/Vol. 3, folder of materials 1841-1856]. Wightman concluded that losses on land speculation (£7000), dead stocks of materials and stores (£1750), unnecessary expenditures on the works (£43,470 — mostly a vastly overpriced railroad and superfluous housing), an annual loss occasioned by the faulty arrangement of the coal yard (£1000), and excessive labor costs (50% more than necessary) were to blame.

The second great wave of costing activity came in the 1870s, occasioned by the appointment of Jonathan Rutherford as General Manager of the GMA holdings in 1872 and the Swann visitations at the end of the decade. At this time there appears in the archive a detailed record of expenditures on a new winning at Sydney with columns for costs incurred through to the end of 1872 and 1873 respectively [PANS: MG1/159/62]. As was the case in the Newcastle region, managers were concerned about the relative efficiency of horses and machinery [Fleischman and Macve, 2001]. In 1869, James Hudson, a resident viewer trained in the U.K., complained to Cunard and Morrow, the GMA's Halifax agents, that at the Joggins Mine the number of horses to tons raised (13 horses for 8,000-8,500 tons annually) was proving too costly [PANS: RG21/A/Vol. 3]. The GMA's proprietors were informed in the report for 1877 that a reduction in the number of horses and associated human handlers in favor of underground hauling machinery saved approximately £35-£40 per horse annually [BI: MG1419/91-68-2690/G/9]. Notwithstanding this concern, Brown, Sr. noted to Jr. in March 1877 that greater attention should be paid to cost on a monthly basis, citing as evidence the gross fluctuation in annual horse upkeep charges ($74 in 1871, $106 in 1872) [PANS: MG1/151/282].

Swann's tenure as GMA Secretary had a positive impact on the volume of expense control reports. In 1878, the year of Swann's first visit to Nova Scotia, E.W. Scovell, Chair of the Board of Directors, reported how production costs had declined as a result of working a new winning rather than the Queen Pit and the considerable reductions in other expense categories the Directors had enforced at the mines [BI: MG1419/91-68-2690/H, 1878]. In the same year, it was further reported that Swann had affected many economies and that he should return to Nova Scotia frequently [BI: MG1419/91-68-2690/G/9, 1878]. A report for 1880 chronicled another visit in which Swann reportedly went over every item of expenditure with Brown, Jr. [G/11, 1880].

Although the annual reports to the GMA became extremely sketchy in the 1890s, the last decade of ownership, and rarely transcended barebones financial statements, certain of the expense control documents reflected a growing maturity. In 1896, Swann was provided with an estimate for a new winning with calculations of the expenses associated with 1½ years of proving the coal seam and three years production at 100 tons and upward per day. There were 33 expense categories [PANS: MG1/159/98]. There was also an 1894 cost comparison of filling orders in summer and winter. From July - September, when raising costs alone impacted upon the cost of production, the cost was 70.111¢ per ton. In winter (February-April), when banking was an additional factor, the cost was 72.049¢. The improvement in expense control at Sydney over time is seen rather dramatically in a comparison of an 1860 and an 1897 abstract of production costs presented as Exhibits 1 and 2. The differences in detail and the number of data categories are immediately apparent.[4]

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[4]Boyns [1993, pp. 336-337] demonstrated how the cost sheets at the Powell Duffryn Colliery in South Wales reflected a more detailed breakdown of costs in the period 1871-1913. New categories of cost were related to technological innovations.

EXHIBIT 1

Abstract of Production Costs, Sydney Mines, 1860

Cost per Ton, Sydney Mines 1860 –

Total Quantity of Coal raised in 1860 as per Abstracts				129.566.0		
Less						
Small Coal	17.449.0					
Used for Colliery, by Colliers &c free –	853.0			18352.0		
Cost calculated on Tons – –				111.214.0		
					s.	D 1/100
Pit Charge	21565	3	10		3	10.54
Surface do	5070	5	7			10.94
Materials used	5783	18	6		1	– .48
Farm Expences	163	9	9			.35
Salaries	1402	10	.			3.03
Sundries	708	18	10			1.53
Raising Charge on 111.214 Tons					6	2 27/100
				D		
Filling from Banks	1103	2	5	2.30		
Leading & Locomotive Charge	585	13	7	1.22		
Shipping do	580	8	8	1.22		
N. Sydney Railway Repairs	205	1	2	.42		
Shipping Charge on 115.167 Tons						5.16/100
Cost on Board vessels					6	8 3/100
Rent & Royalty						6 .
Cost per Ton –					7	2 3/100

or a Fraction over 7/2 per Ton.

EXHIBIT 2

Abstract of Production Costs, Sydney Mines, 1895

Expenditure Abstract and Cost per Ton

			Labour	Labour	Materials
Working and Raising Coal	1	All undergd work for coal getting	179,979 26		7,006 70
	2	Expended on horses employed	2,359 03		4,925 32
	3	Lamps	4,324 61		865 66
	4	Pit Tools	971 21		86 46
	5	Cages Chains & such	258 05		39 13
	6	Shaft work for Winding purposes	415 27		304 49
	7	Pit Tubs all kinds	2,717 11		2,158 61
	8	Platformes Tubweighing & Tallies	4,468 37		326 73
	9	Winding Engine Jack Eng & Boilers by day	4,136 67		738 18
	10	Proportion of Air Compressors & Pipes	645 61		177 49
	11	Underground Timber supply	821 34		5,812 -
	12	Ventilating Fans & boilers for do.	1,979 54	213,076 07	162 41
Pumping	13	Bailing & leading Water underground	80 58		45 34
	14	Expended on Horses employed	71 68		163 80
	15	Shaft work for Pumping purposes	341 34		-
	16	Repairing breakages in pumps & Spare	- 40		-
	17	Pumping Eng. & boilers at Queen Pit	1,498 86		196 26
	18	Pumping Eng & boilers by night. Princess	2,595 59		642 14
	19	Proportion of Air compressor & Pipes	1,325 89	5,914 34	-
Feed Water Supply	20	Reservoir, Water Pipes, Water Tanks	384 33	384 33	60 67
Repairing Dwellings	21	Repairing Dwelling Houses & outhouses thereto	1,433 24	1,433 24	924 30
General Work	22	Repg Shops, Shop Eng & boilers, Steam Hammer	591 81		394 37
	23	Leading materials for general use, rodds &c.	4,402 44		725 81
	23a	Horses employed thereat.	185 21	5,179 46	497 80
Banking Coal	24	Banksmen, Heaproads, Bank Eng.	1,713 67	1,713 67	216
(a) — Raising Coal — 268,629 tons — Raised				227,701 09	
Filling Coal from Pit	25	Screen men, Waggon weighg, Pushing out waggons	3,415 48		86 31
	26	Expended on Horses thereat	35 85	3,451 33	112 90
Filling Coal from Bank	27	Heap fillers, Heap apptx, &c	4,067 26		247 95
	28	Expended on Horses thereat	18 80	4,086 06	53 03
Shipping Coal	29	Shippers, Drivers on Wharf	3,184 48		25 62
	30	Expended on Horses thereat	89 25	3,273 73	236 24
Wharf repairs	31	Repairing & renewing wharves	437 64	437 64	161 05
(b) — Loading and Shipping Coal — 238,550 tons —				11,248 76	
Locomotives	32	Locomotive Enginemen & other hands	2,668 02		535 29
Waggons	33	Repairing	1,956 14		933 85
Horses on Railroad	34	Expended on horses thereat	33 -	4,657 16	102 17
Railroad Repairs	35	Railroad men	1,678 35	1,678 35	1,005 14
— Railroad Working Expenses — 241,327 tons —				6,335 51	
Horses		average of 1896 & 1897 (taken on 268,629 tons)			
Rents paid Insurance & Taxes		-	-		
Salaries		-	-		
General Expenses		-	-		
Maintenance & Renewal					
Coal given free (Gift, Salmon Hatchery Engines) (£ 9347½ @1.50 $1,405.87; Slk 23,854½ @ 0.40 $9,541.80)					
Royalty paid on 233022¾ tons @10c per ton, paid upon,					
				245,285.36	

— Assuming a cost of 40c per ton for Slack, and that Run Mines be valued at 35cts per ton below Screened Large, then cost of each grade disposed of (Sold, given away used &c) will be as follows. See calculation D.

— Screened Large 98,021½ costing $1.65½ per ton — 162,225 58) See letter
— Run Mine 125823½ — 1.30 — 163,570 55

The simple act of increasing the number of cost categories does not in and of itself guarantee that managers utilized the expanded data for more effective cost control. Typically archives do not contain the evidence to provide such assurances. In this case, however, the detailed nature of the GMA's cost records, together with the inclusion of comparative data for previous periods, indicates that the costs incurred were subjected to *ex post* rationalization, which is confirmed in the surviving correspondence and comparisons of actual to budget. A letter in February 1869 from Forster to Foord began:

> I have gone carefully through the various cost sheets of the Mines belonging to the General Mining Association, which you forwarded to me, and as far as I am able to judge from a consideration of the figures given, I think the increase in the working charges has arisen from the following causes: [NRO: 3410/FOR/3/2/140].

He then proceeded to discuss the major items, with suggestions about how they might be reduced. A statement for the Albion Mines in June 1842 computed the cost saving that would have arisen in the month had the work force been paid at the same rates as at Sydney. The situation was reviewed again in February 1843 when the actual labor cost saving was calculated at £431, which over 12 months was expected to reduce the cost of coal by nearly 2s a chaldron. The document also analyzed the "proposed reductions not carried out," totaling £38.8s.7d, and found additional cuts of £78.4s.6d over and above the ones proposed by Brown, Sr. This analysis is the most detailed we have seen in the GMA archive in terms of both the number of cost reductions undertaken and the narrative provided to explain and justify the cuts [PANS: RG21/A/Vol. 7, folder of materials 1842-1866].

In summation, there seems ample evidence of managerial attempts to control expenses. It appears that the Board of Directors in London were willing to be proactive in overseeing this phase of operations. One or two surviving letters indicate that the London-based Directors felt at a disadvantage because of the distances involved [see, for example, Foord's letter to Brown, Sr. of November 1849, BI: MG1419/82-42-1512/D9e]. The culmination came in 1878 with the first of Secretary Swann's "secret visits" that, for a while at least, became annual events. The Browns looked upon intrusion by the Directors as an irritant. In 1870, Brown, Sr. wrote to his son advising him to keep his responses to the Directors' requests for information simple as he doubted their ability to comprehend details. He also urged his son to communicate expenses in pounds sterling as they would appear less than if stated in dollars [PANS: MG1/151/106]. In another letter of November 1877, perhaps in response to Brown, Jr.'s complaints about the intrusion of Swann into mine affairs, Brown, Sr. pointed out that Foord, as GMA Secretary, had been his cross to bear, and complained that the Secretaries attempted to justify their positions by investigating trifling matters of expense ("ascertainments") [PANS: G1/151/300].

Capital Estimates: While the 1870s saw a heightened attention to expense control of daily operations, what was not evident were accounting records relating to Sydney's obvious competitive shortcoming: the absence of an adequate distribution network. The Sydney operation did not have a fleet of coal carriers, as did some of its competitors. The 1871 annual report to the proprietors identified the "shipping problem," that the buyers had to supply their own vessels while other mining enterprises were delivering coal [BI: MG1419/91-68-2690/G/2]. The 1873 report urged the construction of a new wharf to accommodate steamers [BI: MG1419/91-68-2690/G/4]. In Rutherford's first report as General Manager in Nova Scotia, he averred that he had not yet had time to bring his attention to bear on production costs as he was dealing with distribution problems [BI: MG1419/91-68-2680/H, 1872]. In light of this documented, high-priority difficulty, one might expect to see in the archive estimates for dredging, wharf improvement, ship procurement and alternative transport. There is virtually nothing of this genre, giving rise to our thought that capital improvements were not a focus of the accounting system.

The archive was not totally devoid of capital project estimates, however. One of the best examples was prepared in March 1834 by D. Hoard, a Newcastle viewer. Hoard was one of Buddle's associates, and his computation was appended to a report by Buddle on the construction of a new railway at Sydney. The point at issue was whether to ship coal from the existing quay at North Sydney or a new one at Bar Harbor. Hoard costed the Bar Harbor link and calculated the relative cost saving of the shorter route [NRO: 3410/BUD/19/227]. Homegrown examples of a similar genre include a technology proposal (unauthored, but probably by Brown, Jr.) in 1882, in which it was pointed out to Swann that Sydney had spent $9333.48 on drawing and pumping water alone. A new engine costing \$8651.68 would save \$1726.20 per annum in working and \$700 on repairs [PANS: MG1/159/59]. Brown, Sr. sent an estimate to Foord in May 1860 of the cost of opening pits at Cornhill, along with the cost of a branch railroad [PANS: MG1/159/17b]. There was a reasonable amount of detail about the various cost items associated with these projects, but his estimates still fell short of the capital improvement estimates made on Tyneside a generation earlier. Brown sent the GMA's Board of Directors an estimate for a new colliery at Low Point in the early 1870s, totaling £27259 [PANS: MG1/159/54a, b]. Items that would have been broken down in Newcastle included "materials of all kinds in pit £3140" and "labor £1370." Contingencies were given at 20%, twice the "fudge factor" typical of Tyneside costings of capital projects.

If focusing on expense control was possibly a function of absentee ownership, is there an explanation as to why accounting for capital improvements, particularly in transportation, was in a nascent state of development compared to practice in the vicinity of Newcastle?[5] It is difficult to tell as the mines in Nova Scotia appear to have had access to the same range of technical and accounting expertise as in Tyneside, although the relative concentration of expertise in England compared to Canada was probably a factor. Resident viewers, often trained in England, such as Brown, Sr., Scott, or Hudson were in place in the mines at Albion and Sydney, while general viewers from England acted as consultants. This was the pattern employed at the Earl of Lowther's estates in England from whence Brown, Sr. came, although in other situations, such as the Londonderry estates in County Durham, general viewers such as Buddle were in residence or acted as partners in mining enterprises. The greater depth of the Tyneside coal mines, at least until 1854 when the Queen Pit was opened at Sydney, and the more substantial distances of access to water transport may have occasioned a greater attention to capital expenditure projects. Also, the Newcastle-area viewers, who performed a variety of cost accounting functions, may have been more interested in "bigger-picture" items than daily expense control. Absentee ownership might have influenced differential agency patterns and the nature of the accounting data required. Another possibility is

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[5]See Fleischman and Parker [1997, pp. 121, 125, 131] for a discussion of appraising the relative advantages of capital improvement projects and estimating the profitability of new workings on Tyneside.

the difference in competitive environments prior to 1858 when the GMA's monopoly ceased. In Britain, coal mining was extremely competitive throughout the 19th century, and technology provided the key to accessing more coal at greater depths at lesser cost, as well as reducing the cost of transportation. In Nova Scotia, the GMA's position was not seriously challenged until the second half of the century when its relative fortunes declined. Falling profit margins as a consequence of increased competition have been traditionally portrayed in the literature as an impetus to better costing systems [Solomons, 1952, p. 19].

Regulation: Another feature of Nova Scotian coal mining was the large amount of internal management data required by the provincial government. As lessor of the province's mineral rights (in the U.K. the mineral rights belonged to the landowner), the provincial government had an interest in the mines being managed efficiently to maximize its royalties and to preserve the mines' future operating capability. While it is assumed that British landowners were profit maximizers in terms of royalties from their coal leases, they could not command the volume of information solicited by the government.[6] For this reason, the GMA was obliged to submit an annual survey of the state of the operations, and the government's Inspector of Mines had full access to the mine workings [PANS: RG1/461/123]. For instance, surveys have survived for the Joggins and Albion Mines in 1859 that give details of location, seams, method of access, shafts, depth, levels from the shafts, drifts, overground railways, winding gear, wharves, buildings, and steam engines [PANS: RG1/461/106, 198]. Analyses of sales and employees were also required on an annual basis. In 1846, for example, returns were prepared of the quantity and value of coal raised and sold during the year from the Albion, Sydney, and Bridgeport Mines, sub-analyzed by market (U.S., neighboring colonies, and home consumption) and by size of coals [PANS: RG1/461/3-4]. There are many similar examples covering a wide range of years. The analysis by markets shows that

[6]We are grateful to an anonymous reviewer for *AHJ* who informed us that the British government began to require data from collieries regarding employment and output, commencing in 1872. Apparently the amount of information solicited increased over time. In the case of Nova Scotia, there was a quantum leap in the required data between the 1840s and the 1870s, but returns for the 1880s and 1890s have not survived in the archives.

the purpose of this information went beyond the calculation of royalties (royalties were based on total output). The survival of various time series, such as a statement of coal shipped to the U.S. in the years 1830, 1840, 1850, and 1855, suggests that the main interest of the government in these returns was to monitor the industry's development [PANS: RG1/461/121]. The government also seems to have had a demographic interest in the industry, hence the requirement for the GMA to submit annual returns of the average numbers of persons employed at each mine during the two preceding years [PANS: RG1/461/123]. These returns listed the average numbers of men and boys by occupation and, like the surveys and sales returns, were sworn by two company officials before a justice of the peace [PANS: RG1/461/110].

On Tyneside as well, there was an institution exogenous to the individual coal-mining enterprises which dictated the generation of additional accounting data than would otherwise be required. There the relevant agencies were the coal-owners' cartels that collected large quantities of information for the purpose of controlling both the retail sales and labor markets [see Fleischman and Macve (2001) and Oldroyd (1996)].

Accounting for Labor: It seems clear that labor scarcity was a reality of Cape Breton mining as was the case in the Newcastle vicinity [Fleischman and Macve, 2001]. The problem was specifically mentioned in the reports to the proprietors' yearly meetings in 1871, 1873, 1883, and 1887 [BI: MG1419/91-68-2690/G2, 4, 14, 17] and was discussed in the GMA's abstracts of accounts for 1873 and 1874 [BI: MG1419/91-68-2690/H, 1873, 1874]. Occasionally reasons for the perceived shortfall were provided. In 1871, workers were siphoned off to work on the Intercolonial Railway [BI: MG1419/91-68-2690/G2]. Rutherford reported in 1873 that a shortage of worker housing was a problem [BI: MG1419/91-68-2690/H, 1873]. Strikes could also spawn temporary dislocations, as at Lingan in 1883 [BI: MG1419/91-68-2690/G 14]. Of course, one does not need to look very far for root-cause explanations given the smallness of population relative to the scale of coal-mining operations. Attempts to remedy the situation through the importation of workers proved abortive. The provincial government imported French emigrants in 1873 [BI: MG1419/91-68-2690/G, 1874]. Brown, Sr. wrote to his son in May 1882 of the "disgraceful conduct" of the scoundrels imported from Scotland to work in the mines [PANS: MG1/151/446]. The problem of labor shortage was exacerbated by the extreme mobility of the mining population, who proved willing to move from coalfield to coalfield, often on a collective basis [McKay, 1983, pp. 306, 311, 323].

McKay [1983, pp. 311-320] did not find as serious a labor shortage in the Cumberland Coalfields further south in Nova Scotia. In point of fact, the local population was sufficient to obviate the need to import foreign-born labor. McKay also found that the "extraordinary mobility of the mining population" meant that Cape Breton miners could be attracted to the region, particularly to the major mining operation of Springhill. The movement does not appear to have been a two-way flow, however, as Cape Breton was a far more distant outpost with few alternative employment opportunities. Here, where the importation of British miners was a higher priority, the comparatively lower wages failed to attract many recruits.

Perhaps as serious a problem as the shortage of miners was their perceived low level of productivity. Rutherford complained in 1873 that the number of workers was adequate but that the recent increase in wages had "induced less work from each individual" [BI: MG1419/91-68-2690/G4]. Rutherford reported to the GMA's proprietors in 1874 that a vicious cycle involving wage levels and production characterized Nova Scotian mining. The miners took advantage of their scarcity and market conditions to secure wage increases. "The usual result of these advances was to be feared, viz., a diminished production arising from mere idleness in many cases, and from a reduction in the amount of work performed by the more industrious workmen" [BI: MG1419/91-68-2690/H, 1874]. Swann's visitations in the early 1880s brought a similar lament. He complained about the indolence of the men, rather than the paucity of numbers, as responsible for production shortfalls. His expectation was for 80-100 tons per man per month, but the actual results were 50-60 [BI: MG1419/91-68-2690/G 12]. The senior Brown was very conscious of the expense to the company of sub par work. He wrote in his book [Brown, 1871, p. 70; see also Martell, 1945, p. 170] that the company had to provide the same rations (and housing) for all workers, regardless of their skill levels.

The Sydney managers did not adopt methods used in the U.K. to guarantee an adequate supply of labor. In the Newcastle area, miners were bound to a specific colliery for a period typically just short of a year. The system was made functional by the mine-owners' cartel that limited to some degree the mobility of miners to seek out better conditions or wages within the region. Martell [1970, p.170] found evidence that a form of binding existed in the early days of Nova Scotia coal mining. Supposedly miners could be engaged on either four or twelve-month contracts, commencing January 1. In either scenario, the miners were paid only at the contract's termination date. However, there is no indication that the GMA mines entered into contractual agreements of this type, and there was certainly no owners' association in Nova Scotia to clip the colliers' wings. In any event, "binding" had mostly disappeared from Tyneside by the middle of the century, to be replaced by monthly or fortnightly contacts [Church, 1986, pp. 237, 261; Fleischman and Macve, 2001; Hammond and Hammond, 1919, p. 12].

Other U.K. coal regions attempted to use subcontracting (the "butty" or "chartermaster" system) to retain a labor force. The Sydney archive contains both a proposal and an actual subcontracting agreement. In his 1842 report on the unprofitability of Albion, Wightman suggested subcontracting the labor function in order to pass the risk of inefficiency to the subcontractor [PANS: RG21/A/Vol. 3]. There is no evidence that the Board seriously considered establishing that form of labor control, although there does exist an 1869 subcontracting agreement with Richard Partridge, a molder (patternmaker). The contractor agreed to specified piece rates and to pay rents, doctor fees and coal for his charges [PANS: RG21/A/Vol. 3]. However, since the molding function was such a small part of the Sydney operations, it cannot be assumed that this method was of importance.

The labor control technique that found favor with Sydney's management was a series of piece-rate structures with varying degrees of sophistication.[7] The accounting records that tracked labor varied considerably during the course of the 19th century. The earliest was a "GMA Timebook" dated 1830-1832 [BI: MG1419/83-110-1870/E1a]. The miners were numbered with comments offered for those who did not put in a full-day's work (such as, absences, injuries and sicknesses). The entries rarely dealt with workers' inefficiencies, except when their physical presence differed from expectation. There was one mention of

[7]It is well known in the economic literature that increasing piece rates as a device to attract labor is dysfunctional since the higher wages result in heightened voluntary absenteeism [Hirsh and Hausman, 1983, p. 147; Walters, 1975, p. 293].

an operative being fined for failing to separate slack from large coals and another who turned in a cart under measure. As time went on, the number of comments increased and came to include the home-coal consumption of individual miners. In March 1832, for example, items were recorded on 40 of the 140 operatives. The data collection improved with the July 1832 entry as monthly recapitulations appeared in the book wherein each man's productivity was totaled and reconciled to the production total from each pit. The prices for getting the coals were also stipulated as were the piece rates paid for carting coal to the wharf. These rates varied from 5d to 2s per 36-bushel chaldron as a function of pit location. In 1872, Brown, Sr. wrote to his son suggesting a premium plan whereby a 10% bonus would be paid to workers who averaged five days per week at work for the year [PANS: MG1/151/164]. While there is no indication whether this plan was ever implemented, it and other surviving evidence lead us to believe that Sydney management and the GMA were primarily concerned with labor turnout. Labor efficiency was an imponderable that a manipulation of piece rates failed to solve as was also the case on Tyneside and elsewhere in the U.K. [Fleischman and Macve, 2001]. This approach seems to be characteristic of environments where labor is scarce and cannot be recruited from other industries [see, for example, Fleischman and Tyson's (2000) study of accounting on Hawaiian sugar plantations].

This apparent concern for turning out as opposed to productivity was reflected in a lengthy series of time books, 1839-1879 [BI: MG1419/81-52-1272/A1-A10]. Throughout the length of the series, the only information conveyed were tick marks representing days worked by individual miners. Occasionally quarter days of work were indicated. The books contained columns for pay rates that were rarely filled. The only exception was the 1858-1859 time book [BI: MG1419/81-52-1272/A7] which contained details on individual hewers' productivity in terms of tubs mined, forward progress, and mine location. Whatever happened at Sydney at the time of this record-keeping discontinuity also occurred at the smaller Point Aconi Mine, another GMA holding [BI: MG1419/83-110-1870/A22]. Here, for example, Daniel Hartigan received £9.15s in September 1855 for 9½ days sinking at 6s, "15 yards of level at 4s" (presumably a reference to forward progress), and 105 tubs at 9d.

The lack of piece-rate information between 1839-1879 is surprising given that we know from other sources that the company was using piece-rate incentives in 1834 and 1878, that piece rates were used at the Spanish River Mines in Sydney as early as 1801 [PANS: RG21/A], and that the piece-rate system was the established method of paying miners in Britain throughout the 19th century. In 1834, Buddle said that he was very concerned about the high proportion of small coals being produced at Sydney and made the following recommendation:

> The present mode of paying the Colliers by cubical measure, is I conceive objectionable in every point of view, as it holds no inducement whatever to them, to take any pains in producing round Coals, as far as I can discover. And I should strongly recommend working by the Ton to be adopted, to separate or riddle the Coal below ground, and to pay the Collier for the round Coals only - or at any rate to pay a very reduced price for the small. By this plan it would become the Collier's interest to make all the round Coal he possibly could, and it would also enable the proprietors to reward him, for doing so, by giving him an additional price, on the round [NRO: 3410/BUD19/279].

This quote illustrates a system of piece rates already in operation, as well as showing a belief in their potential for influencing behavior so as to optimize the firm's profitability. Similarly, in 1878, the "Billy Fairplay" system was introduced at Sydney, having first been developed in South Wales and from thence making its way to the North of England [BI: MG1419/91-68-2690/H, 1879 report to the GMA]. The system was a screening process that separated small coals and stones from the more valuable larger chunks. Because the screening was done on the surface, the miners underground were spared the labor of "riddling," the process of separating the two coal varieties. Brown, Sr. initially informed his son of "Billy Fairplay" in April 1877 [PANS: MG1/151/285]. A year later, in a letter to H. Poole, Brown, Jr. reported the establishment of the system from April 1, 1878 [PANS: RG21/A/3]. Not only did the process produce a higher quality product for sale because the slack was now fully screened out, but it provided an inducement through a revised piece-rate structure for the miners to be more cautious in avoiding the smaller coals. Previously, miners had been paid \$0.39 per ton of large coal and \$0.17 for riddled slack. Now the piece rate was \$0.43 per ton for large coals and nothing for slack. Brown observed to Poole that the miners could typically make the same or slightly more money and produce more coal per day, saved as they were the labor of riddling. The fact remains, however, that complaints about productivity were a recurrent theme, suggesting that while it is likely that piece rates were used throughout the period, they did not achieve the desired result, which could explain the emphasis on turnout in the pay records.

Commencing in the 1880s, the time books became vastly more complicated and reflected a wage structure that may have existed earlier, but which is not contained in extant Sydney records we have seen. A number of piece rates were inscribed into the front covers of the volumes. The rates paid in 1882-1883 for the quantity of tons mined varied from $0.44 to $0.62 as a function of the "height" of the seams from which the coal was taken. "Height" referred to the thickness of a coal seam so that a thicker seam would yield a greater quantity of coal more readily. Consequently, coal mined from a seam of four feet, eight inches in height was priced at $0.44, while a ton from a three-foot seam returned $0.62.[8] Likewise, piece rates were also paid for forward progress, varying from $0.50 to $0.86 for workings ranging from six to nine yards wide. Day rates were also given — $1.07 for cutters, $0.80 for driving. Prices were also provided for slack coal and stones of various diameters. A few other points of interest were apparent in the 1882-1883 rates. Prices paid in winter were only 75% of those paid in summer.[9] The transition from long tons to tons occurred at this time, and piece rates are provided for each. Finally, the U.K. term "hewer" for the miner taking coal from the coalface had been replaced by "coal cutter" [BI: MG1419/81-52-1272/A10].

The contents of these volumes featured the calculations of pay for the cutters, combining the various components. There were data categories for each individual cutter of days worked cutting at the day rate, the forward progress at four prevailing rates, the tonnage prices, as well as columns for fines and remarks. In subsequent books of this genre, there were additional data categories for non-routine cutter functions, such as "room breaking," "troubles," "timbering," and "low coal" (with

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[8]We are grateful to Trevor Boyns for correcting our error in previous drafts that "height" referred to vertical distance from the mine floor so that higher piece rates were paid for coal closer to the floor which would have required the miner to stoop in order to access the coal.

[9]Nothing we have seen in the archive explains this seasonal differential. It may have reflected the additional cost of banking and tied-up capital since Sydney's harbor was frozen until the spring thaw. The lower piece rate may have represented the minimum the GMA felt it had to pay during the slack season to retain its labor force. This situation was in evidence on Tyneside at least for the hewers. Here, however, the slack season was considerable shorter.

subheaders of height, tons, and piece rate) [BI: MG1419/81-52-1272/A11]. It would appear that the Sydney management had developed a pay structure that took into account the wide variety of work environments which the cutter could encounter.

Later time books of the 1880s saw additional refinements. First, a distinction was made in the piece rates paid at two pits designated north and south. Second, the piece rates were amended annually, an attention not in evidence on Tyneside during the industrial revolution. Finally, the records came to include columns headed "cavil" and "tally." "Tally" was a general term that did not have a specific application in coal-mining terminology in the 19th century, and could signify any kind of matching up. McKay [1983, p. 864] defined it as the number placed by the miner on the tubs of coal filled. The fact that each miner had a distinct tally number, with his "previous tally" also recorded, meant that pay was cross-referenced to output on an ongoing basis. Positioning was a significant factor in earnings potential, and "caviling" enabled the cutters to share good and inferior places by drawing lots. Similar equity considerations were seen in Tyneside mining [Church, 1986, p. 275; Flinn and Stoker, 1984]. The "cavil" column reflected a sequential numbering of the miners in pairs, perhaps indicating the operation of a "buddy" system. Such mutual looking-after was much more vital in a "bord and pillar" environment where the cutters were more isolated in the mine.

Aside from the later time books, there is little surviving evidence that the GMA used the accounting books to control labor productivity.[10] There are two coal account books for Sydney 1889-1890 [BI: MG1419/82-256-1726/D3a, b] and for Victoria Mines 1884-1885 [D3c]. These volumes recorded the individual miner's daily production of riddled coal and slack (in separate books for Sydney). There is also an extant hauling account book dated 1893-1896, which contains the tonnage hauled by each operative daily multiplied by the piece rate as

[10]Christopher Napier, the discussant of this paper at the IPA Conference, Manchester, July 2000, queried why would economically rational managers carry on for a half-century with a system that did not achieve the desired labor control. While we feel comfortable with the explanation that a new control system would be too costly, particularly with reference to anticipated resistance from a scarce labor force, there is a possibility that the apparently heightened attention to piece rates in the 1880s might have been in place all along and that the evidence just did not survive in the archive. After all, there were scattered time books from the 1850s that reflected the same intricate piece-rate calculation methodology.

determined by the distance involved. Also noted was the number of days each worked, although never expressed in half or quarter days as seen in the miners' time books [BI: MG1419/81-52-1272/A17]. In none of these volumes is there any indication that punitive action was taken against inefficient or unproductive workers, suggesting that their purpose was to reconcile payments to output rather than to increase efficiency. According to McKay [1983, p. 848], the lack of discipline of the work force was a distinctive feature of coal-mining culture in Nova Scotia.

It may have been that the GMA would have generated even less information on its laboring force were it not for the wealth of data required by Nova Scotia's provincial government through its Inspector of Mines. The paper has already touched on the provision of costing data for regulation. The government had to be in a position to respond to memorials such as the one presented in 1873 by the leading mine owners soliciting the revocation of royalties during hard times [PANS: RG21/A/Vol. 12]. A printed form was distributed to the mines in 1875, requesting a vast amount of information. 21 operative groups were identified, and for each, highest, lowest, and average wage data were required for 1873 and the average for "10 or 20 years ago." Additionally, prices of necessities were requested, along with data on housing availability and cost. These costs were totaled to calculate average cost per man per day. Further categories asked the cost and consumption of oil, powder, picks, and other mining materials. Finally, in questions which paralleled those asked by the Newcastle coal-owners' cartel in the 1830s, the greatest amounts of coal mined and shipped on a single day were solicited [PANS: RG21/A/Vol. 12; see also Fleischman and Macve, 2001]. In an interesting addendum, the government invited the owners to indicate with an asterisk any information they did not want made public.

AN IMPERIAL CONNECTION?

Having examined the accounting methods in evidence at the Sydney Mines, we will attempt in this section to measure Nova Scotia's inheritance from Tyneside specifically and the U.K. more generally. Given the GMA's absentee ownership, a researcher might expect a substantial flow of information to London and back as was found in various archives of participants in the industrial revolution such as Carron [Fleischman and Parker, 1990] and Cyfarthfa [Edwards, 1989]. However, there are few surviving financial reports which were going to, or instructions coming from, the Board of Directors prior to the 1860s, and even subsequently most of the annual reports were short and uninformative. The London proprietors were concerned with controlling expenses, but this attention was more general than reflective of a careful item-by-item analysis. The more significant links to Tyneside and Britain were in terms of managerial accounting techniques and technological innovation. In particular, the expertise of the Newcastle viewer was a vital resource for the Browns in their management of Sydney.

It is difficult to assess what Richard Brown brought with him from the Earl of Lowther's estates in England because of the paucity of costing data that have survived in the estate records. However, what does survive reveals consistency with contemporary Newcastle practice. For example, annual unit cost was calculated during the 31 years prior to 1842, and planning schedules exist of the extra costs that would have been needed to increase weekly production [CRO: D/LONS/W7/1/28, 333A]. Brown does not feature in the estate papers despite his notability in Canada. John Peile, the chief colliery agent, was the main character, although they were both probably part of the same viewing network. In 1838, John Buddle reminded Brown of the method that had been employed by Peile to extinguish a fire in the estate mines in reply to a request for advice on a similar fire at Pictou [PANS: MG1/158/3]. Buddle's connection with the estates as a consultant went back at least as far as 1812 when he supplied answers to a number of Peile's technical queries [CRO: D/LONS/W7/1/28]. It is likely that he and Brown were personally acquainted, which would help to explain why the GMA used him subsequently. The same may have been true of T.E. Forster. He was at his most active with the GMA in the 1860s; the second earliest extant profit and loss statement for 1869 reveals a stipend paid to him of £105 [BI: MG1419/91-68-2690/H, 1870], but a document in the Nova Scotia archives shows that he and Brown had an earlier connection. In May 1839, Forster, "as requested by Mr Brown," reported to the Directors of the Northern Coal Company that had been formed two years previously in England [Church, 1986, p. 131] on the value of the collieries leased to them [PANS: RG21/A/Vol. 7].

Such connections are not surprising given the way viewers trained and operated. Top viewers like Buddle and Forster sold their consulting services nationally and internationally and were extremely influential. Church [1986, p. 410] referred to the importance of their patronage in securing positions at the largest collieries, as was the case at the Albion Mines in April 1865 following the death of James Scott, the resident manager. Forster regretted Scott's death in a letter to Charles Tupper, the Provincial Secretary, and mentioned that it was he who had originally sent Scott out 11 years before [PANS: RG21A/5]. Forster's nephew, James Hudson, proved to be the replacement. Tupper had been asking for Forster's help in finding a new Inspector of Mines, and Forster replied that he could recommend someone, although the going rate for "a good and practical viewer" was £600 per annum plus expenses.

While the mines in Nova Scotia had "managers" who performed many of the same functions as the resident "viewers" on Tyneside, the GMA also drew upon the expertise of nonresident "general viewers" from the north-east on a wide range of issues. As well as providing consulting services, Buddle apparently did procurement for the Sydney Mines. In a letter to Brown, Sr., he averred that he had not yet made a contract for iron coal tubs but would work with Mr. Foord of the GMA on the matter. Forster, for his part, drafted a list of questions to put to Brown, Jr. in the late 1860s to serve as the basis for suggesting operational changes [PANS: MG1/151/52b]. Unfortunately, neither the questions nor the answers have survived in the archive. Apparently, Forster procured technology for the mines as had Buddle. A letter from Brown, Sr. on March 30, 1867 informed Brown, Jr. that Forster would solicit tender offers on a new engine once provided with information on the depth of shafts, the size of pumps, and the tons of coal to be raised [PANS: MG1/151/16]. In 1877 Forster reported to the GMA on underground haulage techniques [PANS: MG1/151/285].

Swann, the long-term Secretary of the GMA, visited mines in Wales and Staffordshire in 1880 to study underground haulage [PANS: MG1/151/389]. Earlier, Swann had observed and detailed the screening process used in the Newcastle vicinity [PANS: MG1/151/268]. These studies were but two of many technological investigations undertaken by GMA personnel. Brown, Jr. toured the Seaton Delaval Colliery in February-March, 1864. He filled an 80-page notebook with his observations on this major Tyneside coaling operation [PANS: MG1/152/74]. His major interest was in technology as typified by a coal-hewing machine he described to Foord in a letter dated February 23, 1864 [PANS: MGI/159/10a,b]. Although the machine was applicable only to the "longwall" method of mining rather than the "bord and pillar" technique typical of Nova Scotia and Tyneside, Brown wrote a very detailed narrative of operations, including the descriptions and pay rates of the 16 operatives required per shift. The total cost per shift was £3.7s.2d with typical production of 90 tubs of 8 cwt. each, depending upon seam thickness. Brown was also interested in the British names given to various operative classifications and to U.K. ventilation methods. He also took notes on testimony given by T.E. and G.B. Forster before a Parliamentary investigating committee. In particular, Brown wanted to get expert opinion on how much coal to extract (1/3) and how much to leave in the pillars of the mine (2/3) to provide adequate shoring for the roof using the extraction technique employed in Nova Scotia [PANS: MG1/152/74].

Personnel were sent from Canada to Newcastle for training. The best viewers had their own firms of associates and apprentices, as is revealed by correspondence in 1872 between James Hudson and G.B. Forster. Hudson had inquired whether Forster was prepared to accept the nephew of Mr. Cunard, the GMA's agent in Halifax, as a trainee, and Forster wrote back in the affirmative, setting out his terms. He revealed that he currently had six apprentices, although he personally was not involved in their early training as they were too much of "a bother at first" [NRO: 3410/FOR/2/16/136]. Three generations of Richard Browns were committed to the lessons that could be learned from U.K. mining. In September 1870, the senior Brown, now in semi-retirement in the U.K., advised his son that managers in Nova Scotia should travel to England to visit the northern collieries "to get any information or knowledge of improvement" [PANS: MG1/151/107]. A quarter of a century later, Brown, Jr. proposed to the GMA that he send his son to England "to get familiar with the most modern mining practices," particularly those with undersea operations [PANS: MG1/152/255]. However, it was recognized that on occasion the parroting of British methods could produce costly results because of environmental differences. For example, the report of George Wightman for 1842, which identified the causes of losses incurred at the Albion Mines, observed that the miners were overpaid since a sufficient number of miners had to be retained for periods of maximum production, and the wages paid had to cover the lengthy slack period of winter (frequently four months). The precedent for this practice was related "to the maxims and practices of England," but there the slack season was considerably shorter, typically a month around Christmas in Tyneside [PANS: RG21/A/Vol. 3, folder of materials, 1841-1856].

CONCLUSION

The paper has compared the costing methods employed by the GMA in Nova Scotia to practice in the U.K. in the 19th century, especially to the North-East of England. Costing was used by the GMA for expense control, including labor, and to generate data for the regulatory authorities. In the area of day-to-day expense control, the GMA mine managers seem to have taken great care, as did their counterparts in Newcastle. In Nova Scotia the system went beyond the tracking of expenditure and constituted a genuine system of cost control. Expenses were analyzed monthly and yearly and subjected to *ex post* rationalization. There are indications that this heightened emphasis on expense control reflected difficulties felt by the Directors in London in managing the operations at such a distance. It might also be the case that greater attention to actual costs, as distinct from *ex ante* cost estimation techniques for business decision making, may typify more nascent cost accounting frontiers. In terms of the major items of capital expenditure, the GMA's costings do not compare favorably with the careful estimations and cost tracking of pit sinkings, rail and wagon-way construction, and new technology procurement in North-East England. This deficiency was probably related to the concentration of technical and accounting expertise in Tyneside compared to Canada. The difference in competitive environments was another factor.

Common links with Tyneside in the personnel and in the costing procedures adopted show that some costing methods were exported from Britain to Canada. Tyneside viewers were highly influential. Resident managers at Albion and Sydney were drawn from their ranks, and the best viewers also provided consultancy, recruitment, and procurement services. Personnel were sent from Canada to Britain for training.

These findings support a global view of the development of management accounting in different locales at the expense of cultural differences. However, the paper has only considered the costing records of the GMA, an English company. Perhaps it is not surprising that it relied heavily on English practice. Although the GMA was the single most important company in the development of coal mining in Nova Scotia in the 19th century, it became but one of several mining companies after 1858, with capital coming from the U.S. and Montreal as well as the U.K. The province therefore stood at a cultural crossroads between investors from the south, west, and east, and it would be worthwhile replicating this study in relation to the new investment taking place in the second half of the century. Similarly, there are the coalfields of Pennsylvania and Virginia to consider which were the GMA's major competitors in the U.S. market. Harris [1976] referred to a number of studies on the transfer of coal-mining technology from Britain to the U.S., and it would be interesting to see whether costing practice was homogenized here also, or whether these fields developed their own distinct tradition.

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Carol Normand
and
Charles W. Wootton
EASTERN ILLINOIS UNIVERSITY

THE RECOGNITION AND VALUATION OF CURRENT ASSETS ON THE BALANCE SHEET IN THE UNITED STATES, 1865-1940

Abstract: A. C. Littleton [1933, pp. 149-151] in *Accounting Evolution to 1900* wrote that the sub-division of financial statements and the valuation of assets were two of the most important elements in the development of modern financial statements. The purpose of this paper is to explore the historical evolution of the recognition, grouping, and valuation of current assets on the balance sheet in the United States between 1865 and 1940 at which time the basic format for reporting such assets had been adopted. The paper expands the examination of the balance sheet beyond a traditional emphasis on long-life assets to an investigation of the evolving classification of current assets with a special emphasis on the influence of financial users (especially creditors) for its unique development. Historical illustrations of the ways in which companies presented and valued current assets on the balance sheet are presented.

> In matters of form the greatest change which later statements showed was the grouping of data into subsections [A. C. Littleton, 1933, p. 149].

INTRODUCTION

In 1913, Charles Sprague [1913, p. 26] wrote that "the balance sheet may be considered as the groundwork of all accountancy, the origin and the terminus of every account". At that time, however, some companies still issued annual reports that did not include balance sheets or, if balance sheets were in-

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cluded, the financial information was often minimal. Additionally, at the beginning of the 20th century most companies did not classify balance sheets, and in the statements of the few companies that did, there was no consistency in the grouping of items.

Moreover, neither the order of liquidity nor market or net realizable values were determined for assets such as accounts (bills) receivables or inventories. In fact, Foulke [1968, p. 189] notes that it was after 1900 that public accounting firms commonly used the terms 'current assets' and 'current liabilities'. Yet, as Foulke [1945, p. 70] writes: "The classification of current assets is undoubtedly the most important classification in a balance sheet, as current assets largely determine the going solvency of a business concern." This lack of classification also affected credit analysis as pointed out by Brown [1955, p. 18] in her dissertation on the history of ratio analysis: "For years the financial statements published by banks were not adequate for extensive analysis because of a lack of significant classification and clarity of expression." Although her statement concerned banks, the inability to conduct meaningful financial statement analysis was equally true for other industries.

Despite the lack of significant balance sheet classifications at the beginning of the century, by 1940 the basic format for reporting current assets on the balance sheet had been adopted. Instead of following British precedent established under the Companies Acts, the American (or Continental Europe) balance sheet had its own characteristics, especially in regard to the classification and position of current assets. Although many of these characteristics developed after the start of the 20th century, antecedents of these changes began shortly after the end of the U. S. Civil War and reflect the evolution of the business environment itself.

Immediately after the Civil War there was little need for classified balance sheets. By 1940, it was impossible not to have them. During that period, the business world evolved from one that consisted primarily of sole proprietorships with little need for financial statements to one consisting of larger businesses that had to provide basic financial statements to their creditors. The American business world then evolved towards larger corporations that had to provide financial information to shareholders, analysts, creditors, and various governmental entities. This paper examines how the economic, legal and social forces that contributed to the reorganization of the American business world also contributed to the recognition, grouping, and valuation of current assets on the balance sheet and explores how these forces created the unique needs of the American business system which led to the development of financial statements different from those developed in Britain.

Several accounting historians have investigated the evolution of financial statements into their present form. However, most studies have concentrated on the overall development of financial statements or upon the presentation and valuation of long-term assets on the balance sheet rather than current items. Examples of these investigations are numerous. Claire [1945] examined the evolution of the annual report of United States Steel Corporation (USS) from 1902 to 1943 while Schiff [1978] contrasted the 1902 and 1974 annual reports of that corporation. Vangermeersch [1970, 1971/72, 1986] also examined financial reporting milestones in the annual reports of USS over seven decades as well as USS's depreciation policies. Reed [1989] contrasted the historical depreciation reporting practices of USS with replacement cost estimates for 1939 and 1987. In *Financial Reporting Techniques in 20 Industrial Companies Since 1861*, Vangermeersch [1979] continued his analysis of annual reports. Here, Vangermeersch examined the financial reporting techniques of companies such as General Electric and Pullman & Company in regard to 63 aspects of reporting in eight major topical areas such as balance sheets, income statements, depreciation, and inventory. Through these studies, Vangermeersch examined in depth the changing role and format of the balance sheet over the years. However, these studies concentrated primarily on the changing balance sheet itself instead of changing classifications on the balance sheet such as current assets. Edwards [1984] in *Studies of Company Records 1830-1974*, presented a historical discussion on the development of financial statements. In *Corporate Financial Reporting and Analysis in the Early 1900s* Brief [1986] presented the early annual reports of companies such as International Harvester Company and American Telephone & Telegraph Company as well as a series of historical comments on those reports. In an article the following year, Brief [1987] further discussed the financial reports of leading companies at the turn of the 20th century. Recently, Previts and Samson [2000] examined the annual reports of the Baltimore and Ohio Railroad for the period, 1827-1856. In addition, there have been two major conceptual studies on working capital and solvency. In his dissertation, Huizingh [1967, p. vii] examined the genesis and development of the working capital concept (especially through the expressions of academic/financial writers) and proposed a new structure for its presentation. In the AICPA's Accounting Research Monograph 3 (*Financial Reporting and the Evaluation of Solvency*), Heath [1978], presented an extensive discussion of the concept of solvency, the principles of balance sheet classifications, and problems incurred in defining current assets.

This paper expands the examination of the balance sheet beyond the traditional emphasis on long-life assets to an investigation of how the classification of current assets on the balance sheet evolved from the end of the Civil War in 1865 to 1940 by which time the basic format had been adopted for the reporting and valuation of current assets. A special emphasis is placed on the influence of financial users (especially creditors) in this development process. As Anton [1962, p. 5] writes: "the great historical influence of bankers on financial statements cannot be overemphasized . . . preparation of statements for the granting of credit influenced not only the statements themselves but accounting principles as well."

The end of the Civil War is used as the beginning point for this investigation because at that time the major factors that led to the increased importance of the balance sheet and the ultimate need for the classification of current assets emerged. For example, Huizingh [1967, p. 62] writes that it was soon after the Civil War that the practice of purchase on open account developed; Horrigan [1968, p. 285] states that it was in the 1870's that "commercial banks began to request financial statements for lending purposes"; and Foulke [1945, p. 618] stated that "efforts were made by The Mercantile Agency in the 1870's . . . to obtain balance sheets, which at that time were better known as *property statements* [emphasis in original], for the use of the mercantile and bank creditors." Littleton and Zimmerman [1962, p. 92] note that it was during this period that bankers encouraged "utilizing short-term bank loans as a source for much of the working capital needed by business."

In order to address the development of current asset classification, the paper is divided into four periods: (a) 1865 to 1879, (b) 1880 to 1899, (c) 1900 to 1920, and (d) 1921 to 1940. For each period, a historical overview of the business environment and the attitudes of management toward financial information are discussed. The impact of the public accounting profession, academic writings, judicial precedent, and statutory authority on the reporting and valuation of current assets are also reviewed. Additionally, historical illustrations of the ways in which companies presented and valued current assets are presented.[1] The final section presents the summary and conclusions.

A MINIMUM AMOUNT OF INFORMATION, 1865-1879

Prior to and at the end of the Civil War, the great majority of businesses were small proprietorships or partnerships that had little need to prepare financial statements because the owners personally knew the financial condition of their businesses. Additionally, most businesses dealt directly with their suppliers and, as Lough [1917, p. 113] stated, trade credit was the most important form of credit where "purchases of merchandise were customarily settled by notes running six, eight, or ten months . . . which were readily indorsed [sic] and discounted."

During the War and continuing afterwards, however, "merchandise business came down to a basis of cash or of credit of only ten to thirty days" [ibid]. This policy continued until the early 1880s, when credit terms became somewhat longer but "these terms were combined with offers of liberal discount for cash payments" [Lough, 1917, p. 113]. Thus, as Lough [1917, p. 114] writes, with the end of the Civil War, "trade credit . . . is relatively less important, and bank credit is more important."

Although bank credit was now more important, a new problem was created for the banks. Instead of discounting two-party commercial notes, banks began to issue single-name paper [Foulke 1945, p. 68] and, as Huizingh [1967, p. 62] points out, "having foregone the security of double protection, they sensed the need of obtaining more adequate and reliable financial information from their clients." The reliable information desired in most cases was the balance sheet, and on the balance sheet, the liquidity of the assets became the major consideration. Huizingh [1967, p. 62] writes: "His [banker's] preference was to obtain a statement indicating the probability that he would be able to recoup his investment even though the business were not to continue beyond the term of his loan." With the greater credit exposure, there was an increase in the importance of the mercantile credit agencies that had been established before the Civil War and placed upon these agencies an

[1]In selecting illustrations, an effort was made to select companies respective of the major industries and to select companies with financial statements illustrative of the various methods of presentation and valuation of current assets on the balance sheet at that time.

obligation to obtain "exact financial information as a trained intermediary for creditors" [Foulke 1945, p. 68].

Although the great majority of businesses were not incorporated at the end of the Civil War the corporate form was common in certain industries such as canals, railroads, banks, and insurance. Incorporated during the first part of the 19th century under special state charters and during the latter part under general charters, these entities often were required by their charters to issue some form of annual report. Often, however, the reports did not include balance sheets or profit or loss statements. For example, the 28 page annual report of the Union Canal Co. of Pennsylvania, 1865 contained an extensive narrative of the company's operations and offered great detail about tonnage hauled and changes in cash balances. However, the report contained neither a balance sheet nor an income statement while the total revenues and ordinary expenses were stated only in the management narrative.

Among companies that included balance sheets in their annual reports, there was no uniform style. Each company developed its own format and decided what was to be included on the statement. The formats of most balance sheets, however, were variations on the "account form," "columnar trial balance" form, and the "beginning of the [use of the] 'report' " form [Littleton, 1933, p. 143]. The columnar trial balance form was similar to today's work sheet in that a trial balance was extended to various columns such as a balance sheet column and, in time, "the inclusion of a profit-and-loss column" [Littleton, 1933, p. 143].

Regardless of the format, assets on the balance sheet were not classified into categories (e.g., current assets).[2] Moreover, it was often the practice to offset certain assets with liabilities and present only the net amount as the balance: in some cases basically creating net working capital. For example, on the balance sheet of the Delaware and Hudson Canal Co., 1870, receivables were presented under the heading "Cash assets, Notes

[2]Although Littleton [1933, p. 149] stated that one of the greatest innovations in financial reporting was the "grouping of data into sub-sections," he pointed out that in the United States broader classification concepts had to be resolved before this could occur. Littleton [1933, p. 149] wrote "In the nineteenth century ... some wished them called real and representative … others wished accounts classified as material, property, personal, profit-and-loss; still others as real, personal and imaginary … [Thus] the generally accepted classification of real and nominal accounts came later, as did the sub-division of the balance-sheet into current assets."

receivables, etc. deducting Liabilities, $2,197,959.51." With this presentation, the reader had the amount of working capital of the company. However, there were no individual amounts for either assets or liabilities.

In 1865, the Lehigh Coal and Navigation Company [1865, pp. 24-26] issued its 44th annual report which included both a "profit and loss account" and a "summary of the liabilities and assets," however, accounts on neither statement were classified. The only headings on the "balance sheet" were Liabilities (listed first) and Assets. Under Liabilities, equity was listed first followed by liability accounts. Lehigh's $11+ million of assets were represented by only six accounts which are presented in Exhibit 1. The six assets were apparently listed in inverse order of liquidity.

EXHIBIT 1

Asset Section, Balance Sheet, January 1, 1865
Report of The Board of Managers
Lehigh Coal and Navigation

Canal and River Improvements	$ 4,455,000.00
Lehigh and Susquehanna Rail-road	1,917,895.35
Real Estate, cost of coal mine land. . . and improvements	2,072,984.50
Moveable effects, Debts due the Company, Bills Receivable, Bonds and Mortgages, &c.	2,128,112.02
Contingent Fund: cost of investments	640,952.02
Cash on hand	165,975.86
	$11,380,919.75

Due to state incorporation laws, railroads were subject to greater regulation and annual reports were often required [Littleton and Zimmerman, 1966, p. 94]. State laws, however, were often vague and charters did not always address management's reporting responsibilities [Hawkins, 1963, p. 136]. Thus, the reporting practices varied widely between railroads and from year to year within the same railroad. Some railroads provided no annual reports as was seen when the New York Stock Exchange asked the Delaware, Lackawanna & Western R.R. Co. for copies of any reports that it had recently issued. In its reply to the NYSE, the Railroad declared [McLaren, 1947, pp. 4-5]: "The Delaware, Lackawanna & Western R.R. Co. make no reports and publish no statements and have done nothing of the sort for the last five years."

In contrast to no reports or minimum accounts by some railroads, the balance sheet (represented by a General Account) of the Philadelphia and Reading Railroad Company, 1865 showed over 20 types of assets. However, there was no sub-classification of assets and items such as cash and freight receivables were offset with liabilities for wages and materials.

During this period, companies that intended to present a more complete financial picture had few reporting guidelines available. Unlike in Britain, U.S. companies had no railway or companies acts to provide basic models for financial statements.[3] It would be nearly two decades before practitioner journals such as *Accountics* and the *Book-Keeper* emerged with discussions of such accounting concerns.

In the few accounting/bookkeeping texts that were available at the time of the Civil War, the preparation of financial statements often was ignored. For example, the 60th edition of *Mayhew's Practical Book-Keeping* [1861, p. 6] devoted 200 pages to a discussion of "general book-keeping, commercial calculations, philosophy & morals of business, and double entry bookkeeping." It did not, however, address or illustrate either a profit and loss statement or a balance sheet.

One author of the period that went beyond bookkeeping was Thomas Jones. In contrast to writers even in the early 1900s, Jones' 1855 *Bookkeeping and Accountantship* dealt broadly with the issue of valuing current resources. Under the heading of "Resources", Jones [1855, p. vii] listed "Merchandise on hand valued at," which Jones explained was "an estimated value [set] upon his merchandise." Moreover, Jones advocated that each year a company establish a reserve account in which the estimated bad debts of the following year would be recorded.

A later text that examined the preparation of a balance sheet was the 1878 *Bryant and Stratton Common School Book-*

[3]The Joint Stock Companies Act of 1856 offered a model balance sheet on which assets were classified into three categories (property held by the company, debts owing to the company, and cash and investments). These in turn were sub-classified into categories such as immoveable (i.e., buildings) and moveable (stock in trade) property. Moreover, on the balance sheet, "receivables" were to be divided into good and "debts [receivable] considered doubtful and bad" [Edey and Panitpakdi, 1956, pp. 364-365]. In regard to the separation of current items on the Companies Act, 1856 model balance sheet, Chatfield [1996b, p. 63] writes: "The distinction made by classical English economists between fixed and circulating capital may have persuaded legislators to separate current from long-term assets and liabilities."

Keeping. The balance sheet presented in this text was based upon the columnar work sheet concept. That is, the initial trial balance was extended to succeeding columns designated: inventory, business accounts, stock, and financial statement [Packard and Bryant, 1878, p. 141]. The financial statement column in turn was separated into two columns — resources (assets) and liabilities (liabilities and capital). No reserves (allowances) for either bad debts or depreciation were shown.

As Brief [1969, pp. 1-2] points out, external influences can impact accounting behavior. However, at this time with the exception of banks, external influences were minimal. For example, in 1869, the NYSE's Committee on Stock List adopted the policy that, once listed on the Exchange, companies must publish an annual financial report. Many companies, however, did not follow the policy and the NYSE usually did not take action [Hawkins, 1963, p. 149].

In contrast to many other external influences, the U.S. judiciary has both a review process and an enforcement mechanism. Because of these characteristics, the legal system has played an important role in the development of accounting standards and practices. As Mills [1988, p. 13] writes in *The Legal Literature of Accounting*: "accounting practices have been subject to and shaped by legal constraints throughout their history." Moreover, as Reid [1987, p. 256] points out, legal actions often predate the development of an accounting concept.

At a time when some companies did not provide financial statements and most companies did not classify their balance sheets, courts began to respond to the needs of the public. One early case was *Rubber Company v. Goodyear* [1869].[4] Although the case largely dealt with patent issues, an additional concern of the Court was the costs which should be considered in a company's determination of profit. Justice Swayne, writing for the United States Supreme Court [9 Wall. 804], stated that among: "other necessary expenditures, if there be any, and bad debts, are to be taken into the account, and usually nothing else." Thus, under the court's reasoning, a company's profits should reflect an estimate for bad debts. Although the court gave consideration to the profit and loss statement, it did not address the corresponding effect on assets in the balance sheet.

[4]Full legal citations for all cases are presented in the references.

THE EMERGENCE OF LARGE CORPORATIONS, 1880-1899

During the last decades of the 19th century, the business environment in America changed drastically. As Alfred D. Chandler [1959, p. 4] points out, America was transformed from a largely agrarian economy to one in which "major industries were dominated by a few firms that had become great, vertically integrated, centralized enterprises." It was a time of mergers and the creation of substantial industrial and distribution corporations such as General Electric Company, United States Rubber Company, and Sears, Roebuck & Company. With the growth of such companies, ownership was separated from management while shareholders became more numerous and important. As corporations sought outside sources of capital, they faced new demands for financial information because investors, bankers, and bureaucrats often had to rely on financial statements for decision making [Littleton, 1933, p. 366].

Although there was an increase in the importance of financial information, there was little change in the preparation and appearance of the financial statements themselves. In contrast to Britain, where the concept of stewardship greatly influenced the concept of the balance sheet, the preparation of the balance sheet in the U.S. continued to be influenced by the needs of creditors. It was during the last decade of the nineteenth century that requests by banks for financial statements became "a widespread practice" [Horrigan, 1968, p. 285]. Reflecting on why the liquidity concept continued to prevail in the U.S., Montgomery [1912, p. 212] wrote: "it has the sanction of the bankers and credit men of this country, who use balance sheets oftener than any other class."

Even with new demands for financial information, the attitude prevalent in the previous period toward the disclosure of financial information often prevailed. Consequently, companies often did not keep stockholders informed of the results of their operations, the information provided was influenced by the viewpoint of the managers, and the information was often unreliable because of what it excluded [Hawkins, 1963, pp.135]. Moreover, the information provided was often of little value for inter-company comparisons because there were few accepted rules for the recognition of financial items such as depreciation or reserves [Previts and Merino, 1998, pp.125-126]. Even in regulated industries such as railroads, where more detailed information was required, accounting practices varied with state requirements [Hawkins, 1963, p. 135].

In this environment, reporting practices varied widely despite a growing need for financial information. For example, in 1881, American Bell Telephone's *Report of the Directors* did not include a balance sheet. The following year, American Bell's annual report [1882, p. 10] included a balance sheet, however, over $7 million of assets were listed in seven broad categories such as patents, other stocks and bonds, merchandise, and bills & accounts receivable. A reserve account was presented on the liabilities side of the report but its purpose was not disclosed. In 1885, Lehigh Coal and Navigation Company issued its 64th Annual Report that included both a "revenue and expenses" statement and a "balance sheet." The 1885 balance sheet, however, differed little from the 1865 balance sheet (see Exhibit 1) except that a greater number of accounts were shown. As in 1865, the 1885 balance sheet neither classified the assets (e.g., current) nor valued the assets (receivables or plant).

Despite the greater detail provided in the annual reports of railroads, the structure of their financial statements had not advanced much beyond those of other corporations.[5] Little or no classification or valuation was presented. Although some railroads did provide information about selected accounts in a narrative or supporting statements, these statements led to confusion. For example, on a financial statement included in the 1880 fiscal year report [1881, p. 38] of the Atchison, Topeka, and Santa Fe Railroad Co., Accounts Receivable was valued at $1,428,008.67. In General Statement 4, however, Bills Receivable (not accounts receivable) was listed as $2,288,185.82 which included $119,599.82 interest on delinquent accounts. Then, in a separate narrative, the following information was provided:

> Our bills receivable Dec. 31, 1880, on live sales, amount to $2,288,185.82. Of this amount, $341,006.45

[5]The developing nature of the balance sheet was shown in a 1883 article in *The American-Counting Room*. In "Counting-Rooms Chats," readers posed questions for the writers to answer. A reader asked: "what form of balance-sheet is best and shortest." In reply, the article ["On Balance-Sheet," 1883, p. 346] stated that the columnar (worksheet) balance sheet form, "in actual business it has become almost universally condemned." Then, the article illustrated two acceptable forms for a balance sheet. The first was a simple "trial balance resource and liability" form with all assets' balances on the debit side and liabilities (including capital) on the credit side. The second example was a "financial condition of the business" statement. Under this format, assets were classified in three categories: actual resources (cash, real estate), commercial resources (merchandise, other companies' stock), and personal resources (bills-receivable, accounts-receivable).

> is overdue and unpaid. During the year 1880, dead sales to the amount of 10,496.73 acres, $55,989.91, have been cancelled.

The Atchison, Topeka, and Santa Fe continued this method of reporting receivables on the balance sheet throughout the 19th century.

Unfortunately, the New York Stock Exchange (NYSE) did not address variation in balance sheet reporting. In 1869, the exchange had established a requirement that newly listed companies must publish annual financial reports, but the NYSE generally did not enforce its policy.[6] In 1885, the NYSE further weakened the policy by establishing a dual listing of stocks. In order to attract companies that did not want to disclose financial information, the NYSE created an Unlisted Department where companies "were not required to furnish the Exchange with financial information relevant to the issue . . . nevertheless, these shares were traded with regularly listed securities, unlisted stocks being distinguished on quotation sheets only by an asterisk" [Hawkins, 1963, p. 150].

While the NYSE was lessening its disclosure requirements, American courts were establishing new guidelines. In 1890, the issue of the proper inclusion and valuation of current assets was addressed by the Supreme Court of Iowa in *Hubbard v. Weare*. Examining several accounts, which the appellant contended "were improperly included as assets, and others omitted from the statement of liabilities," the court set guidelines for the balance sheet. In regard to inventory, the Iowa court held that "until it had an actual value it should not have been included as an asset." The court then addressed the issue of the valuation of receivables. The appellee had listed on his 1879 balance sheet receivables with a value of $22,821.39; however, no provision had been made for a loss. The Supreme Court of Iowa held that the reported value of receivables on the balance sheet must include an estimate for the "shrinkage or loss in collections," for "without such an approximation, the result would not show with any reasonable certainty the state of the company's affairs" [Hubbard v. Weare, 44 N.E. 920]. Thus, with this decision, we see judicial precedent for changes in the way assets were valued and reported which coincides with Reid's

[6]For example, as late as 1923, over 30% of NYSE listed companies were not required to issue annual reports to their shareholders, and only 25% of the companies provided both annual and quarterly reports to their shareholders [Seligman, 1995, p. 48].

[1987, p. 256] proposition that legal actions often predate the development of an accounting concept. Subsequently, other courts established similar guidelines.

Perhaps because the courts were beginning to set accounting principles through legal actions during the 1890s, accounting and auditing texts were more expansive in their coverage of current assets. For example, Dicksee's[7] 1892 *Auditing* included a page and a half discussion of "bad and doubtful debts." In his guideline for receivables, Dicksee [1892, p. 45] wrote:

> An intelligent system of dealing with the difficult question of Bad and Doubtful Debts is of such assistance to all commercial houses that the Auditor should lose no opportunity of suggesting that the matter be put upon a scientific basis.

Dicksee's scientific basis consisted of two phases. First, as soon as a debt became sufficiently overdue to merit attention, it should be transferred to a "Doubtful Debts Ledger." Dicksee [1892, p. 46], however, cautioned that an account should not be written off "until it is irretrievably bad." The second phase consisted of establishing a provision for Bad and Doubtful Debts through a Bad Debts Suspense Account. The suspense account was credited with the estimated loss while the Bad Debts Account was debited "in the usual way" [ibid].[8]

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[7]Due to the scarcity of American accounting texts, during the late 1800s and early 1900s, basic British accounting texts or American versions of British texts often were used. On this scarcity, John Carey [1969, p. 101] writes "in the first 30 years of its existence, however, the American accounting profession had little native technical literature with which to work." On the importance of British writers, Carey [1969, p. 101] adds: "[at this time], the most important book available was the American edition of *Auditing: A Practical Manual for Auditors*, by Lawrence R. Dicksee, Professor of Accounting at the University of Birmingham, England. The American version was edited by the amazing Robert H. Montgomery." One interesting aspect of Dicksee's *Auditing* was its consideration of the effects of legal rulings upon the profession and its liability. In addition to legal discussions in the body of the text, Appendix B contained nearly forty pages of "Reports of Cases, The Decisions of which are of Professional Interest."

[8]In *Auditing*, Dicksee [1892] did not state whether the created "suspense" account for bad debts should appear on the liability side of the balance sheet or as an offset to accounts receivable. Later in his *Advanced Accounting*, he stated that while the created "reserve" account could be shown on the liability side of the balance sheet; "it is preferable, however, in the case of Reserve Accounts raised to provide for shrinkage in the value of specific assets, to deduct them from those particular assets, in which case, no entry whatever will appear upon the liabilities' side of the balance sheet" [1903, p. 232].

In the early 1890s, many corporations did not follow the lead of the courts or the texts. For example, United States Rubber Company (USR) issued its first annual report in 1893. Its financial statements provided minimum information. Only five categories were employed for USR's $29 million assets and all liabilities were listed in one account. No provision for losses in the receivables or valuation of plant assets were shown. USR continued its minimal reporting throughout the 1890s and into the early 1900s except that in most years assets were listed in four categories. However, in one sense, USR's balance sheet was forward looking because current assets were listed first. At this time, many American companies followed the British practice of listing current assets last, and it was not until the late 1930s that several large industrial companies reversed the practice.[9] The 1893 asset section of USR's balance sheet is presented in Exhibit 2.

EXHIBIT 2

Asset Section, Balance Sheet, March 31, 1893
First Annual Report
United States Rubber Company

Cash on hand and in bank	$ 56,194.02	
Notes and Accounts Receivable	2,846,163.50	
Value of Rubber and other Mdse. on hand, estimated	674,011.51	$ 3,576,369.03
Furniture and Fixtures: New York and Boston	$4,587.18	
Investments	$25,267,833.69	25,272,420.87
Total Assets		$28,848,789.90

In contrast to the minimal financial reporting practices of companies such as American Bell Telephone and United States Rubber, a few corporations provided information about their current assets. For example, in January 1893, General Electric

[9]Littleton and Zimmerman [1962, pp. 92-93] in *Accounting Theory: Continuity and Change* stated there was a logic in the British and American presentations of current assets — "The British had a strong natural interest in the relationship of permanent capital and fixed assets. Belief in the interpretative usefulness of placing these elements at the top of the balance sheet is a logical result of such an interest. ... [In America] the party most interested in seeing the balance sheet was the lender; his chief concern was logically the borrower's ability to repay a short-term loan."

Company (GE) issued its first annual report and much of the current asset data presented is similar to that included today. In its report, GE listed Stocks And Bonds Of Local Cos., Cash, Notes Receivable, Accounts Receivable, Inventories, and Work In Progress in a classification titled "Other Assets." GE was unique in including the last account, for at that time, work in progress often was not listed on the balance sheet. It was not until nearly 50 years later that Dun & Bradstreet [Foulke, 1945, p. 81] would emphasize that a comprehensive balance sheet must include "a breakdown of the inventory of manufacturers into three parts, *raw materials, in process, and finished merchandise*" (emphasis Foulke).

Again unique for the period, GE estimated the net realizable value of two current assets (inventories and receivables) while many companies valued neither. Inventories were listed at $2,307,225.13 "less 10%" for an estimated net realizable value of $2,075,502.62. The basis for the 10% reduction was not given. Also, listed at estimated net realizable values were Notes Receivable ($5,151,950.64) and Accounts Receivable ($7,078,879.15). Although there were no indications on the balance sheet that receivables had been evaluated, in the text of the Report, GE [1893, p. 7] stated "after careful examination, deductions have been made from the notes and accounts receivable to cover fully all bad and doubtful items."

In General Electric's annual report, 1895 the "Other Asset" section was dropped and instead all assets were reported on the left side of the balance sheet with no subheadings. In contrast to the reduction of information on the balance sheet itself, GE's management [1895, p. 10] expanded its discussion of receivables:

> This account represents what is believed to be a conservative value of notes and open accounts of customers, after deducting and charging off to Profit and Loss old notes and accounts receivable of 466 debtors, not now dealt with except on a C.O. D. basis, amounting to $2,291,844.48, heretofore carried at $234,973.69, but no longer carried as assets, except for the aggregate sum of $466, being one dollar for each debtor. They will be liquidated as speedily as possible.

Although most large industrial companies still did not classify their balance sheets, by 1890 several major railroads had started to do so and included, among other subheadings, a section for current assets. For example, the balance sheet in The Great Northern Railway Company's first Annual Report [1890] included a current asset section in which cash, receivables, and "material supply" were listed. There was, however, no provision for losses associated with the receivables.

In the same year, the Atchison, Topeka & Santa Fe Railroad Company (AT&SF) issued a detailed balance sheet listing nearly $350 million of assets classified under five major headings (Franchise & Property, Permanent Investments, Other Investments, Deferred, and Current). Each heading in turn had sub-headings. Under the Current heading were the sub-headings Accounts Receivables, Bills Receivable, Cash, and Securities Owned. Instead of listing inventory as a current asset, the AT&SF listed "Material and fuel in stock" as a "Deferred" item along with "Sundry Advances" and "Deposits." Like The Great Northern, the AT&SF made no provisions for bad debts or depreciation.

Although many companies did not include provisions for bad debts, by the end of the 1890s the importance of such a provision was being discussed. For example, in April 1897, P. W. Sherwood presented a paper to the Associated Accountants entitled "The Preparation of Accounts for Legal and Other Purposes" which was published in *Accountics*. In his paper, Sherwood discussed the importance of the proper preparation of the financial statements, and he emphasized that receivables on the balance sheet must be reported at their estimated net realizable values. Sherwood's [June 1897, p. 54] illustration of the proper valuation and presentation of receivables is presented in Exhibit 3.

EXHIBIT 3

Presentation of Receivables on the Balance Sheet
P. W. Sherwood, April 1897

Accounts Receivable		$50,000
Deduct Worthless Accounts	$6,200	
Deduct Accounts Appraised at 50 percent	6,000	
Deduct Accounts Appraised at 30 percent	2,000	14,200
		35,800
Add Accounts at 50 percent of $6,000	3,000	
Add Accounts at 30 percent of $2,000	600	3,600
		$39,400

Source: Sherwood, P.W. [1897], "The Preparation of Accounts For Legal and Other Purposes," *Accountics*, Vol. 1, June: 54.

MINIMAL UNIFORMITY IN STATEMENTS, 1900-1920

At the turn of the century, there was increased public concern regarding potential market abuses by large corporate trusts [Merino and Neimark, 1982, p. 45]. Partially, as a result of these concerns, in June 1898, Congress established the U.S. Industrial Commission to hold hearings on the possible restraint of trade by large corporations [Previts and Merino, 1998, p. 184].[10] During four years of hearings, various examples of corporate abuses relating to competition and stock issuance were presented and, in 1902, the Commission issued its recommendations.

In the Commission's *Final Report*, Thomas W. Phillips set forth recommendations that included the need for independent audits, recognition of potential conflicts of interest, preparation of financial statements, and liability for material misstatements. Moreover, the *Report* [Phillips, 1902, p. 3] recommended that the balance sheet include: "A statement of the method of valuing assets, whether at cost price, by appraisal, or otherwise, and of the allowance made for depreciation." Because the Commission's proposals were only recommendations, companies often ignored its demands for greater disclosure.[11] The lack of disclosure can vividly be seen in the 1905 balance sheet of American Smelting and Refining Company (AS&RC). With over $113 millions in assets, AS&RC reported its assets in only five broad categories: Property ($86,845,670.51), Investments ($3,982,576.08), Metal Stocks ($16,418,542.68), Material ($1,118,901.73) and Cash ($4,636,649.18). No receivables, depreciation, or reserves were listed on the balance sheet.

In October 1906, in response to the growing demand for information, Thomas Warner Mitchell began a series of twelve articles[12] in *The Journal of Accountancy* on the topic of financial

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[10] For a further discussion of the history of the U.S. Industrial Commission see Barbara Merino [1996] "U.S. Industrial Commission."

[11] Vangermeersch [1979, pp. 1-3] points out that the financial reports of early companies sometimes did not even include balance sheets and it was not until the 1920s that several major companies first reported current assets as a separate section of the balance sheet. Vangermeersch also points out that companies that reported current assets often listed them in an inverse order of liquidity.

[12] "The October 1906 column was not attributed to Mitchell but the others [articles] were" [Brief, 1986, "Introduction," np]. Thomas Warner Mitchell was a professor at the University of Pennsylvania and a widely "perceptive" analyst [see Brief, 1986, "Introduction," np].

reports and financial analysis [Brief, 1986, "Introduction," np]. These articles, in the *Journal*'s words [Editorial, 1906, p. 458], were: "a critical review of the reports of American Corporations."[13] In his articles, Mitchell often criticized the lack of information in statements, lack of review by an independent accountant, and the company's manner of presentation. Sometimes, Mitchell suggested ways for improving the statement. For example, in reviewing the International Paper Company's current assets, Mitchell [1907, p. 397] stated the problem with presenting only a simple listing of assets:

> This assumes that the inventories and accounts and bills receivable were stated at their real worth in the balance sheets; of course if the inventories could be duplicated at much less cost or if the 'accounts and bills receivable' included an accumulation of 'dead wood' from past years, the working capital has been impaired and is really much less than the sums stated.

During this time, accounting writers began to devote more time to the importance of the balance sheet and the presentation of current assets. In *The Philosophy of Accounts*, after stating that he thought the American mode (assets on the left) of preparing the balance sheet was preferable, Sprague considered the order of items on the balance sheet. He wrote: "The arrangement of the items in the balance sheet is of some importance especially if the list is voluminous." [Sprague, 1913, pp. 32-33]. Although in an example of a balance sheet, he listed the items in order of "liquidation," Sprague stated that an argument could be made that "in an industrial enterprise where it was thought that productivity or earning power was more important . . . it might be that the fixt [sic] plant was entitled to the first place among the asset." [ibid.] Sprague then added: "But, at any rate, *some* (emphasis Sprague) principle of arrangement is better than haphazard." [ibid].[14]

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[13]In August and September of 1910, *The Journal of Accountancy* again examined the proper preparation and presentation of the balance sheet in two articles by John Noone [1910a,b].

[14]Although the classified balance sheet was becoming the common illustration, many textbooks [e.g., Cole, 1910, Paton & Stevenson, 1916] continued to list plant assets as the first classification. On the importance of the order, Paton and Stevenson [1916, p. 188] wrote: "Some accountants prefer to place the current assets and current liabilities above the fixed assets and capital, but the location of these groups is a matter of minor importance."

In his 1909 landmark [Zeff, 2000, p. 93] text *Modern Accounting: Its Principles and Some of Its Problems*, Hatfield extensively examined the valuation and presentation of specific current assets on the balance sheet. In his biography of Hatfield, Zeff [2000, p. 95] points out that Hatfield with *Modern Accounting* became a pioneer in the development of the concept of the contra or offset approach of presenting valuation accounts on the balance sheet. In his discussion on inventory, Hatfield [1909, pp. 101-102] stated that although the "going concern" concept made a strong logical case that "merchandise for sale be valued at the present selling price with a reduction to cover selling expenses" generally accepted practice required "merchandise shall be inventoried at cost." Moreover, Hatfield [1909, p. 101] continued "prudence further demands that merchandise which evidently cannot be sold except at a loss, be marked down even below cost."

Hatfield also devoted three and a half pages to the recording and valuation of book accounts, acceptances, and promissory notes. In addition to discussing the merits of the percentage of sales or receivables methods in estimating allowances, Hatfield linked the account-specific information with a discussion of reserve accounts and their impact on the Surplus account.[15] According to Hatfield, the Allowance for Bad Debt had to be established in order to properly value the Surplus account so that the appropriate dividends could be paid.

The influence of the judiciary upon the establishment of accounting standards can be seen in Hatfield's writings. For example, Hatfield cited the 1869 Supreme Court case of *Rubber Company V. Goodyear* [9 Wall. 788] in his *Modern Accounting*. In regard to the court's influence and guidance, Hatfield [1912, p. 100] wrote:

> That such allowance should be made is not only dictated by business prudence and accounting practices, but is as well commanded by the United States Supreme Court. . . . The amount is to be decided in each individual case but it certainly should not be much

[15]Hatfield [1912, p. 233] explained the Surplus account as: "But it is unusual to distribute all of the profits earned and there is ordinarily further action by the directors or stockholders deciding to retain part of the profits. The profits thus reserved from distribution are called Surplus, and constitute an addition to the capital of the concern."

> below what has been generally accepted in the specific business concerned.

Following this ruling, Hatfield [1912, p. 100] provided the following illustration as the proper presentation of receivables and allowances:

Bills Receivable	$99,900	
Less Allowance for doubtful debts	100	$99,800

Hatfield's example of valuing receivables and presenting the related bad debts as a subtraction from the receivables was echoed in Montgomery's 1912 *Auditing Theory and Practice*. However, Hatfield's contra-approach towards the allowance account was not universally accepted. In his 1910 text *Accounting and Auditing*, Cole indicated that the allowance account should be shown as a liability account separated from Accounts Receivable. Cole [1910, pp. 324-325] supported his position with the following statement:

> A devise must be provided therefore to reduce assets by the amount of expected shrinkage in these claims; and yet if that reduction is made by subtracting from any figure of assets, the balance sheet is out of accord with the books. We saw long ago that subtraction is practically never performed in bookkeeping, and, therefore, we fall back on the devise of increasing the other side . . . Its appearance on the liability side of the balance sheet indicates that the business is responsible to make good this shrinkage, and that the amount has been subtracted from income to satisfy that responsibility.

Several other authors of accounting textbooks agreed with Cole's approach to the reporting of the allowance account. For example, Klein [1913] and Paton and Stevenson [1918] advocated that the allowance should be included on the equity side of the balance sheet.

Despite these discussions of current assets, some large corporations[16] still provided a minimum amount of financial information. However, by 1910, other companies had begun to classify balance sheets and to establish reserve accounts for

[16]For example, on their 1910 non-classified balance sheets, American Smelting & Refining Company reported over $93 million of assets in only five categories while United States Rubber Company reported over $120 million of assets in eight categories.

selected assets.[17] One of the leading companies[18] in this regard was International Harvester Company (IH) which, in the early 1900s, began extensive disclosure and evaluation of its current assets (inventories, receivables, and cash). For example, in its 1908 Report, IH stated in a narrative that all inventories (raw materials, work in progress, finished goods) were reported at the lower of original production cost, actual purchase price, or current market price. Moreover, IH provided a supporting schedule of the inventory. Receivables were listed on the balance sheet offset by an accumulated reserves for contingent losses, and a note on the balance sheet indicated that a discussion of the contingent losses could be found on a separate page. Here, IH presented the loss reserve at the beginning of 1908, the amount written off in 1908, and the loss provision established for 1908. Finally, due to the length of time it extended for credit, IH stated that it was its policy to maintain a reserve to reflect the expenses incurred in the collection of receivables. Although IH was a leader in the disclosure and valuation of current assets, the order in which they were presented was traditional. As did most companies, longer-life current assets were listed first and cash listed last [Claire, 1945, p. 49]. The 1908 current asset section of IH's balance sheet is presented in Exhibit 4.

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[17]Merino and Neimark [1982] write that a major reason for the increased disclosure by select companies was to avoid future federal regulation. In the early 1900s, there were increased expressions of concern about the reporting policies of many companies. This concern was expressed in hearings before the Industrial Commission, the final report of the Commission, and in Mitchell's series of articles in *The Journal of Accountancy*.

[18]Two other leading companies at this time in the reporting of current assets were General Electric Company and Westinghouse Electric and Mfg. Co. Although its 1910 Balance Sheet was not classified, GE defined the major current assets (e.g., work in progress, receivables, consignments) in a narrative and stated that proper allowances had been made for losses in the accounts. In confirmation of this, GE's auditor (Marwick, Mitchell & Company) in its report [1910, p. 26] stated: "The amount at which the notes and accounts receivable are included in the Balance Sheet represents their realizable value. . . . We have satisfied ourselves that these inventories have been carefully taken, that have been valued at cost price or under, and that due allowance has been made for old and inactive stocks." For 1910, Westinghouse Electric presented a detailed classified balance sheet-listing both current and working & trading assets sections. The latter section included raw materials, work in progress, finished goods, and goods on consignment. In the liability section, Westinghouse listed a reserve for loss account; however, it was a general reserve which included potential losses on materials, finished goods, and receivables.

EXHIBIT 4

Current Assets, Combined Balance Sheet, December 31, 1908 The International Harvester Company

Inventories:		
Finished Products, Raw Materials, etc., at close of 1908 Season	$33,854,932.88	
Subsequent Material Purchases and Manufacture for 1909 Season	13,832,123.38	
		$47,687,056.26
Receivables:		
Farmers' and Agents' Notes	$25,471.132.81	
Accounts Receivable	13,064,927.11	
	$38,536,059.92	
Deduct:		
Accumulated Reserves for Contingent Losses, (See Page 7)	2,224,829.91	36,311,230.01
Cash		9,339,054.90
		93,337,341.17

Although corporations like IH were moving toward more disclosure, in April 1917, the first national attempt at a formalization of authoritative reporting standards occurred with the publication in the *Federal Reserve Bulletin* on "Uniform Accounting" [Brief, 1987, p. 149].[19] Prior to the statement's issuance, the Federal Trade Commission, under chairman Edwin Hurley had strongly advocated the establishment of "uniform accounts" for several industries, independently

[19]After the initial committee (Harvey Chase, George O. May, Robert H. Montgomery) assigned to establish the criteria for an uniform plan for the independent audit of the balance sheet failed to reach agreement, George O. May (senior partner - Price Waterhouse) gave the committee a report by John Scobie prepared several years before for Price Waterhouse's internal use that addressed the needs of an independent audit of financial statements [Allen and McDermott, 1993, p. 51]. This report was accepted by the committee and forwarded to the Federal Reserve. As related in the *Federal Reserve Bulletin* [Uniform Accounting, 1917, p. 270], this report after approval by the FTC and the FRB and conferences with the FTC and AIA, the FRB then "submitted it [Uniform Accounting] to the banks, bankers, and banking associations throughout the country for their consideration and criticism."

audited financial statements, and a federal register of accountants. After opposition by professional groups to specific aspects of the proposals, Hurley, emphasizing the need for uniform accounts and audits, transferred the proposal to the Federal Reserve Board which had expressed an interest in the idea.

As Carey [1969, p. 132] writes:

> The Federal Reserve Board, however, was keenly interested in the credit worthiness of organizations whose commercial paper was discounted by Federal Reserve Banks . . . the Board, therefore, had an immediate and vital interest in the reliability of certified financial statements of such enterprises.

Moreover, the Federal Reserve Board stated that a major impetus for the issuance of the statement was the importance that banks and bankers assigned to the balance sheet [Huizingh, 1967, p. 69]. In fact, in 1908, the Committee on Credit Information of the American Bankers Association had recommended that banks request "statements certified by reputable public accountants," however, "[banks'] fear of offending customers and losing business was still too strong to permit effective enforcement of such a regulation" [Brown, 1955, p. 13].

In 1917, after reviewing a major fraud case in which a financial statement was not requested, Lough [p. 119] in *Business Finance* wrote: "In the absence of financial statements . . . there is really no method of telling whether a corporation is borrowing beyond the limits of safety or not." Moreover, Lough [1917, p. 125] wrote that the Federal Reserve Bank "favors" paper based upon certified financial statements and probably will "insist that some evidence be given that bank loans are 'self-liquidating'." Finally, Foulke [1945, p. 599] wrote that the Federal Reserve had a deep interest in the development of more uniform methods for the preparation of the balance sheet, "so that the analyst would have more uniformly reliable information on which to base his interpretation of business figures."

Although the "Uniform Accounting" statement (a joint effort between the Federal Reserve Board, the Federal Trade Commission, and the American Institute of Accountants) was largely directed toward audit procedures, the report presented a model "Comparative statement of profit and loss" and a "Form of balance sheet," for banks to follow. In 1918, the *Federal Reserve Bulletin*'s article was reissued in pamphlet form as the *Approved Methods for the Preparation of Balance-sheet Statements*. When compared to the balance sheets then being issued by many companies, the model statement was quite innovative. As Vangermeersch [1996, p. 387] points out the "focus group of the report was bankers performing their credit function by short-term loans," and thus, based upon their perceived needs, "its [balance sheet] format was in the 'current assets first format' in the order of liquidity, except for marketable securities." This order was in sharp contrast to the British balance sheet, in which capital and liabilities were listed first, and also differed from the statements of many U.S. corporations in which long-term assets were listed first.[20]

EXHIBIT 5

Uniform Accounts
Federal Reserve Bulletin
Current Assets, 1917 Form of Balance Sheet

Cash
- 1a. Cash on hand—currency and coin
- 1b. Cash in bank

Notes and accounts receivable:
- 3. Notes receivable of customers on hand (not past due)
- 5. Notes receivable discounted or sold with indorsement or guaranty
- 7. Accounts receivable, customers (not past due)
- 9. Notes receivable, customers, past due (cash value $)
- 11. Accounts receivable, customers, past due (cash value $)
  Less: Provisions for bad debts
  Provisions for discounts, freights, allowances, etc.

Inventories:
- 17. Raw materials on hand
- 19. Goods in progress
- 21. Uncompleted contracts
  Less payments on account thereof
- 23. Finished goods on hand

Other quick assets (describe fully):

Total quick assets (excluding all investments)

Securities:
- 25. Securities readily marketable and salable without impairing the business
- 27. Notes given by officers, stockholders, or employees
- 29. Accounts due from officers, stockholders, or employees

Total current assets

[20] As late as 1938, some major industrial companies continued to list long-term assets first on their balance sheets [Vangermeersch, 1996, p. 387].

Moreover, in contrast to many balance sheets, the model balance sheet (presented in Exhibit 5) was classified (Current Assets, Fixed Assets, Deferred Charges, Other Assets) with noticeable detail about the classification of both "Quick and Current Assets." When Cash, Notes & accounts receivable, Inventories, and Other quick assets were combined, they created "Total Quick Assets." The addition of "Securities" to Quick Assets created "Total Current Assets." Heath [1978, pp. 32-33] notes: "many different terms were used to describe asset categories during the early part of the century," and this included the quick assets — "often used as a synonym for current assets."[21] On the balance sheet, assets were listed in the order of liquidity starting with the current assets;[22] a provisions for bad debts was established and directly subtracted from receivables; and inventories included raw materials, goods in process, uncompleted contracts, and finished goods. Later, "the more comprehensive financial statement forms of commercial banking institutions, Dun & Bradstreet, Inc., and larger mercantile concerns" would require a breakdown of inventory similar to this [Foulke, 1945, p. 81]. Although the pamphlet was directed

[21]In its description, the Federal Reserve [Uniform Accounting, 1917, p. 272] explained the use of the two terms: "The term 'Quick assets' is used here in the sense in which it is used by Federal Reserve practice. 'Current assets' is used to comprise these assets and other assets which through current are excluded in determining the eligibility of the paper for Federal Reserve purposes." Although Heath [1978, p. 33] noted that at this time "quick assets" and "current assets" were used sometimes interchangeably, "quick assets" at this time could refer to a subcategory of current assets, namely cash, trade receivable, and inventory-excluding only marketable securities and receivables from stockholders, officers, and employees."

[22]Even, leaders in informative financial reports such as Westinghouse Electric and Mfg. Co. [Annual Report 1920, p. 10] still listed plant assets first on the balance sheet. For Westinghouse Electric, recognition as a leader in the area of financial disclosure was a major change. During the late and very early 1900s, Westinghouse was constantly cited as an example of a company that held no annual meetings (1897-1906) and provided little or no financial information [Brief, 1987, p. 147]. Furthermore, Westinghouse had gone into receivership in 1907; emerging in 1908. However, by 1910, Westinghouse's financial reports were among the most comprehensive and informative of all major companies. In fact, after reviewing Westinghouse history and financial problems, Arthur Dewing [1914, 200fn] in *Corporate Promotions and Reorganizations* wrote: "This [Westinghouse] annual report of March 31, 1911, is worthy of permanent preservation for its fullness, frankness . . . the present writer knows not its equal among corporation reports." For an interesting history of the beginning, reorganization, receivership, and recovery of Westinghouse Electric see Dewing's *Corporate Promotion and Reorganizations* [1924, pp. 165-202].

primarily at banks, Huizingh [1967, p. 69] writes "large segments of the business community accepted the recommended form . . . as extending to the preparation of all balance sheets." However, since the model balance sheet only was a recommendation, its acceptance was limited.

At the same time as the model balance sheet was proposed, courts again addressed the issue of current asset valuation and the resulting effects of such valuations on the financial statements.[23] In *Cameron v. First National Bank* [1917], the Court of Civil Appeals of Texas [194 S.W. 469] held that "to include in such statements as assets accounts which had proven uncollectible and which by general commercial custom and usage should not be included in a financial statement" was sufficient to charge the corporation's directors with false representation of the assets. In this case, a company had included in its receivables the accounts of deceased persons, persons in bankruptcy, and accounts barred by limitation. Instead of charging such accounts to the profit or loss, the company placed such accounts in a "suspended ledger account" which continued to be listed as an asset. Concluding, Chief Justice Pleasants for the court [194 S.W. 474] considered: "This method of keeping books and preparing financial statements is contrary to commercial custom and usage."

EXPANSION, DEPRESSION, AND REGULATION, 1921-1940

Beginning as a time of prosperity and ending with the start of a major depression, events in the 1920s provided much of the impetus for the greater self and governmental regulation of financial statements that occurred in the 1930s. As the 1920s began, there were major variations in the preparations of the balance sheet especially in regard to current assets [Baxter, 1951, p. 158].[24] For example, in its annual report 1920,

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[23]In *Cornell v. Seddinger* [1912, p. 396], the Supreme Court of Pennsylvania held that "Work in Progress" should not be reported at cost when the contract price was "less by more than $180,000 than the vessels cost to build."

[24]In 1926, *The Atlantic Monthly* published "From Main Street to Wall Street" and "Stop, Look, Listen!" by William Z. Ripley (Professor of Economics at Harvard University); these articles were quite critical of the financial reporting practices of many major corporations. The articles, later a part of Ripley's book *Main Street and Wall Street* [1927], provided numerous examples of the inadequate and sometimes non-reporting practices of companies such as United States Rubber Company, Royal Baking Powder Company, and National Biscuit Company. In regard to the "progressive improvement in the practice of accounting," Foulke [1945, p. 596] credits Ripley as "probably the Renaissance

American Can Company issued a non-classified balance sheet with only five asset accounts (Plants, Real Estate, &c., Other Investment Items, Cash, Accounts & Bills Receivable, Materials & Products Inventory) totaling over $140 million.

Financial statements such as these probably prompted the comments of authors such as William Z. Ripley [1927, p. 191] who, in his widely read book, *Main Street and Wall Street*, wrote "Balance sheets are prone to be inadequate or misleading in two principal respects. One is downright omission of important items . . . another is the failure to disclose the method of the valuation." To illustrate the vagueness of valuations, Ripley [1927, p. 191] gave the example of Punta Alegre Sugar Company which listed on its balance sheet "Planted and Growing Cane, $3,651,579.42." In determining its value, Ripley [1927, p. 191] wondered "what price they counted on getting" and "how they found out what the weather was going to be."

In the reports that did classify assets, some companies (e.g., Commonwealth Edison Company, Cuba Cane Sugar Corporation, The North American Company) listed plant assets or long-term investments first on the balance sheet while others (e.g., General Motors Corporation, United States Rubber Company) listed current assets. Additionally, while some (e.g., Pacific Gas and Electric Company, International Harvester Company) offset receivables directly with allowances (reserves), others (e.g., Westinghouse Electric, Commonwealth Edison) listed reserves in the liability section. In turn, reserves could be specific or general in nature. For example, in a narrative, The North America Company [1920, p. 6] stated it had increased its general reserves by 27.14% which included "substantially increasing the Reserves for Depreciation." One major factor in the increased acceptance of the allowance concept was the Revenue Act of 1921. The 1921 Act allowed the use of bad debt allowances, which as Chatfield [1996a, p. 59] writes: "encour-

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of more recent years in this broad subject was due more to William Z. Ripley than to any one other individual." In a letter to the *New York Times* and in an address to the AIA published in *The Journal of Accountancy*, George O. May (Chairman of Price Waterhouse & Co.) responded to Ripley's articles. Although May [1926, pp. 321-324] stated that Ripley's information was somewhat dated and "did not constitute an altogether fair presentation of the situation which exists today," he conceded that improvements could be made in the reporting process. Moreover, May wrote that it would be an advantage to corporations to have common reporting standards for companies "who desire to be guided by the best practice."

aged taxpayers to anticipate bad debt losses and deduct them before they occurred."

During the 1920s, the reporting of inventories varied among companies. Some companies (e.g., General Electric, Westinghouse Electric) stated in a narrative that their inventories were carried at the lower of cost or market while other companies such as Sears, Roebuck and Co. stated on the balance sheet itself that inventories were carried at "Cost or Market, Whichever is Lower." American Woolen Company stated on its balance sheet that its inventories were carried at market. Companies that reported inventories at LCM often did not state what market meant.

This problem was highlighted in a 1926 article in *The Accounting Review* in which E. L. Kohler stated that, over the last five years, there had been an increasing tendency to report inventories at LCM; however, this information was not always useful for "market has at present no commonly accepted business meaning." Kohler [1926, p. 5] therefore stressed: "Because of the variations in the methods of valuing inventories, a balance sheet must be judged incomplete if the basis of the inventory valuation has been omitted."

Although there were substantial differences in the financial statements of companies, accounting textbooks by the early 1920s were more uniform in their presentation of current assets [Huizingh, 1967, p. 56]. In most textbooks, the classified balance sheet was the common illustration and current assets were listed first.[25] Despite this agreement, textbooks differed in their definitions of what current assets were.[26] For example, Kester [1922, p. 26] in *Accounting Theory and Practice* provided the following definition: "Asset items are classified as current if conversion into cash is expected within three to six months," and included cash, receivables, and merchandise inventory. Kester classified assets such as prepayments and most supplies as Deferred Charges. In contrast, Montgomery [1922, p. 393] in *Auditing, Theory and Practice* advocated that prepayments be included with other current assets and predicted that "within a

[25]On the need for classification, Roy B. Kester [1922, p. 25] wrote: "The balance sheet, accordingly, should be so arranged that the condition of the business as related to its ability to pay its debts will be apparent."

[26]Although "current" was the most commonly used term for this classification of assets some writers such as Scovill [1924, p. 278] used the term "quick assets" for the classification. Scovill noted that corporations used both terms for the classification. On the *Federal Reserve Bulletin's* 1917 Model Balance Sheet, Current Assets minus Securities equaled Quick Assets.

short time good accounting practice will sanction the inclusion in current assets of all current prepayments."[27]

By the early 1920s, more textbooks had adopted the use of the net realizable method for receivables with the reserve (allowance) account a direct offset on the balance sheet. In an unusual twist, Montgomery advocated the use of the realizable concept. However, he stated that the estimated uncollectible amount need not be reported. Montgomery [1923, p. 128] stated his reasoning:

> It is not necessary to state in published balance sheets the gross amount of accounts receivable and the reserves to be deducted therefrom. It is information of interest to competitors more than to anyone else.
>
> It is proper to state that accounts receivable are "net of reserves," but it is not necessary, because an unqualified certificate implies that the accounts and notes receivable have been stated at their realizable value.

Unlike the other methods, Montgomery's method actually presented less information by netting the two accounts.

Also, by the 1920s, the importance of ratio analysis had been recognized. Arthur Andersen (founder of Arthur Andersen & Co.) wrote an article for *Manufacturing Industries* entitled "Operating and Balance Sheet Ratios." In this article, Andersen [1926, p. 351] wrote: "One of the most significant indices to the condition of a business is that afforded through the use of ratios developed from balance sheet and operating statement figures." He then noted that of special importance was the "bankers ratio" — that is the working capital ratio.

In 1929, the Federal Reserve Board issued *Verification of Financial Statements* which was a revision of its 1917 balance sheet audit guidelines and which, like its predecessor, included a model balance sheet. Since its issuance in 1917, the "Uniform Accounting" bulletin had become subject to the criticism that its general instructions for an audit had actually "debased audit standards" [Previts and Merino, 1998, p. 290]. Also, as Carey points out, the 1929 guidelines were in response to the changing nature and needs of an audit and of financial statements. The 1917 statement [Carey, 1969, p. 159] "stressed balance-

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[27]Agreeing with Montgomery, Kohler [1926, p. 5] wrote: "Prepaid expenses, such as insurance and rent, are always properly a part of current assets, although often denied that classification by accountants." Kohler cautioned that it was important not to confuse prepaid expenses with deferred charges such as organization costs which should be reported separately.

sheet items, as was natural in that day when commercial bankers, whom the bulletin was mainly intended to serve, were more interested in liquidity than earning capacity." In contrast, the 1929 bulletin stressed the importance of internal control and "the use of tests instead of detailed verification when internal controls were reliable" [ibid] as well as the increasing important issue of income taxes which were not material in 1917.

Although similar, there were some differences between the two models presented by the Federal Reserve Board in regard to current assets. For example, the term "Current Assets" replaced "Quick Assets." The valuation account to offset accounts receivable was now the "reserve for bad debts" instead of "provisions for bad debts." In addition, more information on receivables was required on the balance sheet. If receivables had been assigned, the amount of assignment had to be shown. Receivables from directors, officers and employees were to be listed separately from trade receivables. On the 1917 statement, only investments in short term securities were shown while on the 1929 statement, both current (marketable securities) and long-term investments (securities of affiliated companies) were listed.[28] Inventories were to be "stated at cost or market price, whichever are the lower at the date of the balance-sheet."[29] One classification, however, did not change. On both model state-

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[28]*Verification of Financial Statements* [1929, p. 329] distinguished between the two types of investments: "Under the caption 'Securities' must be listed securities in which surplus funds of the company or firm have been temporarily invested and those which are considered available as 'current assets,' i.e., items which can be turned into money in time of need. Where stocks of bonds represent control of or a material interest in other enterprises, the ownership of which constitutes value to the holder aside from the dividend or interest return, they should be considered as permanent investments and be stated apart from current assets in the balance sheet."

[29]This prevailing academic viewpoint of inventory was in sharp contrast with the base stock method set forth by Maurice Peloubet the name partner of Peloubet & Co. (a leading accounting firm at that time) and former President of the New Jersey Society of CPAs. In a presentation at the 1929 International Congress of Accounting, Peloubet argued that current assets should be considered a "fixed investment" in that receivables, inventories, and supplies are always present and normally are maintained at rather constant levels, and therefore for certain business, it should be carried at original cost. Peloubet [1930, p. 573] wrote: "Regardless of Government requirements the books of corporations engaged in a business meeting the tests described above and the financial statements drawn therefrom should show their inventories on a basis of normal stocks at fixed prices so that the management and public may get a true view of the position of the company and its realized, distributable net income, unaffected by any marking up or down of a fixed asset."

ments, "prepaid expenses, interest, insurance, taxes, etc." were listed not as current assets but as "Deferred charges" which followed fixed assets on the balance sheet [*Verification*, 1929, pp. 321-354].

To Heath [1978, p. 34] the continued classification of these charges (and sometimes inventories) as non-current assets or in a separate category (deferred items) reflected the influence of bankers upon financial statements and "the bankers' liquidating point of view" in classifying assets. As Heath [1978, p. 34] points out, to bankers, deferred charges "were clearly different in some sense from cash and receivables," and, moreover, there was a question "whether deferred charges would yield anything at all on liquidation." Under this reasoning, if current is defined as immediate liquidation to cash at or near stated value, then deferred charges may be deemed closer to long-term assets than current and thus classified as such.

During the 1920s, the courts dealt with two important cases which addressed the valuation of current assets. In 1928, in *Branch, Trustee v. Kaiser et al.*, the Supreme Court of Pennsylvania while addressing the question of solvency and directors' responsibility, examined the issue of inventory valuation. Among other alleged misrepresentations on the balance sheet, the Girard Grocery Company reported its sugar inventory at cost — which ranged between 26 to 28 cents a pound. However, after Girard had purchased the sugar, prices "suddenly dropped to as low as 5 1/2 cents a pound, entailing in this one item, a loss of $500,000." On the importance of reporting a realistic inventory value on the balance sheet, Justice Frazer [1928, pp. 546-547] writing for the court stated: "In addition, they presented inflated inventory sheets, giving to the actual merchandise the company had on hand a cost valuation, when in fact the value had enormously decreased." Thus, under Pennsylvania law, a material decline in the value of inventory had to be recognized both in the income statement and on the balance sheet.

In 1930, the Federal Circuit Court of Appeals examined the purpose and the proper presentation of the reserve for bad debts on the balance sheet in *Landesman-Hirschheimer Co. v. Commissioner of Int. Rev*. The court observed that the real purpose of the reserve "is to show the probable, true, present value of the accounts [receivable], or that sum which it is expected will be realized from such accounts." Therefore, for balance sheet purposes, the appeals court [44 F.2d 522] stated:

> The real situation could better be shown by deducting the amount of the reserve from the total of the accounts receivable, on the asset side of the statement, and thus fixing the valuation of accounts receivable at that sum which is probably collectible thereon.

With these decisions and others, as pointed out by Berle and Fisher [1932], by 1930 the support of the judiciary for the valuation of receivables and merchandise inventory was rather clear. Under the court's rulings, receivables normally should be reported at estimated net realizable value and inventories should be reported at the lower of cost or market. Moreover, Berle and Fisher noted that the law placed certain responsibilities on the accountant to help ensure the proper valuation of such accounts. Illustrating the accountant's responsibility, Berle and Fisher [1932, p. 600] addressed the valuation of receivables:

> The law must look to the accountant to discover whether the account receivable has in fact that quality of collectivity connoted by the label which it bears; whether the apparent realization of profit permitting an addition to surplus in fact exists.

With the collapse of the securities market in 1929 and the revelation of massive fraud in a New York Stock Exchange listed company, the concept and requirements for financial reporting underwent a massive change. Moreover, the responsibility and potential liability of management for financial reports expanded. In January 1933, Richard Whitney (President of the NYSE) announced that companies applying for a listing on the NYSE had to have their financial statements (balance-sheet, income statement, and surplus statement) certified as to correctness by an independent public accountant. Mr. Whitney insisted that the scope of the audit "must be not less than that indicated" in the revised guidelines set forth by the Federal Reserve Board in May, 1929 [Stock Exchange, 1933, pp. 81-82]. Additionally, in a letter to each listed company and published in *The Journal of Accountancy*, Whitney emphasized the importance of the scope of the audit. He requested that each listed company provide the NYSE with an auditor's letter that addressed such points as "whether in their opinion the form of the balance-sheet and of the income, or profit and loss, account is such as fairly to present the financial position and the results of operation" [Accountants, 1933, p. 242].

At the same time, landmarks in the regulation of accounting and financial reporting occurred — the passage of the Securities Act of 1933 and the Securities and Exchange Act of 1934. The 1933 Act conferred upon the FTC the authority to prescribe accounting methods for companies. Under the act, accountants could be held liable for losses that resulted from material omissions or misstatements in registration statements they had certified. The 1934 Act transferred the authority to prescribe accounting methods to the newly established Securities and Exchange Commission (SEC) and required that financial statements filed with the SEC be certified by an independent public accountant. Moreover, the 1934 act gave the SEC "broad authority to prescribe the form and content of financial statements required to be filed by registrants." Specifically, the SEC was given the power to determine "the items or details to be shown in the balance sheet" [Hills, 1957, p. 52].[30] Thus, with the passage of the securities acts of 1933 and 1934 and the establishment of the SEC, the classified balance sheet and the valuation of listed assets (e.g., accounts receivables, inventories) were now a required part of financial reports for many companies.

After the market crash, the resulting investigations, and the securities acts of 1933-34, the accounting profession became the target of substantial criticism for not accepting professional responsibility for the results and accuracy of its audits, especially in regard to inventory [Previts and Merino, 1998, p. 290]. When the profession pointed out that an audit statement made clear the audit's limitations in regard to the detection of fraud and understatement of assets, critics questioned the purpose of an audit. The establishment of a federal bureau of auditors which would be certified by the federal government was even suggested [Previts and Merino, 1998, pp. 291-293].

In response to the criticism and threats, the American Institute of Accountants (AIA), established a committee headed by Samuel Broad to address the issue. In doing this, Previts and Merino [1998, p. 293] write: "the minutes of the AIA show that the institute's major objective was to establish the autonomy of the accounting profession over audit standards." In 1936, in one of the first examples of the profession's greater responsibility for self-regulation, the AIA issued the official release, *Examination of Financial Statements*. Unlike the 1917, 1918, and 1929 bulletins issued through the Federal Reserve Board, this report

[30]Required registrants were those subject to the Securities Act of 1933, Securities and Exchange Act of 1934, and the Public Utility Holding Company Act of 1935 [Hills 1957, p. 52].

was published by the AIA with the Federal Reserve Board "acknowledging that the latest bulletin . . . superseded the 1929 edition" [Carey, 1969, p. 205].

As in the previous bulletins, the 1936 statement included a model balance sheet, and although the changes were small, there were differences in the treatment of current assets between the models. The valuation basis for inventory was now listed directly on the balance sheet as was the basis for marketable securities. Previously, the valuation bases were not presented for either asset. The "Reserve for bad debts" became the "Reserve for doubtful notes and accounts," while "Goods in process" became "Work in process." Additionally, notes receivable now followed accounts receivable in the order of liquidity [McLaren, 1947, p. 28].

As with the Federal Reserve Pamphlets of 1917 and 1927, the AIA 1936 Model Balance Sheet included prepaid expenses in the Deferred Charges category. Graham and Meredith [1937, p. 25] explained the basis of exiling prepaid items to the long-term category: "The item Prepaid Expenses is of little importance in analysing [sic] the balance sheet, except that it gives some information as to how the company's business is conducted."[31] The AIA's 1936 model current asset section is presented in Exhibit 6.

By the late 1930s, most accounting texts' illustrations were similar to the AIA model balance sheet. No longer was the reserve for bad debts listed with the liabilities and inventories were normally valued at the lower of cost or market. Accounting textbooks, thus, followed the lead of the judiciary and enacted legislation in their discussions of the valuation and presentation of this financial statement component.

[31]It was not until 1947 that the AIA in Accounting Research Bulletin No. 30 recommended that prepaid expenses be included in the current asset section [Vangermeersch, 1979, p. 3]. ARB No. 30 contained another major change in that it changed the basic definition of current assets/liabilities. Previously, one year often was used as a primary determinant whether or not an asset was a current asset. In 1944, in *The Journal of Accountancy*, Anson Herrick set forth the argument that the operating cycle of a business should be used in this determination - not simply an arbitrary period of one year. Herrick [1944, pp. 48-49] writes: "working assets are available cash and those which are made to appear and disappear by the operations of the 'operating cycle'." Herrick then basically defined the operating cycle as the time in which merchandise is purchased and sold, cash to cash. As a member of the Committee on Accounting Practice saw his idea prevail in the committee's unanimous vote for the "now classic 'one year or the normal operating cycle, whichever is greater' rule" [Vangermeersch, 1996, p. 388].

EXHIBIT 6

American Institute of Accountants
Examination of Financial Statements
Current Assets, 1936 Form of Balance Sheet

Cash in banks and on hand
Marketable securities (state basis)
Notes and accounts receivable:
  Customers:
    Accounts receivable
    Notes receivable
  Others
  Less:
    Reserve for doubtful notes and accounts
    Reserve for discounts, freight, allowances, etc.
Inventories (state basis)
  Raw materials and supplies
  Work in progress
  Finished goods
Other current assets:
  Indebtedness of stockholders, directors, officers and employees (current)
  Indebtedness of affiliated companies (current)
  Other items (describe)
    Total current assets

Also, in the 1930s, the importance of the analysis of financial statements and the role of ratios in the analysis was seen in the publications of two classic financial texts *Security Analysis* [1934] by Graham and Dodd and *The Interpretation of Financial Statements* [1937] by Graham and Meredith. Here, Graham and Meredith set forth an extensive discussion of what constituted cash, inventories, current assets, working capital, and the working capital ratio and what should be considered in evaluating them — including the importance of "offset-reserves" in determining the proper valuation of assets. They concluded with a comprehensive example of "analyzing a balance sheet and income account by the ratio method."

The influence of the Securities Acts of the 1930s, the new listing requirements of the NYSE, and the AIA's model balance sheet on the evolution of the current asset section perhaps can best be seen by contrasting balance sheets of the early 1930s with those at the decade's end. While some companies' statements already met the AIA's 1936 balance sheet recommendations, other companies had to create new financial statements.

By 1930, The American Brake Shoe and Foundry Company's annual report presented its current assets almost identically to those on the AIA's 1936 model balance sheet. The balance sheet was classified, current assets listed first, current assets were evaluated, and the valuation basis given.[32]

For Sears, Roebuck and Co. to meet the 1936 guidelines, only modest changes were needed. Although Sears, Roebuck's balance sheet in 1930 presented much greater detail than most companies' statements, the report of 1940 was still more informative and nearly identical to the AIA model. In 1930, fixed assets were listed first on the balance sheet. However, in 1940, current assets were first. In the 1930 report, by contrast to inventories which were reported at LCM, marketable securities were listed but no method of valuation was given. In 1940, both cost and market for marketable securities were presented. In 1930, Sears presented accounts receivables with no offset for bad debts and used a general reserve. Ten years later, accounts and notes receivable were sub-classified (customers, employees, other) and a direct offset (reserve for collection and doubtful accounts) was employed.

Although, in the late 1800s and early 1900s, General Electric Company was a leader in the development of a detailed balance sheet, its balance sheet evolution had not progressed as far as American Brake Shoe or Sears. On GE's 1930 balance sheet, there was no stated valuation of either inventory or notes/accounts receivable; only a general reserve was shown. In 1930, marketable securities were listed but whether a cost or market valuation was used was not disclosed. In GE's 1940 report, marketable securities were reported at the lower of par or market with both values given. Inventories were reported at the lower or cost or market (less reserves) although whether cost or market was used was not stated. Accounts and notes receivable were reported net of reserves. However, in contrast to most companies, the reserve was not a direct offset to receivables but it was reported in the general (miscellaneous) reserves in the liability section.

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[32]International Business Machines was another company whose 1930 current asset section of its annual report met the recommendations of the 1936 model. IBM's balance sheet listed current assets first, evaluated current assets, and reported the valuation basis. The only noticeable difference between IBM's 1930 and 1940 current asset sections were inventories were reported "at cost or lower" in 1930 and "lower of cost or market" in 1940.

Unlike American Brake Shoe and Foundry, Sears Roebuck, and General Electric, there were companies like American Can Company that, between 1930 and 1940, developed an entire set of financial statements. For example, in American Can's annual report, 1930 its "Profit Statement" consisted of four lines starting with "Net earnings for 12 Months" (with no explanation of how this amount was derived) less "amount written off for depreciation" less "reserve for federal taxes" equals "balance" ($22,883,940.63). In 1930, with nearly $200 million in assets, American Can presented a six line non-classified asset section. By 1935, although its "Consolidated Income Amount" Statement still consisted of four lines, American Can's "Consolidated Sheet" (balance sheet) was now classified and presented some detail on current assets. Although valuations for neither inventories nor receivables were presented, in the President's Letter, the valuation method was reported. And, unlike 1930, "Marketable Securities" were reported at both cost and market in 1935.

Although still rather brief when compared to many companies' reports, by 1940, American Can's balance sheet met the general guidelines of the 1936 AIA model for current assets. Current assets were listed first. In a note at the bottom of the balance sheet, American Can stated the basis or the value of its inventory.[33] Receivables were divided into "accounts and bills receivables" and "deferred accounts and bills receivable" with the latter reduced by an allowance account.

SUMMARY AND CONCLUSIONS

Brief [1987, p. 155] writes that the development of financial reports and disclosure in the U.S. was a "period of experimentation and innovation" for, during most of the period, few authoritative standards existed to guide the construction and presentation of the financial data. The development of the balance sheet and the resulting classification of current assets was, therefore, the response of various entities to a changing business environment. In their discussion of why the American and British balance sheet differed, Littleton and Zimmerman [1962, p. 92] wrote: "In America as in England, the accounting action

[33]The note to American Can's balance sheet [1940, np] stated: "As heretofore, a fixed quantity of tin plate (approximately one-half of our average inventory in flat stock) is carried at a constant price which is substantially lower than present market price; the remainder of the inventory is valued at the lower of cost or market."

taken came in response to local conditions; different conditions demanded different solutions."

In contrast to America, by 1870 through the Companies Act, 1862 and the Regulation of Railways Acts, 1868, the basic concept of the British balance sheet had been established: "a horizontal division was made in the British balance sheet . . . the upper portion reported share capital and mortgage debt on the left, permanent assets and 'balance down' on the right" [Littleton and Zimmerman, 1962, pp. 81-85]. This was a logical presentation, since "British balance sheets were designed to publicize both the stewardship of the initial use of the shareholders' investments and the stewardship of the company officers in maintaining capital while seeking profits" [Littleton and Zimmerman,1962, p. 92].

By contrast, in 1870, the purpose, form, and order of the American balance sheet was not settled — the balance sheet was a fluid document. In fact, at this time, many businesses did not issue annual reports. While corporations such as transportation companies, banks or insurance companies were often required by state charters to issue annual reports, these reports did not always include financial statements. If financial statements were included, they were often of a minimal nature.

In truth, there was little reason for companies to do otherwise. There were no authoritative guidelines to follow, no Federal Reserve Board, no SEC, few demands by banks, no requests by security analysis, no CPAs to audit the statements, no editorials demanding more informative statements, and few shareholders to satisfy. As Littleton and Zimmerman [1962, p. 92] point out: "American business did not at that time draw significant amounts of capital from the public sale of securities; there was as yet no history of large issues of stock or of extensive investor losses from stock speculation." Therefore, unlike the situation in Britain, the concept of stewardship did not dominate the preparation of the few statements they were being issued.

Thus, while the balance sheet concept was still quite fluid, a significant change occurred in credit policy. As has been discussed, during and immediately following the Civil War, trade credit became less important and bank credit became more important. Instead of discounting two-name notes which carried with them a certain degree of security, banks often issued single-name notes. With single-name notes came more risk and banks began to review their credit procedures. Although they often had personal knowledge of the business seeking credit, banks began to make more use of mercantile credit agency reports in their decisions. Moreover, banks began to require more financial statements, especially balance (property) sheets from customers. As most debts were short term, banks placed special emphasis on the ability of a business to repay a loan. Instead of looking at solvency (the ability to repay over the life of a business), banks concentrated on liquidity (the ability to repay immediately or in the short run — working capital).

One problem that banks faced was traditional balance sheets did not readily provide liquidity information. At this time, most balance sheets were not classified by assets and if they were, long-life assets were normally listed first. Thus, banks developed their own balance sheet forms for customers to complete on which assets were listed in the order of liquidity. Similarly, because banks were concerned with the repayment of short-term debts, credit agencies and merchandising firms placed great emphasis on the balance sheet and especially the liquidity of the assets.

Because of this trend, by the time the great American corporations emerged and a corresponding increase in shareholders occurred, the general format of the balance sheet had been established. The credit aspects of business still determined the financial reporting practices. Littleton and Zimmerman [1962, pp. 92-93], write: "Circulation of financial statements to shareholders would not be necessary; because of the nature of the loan, the working capital position of the debtor was of greatest interest to these banks . . . the party most interested in seeing the balance sheet was the lender; his chief concern was logically the borrower's ability to repay a short-term loan."

The banker's balance sheet (assets on the left and in the order of liquidity) gained credence with the 1917 issuance of the "Uniform Accounting" statement by the Federal Reserve Board. Although the model balance sheet in the statement was not required, it provided guidelines for companies to follow at a time when few guidelines were available. Yet, at this time, some companies still did not issue classified balance sheets and many listed plant assets first. The usefulness of the availability of such classifications was shown by the increase in the number and importance of security analysis.[34]

[34]In 1919, Alexander Wall, Secretary-Treasury of the Robert Morris Associates set forth a systematic method of analysis and followed that with analysis studies based upon the comparison of companies within industries [Brown, 1955, pp. 14-15].

In 1929, the Federal Reserve System issued the *Verification of Financial Statements,* a revision of its 1917 balance sheet audit guidelines and, like its predecessor, included a model balance sheet. As before, the model was only by way of a guideline and it was not always followed. Its similarity in format, however, reinforced the concept of listing items in the order of liquidity. Moreover, although the 1917 and 1929 reports were largely directed at banks, other business often looked upon the model balance sheets as basic guidelines for their own statements [Huizingh, 1967, p. 69].

With the collapse of the securities market and the revelation of improper financial reporting, financial reporting underwent an extensive investigation and ultimately a permanent change. The Securities Act of 1933 conferred upon the FTC the authority to prescribe accounting methods for companies. The 1934 Securities and Exchange Act transferred the authority to prescribe accounting methods to the newly established SEC and required that financial statements filed with the SEC be certified by an independent public accountant. Additionally, the 1933 Act required the inclusion of a balance sheet and profit and loss data "in such form as the Commission shall prescribe" while the 1934 act gave the SEC "broad authority to prescribe the form and content of financial statements" [Hills, 1957, p. 52].

In 1936, the AIA issued its *Examination of Financial Statements*. This report, which superseded the 1929 bulletin issued by the Federal Reserve Board, was the accounting profession's first major step toward self regulation and a commitment to more uniform financial statements. As in previous bulletins, the statement included a model balance sheet. Although this was similar in many ways to previous statements, it placed greater emphasis upon the proper valuation of current assets on the balance sheet.

Although comprehensive guidelines for the presentation and valuation of current assets were put forth in 1917 and 1927, these guidelines often were ignored. Only after the 1933-34 securities acts and the issuance of the AIA's model current asset section in 1936 did companies have the liability incentive and the authoritative guidelines available to disclose and appropriately value current assets on the balance sheet.[35] Although

[35]Although railroads were leaders in their acceptance of the classified balance sheet, it was the 1950s before many railroads discontinued the practice of listing current assets after plant assets and investments on the balance sheet.

current assets have been reexamined and redefined several times since the 1936 model was presented, the overall format of today's current asset section is still quite similar to that of 1936. Accounting historians might continue the exploration begun in this paper by contrasting the historical development of that model with the historical development of the presentation and valuation of current assets in countries such as Britain or France in which government regulation of companies and authoritative reporting standards developed much earlier.

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Alan J. Richardson
QUEEN'S UNIVERSITY

THE CANADIAN AUDIT MARKET IN THE FIRST HALF OF THE TWENTIETH CENTURY

Abstract: This paper explores the structure of the Canadian audit market between 1901 and 1941 based on a sample of 3661 financial statements from 956 firms. Two aspects of the market are examined: first, the overall degree of market concentration, and second, the existence of market segmentation. In addition, a specific concern of the paper is to analyse competition between domestic accounting firms and the international accounting firms leading to the merger of major independent Canadian firms with international accounting firm networks after World War Two. The data show a pattern of increasing concentration during the period among a small set of domestic and international firms. The data identify both a national market and a series of regional markets for audit services. There is also evidence of market segmentation by industry and stock exchange listing. Overall, the evidence suggests that the early Canadian audit market was competitive but fragmented into a series of niche markets. Domestic firms were able to compete with the international firms but the market was becoming increasingly concentrated.

INTRODUCTION

This paper explores the structure of the Canadian audit market in the first half of the 20th century. This is a key period for the development of the audit market and audit firms in Canada. The first full time public accounting firms appeared in

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the mid-1800s but were initially concerned primarily with bankruptcy and receivership work. The change in focus of the accounting firms from bankruptcy to attest work began in the 1900s based on the introduction of statutory audits. The requirement of audits for public companies was written into the Ontario Companies Act of 1907 and the Canada Companies Act of 1917 (see Murphy [1988] for a discussion of the evolution of these requirements). The banks also fell under statutory audit requirements. After a series of bank failures [Naylor, 1975a], the Bank Act was revised in 1911 to require shareholder audits and again in 1913 to require external audits. After a bank failure in 1923, the Bank Act was further revised to require dual auditors, auditor rotations and to prohibit a bank auditor from providing other services to banks [Richardson and Lew, 1992]. By the mid-1920s the Canadian auditing market had thus taken its current institutional form.

Although a substantial body of work has documented and analysed the emergence and development of financial reporting and professional associations in Canada (see Murphy [1993] for an anthology of this literature), there have been no studies of the development of the Canadian audit market and the firms that served this market. The absence of such studies is unfortunate. An understanding of the structure of the early audit market would be useful, for example, in gauging the degree of change in audit concentration brought about by the recurrent waves of mergers in the industry. It would also allow an assessment of the impact of the liberalization of the trade in services (e.g., under the North American Free Trade Agreement and the Uruguay Round of GATT negotiations) on the fortunes of domestic firms. More generally, at the moment, there is no baseline for assessing changes in the market for audit services.

This paper addresses this gap in the literature focussing on the crucial first half of the 20th century in which the audit market began to assume its present form. The dimensions on which the audit market will be described have been informed by the literature on the relationship between industry structure and economic performance [Scherer and Ross, 1990; Baumol, Panzar and Willig, 1988; Cubbin, 1988]. In brief, this literature is concerned with the effect on social welfare of deviations in industry structure from the ideal of perfect competition. Although there are other models of industry structure that are consistent with competitive behaviour, the classical model of perfect competition is the most stringent and is used here as a benchmark. The key issues are thus the extent of market concentration among suppliers and market segmentation. Each of these dimensions reflects the ability of firms to extract monopoly rents in the market (i.e., to restrict supply and/or increase prices above their competitive baseline) or to engage in strategic behaviour with respect to other firms in the market.

Since the existence of monopoly rents is unobservable, this paper follows the tradition in the industry structure and performance literature by examining key structural attributes of the audit market and using these attributes to infer potential performance issues. The paper addresses three research questions: first, who audited Canadian public companies during this period and how concentrated was the supply of audit services; and, second, how was the audit market segmented among accounting firms? These research questions are overlaid with a third, more general, question reflecting a concern with the openness of the Canadian market within the global economy: how did domestic accounting firms fare in competition with foreign accounting firms?

The first research question seeks to document the distribution of audit services among different suppliers. In a perfectly competitive market all suppliers implement the same production function and are price takers within the market. In this setting the marketplace will be composed of many firms of similar size. The first question is thus concerned with the possibility that one or more firms have achieved a sufficient scale of operations that their actions can affect market prices or supply. The empirical literature has found a positive relationship between industry concentration and profits [Cubbin, 1988, p. 52]. The literature suggests that in concentrated industries prices may rise between 10 and 20% above their level in competitive markets.

The second research question looks at market segmentation. If the demand for audit services can be broken down into a series of niche markets, then it is possible that a firm may be able to achieve monopoly pricing with respect to a particular niche. Geographic constraints on practice [Chan, 1995] and specialized knowledge required for particular industries or capital markets [Danos and Eichenseher, 1982] may serve as barriers to entry to particular niches of the market. The existence of market segmentation thus provides evidence of deviation from the ideal of perfect competition. Empirical studies of market segmentation suggest that prices may be increased between four and 34% above competitive levels in such markets [Cubbin, 1988, p. 55].

The third research question examines the effect of competition between domestic and foreign firms on the structure of the Canadian audit market. Canada is a small, open economy. Foreign accounting firms, i.e. those originating in Great Britain and the United States, were present in Canada virtually from the beginning of the market for audit services. These firms grew along side domestic firms and competed for the Canadian audit market. The dynamics of international competition in this market provide insights into the emergence of international accounting firms/networks.

DATA

The paper is based on 3661 financial statements from 956 client firms published in *The Annual Financial Review, Canadian* [Briggs and Houston, eds.] between 1902 and 1941 when it ceased publication.[1] These volumes include financial statements dated between 1901 and 1941. The *Review* presented a summary of the annual reports of the major Canadian firms through this time period. The summary included the main financial statement information and the name of the auditor(s) and other key officers. It did not include the auditors' certificate. This series has been used as a source of information about Canadian financial reporting practices [Murphy, 1988] in the absence of archives of early Canadian annual reports. This data source has not been used however to explore the early Canadian audit market.

Although this is a rich and unique source of data on early Canadian companies' financial statements, the database has limitations. The financial statements included in the *Review* reflect the willingness of companies to provide data in an era of voluntary disclosure and the editors' choices of which firms to include to maximize sales of their publication. While these selection criteria ensure that the most significant companies in Canada through this time period are included, there may be biases in the coverage. It is likely, for example, that the compa-

[1]The data used are all financial statements published in Volumes 2, 6, 9, 11, 13, 20, 21, 22, 26, 31, 36 and 41. Each volume includes financial statements dated up to three years prior to the year of publication. The volumes generate approximately 500 financial statements in each of the periods used for analysis (see Tables 2 and 3). The sample size was limited by lack of availability of the complete series and the cost of transcribing the volumes into machine-readable form.

nies included are the larger companies in Canada, with widely dispersed shareholdings or closely held-companies with significant impacts on competitors. Since this is not a random sample from a universe of Canadian firms and there is no reliable data on the population of firms in Canada through this period, no attempt will be made to generalize from the sample.[2]

ANALYSIS

Among the 3661 financial statements reviewed, 2823 included a listing of the auditor (or auditors in the case of dual auditors). Most of those financial statements where no auditor is listed are dated prior to the introduction of a mandatory audit requirement in the Ontario Companies Act of 1907, the Bank Act of 1913 and the federal Companies Act of 1917. In order to develop a profile of the market during the period under examination, the audit firms that represented continuations of partnerships and named individual members of firms were grouped together. For example, the Clarkson firm is taken to include the firms named Clarkson Gordon Dilworth, Clarkson Gordon Dilworth & Nash, Clarkson Gordon Dilworth Guilfoyle & Nash, Clarkson & Cross, Clarkson Cross & Helliwell, and the individuals ERC Clarkson and GT Clarkson[3] (among others). The number of financial statements audited by the firms was then summed. Table 1 provides a listing of the major audit firms in Canada between 1901 and 1941. This Table also lists the firms and individuals grouped under a common firm name for analysis. It should be noted that even with this consolidation of the audit firms in the sample, there are 316 separate firms/auditors listed in the database.

The data in Table 1 provides evidence of market concentration among audit firms. More formally, the degree of concentration discussed below will focus on the concentration ratio,

[2] Statistics Canada Historical Statistics of Canada Series R783-794 (available via the Internet) provides a listing of the number of companies and the value of their production at five-year increments beginning in 1900. The number of companies in the sample by year correlates significantly with this series (r=0.95 all companies, r=0.92 companies over $1 million in value of production). Partial correlations controlling for year were not significant. These results suggest that the sample size for each year (i.e., the number of companies included in each volume) is proportional to the growth in the economy but that the sample may not be representative of the specific firms that constitute the economy during this period.

[3] Most early bank audits, for example, were attributed to individuals rather than accounting firms.

TABLE 1

Major Canadian Auditors, 1901-1941 (top 31 firms)

Rank	Name of Audit Firm	Other Firms Included	Number of Financial Statements in the Sample Audited
1	Price Waterhouse	F S Price and N E Waterhouse; Price Waterhouse & Co; Price Waterhouse & Co, CA; Price Waterhouse & Co, Toronto.	392
2	Clarkson	Clarkson & Cross; Clarkson, McDonald, Currie & Co; Clarkson, Cross & Helliwell; Clarkson, Cross & Menzies; Clarkson, Cross & Helliwell, Vancouver; Clarkson, Gordon & Dilworth Clarkson, Gordon & Dilworth, CA; Clarkson, Gordon, Dilworth and Nash; Clarkson, Gordon, Dilworth and Nash, CA; Clarkson, Gordon, Dilworth, Guilfoyle and Nash, CA; Clarkson, Gordon, Dilworth, Guilfoyle and Nash; Clarkson, McDonald, Curie and Co, CA; Clarkson, McDonald, Currie and Co; E R C Clarkson, FCA; G T Clarkson; G T Clarkson, CA; G T Clarkson, FCA; R J Dilworth, of Clarkson, Gordon & Dilworth.	266
3	Ross	A F C Ross; A F C Ross, CA; A F C Ross, CA, FCA; J G Ross; A F C Ross; J W Ross; James G Ross; James G Ross, CA; Jas G Ross, CA; P S Ross; P S Ross & Sons, CA; P S Ross & Sons; P S Ross and Sons, CA; G G Dustan, CA; P S Ross & Son; Peat, Marwick, Mitchell and Co.	203
4	Mitchell	Marwick, Mitchell & Co; Marwick, Mitchell & Co, NY; Marwick, Mitchell, Peat & Co; Marwick, Mitchell, Peat and Co, CA; Peat, Marwick & Mitchell & Co; Peat, Marwick, Mitchell and Co, CA; Peat, Marwick, Mitchell and Co, NY.	184
5	Riddell	Riddell, Stead, Graham & Hutchison; Riddell, Stead, Graham & Hutchison, CA; Riddell, Stead, Hodges, and Winter.	125

Major Canadian Auditors, 1901-1941 (top 31 firms) (continued)

Rank	Name of Audit Firm	Other Firms Included	Number of Financial Statements in the Sample Audited
6	Touche	G A Touche and Co; George A Touche & Co; George A Touche & Co, CA; Touche, Niven and Co; Geo A Touche & Co.	102
7	Edwards	Edwards & Ronald; Edwards, Morgan & Co; Edwards, Morgan & Co, CA; Edwards, Morgan, Clark & Co; Edwards, Ronald & Co; George Edwards, FCA; H Percy Edwards, FCA; George Edwards, FCA; H Percy Edwards, CA; George Edwards; H Percy Edwards.	86
8	Scott	C S Scott; C S Scott and Co; C S Scott and Co, CA; C S Scott, FCA; John Scott, CA; John Scott; John Scott & Co, CA.	84
9	Thorne	Thorne Mulholland & Co; Thorne, Mulholland, Howson & McPherson; Thorne, Mulholland, Howson & McPherson, CA.	71
10	Macintosh	Macintosh & Hyde; Macintosh & Hyde, CA; Macintosh, Cole and Robertson, CA; Macintosh, Robertson and Paterson, CA.	65
11	Deloitte	Deloitte, Plender, Griffiths & Co; Deloitte, Plender, Griffiths and Co, London; Deloitte, Plender, Haskins & Sells.	57
12	Milne	Crawley Milne & Co; Crawley Milne & Co, CA; Milne, Steele and Co; Milne, Steele and Co, CA; Sharp, Milne & Co; Sharp, Milne and Co, CA.	46
13	Creak	Creak, Cushing & Hodgson; Creak, Cushing & Hodgson, CA; G Creak; L Cushing; C Hodgson; George Creak, CA.	45
14	Vigeon	Harry Vigeon, FCA; Frank Vigeon Harry Vigeon, FCA; Frank Vigeon, CA Vigeon & Co Vigeon & Co, CA.	37
15	Young	Ralph E Young; Ralph E Young & Co, CA; Ralph E Young, FCA; Ralph E Young, FCA; G E F Smith, FCA; Ralph E Young & Co, CA; Toronto Ralph E Young, CA; Charles Stiff, CA.	34

Major Canadian Auditors, 1901-1941 (top 31 firms) (continued)

Rank	Name of Audit Firm	Other Firms Included	Number of Financial Statements in the Sample Audited
16	McDonald	George C McDonald & Co, CA; McDonald, Currie & Co, CA; McDonald, Craig and Co; McDonald, Currie & Co, Montreal.	33
17	Barber	Barber & Co; Henry Barber & Co; Henry Barber, Mapp & Mapp; Henry Barber, Mapp & Mapp, CA; Henry Barber, Mapp & Mapp, and etc.	27
18	Barrow	Barrow, Wade, Guthrie & Co; Barrow, Wade, Guthrie & Co, NY; Barrow, Wade, Guthrie and Co, CA.	26
19	Hardy	A J Hardy; James Hardy, FCA.	25
20	Gunn	Gunn, Roberts & Co; Gunn, Roberts and Co, CA.	25
21	Oxley	F H Oxley; F H Oxley and Co; F H Oxley, FCA; Oxley & Johnson; Oxley & Johnson, Halifax.	25
22	Neff	A C Neff & Co; A C Neff and Co, CA; A C Neff, FCA; Neff, Robertson Co, CA; Neff, Robertson and Co; Neff, Robertson and Co, CA; Neff, Robertson and Co.	25
23	Helliwell	Helliwell, Maclachlan & Co; Helliwell, MacIachlan & Co, CA; Helliwell, Moore & Maclachlan, CA; Helliwell, Moore and Maclachlan, Vancouver.	24
24	Welch	H J Welch, CA; Henry J Welch, FCA, Toronto; Lawson, Welch & Campbell; Lawson, Welch & Campbell, CA; Lawson, Welch & Co; Welch, Anderson and Co; Welch, Anderson and Co, CA; Welch, Campbell & Lawless, CA; Welch, Campbell and Lawless; Welch, Campbell, Lawless and Parker CA.	24
25	Piers	Piers, Evans and Co; T L E Piers; T L E Piers, CA.	24
26	Haskins	Deloitte, Plender, Haskins and Sells; Haskins & Sells Haskins & Sells, CA; Haskins & Sells, CPA; Haskins & Sells, NY.	22

Major Canadian Auditors, 1901-1941 (top 31 firms) (continued)

Rank	Name of Audit Firm	Other Firms Included	Number of Financial Statements in the Sample Audited
27	Langley	J P Langley; J P Langley and Co; J P Langley and Co, Toronto; J P Langley, FCA.	22 22
28	Jewell	F G Jewell, FCA; George S Jewell.	21
29	Stiff and Sime	Stiff Bros & Sime, CA.	20
30	Hudsons	Oscar Hudson & Co; Oscar Hudson & Co, CA; Oscar Hudson & Co, Toronto.	20
31	Mcauliffe	McAuliffe, Davis & Hope; McAuliffe, Davis and Hope, CA, London, NY and Barcelona.	20

C_m, where "m" refers to the number of firms used in the calculation. The concentration ratio measures the percentage of the market served by some number of firms (typically 4, 6 or 8 firm concentration ratios are calculated). The concentration ratio has, historically, been used by regulators as a first test of the degree of competitiveness of industries [Miller, 1955] and is still used in Canada as a benchmark [Canada, 1991]. The empirical evidence reviewed by Cubbin [1988] suggests that firms gain monopoly power when the four firm concentration ratio exceeds 60%. In Canada, under the Competition Act, a merger between firms in the same industry may be prevented if the four firm concentration ratio exceeds 65%. The concentration ratio is also the most commonly used empirical measure of concentration. It is the measure used in all of the existing studies of the audit market and so will be used here to allow comparison with those studies.[4]

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[4] The United States Department of Justice has adopted the Herfindahl-Hirschman Index as a first test of market concentration. This index is defined as the sum of the squared percentages of market share of all firms in an industry. This index has the advantage of including all of the firms in the industry and is based on economic theory [Kwoka, 1995]. A variation of this approach is to calculate an index based on a set number of firms. The minimum value of the index would be 1/n where n is the number of firms [e.g., Wooton *et al*, 1994].

The concentration ratio can be measured in several ways. Ideally the degree of market concentration should be based on the fees charged to clients. In the absence of such data, proxies such as total sales or total assets of clients are used [Moizer and Turley, 1987]. The institutional environment limits the choice of measures of market share in the period under study. During this period, for example, clients or auditors did not disclose audit fees so this measure could not be used. In addition, the financial disclosures required under Canadian legislation were limited to balance sheets until 1951 [Anderson, 1977, p. 10] so sales and other income statement data was not consistently or reliably reported during this period. In this paper two indicators of market share are used: the number of clients and the value of assets audited.

The number of clients provides a reasonable measure of market share where the clients are similar in size and/or there are large fixed costs associated with the audit. In this sample, the known bias in the sample is towards the inclusion of the larger Canadian firms at the expense of smaller firms. Given this distribution, the number or percentage of clients of an auditor may be a reasonable surrogate for market share. Moizer and Turley [1987] suggest that concentration measures based on number of clients provide a lower bound to the actual level of concentration as this approach makes the implicit and conservative assumption that all clients are charged the same fee.

This concentration measure is supplemented by a measure based on the value of assets of clients audited by the audit firms. This measure assumes that audit fees are proportional to client assets. This assumption may be reasonable when the audit is limited to balance sheet accounts and particularly prior to the advent of statistical sampling that reduced the cost of large audits (i.e., audits based on sampling methods will generate a non-linear relationship between audit fees and the size of the client). Moizer and Turley [1987] suggest that untransformed measures of client size (i.e., using the actual value of assets or sales rather than the logarithm of these variables) may provide an upper boundary to the estimate of market concentration. Taken together, then, the two measures reported provide a range within which the actual concentration of the audit market should fall.[5]

[5] Consistent with this interpretation of these indicators of concentration, the degree of concentration indicated by the number of clients is always lower than the degree of concentration measured by assets audited in this sample.

Over the entire sample period, the six largest firms by the number of financial statements audited in the sample account for 45% of audited financial statements (i.e., Price Waterhouse, 392; Clarkson, 266; Ross, 203; Mitchell, 184; Riddell, 125 and Touche, 102). The largest four firms account for 37% of audited financial statements. Table 2 and 3 track the change in the distribution of financial statements and assets audited among audit firms in the sample over five-year windows. The five-year windows are used to smooth variations due to missing and small sample years. In these Tables the Big-3 international firms (Price Waterhouse, Peat Marwick Mitchell, and Touche) and the Big-3 domestic firms (Clarkson, Ross and Riddell) are compared with the rest of the market combined. The final column provides the six-firm concentration ratio.

Table 2 shows the steady growth in the proportion of financial statements audited by the Canadian Big-3 firms during the period from the turn of the century through the 1920s. The International Big-3 firms dominate the market after 1916, most likely due to Clarkson's withdrawal from banking audits (discussed below). The pattern is somewhat different if assets audited are used as the measure of market shares as in Table 3.

TABLE 2

Percentage of Financial Statements Audited

	Canadian Big-3[1]	International Big-3[2]	Other	No Auditor Listed	Total Number of Financial Statments[3]	Six-Firm Concentration Ratio
	%	%	%	%	#	%
1901-1905	0.00	0.00	0.00	100.00	241	NA
1906-1910	3.60	1.69	16.12	78.59	439	5.29
1911-1915	11.00	10.50	55.15	23.35	501	21.50
1916-1920	14.91	19.45	57.56	8.08	532	34.36
1921-1925	17.16	19.82	58.33	4.69	576	36.98
1926-1930	19.53	24.03	51.94	4.50	422	43.56
1931-1935	22.17	26.02	49.41	2.40	416	48.19
1936-1941	21.56	25.26	52.97	0.21	468	46.82

[1] Clarkson, Ross and Riddell.

[2] Price Waterhouse, Peat Marwick & Mitchell and George Touche.

[3] 66 financial statements were excluded because the year on which the report was based was not given in the source material (although it could be inferred from the year of publication this reduces the risk of misclassification).

TABLE 3

The Market Share (by proportion of assets audited, corrected for dual auditors[1]) of Major Audit Firms in Canada 1901-1941

	Canadian Big-3[2]	International Big-3[3]	Other	No Auditor Listed	Value of Assets Audited	Six-Firm Concentration Ratio
	%	%	%	%	$Billion	%
1901-1905	0.00	0.00	0.00	100.00	$2.5	NA
1906-1910	2.74	9.49	11.24	76.53	$8.1	12.23
1911-1915	17.42	23.47	52.73	6.38	$52.2	40.89
1916-1920	14.52	38.96	40.12	6.42	$23.6	53.48
1921-1925	12.84	41.20	41.72	4.24	$31.4	54.04
1926-1930	15.30	30.92	39.41	14.37	$23.9	46.22
1931-1935	28.22	27.96	37.77	6.04	$23.6	56.18
1936-1941	25.92	35.87	37.53	0.68	$19.9	61.79

[1] Where dual auditors are used, each auditor is credited with half the value of the assets of the audited firm.
[2] Clarkson, Ross and Riddell.
[3] Price Waterhouse, Peat Marwick & Mitchell and George Touche.

The Canadian firms briefly achieved parity in market share of assets in 1935/36 when Clarkson audited the Canadian National Railways (one of Canada's largest firms) for one year. This brief anomaly is discussed below. In general, however, the international firms have dominated the national firms in terms of assets audited since the First World War. By the end of the period the six largest firms accounted for 46.82% of financial statements and 61.79% of assets audited. If these two measures represent the bounds of a confidence interval within which the correct level of concentration lies, then throughout the period the level of concentration was below the threshold usually associated with monopolistic behaviour.

By comparison, Shaw and Archibald [1970], based on 585 Canadian firms with year-ends in 1968 and assets over $500,000 in manufacturing, merchandising, transportation and utilities, reported that the largest four accounting firms audited 73.9% of assets or 41.4% of firms, and the largest six firms audited 82.8% of assets or 56.1% of firms. The ranking of firms in this later period is consistent with the data reported here with Price Waterhouse leading, followed by Clarkson Gordon, Peat Marwick Mitchell, Touche Ross, Thorne Gunn Helliwell & Christensen, and Riddell Stead. The largest changes in the rankings from the pre-World War Two period to 1968 is due to the merger of Ross and Touche and the merger of the Thorne group of firms.

The pattern of auditor concentration discussed above is also consistent with data on the early U.K. audit market assembled by Anderson and Edwards [1997]. Their data for 1886 show that the six largest firms accounted for 24.4% of clients while the largest four firms served 19.8% of clients. Similarly in the USA, Danos and Eichenseher [1986] used Standard and Poor's Registry of Corporations to calculate eight-firm concentration ratios of 45.3% in 1950, 52.8% in 1960, 60.1% in 1970 and 51.3% in 1980. More recent data for the U.S. [Wooton, Tonge and Wolk, 1994] suggest that the six largest firms now account for between 65% and 98% of clients (depending on the population of clients used, e.g. specific stock exchanges) while the four largest firms account for between 49% and 69%. Although the evidence is drawn from different countries, it suggests a continuing pattern of increasing concentration over a 100 year time frame.[6]

Even in this early state of the development of the international firms, it is interesting to note that only three of the six largest audit firms operating in Canada were national firms (Clarkson, Ross and Riddell). The three international firms with a significant presence in the Canadian market were Price Waterhouse, Peat Marwick & Mitchell and George Touche. The presence of the international firms during the development of the Canadian audit market reflects Canada's position as a colony and the earlier development of the audit market in the U.K. The expansion of the U.K. firms into Canada was driven by the flow of capital from the U.K. into North America during the late 1800s. As will be shown below this is particularly noteworthy for certain industries.

Differentiation in the Early Canadian Audit Market: Scherer and Ross [1990, p. 81] note that service industries are typically competitive when viewed on an aggregate level. Looking more closely, however, monopoly power can be created through

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[6]Maijor and Von Witteloostuijw [1996] show that this pattern of concentration did not occur in Holland due to regulations on accounting practice. The trend towards concentration appears to be particularly supported by Anglo-Saxon institutional structures.

product differentiation or market segmentation that limits the effective number of alternative suppliers. Three market segments are examined in this section: specialization by industry, geography and stock exchange listing. A market niche will exist if there are barriers to entry to competitors, i.e., the costs to competitors are higher than to the firm dominating that niche [Geroski et al, 1990, p. 10]. The barriers may include specialized knowledge related to specific industries, knowledge of and investment in specific geographic areas, or knowledge of and credibility to specific stock exchanges. It is assumed *a priori* that domestic firms compared with the international firms will have better access to niches based on industry knowledge and geography. International firms, compared with domestic firms, will have better access to niches based on stock exchange listing mainly because of their greater familiarity to distant investors.

(A) Industry Specialization: The clients represented in the sample capture most of the key sectors of the economy (an obvious omission is the family owned firms). The largest client firms based on the value of assets tend to be in the transportation, finance and public utilities (e.g., hydroelectric power) sectors (see Table 4). The railway and banking industries have been particularly important in the development of the Canadian economy [cf. Naylor, 1975a,b]. The characteristics of these two industries and their auditors are considered below.

Canada is a large and sparsely populated country. The railways were used to tie the country together and to mould a national identity [Berton, 1970]. The creation of an intercontinental railway was an explicit condition of the Act of Union that created Canada as a country in 1867. It was thought that an east-west railway in Canada was the best defence against the north-south expansionist ambitions of the U.S. The railways allowed the natural resources of the Canadian west to be exploited providing an economical means of exporting wheat, potash and other resources from the interior to the seaports of British Columbia or the inland waterways of the Great Lakes. The railways also facilitated immigration and homesteading that opened new Canadian territories. The railways were expensive to build and operate, requiring government guarantees of their securities to attract investors. Even with this support however, the railways proved unable to pay their debt charges and shortly after the First World War many were nationalized [Bliss, 1987].

TABLE 4

Major Clients (Top 20 by value of assets) and their Auditors

Firm	Industry	Total Assets (Maximum Value in sample)	Auditor (s) listed between 1901 and 1941
Canadian Pacific Railway	Railway	$11,166,433,527	Price Waterhouse
Canadian National Railways	Railway	$ 9,695,380,979	Clarkson; Touche
Bank of Montreal	Banking	$ 6,328,350,953	Graham; Hutchison; Hodgson; Glendinning; Gowan; McDonald; Riddell
Royal Bank of Canada	Banking	$ 5,814,482,709	Marwick; Mitchell; Ross; Thomson; Shepherd; McClelland; Sr Mitchell; Brodie
Canadian Bank of Commerce	Banking	$ 4,880,368,102	Mitchell; Price Waterhouse; Webb; Dewar; Marwick; Shepherd
Sun Life Assurance Co of Canada	assurance-guarantee	$ 3,090,894,940	Brig. Ross
Royal Trust Co	Trust	$ 2,601,354,134	Hutchison; Paterson; Gowan
Cities Service Co	investment	$ 2,532,955,457	No Auditor Listed
Canadian Northern Railway Co	railway	$ 2,357,389,648	Touche
Bank of Nova Scotia	banking	$ 2,161,327,293	Glendinning; Price Waterhouse; Waterhouse; Mitchell; Riddell
Dominion Textile Co, Ltd	industrial	$ 1,729,428,690	Ross
MacKay Co	telephone	$ 1,657,950,796	Barrow
Brazilian Traction Light and Power Co. Ltd	railway	$ 1,628,799,060	Clarkson
Minneapolis St Paul and Ste Marie Railway Co	railway	$ 1,560,600,985	Mitchell
Union Trust Co Ltd	trust	$ 1,435,663,823	Cumberland; Neff; Niles; Price Waterhouse
National Trust Co Ltd	trust	$ 1,417,880,494	Edwards; Scott; Touche; Geggie; Mackay; Durnford; Webb
Toronto General Trusts Corp	trust	$ 1,416,574,440	Clarkson; Hardy; Spence; Macbeth
Imperial Bank of Canada	banking	$ 1,324,139,893	Clarkson; Dilworth; Mitchell; Macintosh; Price Waterhouse
Canada Life Assurance Co	assurance-guarantee	$ 1,213,499,630	Young
Bank of Toronto	banking	$ 1,118,459,249	Clarkson; Glendinning; McClelland; Shepherd; Price Waterhouse; Mitchell

The railways were largely financed by bonds sold in the London, UK, market [Bothwell *et al*, 1987, p. 178]. In fact the majority of UK funds raised between Confederation (1867) and the First World War were used to finance the construction of Canada's two transcontinental railways [Naylor, 1975a, p. 229]. Not surprisingly, then, the financial statements issued by the railways were audited by U.K. audit firms: the Canadian Northern Railway was audited by George Touche until its nationalization in 1919; the Canadian Pacific Railway (CPR) was audited by Price Waterhouse; the Canadian National Railway (CNR) was also audited by George Touche with the exception of one year, 1935, when the Clarkson firm acted as auditor. This incident deserves special mention, as the CNR is such a large company that this change in auditors has a notable affect on the aggregate data.

The brief incursion of Clarkson into railway audits is not mentioned in the history of the firm [Little, 1964] nor is Touches' brief loss of this client mentioned in that firm's history [Collard, 1983]. In the years immediately after the depression Canada's railways were in dire financial distress and in 1933 the government of the day stepped in to attempt to save the Canadian National Railway. Three trustees who had absolute control replaced the Board of Directors of the CNR.[7] The trustees took office in 1934 and remained until mid-1936. The auditors of the CNR were also directed to report directly to Parliament rather than to management.

In 1934 George Touche acted as auditor (as he had in previous years) and laid before Parliament (and thereby the Canadian public) a report on the capital structure of the CNR over the previous twenty years. The report showed that the CNR was essentially bankrupt but the firm had disguised this by inadequate charges for depreciation and obsolescence, and by treating government infusions of cash as equity rather than debt [Thomson, 1938, p. 684]. This report was apparently not well received by government.

> The general public believes . . . that because part of the content of these reports did not please the government of the day [a Conservative majority government], the auditing services of Messrs. George Touche & Co. were terminated in the year 1935 [Thomson, 1938, footnote 149].

[7] An Act respecting the CNR and to provide cooperation with the CPR system and other purposes 23-24 George V C.33 1933.

Touche was replaced as auditor by Clarkson for 1935. In October of 1935 a federal election was held. The Conservative Party on dissolution of parliament held 137 seats; the Liberal Party held 88 seats and other groups held 20 seats. After the election the Liberal Party held 171 seats, the Conservative Party 39 seats and others held 35 seats. The new Liberal Government quickly set about undoing the management structure of the CNR put in place by the previous government. A 1936 Act amended the 1933 Act, bringing back a Board of Directors and separate executive team. One of this group's first decisions was to return the audit to Touche; thus, ended the brief engagement of Clarkson as auditor of one of Canada's largest companies.

The financial sector is a crucial one for the auditors given the introduction (after the 1913 and 1923 Bank Act revisions) of mandatory audit requirements for the banks, the two-auditor requirement and rotation of auditors. These statutory requirements provided a large and stable market for audit services that provided a springboard for the growth of the audit firms [Cowperthwaite, 1986, p. 10]. In addition, the banks by the First World War were routinely requiring audited financial statements to use as a basis for commercial lending. It is likely that audit firms that served as bank auditors would be more familiar to bank officers and, therefore, more likely to be recommended to their customers [cf. Shockley and Holt, 1983]. Under Canadian law, the four pillars of finance — banking, trust, insurance and stock brokerage — had to be carried out by separate companies, hence the presence of trust companies and insurance companies among the list of large clients.

The banking industry was founded on a mixture of capital from the U.K. and domestic sources. Many of the first banks drew on U.K. funds and were primarily involved in providing short-term credit to allow farmers to transport their goods to market and merchants to finance their inventories. These banks focused on the large urban centres and on the more populous provinces. In the Prairie Provinces and in smaller centres, merchants and farmers pooled their resources to create banks to serve their needs [Bliss, 1987, Chapter 10; Naylor, 1975a, Chapter 3]. In this sense "the Canadian banking industry was a truncated import from Britain" [Naylor, 1975a, p. 110]. These sources of capital suggest that both domestic and international audit firms would have opportunities in this market.

The banking industry also has a more complex audit market than the transportation industry as a result of statutory requirements. The dual auditor provision introduced in 1923 provided many opportunities for the smaller Canadian firms to gain experience in bank audits and it is common in the sample to see a Canadian firm acting as the junior auditor along side one of the international firms. For example, Price Waterhouse audited the Bank of Nova Scotia for many years with either the Canadian firm of Riddell or Glendinning as the second auditor. By the end of the period, however, Canadian firms were disappearing from bank audits: for example in 1941 the Imperial Bank of Canada, Dominion Bank, Canadian Bank of Commerce and Bank of Nova Scotia were all audited by Peat Marwick Mitchell. The notable exception was the Bank of Montreal (Canada's largest bank) audited by the Canadian audit firms McDonald Currie and Riddell (as co-auditor) throughout the period.

The gradual withdrawal of Canadian audit firms from the banking industry may reflect the changing nature of banking or the limitations imposed on auditors by the Bank Act. Clarkson had been a major player in bank audits in the early part of the period (prior to 1923). The Clarkson firms were auditors of the Standard Bank, the Dominion Bank, the Bank of Toronto, the Bank of Canada, and the Imperial Bank of Canada. In 1923 the Bank Act was revised and auditors were prohibited from providing any other services to the banks if the firm acted as the banks' auditor. In hearings before the Senate banking committee on the proposed Act, G.T. Clarkson gave testimony that if that provision was passed his firm would not be able to afford to do bank audits and would withdraw from the field [Beckhart, 1929]. He appears to have been good to his word [Little, 1964, p. 26].

Other firms may have lost audit clients due to the changing geographic pattern of banking. Initially the banks' capital came from commercial term deposits and share subscriptions. These funds quickly proved inadequate to meet the demand for loans. As the banks lowered their administration costs, it became cost effective for them to expand their retail operations and secure loan funds from demand deposits [Naylor, 1975a]. All of the Chartered Banks during this period established national retail branch networks. As will be discussed below under geographic specialization, few Canadian audit firms had the office network to match the expanding needs of these clients.

The extent of industry specialization among the six largest firms can be seen in Table 5. Each of these firms displays a distribution of clients by industry that differs significantly from the distribution of the total sample.[8] In particular, the larger firms (with the exception of Peat Marwick) show a higher than average proportion of manufacturing clients. Peat Marwick's strength in the financial services and transportation industries is evident in this table. Other notable industry concentrations include Clarkson's and Touche's higher than average proportion of clients in the natural resource sector and Ross' concentration in public utilities. The Herfindahl Index shows that the Big-Three Canadian firms and the Big-Three International firms were about equally diversified across industries (e.g., the average for the Canadian firms was 0.32 compared with 0.35 for the international firms). The right hand column in Table 5 provides the six-firm concentration ratios by industry. While individual firms were specialized in certain industries, the level of concentration does not appear to have provided monopoly power to the firms.

Industry specializations are also evident among smaller firms. The Milne companies, ranked 12th, had more than half of their audits in light and power companies including Pennsylvania Water and Power Co., Shawinigan Water and Power Co., Laurentide Power Co., Ltd, Canadian Light and Power Co., and Quebec Power Co. The Langley firm, ranked 23rd, was concentrated in the mining industry particularly in Kirkland Lake. Their clients included Lake Shore Mines Ltd, Macassa Mines Ltd, Manitoba Basin Mining Co. Ltd, Murray-Kay Ltd, Premier Gold Mining Co Ltd, Sylvanite Gold Mines, Toburn Gold Mines Ltd and Tough Oats Burnside Gold Mines Ltd. As a final example, F.G. Jewell, ranked 28th based on the number of audits in the sample, is limited to mortgage companies, auditing the Canada Trust Company, the Ontario Loan and Debenture Company, the Huron and Erie Mortgage Company, and the London and Western Trusts Company.

(B) Geographic Specialization: In spite of its vast geographic size, Canada's economic activity is extremely concentrated. There are regional differences in natural resources that provide a natural focus for activity such as oil and gas in Calgary or

[8] This statement is based on a Chi-square test between the industry distribution of clients for each firm compared with the complete sample. All results were significant at $p<0.05$ allowing the conclusion that the distribution of the firms' clients was more concentrated than would be expected if the clients were a random selection from all clients.

TABLE 5

The Distribution of Big-Six Audit Firm Clients Across Industries[1] (percentage of clients served by each firm)

		Accounting Firm							
		Clarkson	Ross	Riddell	Price Waterhouse	Peat Marwick	Touche	Total Sample	% of total sample served by the Big-Six
Major Industry of Client Firm	Financial	19.55	25.24	28.68	18.86	30.65	5.05	36.91	18.3
	Transportation	11.28	4.37	0.78	4.65	24.73	6.06	8.65	31.2
	Public Utilities	6.77	20.39	8.53	7.49	1.61	6.06	8.33	32.1
	Manufacturing	40.60	43.20	57.36	57.11	29.03	58.59	33.11	44.7
	Natural Resource	18.80	3.40	4.65	5.68	8.60	23.23	10.51	28.9
	Other	3.01	3.40	0.00	6.20	5.38	1.01	2.50	49.0
		100.00	100.00	100.00	100.00	100.00	100.00	100.00	
	Herfindahl Index	0.2566	0.2962	0.4208	0.3766	0.2499	0.4072		

The Herfindahl Index is defined as the sum of squared percentage market shares in each category for a firm. The index takes a maximum value of 1 when the firm has all of its clients in one category and a minimum value 1/n (where n is the number of categories) when a firm has its clients evenly distributed among categories (0.167 in this table).

[1]The "Financial" category includes banks, trust, mortgage and insurance companies. The "Transportation" category includes railways, shipping and canal companies. The "Public Utilities" category includes light and power, telephone, telegraph and cable companies. The "Manufacturing" category includes all manufacturing firms. The "Natural Resource" category includes agriculture, mining and petroleum companies. The "other" category includes all companies not otherwise categorized (primarily retailers and construction companies).

wheat in Winnipeg but the heart of Canada's industrial and financial activity is centred on the Great Lakes and the cities of Toronto and Montreal. Toronto is listed as the head office on 33% of the financial statements in the sample, followed by Montreal with 23%. The secondary centres of note include Winnipeg, Manitoba (5% of financial statements: mainly resource companies), Hamilton, Ontario (4% of financial statements: mainly industrial), Halifax, Nova Scotia (3.65% of financial statements: mainly financial institutions) and London, Ontario (3.5% of financial statements: mainly insurance companies). This pattern of economic development allowed for at least two strategies for accounting firms: either to specialize in one region or to diversify across a number of centres.

The extent of geographic specialization among the six largest firms can be seen in Table 6. Each of these firms displays a geographic distribution of clients that differs significantly from the distribution of the total sample.[9] Consistent with Collard's [1983] observations, the Ross firm was the most geographically concentrated of the large firms with over 80% of its clients in Montreal. Collard [1983, pp. 53-54] notes that the firm experimented with branch offices (in Winnipeg, Toronto, Ottawa and Quebec City) but was unable to make them successful. Ross decided as a policy to "stick to their own backyard". Clarkson was highly concentrated in Toronto while Peat Marwick and George Touche both have a higher than average proportion of clients in western Canada (British Columbia, Alberta, Saskatchewan and Manitoba).

The Herfindahl Index reported at the bottom of Table 6 allows the extent of geographic diversification of the firms to be compared. The Big-Three Canadian audit firms all have a higher index values than the Big-Three International Firms. This reflects the greater concentration of the Canadian firms' clients in specific geographic markets. The international firms have very low index values indicating a diversity of client locations across Canada. The right hand column in Table 6 provides the six-firm concentration ratios by location. While individual firms were specialized in certain areas, the level of concentration does not appear to have provided monopoly power to the firms.

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[9] This statement is based on a Chi-square test between the geographic distribution of clients for each firm compared with the complete sample. All results were significant at $p<0.05$ allowing the conclusion that the distribution of the firms' clients was more concentrated than would be expected if the clients were a random selection from all clients.

TABLE 6

Geographic Distribution of Clients of the Big-Six Audit Firms (percentage of clients served by the firm)

		Accounting Firm							
		Clarkson	Ross	Riddell	Price Waterhouse	Peat Marwick	Touche	Total Sample	% of total sample served by the Big-Six
Client	Toronto	75.00	5.97	10.85	27.84	18.13	30.00	33.33	29.3
Head	Other Ontario	18.28	7.96	10.08	12.11	4.68	16.00	18.91	19.5
Office	Montreal	3.73	82.09	51.94	35.82	12.87	22.00	23.38	44.9
Location	Other Quebec	0.37	2.99	15.50	1.03	3.51	1.00	3.41	27.5
	Atlantic	0.37	1.00	2.33	6.19	1.17	7.00	6.32	15.2
	Western	1.49	0.00	8.53	9.28	34.50	23.00	8.37	39.2
	United States	0.37	0.00	0.78	5.15	25.15	1.00	4.84	33.7
	Europe	0.37	0.00	0.00	2.58	0.00	0.00	1.11	24.4
	Other	0.00	0.00	0.00	0.00	0.00	0.00	0.32	0
		100.00	100.00	100.00	100.00	100.00	100.00	100.00	
	Herfindahl Index	0.5976	0.6848	0.3236	0.2364	0.2353	0.222		

The Herfindahl Index is defined as the sum of squared percentage market shares in each category for a firm. The index takes a maximum value of 1 when the firm has all of its clients in one category and a minimum value 1/n (where n is the number of categories) when a firm has its clients evenly distributed among categories (0.111 in this table).

The pattern of specialization in a restricted geographic area is also common of the smaller firms. The firm of C.S. Scott, for example, ranks as the eighth largest auditor during this period. Their clients however were concentrated in Hamilton, Ontario including Dominion Power and Transmission Company, Hamilton Bridge Company, Frost Steel and Wire, Canadian Westinghouse Co. Ltd., the Bank of Hamilton, Sawyer Massey Ltd., and Tuckett Tobacco Co. Similarly, the MacIntosh firms, ranked as the tenth largest auditor of the period, operated primarily in and around Montreal, PQ including clients such as Ames Holden McCready Ltd, Atlantic Sugar Refinery, Bruck Silk Mills, Calgary Power Company (which in spite of the name was headquartered in Montreal), Canadian Vickers Ltd., Consolidated Oka Sand and Gravel Co., Intercolonial Coal Mining, MacLaren Power and Paper Co, Ottawa-Montreal Power Co, Ltd, and Southern Canada Power Co., Ltd. The firm of Creak, Cushing and Hodgson, ranked 13th, is also concentrated in the Montreal area with clients such as National Breweries Ltd, Ogilvie Flour Mills Co., Ltd, Paton Manufacturing Company of Sherbrooke, Price Brothers & Co. Ltd, Tooke Bros Ltd, International Power Co. Ltd, Canada Iron Corporations, Ltd, and Canadian Airways, Ltd.

(C) Stock Exchange Listings: Among the 3661 financial statements analysed, 2414 (66%) indicated that the firm was publicly traded on at least one stock exchange. These financial statements indicated a total of 3636 listings. The location of these listings is summarized in Table 7.

TABLE 7

Stock Exchange Listings

Stock Exchange	Number of listings	Percentage of sample	Cumulative
Toronto	1666	45.85	45.85
Montreal	1349	37.10	82.95
London	324	8.91	91.86
New York	146	4.02	95.88
Vancouver	34	0.94	96.82
Calgary	32	0.85	97.67
Winnipeg	31	0.85	98.52
All other foreign stock exchanges	54	1.49	100.00
Total	3636		

The data in Table 7 indicate that firms were predominately listed on Canadian stock exchanges (approximately 87% of all listings). Where these firms sought foreign funds, the most common listings were on the New York and London stock exchanges. The firms listed on the London Stock Exchange were primarily railways and public utilities (light and power companies). Canadian National Railways and Canadian Northern Railways are reported as listed solely on the London exchange while Canadian Pacific Railways was listed on the Toronto and Montreal exchanges in addition to being listed on the London exchange. Other Canadian companies that limited their listings to London include the Hudson Bay Company, Trust and Loan Company of Canada and the Robert Simpson Company. The New York Stock Exchange attracted a more diverse group of Canadian companies and very few who chose to list solely on that exchange (e.g., the International Nickel Company and Borden Co.).

Within Canada, the Toronto and Montreal stock exchanges dominate the listings. These two exchanges account for eighty-three percent (82.9%) of total listings. Naturally, given the extent of listings on these exchanges, most sectors of the Canadian economy are represented. The smaller Canadian exchanges tend to be specialized in resource-based companies operating in the region of the exchange. For example, firms listed on the Calgary exchange tended to operate in the petroleum industry (exploration and refining); firms listed on the Vancouver exchange tended to be petroleum and mining firms.

The larger audit firms in the sample have a slightly larger proportion of listed clients than smaller firms. For example, among the six largest audit firms 75% of clients are listed while among the bottom six audit firms on the ranked list in Table 1, 68% of clients are listed (among 121 audit firms that appear only once in the sample 68.3% have listed clients). The relatively small variation among large and small firms on this variable is probably a reflection of the selection criteria used by the editors of the *Review*. Presumably to ensure a market for their publication they have focussed on those Canadian firms that were followed by investors, resulting in a bias toward listed firms, and/or were of interest to competitors, resulting in a bias toward larger firms. Unfortunately in the absence of reliable data on the population of firms during this period, it is impossible to generalize beyond the sample at hand.

Among the top six audit firms, 75.9% of the clients of Canadian firms and 76.2% of international firms were listed on at least one exchange. On average, therefore, Canadian firms during this period were doing as well as the international firms in attracting listed clients. Focusing on the clients listed on the London and New York exchanges can refine this view of the market. The big-three international firms in the sample had 11% of their Canadian clients with listings on the London exchange and 6% on the New York exchange. By comparison, the big-three Canadian firms had 6.3% of their clients with listings on the London exchange and 1.9% on the New York exchange. These data suggest that Canadian companies listed on foreign exchanges, particularly on the New York exchange, tended to favour the international accounting firms.

DISCUSSION

The data presented above show that the Canadian audit market was becoming more concentrated over the first half of the 20th century. Brozen [1982, pp. 27-38] identifies two time patterns of increasing industry concentration. Concentration based on technological innovation tends to occur in the early years of a product's life cycle and then is gradually eroded by competition and further product innovation. This is not the case in the Canadian audit market. The second pattern begins with a diffuse market followed by increasing concentration based on improved transportation and communications technologies, and economies of scale in production. Tedlow [1988], commenting on the latter pattern, shows that the pace of concentration was uneven in the U.S. consisting of a series of sharp rises in market concentration interspersed with periods of stability. For most of the period considered in this paper the level of concentration remained constant with the exception of a surge during the late 1920s. The pattern observed in the Canadian audit market is consistent with Brozen's [1990] second model of concentration but is at odds with Tedlow's [1988] findings. Both of these observations require comment.

Concentration in the Canadian audit market was not based on technological breakthroughs that allowed firms to gain an instantaneous comparative advantage. Rather, concentration emerged gradually as firms differentiated themselves. A key factor in this process was the professionalization of accountancy in Canada. The increasing concentration in the Canadian audit market occurred simultaneously with the emergence of professional associations of chartered accountants. The ten provincial institutes of chartered accountants, for example, were incorporated between 1880 and 1921. Although these bodies did not attempt enact legislation that would give them a monopoly over practice, they did seek to differentiate themselves from other practitioners. They were successful, for example, in having early legislation that required audits specify that the auditor should be a chartered accountant "or other expert accountant" [e.g., the Ontario Municipal Act, 1897; the Federal Trust Company Act, 1919; and, the Bank Act, 1923. Cf. Richardson, 2000, pp. 106-107]. This format elevated the status of chartered accountants but carefully allowed "others" to practice. The additional clause ensured that the chartered accountants would not be accused of seeking a monopoly and prevented a call for the chartered accountants' Institutes to grandfather all those currently in practice into membership.

The chartered accountants' institutes also established apprenticeship rules that required potential entrants to serve within an accounting firm prior to writing their examinations. This requirement had three effects. First, it provided an effective barrier to entry to possible auditors and allowed existing firms to grow rapidly based on these entrants. Second, it provided the firms with economies of scale. In most service industries, economies of scale are very limited since the service is based on face-to-face interaction with the service provider. Some economies of scale are possible by delegating lower level tasks to others but this approach is limited by the extent to which the service is decomposable and by the cost differentials between alternative providers. In the case of apprentices, since they will have most of the necessary skills after some period of training a large portion of the audit task can be delegated. Also during this period apprentices were given a meagre stipend or in some case would be charged for the opportunity to train in the firm. Finally, it allowed firms to differentiate themselves based on the training opportunities provided to apprentices. This gave large firms a competitive advantage in seeking out apprentices and hence to grow faster relative to smaller firms.

The rise in concentration levels is also consistent with the effects of improving transportation and communications systems on the ability of firms to expand their markets. For example, in 1911 Clarkson, headquartered in Toronto, sent his nephew (Helliwell) to Vancouver to open a branch of the firm. It became evident after a few years that this arrangement was not workable and the Vancouver firm was allowed to continue on its own account [Crate, 1970]. Clarkson was able to open offices in Ontario and Quebec, however, where it was easier to maintain contact including offices in Montreal (1922), Windsor (1929), Ottawa (1929) and Hamilton (1938) [Little, 1964, p. 36]. It was not until 1945 that Clarkson opened an office in Vancouver that was integrated with the rest of the firm [Little, 1964, p. 41].

One of the key differences between Canadian and foreign auditors during this period was the geographic scope of operations within Canada. Most of the Canadian audit firms were niche players; they were specialized in particular industries and locations. The foreign firms, however, quickly established a wide geographic network. This may have been a result of their connection to investment trusts with widely dispersed assets or, in several cases, their entry into the Canadian market as auditors of the railways. In order to meet the needs of railway audits, these audit firms were forced to develop the office network and abilities to operate across significant distances within Canada.

The final issue to be discussed is the steady rise of concentration in Canada compared with Tedlow's [1988] observations on the pattern of concentration in the U.S. The lack of a dramatic rise in concentration during the 1920s compared with the U.S. can be attributed to differences in the two economies during this period. In the U.S. the "roaring Twenties" saw a period of prosperity and growth that triggered the surge in mergers. Canada however did not share this period of growth. Bliss [1987] refers to this period in Canada as the "stuttering Twenties". Canada recovered more slowly from the First World War than the U.S. and entered the 1920s with a severe capital deficit that prevented rapid expansion. The entire period through the First World War, depression and Second World War was thus marked by steady conservative growth in Canada.

The other difference between Canada and the U.S. was their approach to the regulation of "trusts" and other monopolistic behaviour by firms. The U.S. adopted the Sherman Anti-Trust Law in 1890 and began to enforce these provisions through the Federal Trade Commission in 1914. After the depression further legislation was enacted to address price discrimination, increase the damages that could be sought and eased the burden of proof [Scherer and Ross, 1990, pp. 12-13]. These legal remedies ended prior surges of mergers until entrepreneurs could invent new forms of organization and contracting that did not violate the letter of the law. The result was a series of ebbs and flows in merger activity in the U.S. Canada actually enacted anti-trust legislation prior to the U.S. in 1889 but this legislation used a criminal burden of proof that made enforcement difficult. The Act was amended in 1923 to prohibit mergers to the detriment of the public but the same burden of proof was maintained. This Act remained in place until 1986. During that entire period only one successful prosecution was recorded [Scherer and Ross, 1990, p. 197]. In Canada, then, concentration was not curtailed by legislation but was not catalyzed by rapid market growth. The result was the slow steady increase in market concentration reflected in the data analysed in this paper.

CONCLUSION

The Canadian audit market, like that of other countries, emerged in response to the creation of capital intensive industries, joint-stock companies and government intervention in financial reporting. The accounting firms that served this market in Canada were a mix of international firms (most notably Price Waterhouse, Peat Marwick Mitchell and George Touche) and domestic firms. Among the Canadian firms few could compete for market share with the international firms during this period. The exceptions were the Clarkson partnerships, P.S. Ross and Sons, and, to a lesser extent, the Riddell partnerships, Thorne Mulholland Howson & McPherson, and Edwards Morgan.

The Canadian audit market during this period was concentrated among a small set of suppliers. The six largest audit firms provided 42% of all audits in the sample. Among the larger audit firms, the international firms had a more geographically diverse set of clients than the Canadian firms but all of the large firms had clients spread across a diverse set of industries. Smaller firms in the Canadian marketplace appear to have followed a niche strategy, usually concentrating on a small geographic market or, to a lesser extent, on particular industries. There is also evidence of market segmentation by stock exchange listing with listed companies more likely to choose one of the large audit firms, and companies listed on foreign markets showing a preference for the international accounting firms.

The overall level of concentration in the market during this period was below the threshold usually associated with monopoly pricing (approximately 60% of the market served by the top four firms [Cubbin, 1988, p. 62]). However, the existence of niche markets in geographic areas, industries and, to a lesser extent, stock exchanges suggests that firms may have been able to exercise some monopoly power. In contraindication to this, however, the openness of the Canadian market to international firms suggests that entry and exit to the market was relatively easy. The potential for competition where monopoly rents were possible may be a key factor in maintaining the efficiency of the industry.

All of the Canadian firms, listed in this study of the pre-World War Two audit market in Canada, have disappeared. Clarkson merged with Arthur Young (which became Ernst & Young), P.S. Ross & Sons merged with George Touche to form Touche Ross (now Deloitte Touche), and Edwards Morgan merged with Deloitte (now Deloitte Touche). Thorne Riddell became KPMG in Canada in 1979. The Thorne Riddell firm brought together several of the ranked firms during this period including Thorne, Riddell, Barber, Hudson, and Helliwell. This firm, and its predecessors, was an explicit attempt to remain an independent Canadian partnership [Crate, 1970].

As Cubbin [1988, p. 48] notes, mergers are the key mechanisms by which market concentration increases. Historically, Canadian competition policy has focused on removing barriers to trade rather than restricting corporate size or concentration [Caves *et al*, 1980]. The openness of the audit market during this period and the increasing concentration over time are reflections of this policy. The impact of the disappearance of Canadian nameplates from audit firms and the increasing concentration of auditors in the post-Second World War period requires study to further our understanding of the evolution of the Canadian audit market.

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Stephen A. Zeff
RICE UNIVERSITY

THE WORK OF THE SPECIAL COMMITTEE ON RESEARCH PROGRAM

Abstract: This article begins by recounting the circumstances that led to the AICPA's decision in 1957 to appoint a special committee to recommend a stronger research program to support the process of establishing accounting principles. It then proceeds to examine in depth the committee's sometimes difficult deliberations that eventually led to a unanimous report, in which it recommended the creation of an Accounting Principles Board and an enlarged accounting research division within the Institute. In the course of the article, the author brings out the strong philosophical differences among several of the Big Eight accounting firms that had been impeding the work of the Committee on Accounting Procedure and that also intruded into the Special Committee's deliberations.

INTRODUCTION

One of the major junctures in the process of establishing accounting principles in the United States occurred in 1957-59.[1] After almost 20 years of experience with the Committee on

Acknowledgments: I am grateful to Art Wyatt, George Catlett, Chuck Horngren, Oscar Gellein, Dick Brief, Tom Dyckman, Marc Epstein and Bob Mautz for comments on earlier drafts. Mautz is the lone surviving member of the Special Committee. They are not responsible, however, for the contents of this paper.

[1]Prior to the 1970s, what is today known as "standard setting" was characterized as the establishment of accounting principles. In 1970, the Institute of Chartered Accountants in England and Wales set up the Accounting Standards Steering Committee, which began issuing Statements of Standard Accounting Practice (in succession to Recommendations on Accounting Principles). In 1972, the American Institute of Certified Public Accountants created the Financial Accounting Standards Board (in succession to the Accounting Principles Board), which began to issue Statements of Financial Accounting Standards. With the inception of these two new bodies, the term "standard setting" entered the profession's vocabulary.

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Accounting Procedure,[2] there was increasing criticism of the committee's inability to secure agreement on the most difficult problems, including accounting for changing prices, business combinations, deferred taxes, and pensions. The leadership of the American Institute of Certified Public Accountants (Institute, AICPA) believed that a new approach was needed, one that placed more emphasis on research into the fundamentals of accounting as a means of facilitating an agreement on particulars. In December 1957, the Institute created a blue ribbon panel known as the Special Committee on Research Program in order to recommend a new approach. The Committee's report, which was issued nine months later, led to the establishment in the following year of the Accounting Principles Board (APB).

No previous study has reported on the deliberations of the Special Committee, which was composed of strong-willed leaders of the profession, including the outspoken managing partner of Arthur Andersen & Co., Leonard Spacek, who was the most vociferous critic of the Committee on Accounting Procedure. It is the objective of this article to relate the Special Committee's deliberations in a way that brings out the strong philosophical differences among the members. As standard setting for financial reporting continues to evolve, both at the national and international levels, a study of the deliberations leading to the setting up to the predecessor of the Financial Accounting Standards Board may provide readers with an understanding of the dynamics of change when moving from one regime to its successor.

The author possesses a file of the minutes of the Special Committee's meetings, together with correspondence among the members, and most of the contents of this article, including

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[2]From 1939 to 1957, the Committee on Accounting Procedure issued 48 numbered Accounting Research Bulletins, of which eight were reports prepared by the Committee (or Subcommittee) on Terminology between 1940 and 1949. Bulletin No. 43, issued in 1953, was a restatement and revision of the previous 40 Bulletins dealing with accounting principles. In the same year, the Committee on Terminology issued a review and résumé of the eight Bulletins dealing with terminology. For all of the Bulletins and reports of the Committee on Terminology issued between 1953 and 1959, see *Accounting Research and Terminology Bulletins, Final Edition* [1961]. For all of the Bulletins issued between 1939 and 1952, see Zeff and Moonitz [1984, vol. I]. When, as will be brought out in this article, the Special Committee on Research Program recommended the establishment of an Accounting Principles Board, it was intended that the board replace both the Committee on Accounting Procedure and the Committee on Terminology. The work of the Committee on Terminology will not be treated in this article, as it was noncontroversial.

several quotations, are derived from this file.[3] This article begins with a discussion of the events and developments that collectively precipitated the creation of the committee and continues by turning to the Committee's sometimes tense deliberations and exchanges of correspondence that led to its report filed in September 1958. It ends with the appointment of the members of the new APB, which itself was not devoid of controversy.

CREATION OF THE COMMITTEE[4]

The Special Committee on Research Program was established in December 1957 as a direct consequence of a major address given two months earlier by Alvin R. Jennings, the managing partner of the Big Eight firm, Lybrand, Ross Bros. & Montgomery (LRB&M), at the Institute's annual meeting held in New Orleans. Jennings was the incoming president of the Institute. In his address, "Present-Day Challenges in Financial Reporting" [1958a], he gave voice to a growing unease among leaders in the profession with the functioning of the Committee on Accounting Procedure (CAP), which had been issuing a series of Accounting Research Bulletins since its establishment in 1938/39. In particular, he was critical of the committee for sometimes acting too quickly under pressure and of "the difficulty which exists in reversing positions previously taken" [ibid., p. 33].

Jennings expressed disappointment that the effort by the Institute's research staff to develop a "procedural method" for obtaining the views of industry spokesmen had not succeeded.[5] Some of the fault, he said, "rests largely upon a failure of industry to acknowledge in any major sense its own obligations, and a disposition to interpret leadership by the Institute as an indication of willingness to assume full responsibility" [ibid., p. 31]. For its part, the Controllers Institute of America (shortly to be

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[3]I am immensely grateful to the late Leonard Spacek for providing me with this file in 1970, which may be the only survivng record of the Committee's minutes and correspondence. I am also grateful to Price Waterhouse and Deloitte Haskins + Sells (as they were then known) for supplying additional files of correspondence in 1981.

[4]The discussion in this section draws in part on Zeff [1972, pp. 129-171] and Zeff [1984, pp. 459-462].

[5]Curiously, the managing director of the Controllers Institute has written that, in January 1957, there were "several signs of a growing closer relationship between the two Institutes" [Haase, 1971, p. 176].

renamed the Financial Executives Institute) complained from time to time that its members were not being adequately consulted. The Institute's executive committee, however, had never appointed any industry representatives to the CAP. Its 21 members were drawn from the ranks of public accounting practitioners (including representatives from all of the major firms) and from two to four academics. All of the committee members had to be Certified Public Accountants. This was an era when leaders of the Institute regarded CPAs in industry as having "left the profession."[6]

Jennings proposed that the Institute consider setting up a small, full-time research organization whose function "generally should be to carry on continuous examination and re-examination of basic accounting assumptions and to develop authoritative statements for the guidance of both industry and our profession" [ibid., p. 32]. To Jennings, a practitioner, "Development of accounting principles should be regarded as in the nature of pure research," and it was needed to keep up with "the economic and social changes which affect accounting and financial reporting" [ibid.]. To him, staffing the research organization meant, ideally, finding "five or six Carman Bloughs"[7] [ibid., p. 33]. It should consult widely and solicit informed views from interested parties, including industry, the accounting profession, the teaching profession, and representative of regulatory bodies. The cost of the research organization should be shared "in equitable proportions" by industry and the profession. Probably his most controversial suggestion was that the basic ideas contained in the statements issued by the research organization should be presented to the Institute's Council for

[6]The Institute was slow to bring non-practicing members into positions of importance, let alone leadership. It was not until 1998 that its first elected chairperson came from outside of public accounting. By contrast, the Canadian Institute of Chartered Accountants and the Institute of Chartered Accountants in England and Wales named their first president from outside of public accounting in 1945 and 1968, respectively.

[7]Carman G. Blough was a onetime accounting academic, the first SEC chief accountant (1935-38), a manager and partner in Arthur Andersen & Co., an early member of the Committee on Accounting Procedure (1938-42), and the Institute's full-time director of research since 1944. As director, he supervised a small research staff, which serviced the CAP and also many other Institute committees, and, since 1947, he wrote a monthly column in *The Journal of Accountancy* in which he dispensed his wisdom and views on accounting and auditing issues of interest to practitioners of all stripes. Through his column, he acquired a towering reputation as the ultimate authority on such matters [Moonitz, 1982].

approval or rejection, and that any bulletins approved by a two-thirds majority of Council "should be considered binding upon members of our Institute" [ibid., p. 32].

Jennings had issued the challenge. He was aware of the desire by the Securities and Exchange Commission (SEC) that the CAP make progress in adopting "definite rules" [King, 1951, p. 43], and he also was sensitive to the series of hard-hitting speeches by Leonard Spacek, the managing partner of Arthur Andersen & Co., in which he charged that financial statements were misleading because they reflect "the application of antiquated accounting principles" [1956a, p. 1] and do not reflect the "true impact of business transactions" [1956b, p. 10]. Spacek also argued that comparability was impaired by the use of alternative accounting principles, and that the profession and the Institute had abdicated their responsibility to the public by not addressing these problems.[8] In a speech made in January 1957, Spacek argued that "The profession has not exhibited the independence and ability which the public is entitled to expect" [Spacek, 1957a, p. 24]. In the words of John L. Carey, the Institute's long-time executive director, Spacek accused the CAP of:

> yielding to industry pressure on an important principle without public discussion. He criticized the committee also for failing to issue bulletins in the face of substantial internal dissent. Finally he impugned the motives of members of a special committee of the Institute appointed to investigate and report on divergencies between generally accepted principles of accounting and the accounting practices prescribed for railroads by the Interstate Commerce Commission [Carey, 1970, p. 77].

Spacek's criticism of the behavior of the two Institute committees was reported in the press, and his criticism of railroad accounting practices triggered a Congressional hearing [*Railroad Accounting Procedures*, 1957].

It was unheard of for a major figure in the accounting profession to direct public criticism at the profession or the Institute, and the leaders of the Institute were shocked.[9] The

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[8]For most of Spacek's collected speeches from that period, see *A Search for Fairness* [1969, pp. 1-59]. For a further discussion of Spacek's series of critical speeches, see Carey [1970, pp. 74-80] and Previts and Merino [1998, pp. 310-311].

[9]Interview with George R. Catlett, retired partner in Arthur Andersen & Co., October 21, 1999. Catlett was a longtime close colleague of Spacek's in the home office of Arthur Andersen & Co.

Institute's executive committee, with the evident support of Carey, immediately authorized President Marquis Eaton to take the extreme step of appointing a special committee to investigate Spacek's accusations. The special committee completed its inquiry with dispatch, and in its report dated April 17, 1957, a scant six weeks after its appointment, it found that the Institute committees had not yielded to improper influences [Report of Special Committee, 1957]. If Spacek earlier had little confidence in the leadership of the Institute, by the Spring of 1957 he had become embittered toward the Institute. In a letter to the Institute, Spacek took exception to the special committee's conduct of its investigation as well as with the reasoning in its report [Spacek, 1957b].

The Institute's leadership was determined to take the report of the special committee even further. It then proposed to Council that the Institute expel Spacek from membership, but the effort failed [Spacek, 1989, pp. 242-243]. Thereupon, the Institute apparently led an unsuccessful effort to get at Spacek through the Illinois Society of Certified Public Accountants [ibid., pp. 243-244]. For his part, Spacek threatened to pull Arthur Andersen & Co. out of the Institute [ibid., p. 237]. He viewed Carey as an apologist for permissiveness on accounting principles [ibid., pp. 38-39], which he also associated with several of the Big Eight firms based in New York City. For his part, Jennings responded to Spacek's public accusations by asserting in his address that "Criticisms which suggest that the profession on any widescale basis has lost its independence . . . are baseless" [Jennings, 1958a, p. 33]. The Institute's leadership wanted to rein in Spacek, and this may have been a major factor behind Jennings' call for a new approach.

But Spacek continued his crusade. In an August 1957 speech to the American Accounting Association (AAA), he advocated establishment of a "court of accounting principles" within the Institute, which was also reported in the press. In that speech, he contended that "Our present American Institute Bulletin method is seriously lacking as to the reasoning and the criteria on which the opinions are based" [Spacek, 1957c, p. 34]. Spacek believed that the [legal] case method should be used so that "not only the accounting profession, but also industry, government, teachers, and students will know the views that prevail [on accounting principles] and why they prevail" [ibid.]. More important, he argued, "We now have no satisfactory method of challenging what are presently regarded as accepted principles of accounting" as well as determining which new principles should be adopted and which alternative principles should be eliminated [ibid.]. As criteria for making such determinations, he believed it was essential that premises and objectives be developed and agreed upon.

Another factor that might explain Jennings' proposal was the increasing belief that the AAA, a body composed primarily of accounting academics, had been stealing the Institute's thunder in establishing accounting principles [see Storey, 1964, pp. 40-52]. In 1936, 1941 and 1948, the AAA had published a series of statements of accounting principles [*Accounting and Reporting Standards*, 1957], which the SEC's chief accountant would sometimes cite as authoritative support in his speeches and in his section in the Commission's annual report to the Congress [see, e.g., Blough, 1937, p. 30; Werntz, 1946, p. 35; King, 1948, pp. 52-53; Zeff and Moonitz, 1984, vol. II, pp. 202, 252]. The AAA's 1940 monograph by Professors W. A. Paton and A. C. Littleton, *An Introduction to Corporate Accounting Standards*, which was issued as an elaboration of the 1936 statement, was widely quoted and cited by practitioners and used by accounting academics in their university courses. The AAA published a series of eight "supplementary" principles statements on specific accounting topics between 1951 and 1955, and in 1957 it issued a revision of its 1948 statement. William W. Werntz, the current chairman of the CAP, lauded the 1957 statement in an article in *The Journal of Accountancy* and contrasted the series of "integrated" AAA principles statements with the output of his own committee, which, he wrote, had "chosen to express its views only on certain aspects of accounting as the occasion presented itself" [Werntz, 1958, p. 33]. The CAP had several times decided against developing and publishing a statement of fundamental accounting principles, and instead, composed mostly of practical men, preferred to take up accounting issues as they became pressing.

In 1955 and 1956, moreover, the AAA had published three research studies on price-level changes and financial statements [Jones 1955, 1956; Mason, 1956], which attempted to get to the heart of the theoretical and practical problems of recognizing the effects of inflation in financial statements. This subject was one on which the CAP was unwilling to issue a Bulletin in the mid-1950s, once the antipathy of the SEC's accounting staff toward such reform had become known [Zeff, 1972, pp. 155-157, 165-166; and see below].

Even George O. May, the former senior partner of Price Waterhouse & Co. and the lion of the profession, expressed the belief in 1958 that the Institute had been falling behind the AAA:

> The American Accounting Association from the time of its first pronouncement has sought to relate specific provisions to a broad concept. It would seem that the Institute must successfully undertake a similar task before it can claim with reason to be either the leading authority or one of the leading authorities upon the subject [Grady, 1962b, p. 278].

One can therefore understand why Jennings placed emphasis on "pure research," by which he meant "continuous examination and re-examination of basic accounting assumptions. . ." [Jennings, 1958a, p. 32; see also Jennings, 1958b].

But perhaps the most compelling reason for a change of approach was the persistent unwillingness of the CAP to make difficult choices on controversial topics. The committee members were apparently loathe to declare that certain accounting practices that had achieved a degree of acceptance were no longer includible among "generally accepted accounting principles" (GAAP), which was the profession's code terminology for proper practice. Even though the opinions expressed in the CAP's Accounting Research Bulletins were not binding on members of the Institute[10] (which was, after all, a voluntary association of CPAs licensed by the states), the committee knew that the SEC's accounting staff was inclined to enforce compliance with its opinions. But, as Carey wrote, "except as the SEC or the New York Stock Exchange insisted on compliance, individual companies and auditors were at liberty to deviate if they chose to assume the burden of justifying their departure" [1970, p. 88]. Although housed within the Institute, the CAP was effectively a creation inspired by the SEC, whose chief accountant had made it clear in 1937 that the accounting profession should take the initiative "to develop uniformity of procedure," lest the Commission do so itself [Blough, 1938, p. 190].

In the 1940s and especially in the 1950s, it became evident that three fundamental differences among the members mili-

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[10]Accounting Research Bulletin No. 43 [Committee on Accounting Procedure, 1953, p. 9] stated rather ominously that "the burden of justifying departure from accepted procedures, to the extent that they are evidenced in committee opinions, must be assumed by those who adopt another treatment." An almost identical *caveat*, but omitting the passage set off in commas, appeared in most of the other Bulletins.

tated against agreement within the CAP. There was a profound difference between several of the major firms over whether a desirable goal was eventual "uniformity" of practice among companies, or instead a diversity of practice that would allow company managements to choose the accounting methods that, in their view, most suit their circumstances [see Carey, 1970, p. 88]. This was the "uniformity" v. "flexibility" debate that veritably exploded into the literature in the early and middle 1960s [see, e.g., "Uniformity in Financial Accounting," 1965].[11] Arthur Andersen & Co. (AA), which had a significant client base in the regulated public utility field [Spacek, 1989, pp. 8-9], was the foremost advocate of "uniformity" [ibid., pp. 38-43; Carey, 1970, p. 127], while Price Waterhouse & Co. (PW) and Haskins & Sells (H&S) were the two leading defenders of flexibility. The latter two firms believed that the choice of accounting methods should be tailored to the circumstances of individual corporations [see, e.g., May, 1943, pp. 183, 251; Kracke, 1947; Gellein, 1957, p. 91; Powell, 1964, pp. 40-41; Bevis, 1965, pp. 21-22; Keller, 1965, p. 648].

The second fundamental difference turned on the authority that the CAP possessed to impose significant changes on accounting practice. There was a philosophical split among the major firms over the committee's proper role in "forcing" a narrowing of accounting alternatives, as opposed to a more "empirical" approach of cataloguing generally accepted practices. AA wanted there to be a strong hand to change practice,[12] while PW and H&S did not see that as being within the committee's province [see Devore, 1958, p. 122; Powell, 1964, p. 40], as will be seen below. The views of the other major firms were less diametrically opposed. This issue, together with the debate over uniformity v. flexibility, were undercurrents that periodically surfaced in the phrasing of qualified assents or dissents in several of the CAP's more controversial Bulletins.

The third fundamental difference was over the primacy of conventional historical cost versus current value accounting or general price-level accounting in the financial statements, especially as regards the measurement of depreciation expense. Views within the CAP on conventional historical cost account-

[11]For an editorial and four articles on the subject, see the April 1961 issue of *The Journal of Accountancy*.

[12]Spacek advocated a "court of accounting principles" because he viewed the CAP as not being up to the task [Spacek, 1957c].

ing[13] versus general price-level accounting or a form of current value accounting were disparate, and the few efforts within the committee to advance the cause of current value accounting were rebuffed by the SEC, which was an arch defender of conventional historical cost accounting in the determination of net income [see, e.g., Zeff, 1972, pp. 155-157; Walker, 1992]. Of the major firms, AA was the principal advocate of general price-level accounting or current value accounting [Spacek, 1956a; 1956b].[14] Within PW, it depended on the partner.[15] During the 1950s, Garrett T. Burns, the AA representative on the CAP from 1953 to 1959, led an effort to issue a Bulletin in favor of the upward revaluation of assets, but, in the end, a negative signal from the SEC's chief accountant scuttled his initiative.[16]

Alvin Jennings evidently believed, with Oliver Wendell Holmes the elder [1891, p. 11], that a consensus on the particulars would come more easily once they could be traced to the basic assumptions, or "*ultimata* of belief," on which they depend. In early December, the Institute's executive committee accepted Jennings' challenge and set up "a committee of the Institute to study a new approach to accounting research, as stated in the letter of invitation."[17] The letter continued: "The executive committee believes that the problem deserves and requires intensive study by a committee of distinguished members, representing so far as possible the various points of

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[13]"Conventional historical cost accounting" is intended to describe historical cost accounting without a restatement for the changing purchasing power of the dollar.

[14]Not all AA partners favored current value. Paul K. Knight, in AA's New York office, who represented AA on the committee from 1942 to 1953, did not seem to be an advocate. Knight assented to Accounting Research Bulletin No. 33, "Depreciation and High Costs" [Committee on Accounting Procedure, 1947] and to a reaffirming letter from the CAP in 1948. Both utterances opposed departures from historical cost in the body of the financial statements.

[15]By the end of the 1940s, the retired but still very active George O. May came to believe that conventional historical cost accounting was deficient, yet John B. Inglis, PW's representative on the CAP during its busy period from 1945 to 1951, was a conventional historical coster [see Inglis, 1974, p. 111; Grady, 1978, p. 324]. May, as well as senior PW partners Paul Grady and (to a lesser extent) Percival F. Brundage, came to favor the use of general price-level adjustments, either combined with historical cost in the body of the financial statements or in a supplementary disclosure [see May, 1949, pp. 66-68; Grady, 1952; Brundage, 1951, p. 114].

[16]Minutes of the meeting of September 25-26, 1958 of the Committee on Accounting Procedure, pp. 4-5. The chief accountant at the time, Andrew Barr, placed his views on public record [see Barr and Koch, 1959, p. 182].

[17]Letter from John L. Carey to the ten invited members of the committee, dated December 11, 1957.

view of practicing accountants, and of industry, the academic world, and the investing public." This was an unprecedented breadth of membership for an Institute committee dealing with accounting principles. It acknowledged, perhaps for the first time, that representatives of industry and the investing public should have a voice in the establishment of principles. It was made clear in the letter that Institute President Jennings wished "to emphasize the fact that the scope of the committee's activity is not to be restricted to a consideration of his proposal. Rather it is hoped that the committee will make an independent approach to the basic problems to which Mr. Jennings was attempting to point out at least one possible means of solution." The suggested title of the committee was "Committee to Study a New Approach to Accounting Research."

COMPOSITION OF THE COMMITTEE

Jennings chose Weldon Powell, the senior technical partner in the New York executive office of H&S, as chairman of the committee. Powell had been serving on the Committee on Accounting Procedure since 1954. He was a member of the "gradualist" school, which favored an evolutionary change in accounting principles and methods, with considerable discretion being given to company managements to choose the methods most responsive to their circumstances [see, e.g., Powell, 1965a, 1965b]. He was highly respected for his thoughtful manner and principled views, and he was "an acknowledged authority on accounting theory" [Carey, 1970, p. 92]. The other members invited to serve, all of whom accepted, were as follows:

Andrew Barr, the SEC chief accountant.
Carman G. Blough, the Institute's director of research.
Dudley E. Browne, comptroller of Lockheed Aircraft Corporation, Burbank, California.
Arthur M. Cannon, vice president and treasurer, Standard Insurance Co., Portland, Oregon.
Marquis G. Eaton, senior partner in Eaton & Huddle, San Antonio, Texas.
Paul Grady, partner in the New York executive office of PW.
Robert K. Mautz, professor of accounting, University of Illinois.
Leonard Spacek, managing partner of AA, Chicago.
William W. Werntz, partner and member of the board of directors of Touche, Niven, Bailey & Smart, New York.

Alvin Jennings, as Institute president, was a member *ex officio* of the committee. One supposes that Barr was regarded as the representative of "the investing public" on the committee. All of the committee members were CPAs.

It was, as Carey wrote, a "high-powered committee" [1970, p. 93], composed of strong personalities. Andrew Barr had to obtain the Commission's approval to be able to serve on the committee: it was the first time that a sitting SEC chief accountant became a member of an Institute committee. Obviously, the work of the Special Committee was important to Barr and to the Commission. Both Carman Blough and William Werntz had been SEC chief accountants, and Werntz was in his second year as chairman of the Committee on Accounting Procedure.

Carman Blough, the Institute's director of research, and his small staff had been servicing the Committee on Accounting Procedure (as well as many other Institute committees) since 1944, and his name was printed on every Accounting Research Bulletin since No. 25, which was issued in April 1945. Since 1947, he had been writing a column in the monthly *Journal of Accountancy*, in which he presented his views on what constituted proper accounting and auditing practice. Blough was the profession's most respected authority on "generally accepted accounting principles" [see Carey, 1970, p. 87; Moonitz, 1982].

Dudley Browne was probably the first member from industry to serve on a high-level Institute committee, and he was there to forge a stronger link between the Institute and the Controllers Institute of America. Browne was board chairman and immediate past president of the Controllers Institute. During his presidency, Browne did much to improve relations between the two Institutes, especially on accounting principles [Haase, 1971, p. 176]. But there was still the feeling that the Controllers Institute was on the "outside" of the process by which accounting principles were established.

Arthur Cannon was a surprise choice. He had been an accounting professor at the University of Washington for some ten years prior to becoming an executive in an insurance company in Portland, Oregon. He wrote numerous articles, was an energetic and a persuasive speaker, and had been a vice-president of the AAA and president of the Washington State Society of CPAs. In addition, he had ably edited *The Accounting Review*'s book review section from 1950 to 1957, and in 1954 he launched *The Journal of Accountancy*'s lively and excellent "What to Read/Current Reading." It was in this last capacity that Cannon would have come to the attention of John L.

Carey, the Institute's powerful executive director and publisher of the *Journal*. But it was probably Perry Mason, Blough's assistant at the Institute, who recommended Cannon for the committee. Some years earlier, Cannon had spent a year at the University of California, Berkeley, in an aborted start for a Ph.D. Mason was then a professor on the Berkeley faculty, and he was impressed with Cannon.[18] At 46, Cannon was the second youngest member of the committee.

Marquis Eaton was the immediate past president of the Institute, and he was widely admired and applauded for his innovativeness and leadership in that office [Carey, 1970, pp. 294-296]. Unfortunately, he died suddenly on February 23, 1958. The executive committee did not appoint a successor.

Paul Grady was a protégé of George O. May, the doyen of the profession and former senior partner of PW [see Grady, 1962b]. Under Grady's leadership in the mid-1940s, the Institute's auditing procedures committee issued the first authoritative statement of "generally accepted auditing standards." Like Powell, Grady was a member of the "gradualist" school on accounting principles [see Grady, 1965, esp. pp. 32-34]. Grady was formerly a partner in Arthur Andersen & Co. and was the founding partner's choice as his successor. But Grady and Arthur E. Andersen had a falling out, and he was dismissed from the firm in 1942. At that time, Leonard Spacek was also a rising partner in the firm [Grady, 1978, pp. 55-56; *A Vision of Grandeur*, 1988, pp. 77, 79], and apparently subsequent relations between the two were tepid.

Robert Mautz was a prolific author on accounting and auditing and had chaired the committee that prepared the 1957 revision of the AAA's series of statements on accounting principles [see Mautz, 1957]. It was probably because of this latter role that he was named to the committee. At 42, he was the youngest member of the committee.

Leonard Spacek would have been the most controversial appointment to the committee. He had never before served on an Institute committee, and in speeches and articles he had been assailing the accounting profession and the Institute over the lack of definition of accounting principles. As noted above, the Institute had less than a year earlier convened a special

[18]E-mail message from Loyd Heath, dated December 20, 1999, and telephone interview with Kermit O. Hanson, July 22, 2000. During that general period at the University of Washington, Heath was a member of the accounting faculty and Hanson was the dean of the school of business administration.

investigative committee to look into allegations of improper behavior by members of two Institute committees, a charge leveled by Spacek in a speech to a chapter of the Controllers Institute. Carey reported that "A wave of indignation greeted this speech" [1970, p. 77]. But Jennings wanted Spacek on the committee so that his criticisms would be channeled toward constructive change, and also that he would become a party to whatever reform was reported out of the committee. Like Arthur E. Andersen before him, Spacek wanted nothing to do with the Institute, but Jennings, whom Spacek came to respect, persuaded him to accept the invitation.[19]

William Werntz, a lawyer, had joined the SEC's legal staff in 1935 and served as chief accountant from 1938 to 1947, when he joined the newly formed public accounting firm of Touche, Niven, Bailey & Smart, in New York, and then became a CPA.

Several of the committee members had some salient experiences in common. Barr, Grady and Powell had been classmates at the University of Illinois and had studied under Professor A. C. Littleton, who was a staunch defender of historical cost accounting and an exponent of inductively deriving theory from regularities in practice [see Littleton, 1961].[20] Mautz also was a student of A. C. Littleton's, but some 15 years later. The University of Illinois' department of accountancy has, for many years, been reputed as having one of the best bachelor's and master's programs in the country [Bedford, 1997, pp. ix, 50-51], and quite a few leaders of the accounting profession were educated there. Moreover, Barr, Blough, Cannon, Grady, Powell and Werntz had all been tapped by the AAA to serve as vice presidents, and Blough also had served as AAA president. Beginning in 1945, the AAA had a policy of electing one non-academic vice president each year in recognition of his achievements in the profession. At the time of his vice presidency, Cannon was a full-time academic. In addition, Barr, Blough and Werntz had been accounting instructors for short periods early in their careers. Finally, four of the committee members had seen service on the Committee on Accounting Procedure: Blough (1938-42), Eaton (1945-46), Powell (since 1954), and Werntz (since 1950). It is worthy of note that Blough

[19]Interview with George R. Catlett, October 21, 1999.

[20]Grady's and Powell's writings clearly indicate that they subscribed to Littleton's inductive approach. See, e.g., Grady [1962a, pp. 46-47] and Powell [1961, p. 29].

was involved with the committee as either a member or the principal staff liaison for all but two years of its history as the issuer of Accounting Research Bulletins.

By contrast to the inductive derivation of principles that marked Grady's and Powell's thinking, Spacek strongly believed that accounting principles should be derived deductively from "objective standards" [see Spacek, 1958b, pp. 81, 82; 1958c, p. 91] and, as will be seen, this difference of view between him and Powell would later cause friction. Spacek was the only committee member, apart from Eaton, without a university degree. A blunt-spoken Midwesterner, he did not mix well with the profession's New York establishment.

THE COMMITTEE REPLIES TO POWELL'S QUESTIONNAIRE

In a letter dated January 9, 1958, Weldon Powell, the chairman, wrote to the other nine members of the committee to lay out the plan of work. He suggested that they do some preparatory work, by reading Jennings' address (1958a) and four recently published articles:

Samuel J. Broad's "Applicability of Accounting Principles" [1957],
Marquis Eaton's "Financial Reporting in a Changing Society" [1957],
Oswald W. Knauth's "An Executive Looks at Accountancy" [1957],
and
May's "Generally Accepted Principles of Accounting" [1958].

He also distributed the typescript of Leonard Spacek's "accounting court" address of August 1957 [Spacek, 1957c].

In order to learn how professional bodies in different fields carried out research, Powell then asked several of the committee members to "direct inquiries to a few other organizations interested in research" and report back on their experience. The organizations were the American Enterprise Institute (on which Barr was to report), the American Accounting Association (Cannon), the National Bureau of Economic Research (Grady), and the Practicing Law Institute (Werntz). Powell said he would prepare a report on the National Industrial Conference Board. (In the event, only a few of these reports were completed and circularized to the committee.)

Powell called on Blough to "summarize for us the history of the Committee on Accounting Procedure — its genesis, its accomplishments, its shortcomings, its present position, and so on." He also asked the members to consider whether the committee should canvass the views of accountants, businessmen, lawyers, educators, people in government, labor leaders, and others. He said that Perry Mason (a former academic), who was the Institute's associate director of research, would service the committee. Finally, he said he would propound a list of questions "to find out the extent to which there is a consensus, or lack of it, among us on some of the fundamental issues involved in the development and application of accounting principles."

In a second letter written the following day, Powell asked the members to give their views on the following 13 questions by February 1, which are reproduced below, *verbatim*, from his letter:

1. To what extent do you think that accounting is essentially utilitarian in nature?
2. How important do you think it is that there be uniformity of accounting principles among business corporations?
3. Do you think that it is practicable to enforce uniformity of accounting principles among business corporations?
4. Do you consider uniformity of accounting principles among business corporations to be more important or less important than consistency in the application of accounting principles by each of such corporations?
5. To what extent do you believe that adequate disclosure by each business corporation of the accounting principles followed by it is an acceptable substitute for uniformity among business corporations?
6. If you favor the promotion of uniformity among business corporations, what agency or combination of agencies do you think should have the primary responsibility for it? (Some possibilities are state governments, through uniform statutes, the SEC, the Internal Revenue Service, the courts, an organization of stock exchanges, an organization sponsored by corporate managements, an organization of professional accountants, an organization of educators, and an organization including representatives of some of these groups and of labor unions and the public.)

7. Do you think that [an] organized effort to develop accounting principles should confine itself to broad postulates, or that it should comprehend something more?
8. To what extent do you believe that the provisions of law and the requirements of regulatory authority should affect ordinary accounting and reporting?
9. Do you think that we should concern ourselves with the development of accounting principles for public business corporations only or for other persons [i.e., entities] as well?
10. What, if any, features of the organization and work of the present committee on accounting procedure trouble you?
11. Do you consider the proposal of the President, as outlined in his article in the Journal of Accountancy for January 1958 [Jennings, 1958a], to be practicable?
12. What, if any, alternative proposal do you have to suggest?
13. What other points, if any, would you like to have the committee consider at this time?

This was indeed a comprehensive set of questions, but only two dealt with Jennings' "research organization" proposal. Five of the 13 questions dealt with the simmering controversy over "uniformity" versus "flexibility" (or "diversity") of accounting principles, on which Powell, Grady, Browne and Spacek held strong views.

In a memo dated February 7, 1958, Carman Blough replied to Powell's request that he discuss the accomplishments and shortcomings of the Committee on Accounting Procedure. Blough recited four criticisms that had been made of the committee's performance (rather than undertaking to criticize the committee himself), which I summarize below:

1. That the committee is too slow to produce results. Implicit in his discussion was the fact that his small research department was servicing too many Institute committees to provide sufficient staff support. A contributing factor, he said, was the size of the committee, but a smaller committee would necessarily include fewer representatives of the smaller firms and individual practitioners. Blough wrote, "It must be seriously questioned whether the rank and file of the profession would accept the recommendations of a small group of large firm representatives."

2. That the "caliber of members on the committee has been . . . deteriorating." Committee members, he said, have been known to "feel compelled to go back to their firms for instructions before taking a position on a matter . . . [meaning that] partners who do not have the advantage of the discussions that take place in the committee meetings tend to make the decisions." Partly, he believed that this reflected the fact that, "since the committee first started on its present basis, most firms have developed procedures for clearing technical questions within their own organizations which were not common then." Also, it was "hard to keep a firm's top policy man on the committee indefinitely. . . ."
3. That "The charge has been made [that] client influences are felt, in the considerations of the committee, more than they should be." He believed, however, that, "While it has been clear, from time to time, that a position supported by some member of the committee was one which was being followed by an important client of his firm, it has usually been impossible to assert that it did not represent his independent considered judgment. Very seldom has it seemed that a procedure was being defended to satisfy an important client."
4. That "too many members of the committee are too reactionary in their attitudes." But, he added, "that when a man has had enough experience and background to justify his membership on the committee, he has reached an age when it is only natural to look at new ideas pretty carefully before supporting them. . . . Accordingly, established procedures are given a strong benefit of doubt."

Blough concluded by saying that "Possibly the greatest objection to the work of the committee grows out of the tendency of a good many CPAs to object to anything which prevents them from adopting any procedure they consider appropriate in the circumstances."

The members' replies to Powell's 13 questions were interesting. On question 10, concerning features of the present operation of the Committee on Accounting Procedure that trouble them, Perry Mason summarized the responses as follows (with the principal advocate of the position indicated in brackets):

> Bulletins are too brief [Barr, Grady]. The committee is too large [Grady, Powell]. The calibre of the membership has deteriorated [Cannon]. The staff may be inadequate [Grady, Werntz]. The committee settles only important specific problems and does not concern itself

> with pure theory or research [Mautz]. The committee is too slow [Powell]. The committee does not work closely enough with other groups [Powell]. The committee does not do enough to guide opinion in controversial matters [Powell]. The committee is biased [Spacek]. The committee compromises too much [Spacek]. It is difficult to get members with interest and time [Werntz] [from Mason's memo to the committee dated March 3, 1958].

Barr and Grady both complained that the Bulletins did not give the reasoning in support of the conclusions. Oddly, Browne did not respond to this question, and Blough let his lengthy memorandum on the effectiveness of the Committee on Accounting Procedure be his reply.

On Question 11, the committee reacted to Jennings' proposal. Five members thought the suggestion that the Institute's Council should approve, or could veto, the research organization's pronouncements was impracticable. Several members liked the heavier emphasis on research, but they were concerned that the proposed research organization would lose touch with practical issues. In general, the committee was ambivalent toward the proposal.

In Question 7, Powell broached the evocative term, "broad postulates." (A concise summary of the evolution of the term "postulate" in the accounting literature, to which George O. May made a significant contribution, is given in an appendix.) Paul Grady, a close colleague of May's, was a partisan of the postulates approach. In his reply to Question 12, on alternatives to Jennings' proposal, he argued for (1) "a qualified group" that would identify and explain "the broad postulates or premises of determining business income," (2) a "research staff to carry out accounting research projects," and (3) an Institute committee to prepare "bulletins on accounting practice which flow from the research projects or arise from other demonstrated needs of the profession."[21] Of course, Spacek had been speaking publicly in favor of the need for the profession to establish the "premises" and "objectives" of financial reporting. In reply to Question 7, virtually all of the members favored initial attention to broad postulates or, in the case of Spacek, to "objective standards," and that a study of their implications for principles or practices should follow.

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[21]With this three-part recommendation, Grady came close to anticipating the principal outlines of the Special Committee's final report.

The replies to Powell's Questions 2-6 on uniformity revealed the substratum of philosophical division that was, as suggested above, impeding the work of the Committee on Accounting Procedure. The representative of the Controllers Institute on the Special Committee, Dudley Browne, was implacably opposed to uniformity. In reply to Question 2, he wrote, "I regard uniformity as a device designed to reduce accounting from a profession to a clerical process," and he said "I am inclined to favor adequate disclosure over uniformity" in reply to Question 5. Eight years later, Browne declared:

> I maintain that divergent [accounting] practices are both the outgrowth and reflection of our economic system and that the effort to eliminate or reduce them is not a service either to our accounting system or to the economic system it serves. Such goals of restricting [management] choice and seeking uniformity are more rightfully concepts of totalitarian worlds [Browne, 1966, p. 42].[22]

Apart from Browne, Powell was the least won over by an argument for uniformity. He saw uniformity as "desirable but not essential." He added: "As a practical matter it is elusive. It is not a panacea. There probably should be more than one right way of doing any number of things, and business men should have the opportunity of experimenting with different approaches to their problems." The very fact that he asked, in Question 4, whether uniformity of accounting principles was more or less important than consistency in the application of accounting principles suggested his low regard for the former. Blough pointedly replied: "These are not alternatives." After suggesting that "the trend within a company is often more important than its comparison with other companies," he added: "However, that is no reason for failing to get as much comparability as practicable." Cannon replied, "Uniformity encompasses consistency. The one makes data comparable between different businesses; and the other makes data comparable from year to year." Mautz replied: "Consistency in application is a prerequisite to uniformity of principles. It is not a substitute for uniformity. They are about equally important." Werntz wrote, "In

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[22]In his article, Browne interpreted principles as meaning "rules of action," or practices. As to fundamental principles, he wrote: "We can of course expect general agreement and uniformity in the broad and basic principles such as honesty, for example, or full and frank disclosure" [1966, p. 41].

broad general areas uniformity is more important. As to detailed practices, consistency is more important."

Powell's was clearly a minority position. He replied that "Consistency from year to year is very important. . . . Business enterprises vary from one to another in a number of respects anyway, and it has never troubled me that there are some differences in accounting." Even Grady, who replied that it is "very important to have consistency," added: "I favor more uniformity so long as we do not indulge in misrepresentation."[23]

On the subject of whether adequate disclosure of the accounting principles followed would be an acceptable substitute for uniformity among business corporations (Question 5), Cannon and Mautz said "no." Most of the others believed that disclosure was adequate until greater uniformity was achieved. SEC Chief Accountant Barr and two of his predecessors in that position (Blough and Werntz) made it clear, as Barr said, that "Disclosure of an unsound practice is not substitute for the adoption of sound principles,"[24] a view that Spacek espoused as well. Spacek counseled that "The accountant should have the right to criticize a generally accepted accounting principle in his certificate, if he will take responsibility for supporting his opinion" — a practice that his firm had already adopted for price-level depreciation [see Zeff, 1992, pp. 457-459; Accounting Research Division, 1963, pp. 211-217].

Hence, based on the replies to most of Powell's questions, there was a considerable difference of views on both the points of substance and approach. The first five of Powell's questions dealt with the attributes of good accounting, rather than directly addressing the mission given to the Special Committee, namely, consideration of "a new approach to accounting research." Powell and a few others on the committee were initially of the view that perhaps the Special Committee should actually propose the norms of sound accounting, including the

[23]Seven years later, Grady set forth a list of "basic concepts to which accepted accounting principles are oriented," which included a concept entitled "diversity in accounting among independent entities." Although he said that this concept does not imperil the objective to "narrow the areas of difference in accounting" and to promote greater comparability in financial statements, he concluded that "It does, however, place the objective within realistic limits which fall considerably short of uniformity" [Grady, 1965, p. 35].

[24]This was a restatement of the SEC's long-standing administrative policy on financial statements, which was announced by the Commission in Accounting Series Release No. 4, issued in April 1938 (when Blough was the chief accountant).

broad postulates. Nonetheless, the full range of questions posed by Powell was a useful beginning to the committee's work, because it focused the members' attention on the important issues.

THE COMMITTEE'S FIRST MEETING

The Special Committee's first meeting was held on March 23-24, 1958, in New York City. All of the members of the committee, plus Mason, were in attendance. Jennings and Carey met with the committee at lunch. The minutes of the meeting were not really a record of the discussions but instead consisted of a summary of the suggestions that were broached, without attribution to any members by name. Fortunately, the author is in possession of a confidential internal memorandum written on April 8, 1958 by one of the committee members, which reviews the proceedings in greater detail.

As the committee had not been given a formal name, it was agreed that it would be called the Special Committee on Research Program.

Powell asked the members to comment on the written answers to his questionnaire, most of which had been distributed prior to the meeting. Several members criticized Browne's categorical rejection of uniformity.

At an early point in the meeting, the committee came to the belief that the Committee on Accounting Procedure should be reorganized so that its members would be the most capable and talented men from the profession. The practice of balancing the committee geographically, and having one representative from all of the big firms, would be abandoned. Views differed according to whether the reorganized entity would continue to be the Committee on Accounting Procedure or would become a review board or an accounting court. But there was general agreement that the process for establishing accounting principles should remain within the profession and under the control of the Institute.

When discussing the issues that the new entity should address, Spacek reiterated his credo that the accounting principles adopted had to be fair to various segments of the public, including stockholders, management, consumers, and labor [see Spacek, 1957c, p. 37]. Mason disputed how it could be determined that an accounting principle was fair to all of these groups. Cannon intoned that George Meany, president of the AFL-CIO, had criticized the use of accelerated depreciation in financial statements, and had argued that depreciation should represent the fair cost of using up property from the point of view of labor, as well as stockholders and consumers.[25]

Grady then proposed George O. May's postulates for consideration, and Barr recommended that the broad postulates should include the principles enunciated by the AAA committees in prior years. There seemed to be general agreement that the Committee on Accounting Procedure had not done enough to "narrow areas of difference and inconsistency in accounting practices," a principal objective that the committee had itself enunciated.[26] Powell surprised some of the members by venturing the view that he would not support an Accounting Research Bulletin that would change accounting procedures unless he knew his clients were in favor of the change. A dispute soon developed over deferred tax accounting, bringing out the difference in views between three of the Big Eight firms over the propriety of deferred tax accounting as well as the acceptability of alternative methods. Spacek, who favored deferred tax accounting and a greater degree of uniformity, said there was only one answer. Grady and Powell, whose firms believed that a required use of deferred tax accounting was unjustifiable and were reluctant to force uniformity, believed you could sign an unqualified audit report either with or without deferred tax accounting. Barr said that, in his book, the auditor could not sign both reports.

There followed a discussion of how long a period of experimentation should be allowed before a Bulletin designating one of two alternative accounting methods as preferable would secure industry acceptance. A few members believed that the SEC would not wait for industry to acquiesce, because it had the power to prescribe accounting practices under the securities acts.[27]

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[25]This reference to Meany's view on corporate depreciation allowances also appeared in an article by Spacek in the May-June 1958 issue of the *Harvard Business Review* [Spacek, 1958b, p. 80].

[26]It seems that the earliest expression of this objective was in Accounting Research Bulletin No. 43, *Restatement and Revision of Accounting Research Bulletins* [Committee on Accounting Procedure, 1953, p. 8]. This passage seems likely to have been drafted by Carman Blough, the committee's research director and a former SEC chief accountant.

[27]Until this point, the rendering of the proceedings during the committee's first meeting is based on the aforementioned confidential internal memorandum written by one of the members of the Special Committee.

The minutes of the meeting reproduced a series of "suggestions" made by members of the committee for the new research program. Among them was the following, which doubtless was urged by Spacek:

> There should be a "right way" to handle any given transaction, by reference to a basic principle. It was suggested that a showing that a given principle was fair to management, to the stockholder, to labor, and to the consumer would constitute an objective standard for the establishment of accounting principles.

Powell regarded the committee's first meeting as exploratory. In a communication to the Institute's Council in April, he conceptualized the direction in which the committee was headed, and he reported that agreement had been reached on several points:

> We think the Institute should take a firm lead in the development and promulgation of accounting principles, and we believe a change in the present approach to this matter is needed. We think the research program should be a planned one. Possibly the first step could be the determination of the basic principles or postulates upon which accounting procedures are based, as a framework of reference for the solution of detailed problems; next might come the preparation of a fairly broad set of coordinated but not detailed principles, similar to the statements of the American Accounting Association; and finally could follow a consideration of more detailed matters, such as those covered by the present accounting research bulletins, but in relation to the basic broad principles. . . .
>
> We are in agreement . . . that any new approach should provide for greater staff participation in research, more effort to ascertain and lead public opinion in uncertain and controversial areas, and closer attention to means of obtaining general acceptance of pronouncements on accounting matters, than there has been in the past.

Powell's concern that the acceptance by industry of any major changes in the choices of accounting principles or practices is made clear at the end of the foregoing quotation. He was certainly not one who believed that such changes, including especially a move toward uniformity, could be forced.

Spacek was elated after the committee's first meeting. In a speech the following month, he said, "This committee, in my opinion, is making excellent progress towards its objectives" [1958a, p. 67].

THE COMMITTEE'S SECOND MEETING

The second meeting was held in Chicago, on May 12-13, 1958. All of the members attended. Jennings and Carey, who had lunch with the committee at the first meeting, were not present. The quotations in this section are drawn from the minutes of the meeting.

At the beginning of the second meeting, the committee approved two important amendments to the minutes of the first meeting. Both dealt with the sensitive issue of promoting uniformity. The summary minutes of the March meeting, which had been drafted by Mason and probably overseen by Blough, reported, among a series of suggestions made by one or more members, that "The research program should be more than fact finding. It should include conclusions and recommendations which could result in the enforcement of uniform standards." The second sentence was amended to read: "It should include conclusions and recommendations directed toward the strengthening of accounting principles or standards." It was also stated in the minutes from the first meeting that "It is not possible to achieve complete uniformity and comparability in accounting and reporting, but much improvement can be made." The second clause in the sentence was amended to read: "but it is desirable to narrow the areas of difference." Except for these amendments, the March minutes were written to reflect Secretary Mason's view, as edited by Chairman Powell, of the emerging consensus of the committee's agreement on the shape of the new program.

At this second meeting, this emerging consensus began to look very much as it would in the committee's final report. Contrary to Jennings' suggestion in his 1957 address [1958a] that the cost of a new research organization should be shared by industry and the profession, the committee decided that "The research organization is [to be] kept within the framework of the American Institute. Outside accounting organizations would not participate directly but would be consulted and kept informed of all research activities."

Two types of publication were envisioned:

> Tentative, informative, thoroughly developed and documented studies, including conclusions reached, would be prepared by the research group and be issued

> on its own authority. The purpose of these studies is to expose ideas for comment, help to mold opinion, and pave the way for more formal and more authoritative statements of generally accepted accounting principles.

The second type would be "Authoritative statements of generally accepted accounting principles, similar in standing to the present accounting research bulletins, and based upon studies made by the research group, [which] would be issued by a special 'Board' set up for that purpose." These statements were to be "based principally upon the publications of the research group." Indeed, the committee agreed that "An immediate project would be the preparation of a statement of basic postulates and standards on which all other pronouncements would be based."

Previously, the literature available to Institute members had consisted, in the main, of articles by practitioners and academics arguing one or another side of a controversial accounting issue, which were published in *The Journal of Accountancy* or *The Accounting Review*, as well as the series of monographs and principles statements published by the American Accounting Association. In addition, the Institute's research staff had, between 1940 and 1953, published a series of short papers on controversial accounting topics [see Zeff and Moonitz, 1984, vol. II].[28] With this proposal, the Special Committee sought to stimulate the production of a series of research studies that would synthesize the best of the literature and thus promote a broader understanding and agreement on accounting principles among the Institute membership.

Several names were suggested for the "Board": Accounting Procedures Board, Board on Accounting Principles, and Board on Generally Accepted Accounting Principles. The last of these three received the most support. The term "board" was apparently intended to increase the authority and standing, beyond just committee status, of the body issuing pronouncements. The board would be "somewhat smaller" than the Committee on Accounting Procedure and would be elected by the Institute membership or by Council, rather than appointed by the president. In the selection of board members, the committee agreed

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[28]This recitation omits an occasional monograph or book as well as the "official" literature composed of Accounting Research Bulletins and the SEC's Accounting Series Releases.

that "Emphasis would be placed upon competence rather than representation of particular groups or geographic areas."

The committee agreed that "Only a very few seasoned and widely accepted pronouncements would be adopted by the membership of the Institute (or the Council) and thereby would become mandatory upon the members." In fact, only in 1918 and 1934 did the Institute membership ever vote to approve or disapprove any accounting rules or principles [Zeff, 1972, pp. 115-116, 125], and the six rules or principles approved in 1934 were repeated in Accounting Research Bulletin No. 1 [Committee on Accounting Procedure, 1939] as well as in chapter 1 of Accounting Research Bulletin No. 43 [Committee on Accounting Procedure, 1953]; four of the six continue to be applicable today. None of the contents of any other Accounting Research Bulletins were ever submitted either to Council or to the Institute's membership for approval.

"The general goal," the Special Committee agreed, "should be to make the expression of generally accepted accounting principles more complete, to continue to narrow the areas of difference, and to increase the authority and acceptance of the pronouncements."

Importantly, the committee added that "All recommendations should be founded on a statement of basic postulates and standards, but attempts should be made to keep the results flexible and not freeze accounting procedures into a set of rigid rules." Thus, the concern about limiting companies' freedom of action was clearly expressed. It is not clear from the minutes whether the "postulates" were to be normative or descriptive, and it is likely that the issue was not raised. The addition of "standards" makes the foundation appear to be more yielding than if "postulates" were used alone.

An appendix to the minutes supplied details of the new organization. It is not known whether the contents of the appendix were actually discussed and agreed in the committee meeting or were interpolated by Chairman Powell and Perry Mason. The appendix provided for a board membership of 18, compared with 21 serving on the Committee on Accounting Procedure, and they all were to be members of the Institute, and therefore CPAs. It was stated in the body of the minutes that a proposal that pronouncements be approved by a simple majority, instead of by the current two-thirds, was defeated. While it was not stated in the appendix whether all of the Big Eight firms would be represented on the board, it was probably assumed that they would, and a requirement of a two-thirds majority would prevent the Big Eight firms' representatives, were they to be in agreement, from being outvoted by the other ten members. The board members were to be selected for staggered three-year terms "on basis of competence, primarily, rather than representation of particular groups or geographical areas." They would select their own chairman. They would be elected by the Institute membership or by Council rather than be appointed by the president.

The appendix called for an accounting research staff composed of a director, three to five senior members and three junior members, plus two secretaries — representing a massive increase over the staff support for the Committee on Accounting Procedure. Further, the committee decided "Contact with accounting practice would be maintained through the use of advisory committees which would work closely with the research staff." The committee consensus was that an advisory committee should not have veto power over the publication of a research study, but that the director should make the final decision.[29]

It was also stated in the body of the minutes that "it would not be appropriate for the director of the research program to edit a column in The Journal of Accountancy, as is now done by the Director of Research." There was only one Carman Blough.

The committee agreed that the accounting research staff would not be concerned with issues relating to auditing or managerial (or cost) accounting. The scope of its research activities would be the same as that for the Committee on Accounting Procedure.

The committee considered the possible use of public hearings, or of board meetings that might be attended by representatives of outside groups, but they believed that, "while expressions of opinions of non-members of the Board should be welcomed and solicited, they should be restricted to written memoranda." "It was pointed out," the minutes went on, "that publication of research studies in advance of the preparation of statements by the Board would do much to take care of the problem of informing and securing the cooperation of outside groups."

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[29]The issue of whether to publish a research study actually arose four years later, when the director authorized publication of the research study on broad accounting principles in the face of opposition by a number of prominent members of the advisory committees on the postulates and principles studies [see Zeff, 1972, pp. 175-178].

Therefore, at its second meeting, the committee seemed to make substantial progress toward developing a reform plan.

POWELL DRAFTS THE COMMITTEE'S REPORT, AND SPACEK OBJECTS

After two meetings, Powell believed that the members were in sufficient agreement that only one more meeting, scheduled for August 1, would be needed to put the finishing touches on its report. So he set about preparing a tentative draft report, dated July 9, 1958, which he exposed to President Alvin Jennings and Executive Director John Carey for comment prior to sending it, as modified by their comments, to the other members of the committee.

In Perry Mason's letter covering the draft, dated July 11, he cited the principal differences between Powell's draft and the plan developed at the committee's meeting in May. At Carey's suggestion, Powell decided that "Commission" would replace "Board" for the name of the new entity that was to issue the authoritative statements of generally accepted accounting principles, and that a steering committee, to be known as the Board of Managers, would supplant the Institute's executive committee as the body to oversee the financial administration of the research organization. The Board of Managers would be composed of Carey and four members chosen by Council. Powell also decided that the Commission's chairman would be chosen by the Institute's executive committee, and not by the Commission itself. Also, the director of accounting research would be selected by the Board of Managers instead of by Council. In addition, Powell risked treading on sensitive toes by allowing some of his philosophical views to seep into the draft (as will be seen).

After reading Powell's draft report, Leonard Spacek erupted. As noted above, he harbored a deep distrust of Carey and of the three firms that had been providing much of the Institute's leadership — PW, H&S and LRB&M — and he sent Powell a bluntly worded, six-page letter of criticism. In his letter, dated July 17, 1958, Spacek accused Powell of having omitted and misrepresented substantive views on which the committee had agreed, and he berated Powell for having sought Jennings' and Carey's views, for, he said, they were not members of the committee. In his reply to Spacek, dated July 22, Powell wrote that "the July 9 draft reflects the substance of the conclusions reached at the two meetings of our Committee, as I understand them. I did not knowingly include anything substantive that was not discussed, or omit or misrepresent anything substantive that was discussed." Jennings, who had been sent a copy of Spacek's letter, himself replied that, as Institute president, he was a member *ex officio* of every Institute committee, but he had scrupulously attempted not to influence the deliberations or report of the committee [letter, August 19, 1958]. Even though he respected Jennings, Spacek wanted the committee to be as free as possible of the taint of the Institute establishment, although he was well aware that Powell (H&S) and Paul Grady (PW) were senior partners of two of the most influential firms in Institute affairs.

In his letter of July 17, Spacek also criticized Powell for not emphasizing the centrality of postulates or "objective standards" in the new program. In his draft report, Powell had written:

> The general purpose of the Institute in the field of financial accounting should be to advance the written expression of what constitutes generally accepted accounting principles, for the guidance of its members and of others. This means something more than a survey of existing practice. It means inquiry to determine acceptable practice, and effort to narrow the areas of difference and inconsistency in practice.[30]

To Spacek, that sounded more like description than prescription. He reminded Powell that, at its March meeting, the committee had decided that "There should be a 'right way' to handle any given transaction, by reference to a basic principle." In fact, the committee had not made such a decision: it was merely minuted as a "suggestion," but Spacek believed that it was fundamental to the process of developing sound accounting. Powell's passage on narrowing the areas of difference and inconsistency in practice agreed almost *verbatim* with a passage in Accounting Research Bulletin No. 43 [Committee on Accounting Procedure, 1953, p. 8]. As such, it probably sounded to Spacek as a continuation of the *ancien régime*. It is interest-

[30]The phrase, "narrow the areas of difference and inconsistency in practice," was code terminology. As noted above, this wording appeared in the introduction to Accounting Research Bulletin No. 43 [Committee on Accounting Procedure, 1953, p. 8], and it can be traced to Accounting Research Bulletin No. 1 [Committee on Accounting Procedure, 1939, p. 2]. For many years, the SEC's chief accountant had been adjuring the Committee on Accounting Procedure to follow this course. See Pines [1965, p. 748].

ing to note that, in the committee's final report, Powell's "acceptable practice" was replaced by "appropriate practice."

The next paragraph in Powell's draft, reflecting his philosophical leaning, was as follows:

> In accomplishing this purpose, reliance should be placed on persuasion rather than on compulsion. The Institute cannot impose accounting principles by fiat. At the same time, it can, and it should make every effort to lead in the thinking on unsettled and controversial issues.

Spacek objected that the committee had not said that "reliance should be placed on persuasion rather than on compulsion." In reply to Spacek, Powell wrote, "Maybe the Committee did not say it, but, as I remember the discussion, we meant it. If we did not, we can change it." In fact, the committee eventually approved this wording for inclusion in its final report. A review of the minutes for the March meeting shows that, following Spacek's espousal of the need for an "objective standard for the establishment of accounting principles," it was stated that "There appeared, however, to be differences of opinion [within the committee] as to how far the elimination of alternative practices could be carried." Another of the "suggestions" minuted during the meeting was that "The research program should be more than fact finding. It should include conclusions and recommendations which could result in the enforcement of uniform standards." The source of this point was probably also Spacek.

Powell had stated in an early section of his draft report that:

> Thought should be given at the beginning and from time to time thereafter to the forward planning of the accounting research program and related activities, to the end that accounting principles are developed on a coherent and consistent basis and pronouncements are made in an orderly and timely manner. This does not mean the detailed codification of accounting principles. It does mean the study of the postulates, few in number, upon which accounting practices are based, followed by the formulation of a fairly broad set of coordinated but not detailed principles, as a framework of reference for the solution of detailed problems. The consideration, then, of detailed matters, such as those covered by the present accounting research bulletins, should be undertaken in relation to the postu-

> lates and broad principles previously expressed. Institute pronouncements should have reasonable flexibility, and should avoid rigidity.

Spacek complained that Powell had omitted any reference in his draft to "objective standards" (Spacek's preferred term), and he suspected that Powell's description of the operation of the Commission sounded as if it were to behave like the old Committee on Accounting Procedure, in which the members advocated accounting practices without regard to a governing set of objectives or basic norms. The phrase "upon which accounting practices are based" probably grated at Spacek, because it would have implied to him that the postulates would be inferred, or inductively derived, from established practice (in the Littletonian sense), rather than prescribed on the basis of "objective standards." That phrase was not repeated in the committee's final report. Spacek would also have bridled at the juxtaposition of "reasonable flexibility" and "rigidity," as if the proponents of uniformity favored actual rigidity [see Spacek, 1958c, pp. 85-86]. The term "rigidity" did not appear in the committee's final report.

The March meeting of the committee had apparently been regarded as exploratory and not as the occasion for defining the terms of a reform proposal. Under the heading, "Goal of the Research Program," in the minutes drafted by Perry Mason, all of the nine enumerated statements of view were characterized as "suggestions," not as agreed positions. Spacek probably recalled the points that he made during the meeting, in his typically forceful manner, without recalling whether disagreement, or contrasting views, had been expressed, and he was convinced that the statements of view in the minutes corresponding with his own views had been agreed. (He also complained in his letter of July 17 that the minutes had not represented the views of the committee. Whether, at the May meeting, he had proposed amendments to the minutes of the March meeting that failed to secure committee support is not known.) Had Spacek not suspected the Institute's leaders of a Machiavellian plot, namely, that they were determined to preserve the status quo under the flag of reform, his bill of exceptions to Powell's draft report could probably have been resolved through amicable correspondence and without vituperation. But Spacek's accusatory manner was to vent his disagreements with those who ran the profession, and this was no exception.

Apparently, none of the other committee members commented in writing on Powell's draft. Spacek's letter, which detailed many concerns in addition to those mentioned above, was sharply worded, and Powell, ever the gentleman, felt injured by the tone of his remarks. Spacek intended no personal affront; it was in his nature to speak and write bluntly. His reaction to the draft was undoubtedly colored by his distrust of the Institute and its leadership. Another factor would have been the tense relationship between his firm and several others in the Big Eight, including Powell's, arising from Arthur Andersen & Co.'s crusade to persuade the Committee on Accounting Procedure (CAP) to revise its Bulletin 44, issued in 1954, which stated that income tax allocation was not required when companies used the declining-balance method of depreciation for income tax purposes and the straight-line method for financial accounting purposes. Arthur Andersen & Co. favored income tax allocation when such differences arose [see, e.g., Spacek, 1956a, p. 6; Spacek, 1956b, p. 12], and, due mainly to the efforts of Garrett T. Burns, the firm's representative on the CAP, Bulletin 44 was finally revised in July 1958, requiring income tax allocation when different depreciation methods are used (as above). Neither H&S nor PW liked income tax allocation, and Powell was then serving on the CAP. Powell and the PW representative on the CAP filed a qualified assent, which read more like a dissent, in which they disagreed with the requirement for income tax allocation [Committee on Accounting Procedure, 1958, pp. 5-A]. As has been noted above, H&S and PW were advocates of permissiveness, while AA was not.

THE COMMITTEE'S FINAL MEETING

The committee's third and final meeting was held on August 1, 1958, in New York City. All of the members but Carman Blough, who was ill, were in attendance. Although it was an all-day meeting, the three double-spaced pages of minutes revealed very little of the tenor of the discussion, virtually all of which was devoted to the points in Powell's July 9th draft of the final report. A number of minor amendments were made to the minutes of the May meeting.

The committee decided that it would not itself undertake to set forth the postulates or principles of accounting. Instead, the minutes stated that:

> The majority of the committee felt that, while the report should contain a statement of the basic considerations and philosophy underlying the need for a revision of the Institute's research program, [the com-

> mittee's] principal function would be to present a plan for an organization which would accomplish the desired improvement in research activities and would result in defining and determining generally accepted accounting principles.

It seems likely that Spacek constituted the minority.

The committee disapproved of the use of a Board of Managers, as suggested by Carey, and it decided to recommend that the new research program be financed through efforts of the members of the accounting profession, and not from outside the profession. Most of the other changes were said to be of an editorial nature.

SUBSEQUENT EXCHANGES OF CORRESPONDENCE

Four days after the August 1st meeting, Perry Mason sent the committee members a rewritten draft of the final report (dated August 5), which was attached to the minutes of the meeting. The section at the outset of the report, entitled "Basic considerations," was modified and amplified. It was there that the philosophical differences over flexibility v. uniformity rose to the surface. Following the meeting, the committee members proceeded to exchange correspondence on various points in the draft with which they were at odds, and they reflected as well on decisions taken at the meeting. From this subsequent exchange of letters, it becomes clear that the committee had voted, evidently by a narrow majority, to delete a sensitive passage, "This [i.e., the development of accounting principles on a coherent and consistent basis] does not mean the detailed codification of accounting principles," from Powell's earlier draft. Grady, Powell and Blough, in correspondence, expressed regret at the committee's decision and recommended that its substance be restored [letters dated August 6, 7 and 12, respectively]. Barr believed that the sentence probably would fit better in the new draft than the old, but he did not press the matter [letter dated August 15]. Mautz said he would not object to the reinstatement of the sentence [letter dated August 15]. Cannon was willing to see it reinstated, but he felt that the point had been made adequately elsewhere in the draft [letter dated August 11]. Spacek, who had been the strongest proponent of the deletion during the committee meeting, defended the committee's decision [letter dated August 13], and Werntz agreed with him [letter dated August 15]. The deleted sentence was not restored. But a new paragraph in the August 5th draft, which survived into the final report, probably covered the same ground:

> Rules or other guides for the application of accounting principles in specific situations, then, should be developed in relation to the postulates and principles previously expressed. Statements of these probably should be comparable as to subject matter with the present accounting research bulletins. They should have reasonable flexibility.

The members continued to trade suggestions on the name of the entity to succeed the Committee on Accounting Procedure (and the Committee on Terminology). Paul Grady wrote to the committee members that he disliked the title, "Commission on Generally Accepted Accounting Principles," which the committee had just affirmed at its meeting. He said that "the word 'Commission' has a strong governmental regulatory connotation which I believe should be avoided" [letter dated August 6]. He related that "one of the principal criticisms which I have heard from businessmen in relation to Accounting Research Bulletins is that the Institute seems to be setting itself up as a regulatory body from which there is no appeal." He said that "the public relations aspect of this matter is important and that 'Board' sounds somewhat less regulatory in character than 'Commission'." Grady's suggestion of board instead of commission met with general approval, although Spacek, always suspicious of Grady's (and Powell's) motives, reminded his colleagues that the accounting profession "has regulatory aspects in its operation," although he was indifferent as between "board" and "commission" [letter dated August 13].

Grady said he favored "Accounting Research Board," thus continuing to place emphasis on "research," as had Alvin Jennings in his December 1957 address [1958a], and perhaps because he was serving on a body with the title, Special Committee on Research Program. In rapid order, Powell, Blough and Browne wrote that they agreed with Grady's preferred title [letter from Powell dated August 7; letter from Mason dated August 12, conveying Blough's view; and letter dated August 12 from Browne]. Spacek disagreed with "Accounting Research Board," as he argued that research was only one part of the responsibilities of the new board, which, he said, was to provide adequate leadership in the development of generally accepted accounting principles [letter dated August 13]. In a letter dated August 18, Werntz said he was also not happy with "Accounting Research Board," "as I do not like the connotation of 'Research' in the title." He preferred "Board on Accounting Principles," adding: "I think it is unnecessary to include the words 'generally accepted' since 'generally accepted' really comes about from the action of others" [letter dated August 18]. Blough (modifying his view) and Cannon agreed with Werntz's preference [letters from Mason dated August 19 and from Cannon dated August 20]. As the tide began to turn from "research" to "principles" in the title of the new board, Powell wrote that he did not think that the term "generally accepted accounting principles" had to appear in the new board's title so long as the board's pronouncements were characterized as "statements on generally accepted accounting principles" [letter dated August 15]. To some members, it was important that the name or published utterances of the new board be linked explicitly to the standard wording in the auditor's opinion.

Following the exchange of views, the committee's final report was revised under Powell's direction, and it was dispatched to the Institute's Council in September.[31] The final report gave Accounting Principles Board as the name of the new entity, and it is likely that Powell, Mason or Carey had made the selection. Reflecting Powell's strong preference, the final report referred to the new board's pronouncements as "statements on generally accepted accounting principles."[32] The draft also affirmed that, unlike the CAP (whose members were chosen from year to year by the Institute president), the members of the new board would be nominated by the executive committee and elected by Council. Blough later wrote, "It is anticipated that this will give the board even greater stature than was accorded the committee on accounting procedure" [1960, p. 8].

One minor crisis was averted at the eleventh hour. In a letter to Powell dated August 15, Spacek gave notice that he wanted to attach a "comment" to the report, and he submitted a preliminary draft of the comment. He believed strongly that he

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[31]The report was published in *The Journal of Accountancy* two months later [1958].

[32]Powell's choice of preposition was apparently deliberate. Had the statements been "of generally accepted accounting principles," they would have arguably possessed a more fundamental character. The comparable preposition for auditing pronouncements (adopted by the Institute in 1973) has also been "on": Statements on Auditing Standards. The term "generally accepted auditing standards" refers to the fundamental norms that were developed in the mid-1940s and subsequently approved by the Institute's membership in 1948.

should speak out on two issues that troubled him. Although, in the proposed comment, he gave "wholehearted support to the [committee's] report," he felt it necessary to emphasize that the "objective standards [a term that was not used in the report] or postulates" must give rise to generally accepted accounting principles that require companies to show "as profit only the economic gain after preservation of beginning capital and that show the extent to which the capital is subject to prior obligations. . . . " This was a clear reference to his firm's publicly known view that general price changes must be explicitly factored into the derivation of net income [Spacek, 1956a; 1956b; Zeff, 1992, pp. 457-459]. He also wanted to state that accounting principles should "clearly recognize the reporting needs of the various segments of our society," another position that he and his firm had advanced publicly [Spacek, 1957c]. Second, he would charge the members of the new board to make "objective decisions with respect to generally accepted accounting principles on the basis of established postulates or standards without being biased because of decisions already made in their own practice." He was greatly concerned that the new board would continue as had the CAP, some of whose members, he believed, had sacrificed principle for expediency, by countenancing questionable practices supposedly to defend the interests of major clients. He said that he had less confidence than did his colleagues on the Special Committee that the members of the new board would "subordinate their prior views to the objective standards or postulates."

None of the other members of the committee would have liked the idea of Spacek's writing such a comment, and Cannon succeeded in persuading him not to do so. In a letter to Spacek dated August 28, Cannon argued that his point concerning profit being based on economic gain goes beyond the charge to the committee, which was to propose a new organization, not to settle in advance the problems that might come before it. Cannon also argued that the section on "Basic considerations" in the committee's draft report dealt with his anxiety over the meaning of accounting principles. Finally, in regard to Spacek's concern over the objectivity of the future members of the new board, Cannon wrote, "that's a risk anyone takes when he sets up an organization," and that "we have to assume that the motives of others are no less honorable than our own. . . . " After discussing Cannon's arguments with him by telephone, Spacek wrote Powell that he wished to withdraw his concurring comment [letter dated September 5].

ESTABLISHMENT OF THE ACCOUNTING PRINCIPLES BOARD

The report of the Special Committee on Research Program marked a major turning point in the Institute's role in establishing generally accepted accounting principles. The committee succeeded in bridging significant philosophical differences among several of the major public accounting firms and their strong-willed leaders, and its report held out the promise of reinvigorating the process of establishing accounting principles. *The Journal of Accountancy*, which is published by the Institute, hailed the report and made clear "that the inspiration for it came from within the profession, rather than from outside pressure" ["Accounting Research and Accounting Principles," 1958, p. 28]. The Institute's Council adopted the report in April 1959, and the Accounting Principles Board (APB) was launched on September 1, 1959,[33] almost one year after the special committee submitted its report. Paul Grady wrote that "Accounting firms responded with generous pledges of almost one million dollars to support the newly augmented research program" [1972, p. 18].

The Institute's executive committee selected Weldon Powell to be chairman of the board. But, in a controversial move, it decided that all of the Big Eight accounting firms, apart from Powell's firm, would be represented on the board by their national managing partner, not a technical partner. Carey recalled that the reasons for this action were "both to emphasize its authority (prestige) and to speed up decision-making" [letter to the author dated July 2, 1970].[34] George O. May, who was being kept apprised of developments by Paul Grady, wrote to Institute President Louis H. Penney to criticize that decision. May argued that "the Board would operate more effectively if members chosen from the very large field were sources rather than channels of opinion."[35]

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[33]The Committee on Accounting Procedure and the Committee on Terminology went out of existence on August 31, 1959.

[34]Carey's second reason alluded to an experience of the CAP, when some partners serving on the committee were known to seek advice from their firm's executive office prior to casting their vote.

[35]May observed that neither he nor Walter A. Staub, Samuel J. Broad and other chairmen of the Committee on Accounting Procedure were the executive head of their firm. Letter from May to Penney, dated April 2, 1959, in the George O. May collection at Price Waterhouse & Co., New York City.

Penney elaborated on the executive committee's expectation for the APB as follows:

> It is not intended that this Board will be a working committee in the sense that the Committee on Accounting Procedure has been. As we visualize the program, the Board is to be largely a policy making organization and in addition it will from time to time very likely have to make decisions regarding the selection of certain courses of action from two or more alternatives. Some of those decisions may be difficult. For that reason the Executive Committee approved the theory of selecting for the Board some of the executive heads of some of the better organized accounting firms because those individuals, generally speaking, have broad accounting experience and are accustomed to making decisions on the basis of facts submitted to them by responsible technicians [letter from Penney to Hassel Tippit, dated April 3, 1959].

The executive committee's conception of the role of the APB as a senatorial body would most certainly not have been the one envisioned by the members of the Special Committee. Nor was it an accurate forecast of the actual role of the APB. Paul Grady has written that the executive committee's decision "was a sad error in judgment, which I strongly opposed at the time" [letter from Grady to the author dated September 28, 1970]. In the end, the managing partners of seven other Big Eight firms were invited to serve on the APB,[36] but two of the firms, Peat, Marwick, Mitchell & Co. and Arthur Andersen & Co., declined to do so. They both replied that their senior technical partner, John Peoples and Russell Morrison, respectively, should represent their firm on the new board. Peat Marwick's Managing Partner William M. Black replied that his existing obligations prevented him from freeing the time to serve on the board [letter from Black to Penney, dated March 27, 1959]. AA's Managing Partner Leonard Spacek replied that Morrison was "better qualified than I," and, furthermore, he wanted to continue to speak out publicly on the deficiencies in accounting principles and practices. He also said that "it would be inappropriate for me to serve on the Board, particularly in view of my reservations as to the entire program, which I wanted to voice [in a comment appended to the Special Committee's report] but

[36]As noted above, Weldon Powell, the senior technical partner at Haskins & Sells, had already accepted the appointment as APB chairman.

finally agreed to withdraw in the interest of showing solidarity" [letter from Spacek to Penney, dated March 27, 1959]. But the executive committee continued to insist that Black and Spacek should represent their firms. Consequently, during 1959-60, the APB's first year, it had 18 members, including representatives from only six of the Big Eight firms.

The following year, Institute President J. S. Seidman, a partner in a middle-sized New York City firm, persuaded Spacek to join the APB [letter from George R. Catlett to the author dated November 29, 2000]. Peat Marwick's Black, not wishing to be the lone holdout, also joined the board [letter from Black to the author dated October 19, 1970]. Thereupon, the size of the board was increased from 18 to 21 to accommodate them.

Also in 1960, the Institute appointed Maurice Moonitz, an accounting professor at the University of California, Berkeley, as the first director of accounting research. His unit was deliberately called "the accounting research division," in order to assure that, unlike Blough's research department, it would not be commandeered by other committees of the Institute.

The program of accounting research and the work of the APB, as a result of the Special Committee's report, were thus ready to begin in earnest.

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APPENDIX

A Concise Summary of the Evolution of the Term "Postulate" in the Accounting Literature

The term "postulate" was not frequently used in the accounting literature in the 1950s, but, as is well known, Maurice Moonitz's Accounting Research Study No. 1, published in 1961 under the aegis of the Accounting Principles Board, was entitled *The Basic Postulates of Accounting* [1961]. During the 1960s, numerous authors discussed the "postulates" approach to developing accounting principles [see, e.g., Chambers, 1963, Vatter, 1963; Gordon, 1964; Buckley et al., 1968], and it might therefore be instructive to explore the provenance of this term in the accounting literature. Paton [1922, p. 472] entitled a chapter "The Basic Postulates of Accounting," in which he enumerated seven "underlying propositions upon which accounting is based." Paton's use of the term was carried forward in the "tentative statement of accounting principles" issued by the American Accounting Association's executive committee, of which Paton was a member, in 1936. The executive committee used the term "postulates" to describe "certain basic propositions of accounting which embody standards of adequacy and reasonableness in the presentation of corporate financial statements."[37] What the AAA committee called postulates, however, were in reality what it regarded as statements of proper practice.

George O. May continued the use of "postulates" but with a very different meaning. In 1937, May, who was to become chairman of the Institute's Committee on Terminology, argued that the term "principles" should be defined, quoting a dictionary definition, as "A general law or rule adopted or professed as a guide to action; a settled ground or basis of conduct or practice. . . ." He rejected its definition as "A fundamental truth or proposition on which many others depend. . . ." [ibid., p. 423]. Three years later, his terminology committee said: "Initially, accounting rules are mere postulates derived from experience and reason. Only after they have proved useful, and become generally accepted, do they become principles of accounting" [Committee on Accounting Procedure, 1940, p. 60; see also May, 1943, p. 38]. To May, therefore, postulates were principles (in reality, practices) that had not yet won general acceptance. But in the late 1940s he redefined postulates as working assumptions or guiding propositions. In a monograph written for the Study Group on Business Income, May identified two "postulates or canons of income accounting" [May, 1949, p. 23] which fell somewhere between "the foundation on which accounting concepts of income rest" and "problems of a conceptual character encountered in the determination of business income" [ibid., p. 21]. His two postulates were "the going concern concept" and "that the income statement of a year should be regarded as a part of a continuous and integrated series" [ibid.]. Three years later, in the Study Group's report, which May largely drafted, it was stated that "Income accounting necessarily rests on a framework of postulates and assumptions; these are accepted and acceptable as being useful, not as demonstrable truths; their usefulness is always open to reconsideration" [Report of the Study Group on Business Income, 1952, p. 19; see also May, 1948]. Three postulates were cited: monetary, permanence (i.e., going concern), and realization. The monetary postulate was "that fluctuations in the value of the monetary unit, which is the accounting symbol, may properly be ignored" [Report of the Study Group on Business Income, p. 20].

Eric L. Kohler, in the first edition of his *A Dictionary for Accountants*, gave the following definition of postulate: "Any of a series of axioms or assumptions constituting the supposed basis of a system of thought or an organized field of endeavor" [1952, p. 323]. He also wrote that "If a principle is accepted without evidence of proof, it may be called an *axiom*, *assumption*, or *postulate*" [ibid., p. 335]. Finally, in 1957, Oswald W. Knauth, a distinguished company executive and

[37]Although the AAA committee used the term "postulates" only once, Gilman [1939, chap. 14] referred to all 20 of the committee's propositions as postulates.

public servant who had been associated with May in the original drafting of the 1952 Study Group report [1952, p. v], reiterated the three postulates from the report in an article published in *The Journal of Accountancy*. Knauth's article was one of those that Powell asked the committee members to read.

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Warwick Funnell
UNIVERSITY OF WOLLONGONG

ACCOUNTING FOR JUSTICE: ENTITLEMENT, WANT AND THE IRISH FAMINE OF 1845-7

Focal text: R. Nozick, *Anarchy, State and Utopia* (New York: Basic Books, 1974).

Abstract: The evolution of modern accounting consists essentially of a series of pragmatic responses to the needs of capital. Accounting is implicated, therefore, in the maintenance and creation of societies in which relations are primarily defined in terms of property, however it is distributed, and justice is determined by the sanctity of property rights. Accounting historians are encouraged to broaden the compass of their research to include the association between accounting and justice which is already well recognised in the critical accounting literature. Theories of justice, especially those of 19th century political theorists such as Bentham and Senior, and more recently that of Nozick, are used to explore the close association between property, accounting and justice at the time of the Irish potato famine of 1845-7.

INTRODUCTION

Societies are founded on some understanding of justice, however objectionable the dominant meanings of justice may be perceived by those not favoured. All laws of government emanate from this essential feature of social relations for no government will survive without the assistance of significant force if it is not able to convince a sufficient number of citizens that their society is just. For David Hume, Aristotle and Adam Smith justice was first among all the virtues. Smith stipulated that "(j)ustice . . . is the main pillar that upholds the whole edifice. If it is removed . . . the immense fabric of human society . . . must in a moment crumble into atoms" [1976, Section

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II, Chapter ii, parts 4 and 6]. Smith did not have in mind the distributive justice which we now associate with the achievement of social justice, notably that portrayed by Marshall [1992]. Rather, Smith adopted a Lockean stance and identified justice with the absence of any harm to either an individual's person or to their property; "preservation of property being the end of government" [Locke, 1884, Book II, Chapter IX, section 138, also Chapter XIX, section 222]. Thus, the foundation of justice in capitalist societies is securing property rights [Smith, 1976, Section VII, Chapter ii, part 10; see also Carter, 1989, p.9]. Any threats to property rights, suggested Hume, were equivalent to an attack on the sacred laws of God, the result of which would be tyranny and the destruction of society [Hume, 1960, Book II, section 2, paragraph 2]. The intention of this paper is not to promote one form of justice over another, rather to show how accounting is compatible with, and essential to, an interpretation of justice derived from the rights of property. It is accepted that meanings attributed to justice are not absolute but instead are the products of particular social contexts.

The intimate association between property rights and justice has long been recognised in theories of justice from Aristotle [1905] to Thomas Aquinas [1969], through to the writings of political theorists such as Rousseau and Bentham during the 18th and 19th centuries and most recently the highly influential work of Robert Nozick [1974]. Nozick's entitlement theory of justice, which owes much to Adam Smith and the utilitarianism of Bentham, proposes that distributions of wealth are just if people are entitled to their holdings as a result of being acquired through the exercise of the initial capacities with which they were born or if their property was transferred to them justly as a result of freely entered into exchanges [Nozick, 1974, pp.150-153, 1993, p.286; see Sen, 1981, p.2 for a similar approach[1]]. Nozick rejects the idea of the state taking responsibility for achieving social justice if this relies upon a conception of distributive justice in which voluntarism is corrupted. The state, according to Nozick [1974, p.ix; 1993, p.285], should limit itself to ensuring that entitlement rights, once confirmed as just, are secure. The dependency that Nozick sees between justice, markets and the sanctity of entitlements derived from property offers an attractive lens through which accounting historians can examine the relationship between

[1]Sen defined entitlements as "the set of alternative commodity bundles that a person can command" [Watts 2001, p.130].

accounting and matters of justice. Indeed, a close study of theories of justice, especially those which have been influential over the past three centuries, offers accounting historians a powerful critical means to probe the social roles served by accounting. Although Nozick's ideas are not canvassed in detail for the purposes of the present paper, his theme of just entitlements resonates with persuasive authenticity when examining the role of accounting technologies in the context of the Irish famine of 1845-7. During this period of great suffering, accounting played an essential role in confirming the conditions under which property entitlements were determined to be just and in providing an apparatus for the state to laager these entitlements. Theories of property and justice, therefore, have much to contribute to accounting history.

The work of accounting historians has consistently, if not always manifestly, recognised the association between reverence for the rights attached to property and the role of accounting. Cost accounting practices which are meant to discipline the workforce to enhance the efficiency of production, and thereby contribute to ever greater accumulations of property, have been especially attractive to accounting historians [Hoskin and Macve, 2000; Fleischman and Tyson, 1996; see Carnegie and Potter, 2000 for a survey of the subjects preferred by accounting historians]. The intimate determinacy between property entitlements, justice and accounting, however, has yet to establish a presence in the accounting history literature, despite the prominence given to matters of social justice in the critical accounting literature [Miller, 1990; Miller and O'Leary, 1987]. Accounting historians, notably Foucauldians [Hoskin and Macve, 1986] and labour process theorists [Hopper and Armstrong, 1991], have identified the oppressive consequences for labour of the close association between property and accounting. Yet, they have done so almost exclusively in terms of onerous regimes of control rather than as matters of justice. As citizens, accounting historians have an obligation to contribute far more than providing justifications for, and explanations of, accounting practices, whether located in the factory or in the offices of government. Matters of justice are of great consequence, as is the obligation of accounting historians to give these prominence in their work. Of particular relevance to this paper is the ability of accounting history to provide a persuasive means of demonstrating the social consequences of the highly individualised approach of capitalism to government in which property rights are paramount.

Recent work by Fleischman and Tyson [2000] and Funnell [1998] has edged accounting history away from more utilitarian considerations to examine the effects when accounting is used to serve ideologically racist ends. Still, the concern of these papers is not *expressly* that of justice. This paper takes the process further into the domain of justice, an area not explicitly identified in the survey by Carnegie and Potter [2000] as having penetrated accounting history to any significant degree. The themes addressed are meant to encourage accounting historians to widen the compass of their interests to include the fundamental relationship between property, justice and accounting in various social contexts in different historical epochs. The paper acknowledges that accounting has served legal/political systems which "more often than not . . . (have) served oppressive, unjust, inhumane social arrangements" [Lyons, 1993, p.ix; Neu, 2000]. It also demonstrates in the context of the Irish famine of 1845-7 the intimate connection noted by Miller [1990] and Miller and Rose [quoted in Neu, 2000, p.270] between the political rationalities of government and the technologies by which they are implemented.

Given the hortative intent of this paper, there is not the opportunity to provide a detailed rendition of accountings during the Irish famine. Instead, the focus is on the motives and consequences of the regimes of accounting which were essential to the implementation of government policy as it concerned the Irish. Accounting, as used by the British Government and its administrators, is shown to have been implicated in the prosecution of a particular, privileged form of justice which gave pre-eminence to the interests of property, irrespective of the desperation of the Irish poor. The only moral basis for determining entitlements to relief outside the Poor Law was the possession of property. Study of the Irish famine illustrates how the moral agency of accounting is determined and legitimated by prevailing economic and political structures and not by any internal logic or calculus. Laws, as Rousseau [1973, p.166] astutely observed, "are always of use to those who possess and harmful to those who possess nothing".

After a discussion of the relevance of accounting to matters of justice, attitudes towards property rights and poverty in the 19th century are shown to have constituted a moral discourse of justice which was underpinned by accounting technologies. The Irish potato famine of 1845-7 and government responses to it under Peel and then Russell are used to illustrate the proposition that in a capitalist society the form of justice which accounting can serve is that based upon property entitlements. Indeed, accounting is essentially and substantially a technology for enforcing these entitlements. The basis upon which the government at Westminster determined who was eligible for assistance during the famine and who would be excluded was determined by the prevailing belief that government should not intrude itself in the affairs of business, nor should government take from the owners of property to provide for those, devoid of property, whose destitution was a confession of their lack of virtue. Only in this way would justice be served.

THE JUSTICE OF ACCOUNTING

Theories of justice are either based upon principles of personal freedom and individual rights, in which economic deserts and merit determine entitlements, as epitomised by Nozick's entitlement theory of justice, or upon social effects where rights are claimed on the basis of need and fairness [see Nozick, 1974, p.90 and section II; Rawls, 1972]. The importance of the latter conception of distributive justice was recognised in the late 18th century by Paine [1969, p.90] for whom it was inconceivable that an individual had entered society "to become *worse* than he was before, nor to have fewer rights than he had before". J.S. Mill, who when writing had the benefit of drawing upon the experiences of the Irish famine, also warned how a society founded upon rules "by which it may protect its material interests . . . will do nothing . . . for the spiritual interests of society" [quoted in Goodin, 1995, p.12].

Accounting has had much to say about the justice of deserts and lawful entitlements derived from the possession of property — the concern of 19th century political economists (see below) — but has contributed little to interpretations of justice based upon need. Indeed, ensuring justice in capitalist societies is the fundamental intent of accounting, although only those interpretations of justice that are grounded in property rights which have been secured and consummated by the market exchanges praised by Adam Smith. Accounting evolved from, and exists because of, the needs of property arising out of its accumulation, protection and legitimation. The morality that accounting promotes in a capitalist economy, that is its interpretation of right and wrong, merit and desert, is that associated with property entitlements. Accounting technologies have not been designed to decide whether a given allocation of property and entitlements are either socially or morally defensible or to compensate for social and economic inequalities, rather to recognise, embrace and to protect these in the interests of those who hold property. Accountants are not paid to be agents of social change. On the contrary, they are employed to take advantage of existing social relations and inequalities. Therefore, any virtue that may be attributable to accounting arises mainly from its success in serving the interests of property. Ultimately, accounting involves "the communication of a set of values, of ideals, of expected behaviour, of what is approved and disapproved" [Roberts and Scapens, 1985, p.448]. This allows accounting to play a highly influential role in institutionalising particular, privileged values and beliefs.

The instrumental role of accounting is fundamental to the indifference of the double-entry accounting calculus to the distribution of property and its associated entitlements which double-entry accounting catalogues and makes visible. Its primary concerns are: an accurate rendition of a particular property distribution, irrespective of any equity considerations; adjudicating between competing property claims and the identification of either enhancements or diminutions of equity in property. Debates in accounting history over the importance given by Sombart, Weber and Tawney to double-entry bookkeeping in the rise of capitalism accept that any significance it may have had was derived from its ability to serve the acquisitive instincts of the propertied classes [Yamey, 1949; Winjum, 1972]. Therefore accounting, as a technology that perpetuates existing entitlements, protects against actions other than those consistent with, and sanctioned by, the relations of power that accounting serves. Indeed, the objective, blind justice which accounting is meant to serve has made it attractive to property holders. This, as Cooper and Sherer [1984, p.208] have reminded us, does not deny that this amounts to accounting information being manipulated to favour particular interests to enhance the distribution of property rights which they favour. In this sense, accounting is certainly neither neutral nor objective. It is political because the consequences of accounting have the ability to "benefit some groups in society and to the detriment of others" [Cooper and Sherer, 1984, p.208]. The latter is especially so when it comes to matters of justice and recognition by the state of entitlements which individuals claim for themselves.

As an implement of power used to sustain inequality and entrenched privilege based upon property entitlements, accounting was harnessed during the Irish famine of 1845-7 to impoverish the existence of many and to deny opportunities for redemption. Accounting provided the means to exclude, silence, condemn and dismiss the urgent entreaties of those without the necessary property to legitimate their claims on the state. During the famine, accounting technologies were essential to the British Government's determination to follow a policy of minimal, reluctant interference for fear of upsetting the market, alienating owners of property and, so they thought, threatening the very foundations of society.

NINETEENTH CENTURY ATTITUDES TOWARDS PROPERTY AND POVERTY

Advocacy of *laissez-faire* government by liberals in the 19th century amounted to the protection of the interests of property against any state imposts. According to Bentham, the state existed to "maintain the distribution . . . (of property) as it is actually established. It is this which under the name of justice, is regarded as . . . (its) first duty" [Bentham, 1871, p.119]. Nassau Senior, as did Locke [1884, Book II, section 222], saw "the great object and the great difficulty in government is the preservation of individual property" [Senior, 1868, p.1]. Similarly, Hobbes believed that *"Justice is the constant Will of giving to every man his own"* [Hobbes, 1968, Part I, Chapter XV, pp.201-2, emphasis in the original]. Individuals' rights could only guaranteed as long as property rights were treated as sacred and recognised as the foundation of society. Thus, Bentham [1960, Book II, Part I, Section X] defined property in terms of *"a relation betwixt a person and an object as permits him, but forbids any other, the free use and possession of it, without violating the laws of justice . . ."*[2] (emphasis in the original). Property and justice were inseparable, for property consisted of "those goods, whose constant possession is establish'd by the laws of society; that is, by the laws of justice. . . . 'Tis very preposterous, therefore, to imagine that we have any idea of property, without fully comprehending the nature of justice . . . (for) the origin of justice

[2]According to Honore [1961, pp.112-113] property ownership comprises "the right to possess, the right to use, the right to manage, the right to the income of the thing, the right to the capital, the right to security, the rights of incidents of transmissibility and absence of term, the prohibition of harmful use".

explains that of property" [Bentham, 1960, Book III, Part II, Section II].[3]

Most of the more odious consequences of the self interest motivated by the attractions of property, however, were of little concern to political theorists who were highly influential in the 19th century, especially Jeremy Bentham, Thomas Hobbes, Joseph Townsend and Nassau Senior, all of whom were unanimous in their praise of the virtues of untrammelled property rights. Bentham was indifferent to how 'the good' created by self-interested behaviour was distributed throughout society and was unconcerned about the inevitable resulting inequalities. Instead, inequalities were accepted by Bentham as part of the natural order, arising as they do from the differential distribution of abilities throughout the population [see Nozick, 1993, p.286-289].

The morality of actions for utilitarians was only to be judged according to their impact on the overall wellbeing or happiness of society, not the pain experienced by one group of individuals. Justice was the outcome of the enforcement of a common set of procedural rules enshrined in law which governed the behaviour of all. Justice was not determined by the fairness of the outcomes but by the fairness of the processes or rules which are followed along the way. Denying one group their rightful possession of property, acquired according to these rules, was the illegitimate exercise of government powers and was unjust.

Whereas poverty in the 19th century was widely regarded as the absence of the means of entitlement, the consequence of "fraud, indolence, and improvidence" [Report of the Poor Law Commission 1834, cited in Ashcraft, 1995, p.46], property was the result of foresight, moral rectitude and evidence of a virtuous life. Accordingly, the poor had no entitlement rights; they could expect nothing. Society was under no obligation to protect non-existent rights. Bentham, whose influence in the 19th century Macpherson [1978, pp.39, 50] describes as "immense", argued that we can only expect to be treated as we have acted; good for good, evil for evil [see Bentham in Berger, 1984, p.158]. To talk about natural rights, therefore, was a

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[3]At the time that the American Constitution was being finalised, James Madison drew attention to the way in which "those who hold and those who are without property have ever formed distinct interests in society ... The regulation of these various and interfering interests forms the principal task of modern legislation" [*The Federalist Papers,* Number 10].

'nonsense'. Only those who do well deserved to be treated well. These views were given a sympathetic, if somewhat extreme, rendition at the height of the Irish famine by *The Economist* [30 January 1847] which protested against the ongoing expense of providing relief, irrespective of how inadequate it may have been. Relief should not aim to avoid deaths at any cost, for "if left to the natural law of distribution, those who deserved more would obtain it". Thus, in order that the poor did not unfairly burden property owners, it was essential that relief went only to the deserving poor [Irish Poor Laws, 1 and 2 Vic. c.56, July 1838]. The undeserving poor, that is those who were seen by government to be poor because of their indolence and immorality, were to be identified and excluded from any assistance which did not involve work on their part. Like everyone, they had the ability to redeem themselves from their state of moral and economic want through their own industry and providence. Hard work and diligence allowed paupers to rise out of their state of dependence and assume the right to control their own life.

Towards the end of the 18th century, Frederick Eden had denounced any attempts to alleviate the suffering of the poor at the expense of property as a case of humanity exceeding good sense which contradicted the fundamentals of political economy [Eden, 1797; see Eden in Cowherd, 1977, p.xiv; also Senior, 1868, p.178]. Social measures which sought to redress economic disadvantage, thought Bentham, should only be contemplated while ever they do "not interfere with security; in which it does not thwart the expectations which the law itself produced, in which it does not derange the order already established" [quoted in Macpherson, 1978, p.43]. That is, social reforms could be tolerated as long as property rights were not threatened. This view was shared with Hobbes who, over a century earlier, had also concluded that without order to protect property rights "there is no place for Industry; because the fruit thereof is uncertain: and consequently no Culture of the Earth . . . And the life of man, solitary poore, nasty, brutish, and short" [Hobbes, 1968, Part I, Chapter XIII, p.186].

The stimulus to work which poverty provided, according to Malthus, was "absolutely necessary to promote happiness of the great mass of mankind" [quoted in Boyer, 1990, p.56; for similar thoughts see Burke in Ashcraft, 1995, p.55]. Joseph Townsend in 1786 denounced poor relief as unnatural. He reminded his readers that:

> . . . hope and fear are the springs of industry . . . In general it is only hunger which can spur and goad . . . (the poor) on to labour. They say that . . . no man, even though by his indolence, improvidence, prodigality and vice, he may have brought himself to poverty, shall ever suffer from want . . . (Some) must want [quoted in Boyer 1990, p.52; see also Senior's views in Bowley, 1967, p.291].

Edwin Chadwick, who along with Nassau Senior made the greatest contributions to the 1834 English Poor Law Report, described poverty as "the natural, the primitive, the general and unchangeable state of man; and as labour is the source of wealth, so is poverty of labour. Banish poverty, you banish labour" [quoted in Cowherd, 1977, p.245; see also Senior, 1868, p.187]. Significantly for those who would later starve in Ireland, Senior and Chadwick were as one in their admiration for the redemptive powers of property [Senior quoted in Bowley, 1967, pp.239-240]. When famine struck in 1845, the fate of the Irish poor, therefore, was sealed as much by prevailing economic doctrine as by the perfidy of nature. Tragically, it was also dramatically exacerbated by the rigid, unyielding bureaucratic behaviour of relief personnel which was induced by the minutiae of the accounting controls required by their master, the British Treasury.

THE IRISH POTATO FAMINE 1845-7

Origins and Consequences: Famines, as Malthus [1798] was only too eager to confirm, have been a regular occurrence throughout history and over most parts of the globe. Ireland's perilous dependency on the potato had seen repeated food shortages of varying severity and extent. The 1830s were particularly known for food crises occasioned by crop failures somewhere in Ireland [Woodham-Smith, 1962, p.38; O'Rourke, 1902, pp.30, 34]. None, however, had approached the severity of that which extended over Ireland between 1845-7. By the end of the 1840s over one million Irish had perished from hunger and associated disease and another two million had emigrated to escape the misery. A measure of the extent of the tragedy which was visited upon Ireland, and the commonplace of death, can be gauged from a report in the *Cork Southern Reporter* in 1846. The newspaper's correspondent described seeing in a cabbage garden "the bodies of Kate Berry and her two children very lightly covered with earth, the hands and legs of her large body entirely exposed, the flesh entirely eaten off by the dogs, the skin and hair of the head lying within a couple of yards of the skull" [quoted in O Grada, 1989, p.42].

The first hint of the appearance of yet another threat to the potato crop came in a report from the Isle of Wight in August 1845 which warned that the potato blight, which had recently ravaged potato yields in North America, had now hit England. By September the fungus *Phythophthoria infestans* was in Ireland [Black, 1960, p.10; O'Rourke, 1902, pp.48-54]. Responses by the British Government to the famine occurred in two phases; the first during the government of Sir Robert Peel, which lost office in July 1846 after repealing the Corn Laws, and that of its successor, the government of Lord John Russell. Unfortunately for the Irish, Peel's unusual preparedness to intervene early in the crisis with the *secret* purchase of Indian corn meal from North America was not carried forward by Lord Russell [*British Parliamentary Papers* (hereafter *BPP*), 1846 [735], Vol.XXXVII, p.21; Black, 1960, p.114]. The opposition of Russell towards most forms of government-sponsored relief for Ireland, especially any action which threatened the profits of merchants, was made very clear in a letter from Sir George Grey, a minister in Russell's Cabinet, to a British official in Ireland who had sought additional funding. Grey had "the strongest objection to any grant from the Public Treasury in aid of or as a substitute for the rate for the relief of the poor" [Sir George Grey to Mr Twisleton, 21 December 1846, *BPP* 1847, Vol.LV, pp.12-13; see also Trevelyan to Routh, *BPP* 1846, [735], Vol.XXXVII, p.26].

Immediately after the replacement of the Peel Government was announced in July 1846, the Treasury's most senior officer in the field in Ireland, who as a Treasury employee had been trained to "cheesepare, to save a farthing wherever a farthing could be saved" [Woodham-Smith, 1962, p.58], was directed by the Assistant Secretary to the Treasury, Charles Trevelyan, that all relief arrangements in place "should be stopped or you run the risk of paralysing all private enterprise . . . The only way to prevent the people from becoming habitually dependent on Government . . . is to bring the operations to a close" [Trevelyan quoted in Woodham-Smith, 1962, p.89]. A second crop failure in 1846 was again met by Trevelyan's determination to make sure that the government did not interfere with the operation of markets, even if these were for basic foodstuffs [Trevelyan to Coffin, 3 April 1846, *BPP*, 1846, [735], Vol.XXXVII, p.101]. Significantly, Peel had been very aware of opposition in the

Treasury to any forms of government-sponsored relief and had encouraged those entrusted with the relief effort not to be frustrated by the Treasury [see Sir James Graham in O'Neil, 1957, p.214].

Despite the scale of the famine, as the death toll mounted throughout 1846 and 1847 large amounts of agricultural products were still being exported from Ireland to meet demand in England, which was also suffering from food shortages arising from the potato blight. This merely continued the existing set of arrangements which saw between 1843 and 1845 over 463,000 tons of food exported, irrespective of persistent food shortages in many regions of Ireland [O Grada, 1989, p.33; Editorial, *The Waterford Freeman*, 3 October 1946, in Kissane, 1995, pp.54-55; *BPP*, 1850, Vol.XVII, p.423]. As with any unfettered market in which products migrate to where the highest price is promised, during the Irish famine no impediments existed to the search for equilibrium between demand and supply. Abject need which, in the absence of financial means, could not be translated into an economically enforceable entitlement, had no relevance to the most efficient disposition of food supplies, as opposed to distribution based upon humane considerations.

The strict rendition of the principles of 19th century political economy, which both the governments of Peel and Russell insisted on moralistically applying, meant that the only entitlements which were morally and economically defensible were those exercised in and derived from market exchanges [see Sen, 1981, pp.161, 162]. Those able-bodied who could meet the qualifications of entitlement, that is they had sufficient money to buy food, would be fed while others would starve. Accordingly, widespread starvation may have been initiated by the potato blight but *famine* was induced by the absence of the necessary means to exercise purchasing power in the market and, therefore, in a society dominated by the rights of property and market utopianism, the absence of entitlement. Liberal capitalism according to Watts [2001, p.127] had become a "gigantic killing machine".

Relief, the British Treasury and Centres of Calculation: The responses of the British Government to the famine, especially from late 1846, were conditioned primarily by the prevailing economic antipathy towards virtually all forms of government intrusion in the operation of markets. All demands on the public purse were to be strenuously resisted. This sacred task was entrusted to the Treasury, which from the earliest evidence of impending widespread starvation in 1845 was already in attendance in Ireland. Although the Treasury accepted that the Irish could not be left completely to their fate, it went to extraordinary lengths to make sure that food went only to those amongst the desperate who had met the necessary property qualifications of entitlement. All the time, Treasury officers were to ensure that their accounting reports provided the necessary evidence that these entitlements, and only these, had been met. To ensure that all payments "were duly accounted for and properly vouched", the Treasury established very early that "accounts of every description of expenditure connected with the expected relief should be . . . promptly rendered to the Commissioners of Audit (at the Audit Office) at the close of every month" [Trevelyan to Routh, January 1846, *BPP*, [735], Vol.XXXVII, pp.16,17]. The close association between the Audit Office in London and the Treasury's agents the Commissariat was strengthened with the appointment of auditors from the Audit Office to Ireland [Treasury Minute, 9 October 1846, Trevelyan to Routh, 10 October 1846, *BPP*, 1847 [761], Vol.LI, pp.134, 137].

All monies for the purpose of relief had to go through the Treasury and be accounted for by the Treasury which, especially after the passage of the Audit Act, 1846 was ascendant in all matters of financial control. An examination of the immense array of Treasury documents, which stipulate the need for a seemingly endless number of accounting checks and accounting reports essentially as protections against unauthorised spending, unmistakably reveals the primary concern of the Treasury during the famine to be financial rectitude [see particularly good examples in *BPP*, 1847-48, Vol. XXIX, p.956ff and 1846, Vol.XXXVII, p.615ff]. As the government's financial gatekeeper, the Treasury made sure that the officials authorised to spend any monies did so according to regulations and accounted for them in a punctilious fashion. Through its accounting reports the Treasury was able, in terms of Miller's [1990, p.318] description, to govern at a distance through their centres of calculation located at Commissariat depots, principal amongst which were those at Cork and Limerick. Treasury regulations and accounting reports provided a constant and every present means of disciplining behaviour. Through the work of the Commissariat, whose later actions in the Crimean War (1854-6) were to become infamous [Funnell, 1990], the Treasury was able to exert an intimate and suffocating control over all relief measures, including those initiated by private charities. The numerous accounting reports required by the Treasury epitomised Foucault's systems of disciplinary surveillance by giving visibility to the smallest aspects of the Commissariat's operations, thereby constraining any tendencies to respond to the emergency other than on the sure grounds of indifferent, meticulous instrumentalism. Treasury policies and the prejudices of the government were ineffectual without the means by which they could be prosecuted. Thus, accounting provided the technologies to enforce the exclusion of those who were condemned as undeserving of assistance. Entitlements justified on economic grounds were the natural domain of accounting calibrations.

The Commissariat was the primary means by which the British army was provisioned both in Ireland and wherever else it operated. Woodham-Smith [1962, p.58] described it as "a civilian department of clerks" which became involved in civilian affairs only in the most extreme circumstances. In all matters pertaining to its operations, the allegiance of the Commissariat was firstly to the Treasury, to whom all staff would be held personally liable for all expenditures, stores and monies. The first concern of the Commissariat, therefore, was a rigid adherence to Treasury rules, conventions and wishes, most of which found expression in accounting reports. Far too frequently this put Commissariat officers at odds with their own consciences which, in the distressing circumstances in which they worked, may have compelled them to show more compassion [see comments by Commissary General Routh in Woodham-Smith, 1962, p.91]. When Trevelyan announced the appointment of Routh as Commissary General in November 1845, he made it very clear that his primary duty was to:

> . . . consider, and to call attention to, . . . the financial bearings of the measures which may be proposed for this purpose, . . . the object in view being to provide and dispense any supplies of food which it may become necessary to afford, according to such *arrangements as will impose the smallest possible ultimate burden on the public* . . . You will be careful, however, not to be a party to any promise of public money . . . *unless under express authority from the Treasury* [Trevelyan to Routh, *BPP*, 1846, [735], Vol.XXXVII, pp.21-22, emphasis added].

The purpose of the Commissariat food depots was to augment food supplies available from private contractors. The Treasury specifically prohibited Commissariat food stores from being opened in areas in which private suppliers already existed. The Commissariat was to take particular care not to go into competition with private firms or, if this was unavoidable, to ensure that the prices that it charged were slightly above those of its competitors [Treasury Minute, 31 August 1846, in O'Rourke 1902, p.170, see also p.222 and Treasury Minute of 29 September 1846, on p.226]. Only when private supplies had been exhausted would there be a call for its stores. In a letter from Trevelyan to Commissary General Routh in late 1846, Routh was told that "the Chancellor of the Exchequer will on no account permit you to undertake to provide food for any portion of the eastern district of Ireland . . . *No exigency however pressing, is to induce you to furnish supplies of food* for any districts except those for which you have already undertaken" [quoted in O'Neil, 1957, p.224, emphasis added].

The moral character of poverty and the moral effects of assistance, as previously noted, readily and conveniently justified harsh policies of exclusion from sources of relief. Administrators of poor relief during the famine were admonished to be vigilant to ensure that those assisted were not merely the destitute who in usual circumstances perennially afflicted Ireland. Only those who had been cast into a state of need solely as a consequence of the failure of the potato crop could be regarded as candidates for assistance. This required that a firm stand be taken "against the prevailing disposition to take advantage of the crisis" [Trevelyan to Routh, February 1846, *BPP*, 1846, [735], Vol.XXXVII, p.18]. The aim was never to eliminate poverty, the natural state of many. When in 1846 soup kitchens were proposed by several Union Boards of Governors, Edward Senior, Assistant Poor Law Commissioner, refused to allow them on the basis of moral consequences. It was wrong to feed "the whole body of the poor, in return for no work, subject to no test, with a better and more expensive description of food than they have ever been accustomed to" [correspondence of Edward Senior, 28 October 1846, *BPP*, 1847, Vol.LV, p.24]. Nassau Senior, a highly influential political economist, saw poverty to be the result of "misconduct" and not "misfortune", a position he shared with Ricardo, Mill, Malthus and Bentham, all of whom favoured the abolition of the poor laws and poor relief [see Checkland and Checkland, 1974, pp.29-31]. According to Nassau Senior:

> . . . the duty of the Government is simply to keep the peace, to protect all its subjects from the violence and

> fraud and malice of one another, and, having done so, to leave them to pursue what they believe to be their interests in the way which they deem advisable [quoted in Bowley, 1967, p.242].

Sir Charles Wood's relentless determination, as Chancellor of the Exchequer, and that of his energetic subordinate Trevelyan, to ensure that the vaults of the nation would not be breached by the desperate poor and starving betrayed an implicit faith in the ability of 'natural' market processes to deal with most problems involving the supply of material needs. In a letter to the progressive Irish landowner Lord Monteagle, Wood said that "the more I see of government interference the less I am disposed to trust it, and I have no faith in anything but private capital employed under individual charge" [quoted in Black, 1960, p.39]. Wood's uncompromising stand on spending public funds, as befitted a senior representative of the Treasury, lead Woodham-Smith [1962, p.87] to observe that he "united love of liberty with reverence for property . . . Humanitarianism was not among his undoubted virtues". In a similar vein Taylor [1976, p.75] concluded that:

> . . . it is easy to understand how Trevelyan and the rest thought that they were doing their duty. They were handling human beings as ciphers on a bit of paper. They looked up the answers in a textbook of economics without ever once setting eyes on the living skeletons of the Irish people. . . . (These) enlightened men feared that their whole social structure would topple down if men and women were given food they could not pay for.

The moral inflexibility of the Treasury during the famine saw it treat starving individuals as financial burdens on the public purse which were to be minimised by restrictive qualifications for entitlement to relief, irrespective of the frantic reports coming from its officers in the field. The only representation of the calamity in Ireland relevant to the Treasury was that which was to be found in the accounting for costings, inventories, receipts and loans. The mounting death toll, many of whom died in close proximity to the Commissariat depots, could be seen as vindication that the Treasury's policies were working as intended. Their work was not to save everyone in need, only those who by economic entitlement could afford to pay, which gave them the moral right to sustenance, or had been brought under the mean protection of the Poor Laws as a result of physical or mental infirmity. During the emergency, while the hungry who did not meet these qualifications for assistance could be heard crying outside the depot gates, the Treasury was effectively carrying out its work.

Thus, at regular intervals a strict accounting for the amount of food provided by the Commissariat required a meticulous reconciliation against lists of those eligible for assistance. One official in Ireland reassured Trevelyan that he would not let the "pressure of the people" deflect him from "purging the lists of all persons not requiring assistance" and that he was "determined never to flag, though the country is in a dreadful state" [*BPP*, 1847, Vol.L, p.293]. Uncalculating compassion had no place in Treasury policies and practices which were the administrative manifestation of the prevailing, intolerant attitude towards the Irish poor and the righteous appreciation of the virtues of property ownership. While entitlements were determined by property qualifications and the need to minimise encroachments on property rights, accounting was nothing less than a technology which served policies and practices which were indifferent to physical want and any conceptions of justice other than those derived from property.

CONCLUSION

The Irish famine exposed the ultimate consequences for a society based upon a conception of justice where entitlements were defined entirely in terms of the rights of property holders and where the primary function of the state and its agencies, notably the Treasury, was to protect these rights. As a technology which evolved in response to the needs of property, accounting was indispensable to policies of relief which served the interests of property. The interdependence between entitlement and justice, introduced in this paper through Robert Nozick's work, meant that the legitimacy of claims on the compassion of the state was determined according to the moral worth afforded to each individual by their property and not need. Pleas for rescue by the able-bodied on the basis of abject need were dismissed as illegitimate demands on the rights of the virtuous. The teachings of prominent political economists, notably Bentham, Senior and Locke, which advocated minimal government interference in the lives of citizens, both prepared the ground for government responses and provided a ready supply of justifications for all but the most uneasy consciences. Justice, as sanctioned by 19th century utilitarians and confirmed by Nozick's entitlement theory of justice, could only ever mean defence of entrenched interests.

The Irish died in large numbers during the potato famine because they did not have the means to acquire legal entitlement to food, not because there was a complete absence of food. The unrelenting indifference with which those in desperate need were regarded by senior British administrators intent on minimising government obligations was compounded when the government placed all responsibility for administering and delivering relief in the hands of the Treasury. At all times, the financial consequences for the public purse of any actions to ameliorate distress were to be given pre-eminence by the Treasury and its servants in the field. Most important to the Treasury in the dispensing of relief was meticulous stewardship of public resources by ensuring that all money and stores could be rigorously accounted for and that assistance went only to the eligible who met prevailing morality and economic tests. Enforcement of these proscriptions by the Treasury was made possible through a myriad of finely detailed accounting controls which sought to protect public property from the impertinent demands of the dying and private property from improper government levies or interference with the market. Whether in deciding upon the extent of the government's contribution to relief, the mode of relief or the qualifications for relief, accounting information figured prominently in providing justifications, legitimation and the means to control the relief effort.

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COMMENT

Christopher W. Nobes
UNIVERSITY OF READING

WERE ISLAMIC RECORDS PRECURSORS TO ACCOUNTING BOOKS BASED ON THE ITALIAN METHOD? A COMMENT

Abstract: Some readers might have interpreted Zaid [2000] as claiming that the accounting practices of the Islamic State already used or directly led to double entry. This comment puts Zaid's paper into the context of prior literature and points out that no evidence is offered in that literature or by Zaid to dispute an Italian origin for double entry. Nevertheless, there are clear influences from the Muslim world on some antecedents to Western accounting developments and on some features of pre-double-entry accounting in the West.

INTRODUCTION: ZAID'S HYPOTHESIS

Zaid [2000, p. 89] argues that "the development of accounting records and reports in the Islamic State have most likely contributed to the development and practice of accounting in the Italian Republics as documented by Pacioli in 1494". Zaid would seem to be seeking to identify the influence of the practices of the Islamic State on one or other of the following Italian developments:

1. various pre-double-entry accounting records and reports, or
2. the accounting records and reports specifically related to the practice of double entry.

Readers might well infer from the reference to "as documented by Pacioli" that Zaid is suggesting Interpretation 2. Such an

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inference might be confirmed when Zaid [p.74] states, without questioning it, that (according to ten Have) it is "received wisdom" that Italians borrowed the concept of double entry from the Arabs. Zaid also refers to "the Italian Method" [title]. The main feature that distinguishes "the Italian Method" of recording described by Pacioli [1494] from that of previous Western systems is double entry.

Zaid has confirmed[1] that he has no evidence that Islamic records were kept in double entry in the period examined in his paper and that, despite the above references, he did not intend to claim Islamic influence over the development of the system. It is vital to establish this because a mass of literature would be overturned if Zaid had proposed and provided support for Interpretation 2. Not only do standard texts [e.g. Edwards, 1989, p.48; Chatfield and Vangermeersch, 1996, p.218] now assume an Italian origin for double entry, but scholars have expended great effort on explaining why it developed there when it did and how it spread from these origins [e.g. Bryer, 1993;[2] Mills, 1994].

The purposes of this comment are to try to summarise the literature relating to the Islamic influence on accounting in order to put Zaid's paper into that context and to correct any misinterpretation of the paper that some readers may have reasonably made.

PRIOR LITERATURE

Double-entry bookkeeping (or, at least, substantial elements of it) can be found in use by Italian merchants in Provence in 1299-1300 [Lee, 1977] and in London in 1305-8 [Nobes, 1982] and in the records of the commune of Genoa in 1340 [de Roover, 1956]. It can be seen evolving in Italy in records earlier than this [Yamey, 1947; de Roover, 1956; Lee, 1973]. It is the later Venetian version of the system that Pacioli describes in a small section of his *Summa*.

There is widespread acceptance that many of the necessary conditions for the development of double entry (as suggested by Littleton, 1966) were established in the Muslim world earlier than in Italy and that they probably moved from the former to the latter. Parker [1989] examines this in detail. Incidentally, the suggestion that Hindu/Arabic numbers are important for

[1]Correspondence between O.A. Zaid and the author of 14 March 2001.

[2]As Macve (1996, footnote 14) notes, Bryer argues that double-entry reflects things about Northern Italy other than the needs of capitalism.

double entry (as in many references noted by Parker, 1989, p.110) can be countered by referring to the use of Roman numerals in the Farolfi and Gallerani records [Lee, 1977; Nobes, 1982].

Parker [1989] identifies medieval Jewish traders as the major intermediaries for taking Muslim ideas to Italy. He leaves open the question [p.112] of whether there was direct influence on accounting practices rather than on the antecedents of those practices (such as paper, arithmetic and money). Commenting on this, Scorgie [1994, p.141] refers to evidence that Jewish bankers in Cairo used a bilateral form of accounts in the eleventh and twelfth centuries, thus predating Italian use.

Albraiki [1990] provides some evidence that certain bookkeeping features needed for the development of double entry were invented in the Islamic world, but no evidence of direct transfer to suggest that they were not also separately invented in Italy. Albraiki examines sources relating particularly to tax records in the Islamic world from the ninth to twelfth centuries. They show the development of bilateral accounts and of dual entries for certain transactions. There is also balancing of accounts. However, there seem to be no trial balances of the whole system, nor balance sheets.

Hamid *et al*. [1995] also describe in detail the registers of a tax department of a 10th-century Muslim administrative office. They conclude that the environment was suitable for the development of double entry but that "[i]t cannot be concluded from this tentative enquiry that double-entry was practised" [p.331].

ZAID'S EVIDENCE

Like Hamid *et al*. [1995], Zaid [2000] describes (from secondary sources) some of the accounting records of the Islamic state. He identifies four types of journal, three types of other accounting book and two types of report. Some of these can be identified in Hamid *et al*.'s list [p.325] of nine "registers". Zaid's categorisation of the records adds some clarity, but it would have been useful to readers if Zaid had acknowledged and commented on the similarities and differences between the two outlines.

As noted above, Zaid does not suggest that he is offering evidence that any of the Islamic records were kept in double entry. The fact that certain accounts had two columns (e.g. for tax liabilities and tax payments) [p.82], classified expenses according to type [p.84] or totalled revenues and expenses by month [p.85] would neither confirm nor deny the existence of double entry.

Zaid notes [p.86] that "the concept of the balance sheet as a separate statement . . . was not common". There seems to be no evidence of the balance sheet in the sense of a periodic balancing list of debit balances and credit balances from a recording system (including some form of owner's equity). By contrast, Zaid reports [p.86] that for particular purposes "some balance sheet items were included".

The most specific of Zaid's suggestions [p.81] of borrowing by Italian merchants from Islamic merchants concern Pacioli's admonition to start accounts with "In the Name of God" and his use of the term "journal". However, pious inscriptions can be found in Italy throughout the centuries leading up to the appearance of double entry [Lopez and Raymond, 1955, pp. 146, 170-178, 188, etc; Yamey, 1974, pp. 143-144]; they were applied to other documents, not just to accounting.

As for the word "journal" (or Venetian "*zornal*"), Zaid suggests [p.81] that this "may be based on the translation of the Arabic word *Jaridah*", although later [p.89] the suggestion becomes a statement that the word "is the literal translation of the Arabic word "*Jaridah*"". However, the English word "journal" has, as one of its meanings, the same meaning as the English word "diurnal"; and a large dictionary of English [e.g. OED, 1970, p.1069] will show that the English word "journal" derives from the French "*journal*", related to the Italian "*giornale*", and that it goes back (like the English word "diurnal") to the late Latin adjective "*diurnalis*" and the ancient Latin adjective "*diurnus*" (both meaning diurnal or daily). In ancient Rome, a diary or day-book was a "*diurnum*". This pre-dates Islam by many centuries.

ZAID'S USE OF OTHER AUTHORS

Zaid's introductory reference to ten Have (see above) might mislead readers into thinking that it is now generally accepted by scholars that double entry was borrowed by the Italians. However, ten Have himself [1976, p.11] rejects the idea of any proof:

> It cannot be demonstrated that the Arabs in this period had already developed the double-entry system; thus there is no proof the Italians borrowed from the Arabs. Nevertheless, the possibility cannot be ruled out completely.

Zaid [p.74] cites Woolf [1912, p.54] as a further reference for the unlikelihood of accounting progress in Italy "at the time". Since this reference comes in the same paragraph as Zaid's quotation from ten Have, readers might infer that Woolf was referring to the period leading up to the appearance of double-entry in Italy. However, Woolf is referring to the period from 500 AD to 1000 AD. Woolf himself [pp.105-106] ascribes developments in accounting (up to the appearance of double entry) to the Italians.

Zaid [p.81] also tries to support the idea of Islamic influence by suggesting that Ball [1960, p.209] saw Pacioli's *Summa* as based on the work of Leonardo of Pisa who had translated Arabic writings, and that Chatfield [1968, p.45] saw Pacioli as "a translator of what existed in other cultures". Of course, these references by Zaid to Pacioli are not really relevant to his thesis. Examination of the content of a book of 1494 cannot help us much in determining the foreign influences on the development in Italy of accounting records and reports which occurred 200 or more years earlier.

Anyway, Zaid's references are likely to mislead readers again. Ball referred to Pacioli relying particularly on Leonardo of Pisa for other arithmetic matters, not for accounting. When it comes to accounting (both before and after the appearance of double entry), Ball [1960, p.187] is quite clear:

> The history of modern mercantile arithmetic in Europe begins then with its use by Italian merchants, and it is especially to the Florentine traders and writers that we owe its early development and improvement. It was they who invented the system of book-keeping by double entry.

There is nothing in the Chatfield [1968, p.45] reference which corresponds to Zaid's description. However, on p.45 of another Chatfield [1974] book, there is a reference to Pacioli drawing on the work of other Italian writers, but no reference to other cultures. Elsewhere, Chatfield [1974, pp. 32 and 34] specifically refutes the idea of non-Italian invention of various accounting practices (again both before and after double entry):

> Bilateral accounts developed in northern Italy between 1250 and 1440 . . . They were not the product of any earlier civilization . . . [p.32]. Though claims are made for an earlier invention of double entry in other places . . . in fact the Italian system was from the beginning essentially different from any which preceded it [p.34].

Perhaps the more recent scholarship cited earlier in this comment casts some doubt on the certainties of Ball and Chatfield, but this merely reinforces the point that Zaid should not have used them in support of his thesis.

CONCLUSION

Zaid's paper could be interpreted as suggesting Islamic influence on pre-double-entry Italian accounting records and reports (Interpretation 1) or directly on double-entry itself (Interpretation 2). Elsewhere Zaid refutes the latter.

Assuming Interpretation 1, Zaid offers no new evidence about the state of Islamic accounting in the period before Italian double entry, and does not link his description to prior descriptions. He offers no evidence of actual transfer of accounting technology to Italy. The most precise suggestions of borrowings (notably the word "journal") seem to be clearly unfounded.

Three authors (ten Have, Ball and Chatfield) called in aid by Zaid make it clear that they would either have been opposed to or could not have offered any evidence to support either Interpretation.

In sum, influences from Arabia on mathematics and on some other antecedents of accounting developments in the West are undoubted. It has also been clear for many years that several features of pre-double-entry accounting were used in the Muslim world before they were used in the West. Further, direct influences on some elements of Western accounting are plausible, although no evidence is offered by Zaid or others on this. Finally, there is still no evidence that double entry was first developed outside Italy. At present, it still seems that it was Italians who were the authors of the earliest surviving records kept as full double-entry systems; Italians who wrote the earliest surviving descriptions of double entry; and, above all, it is in sets of Italian records that the gradual evolution of the elements of double entry, towards a full system, can be seen in the 13th and 14th centuries.

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RESPONSE

Omar Abdullah Zaid
INTERNATIONAL ISLAMIC UNIVERSITY MALAYSIA

"WERE ISLAMIC RECORDS PRECURSORS TO ACCOUNTING BOOKS BASED ON THE ITALIAN METHOD?" A RESPONSE

Abstract: Offers a response to Nobes' comment on Zaid [2000]. Focuses on Nobes' interpretation of the arguments presented by Zaid, his contentions about 'pious inscriptions' and the use of the term 'journal'. Calls for broader thinking on the history of double entry bookkeeping and for more research on possible antecedents in the Islamic state.

Four aspects of Nobes' comment will be addressed in this response: Nobes' understanding and interpretation of Zaid [2000]; the requirement to start the books with the phrase '*In The Name of God*'; the use of the term '*Journal*' ; and, the readers' understanding of Zaid [2000] as perceived by Nobes.

First, the subject of Nobes' understanding and interpretation of Zaid [2000]. Nobes suggests that: "Zaid would seem to be seeking to identify the influence of the practices of the Islamic State on one or other of the following Italian developments:

1. various pre-double-entry accounting records and reports, or
2. the accounting records and reports specifically related to the practice of double entry."

It will be apparent to readers of Zaid [2000] that neither of these issues were the concern of, or addressed in, my paper. Rather, the paper specifically examined accounting *books* as

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one of the several components of the Italian Method. The paper did not refer to the 'double entry system'. It appears that Nobes understands the 'Italian Method' as being restricted to the 'double entry system'. The 'Italian Method', as we know it is a more comprehensive practice that should not be restricted to meaning only 'books' or the 'double entry system'. Accordingly, Zaid [2000] was an attempt to examine the influence of the accounting *books* developed in the Islamic state on the accounting *books* used in the Italian republics.

The subject of the 'double entry system' is a separate issue; and requires further research and discussion about 'who' was responsible for its development, and 'where' and 'when' it emerged. At present no conclusive evidence exist as to 'who' developed the 'double entry system'. All that we do know is that it was used in the Italian republics. Although I confirm that at present no evidence has been found that the 'double entry system' was developed by Muslim scholars or others outside (or inside) the Italian republics, the possibility of a direct or indirect contribution by Muslim accounting scholars to the development of the 'double entry system' through their accounting books, accounting systems, recording procedures and reports, cannot be ruled out. This possibility exists given the influence of Muslim traders on the practices of their Italian counterparts. As Wolff observed in the wider context, the condition in Europe at the time of the early use of double entry "was temporarily at a standstill, and we shall therefore not expect to find a visible or appreciable progress in methods of accounting during that period" [1912, p. 54]. This was also suggested by a number of Western scholars and is akin to Nobes' comment "that many of the necessary conditions for the development of double entry (as suggested by Littleton) were established in the Muslim world earlier than in Italy and that they probably moved from the former to the latter".

As Nobes mentions in his comment, "Zaid does not suggest that he is offering evidence that any of the Islamic records were kept in double entry". This statement would appear to conflict with his earlier contention that "Zaid would seem to be seeking to identify the influence of the practices of the Islamic State on one or other of the following Italian developments: 1. various *pre-double-entry* accounting records and reports, or 2. the accounting records and reports specifically related to the practice of *double entry*." (emphasis added). If the object of Nobes' comment is to explore whether developments in accounting and trade in the Islamic state contributed to the development of 'double-entry-system', my response is that neither a direct or indirect relationship between developments in the Islamic state and the emergence of the double entry system can be ruled out. This was also the opinion of a number of Western scholars including Littleton.

A second issue addressed by Nobes concerns his statement that "pious inscriptions can be found in Italy throughout the centuries leading up to the appearance of double entry . . . they were applied to other documents, not just accounting". I agree with Nobes' statement that "pious inscriptions" can be found in and outside Italy before and after Pacioli's documentation of the double entry system in the Italian republics. But the question that should be raised is whether the use of 'pious inscriptions' was a general requirement or was optional? According to Nobes this was not a mandatory requirement. According to Al-Mazendarany [1363] it was an *explicit mandatory requirement* that the accountant starts the accounting books with the phrase "In the Name of Allah, The Most Gracious, The Most Merciful" and the same was later suggested by Pacioli in 1494, whether the person is a pious accountant or not.

A third issue addressed by Nobes is the use of the term 'Journal'. Nobes states "the English word "journal" derives from the French '*journal*', related to the Italian "*giornal*", and that it goes back (like the English word "diurnal") to the Latin adjective "diurnalis" and the ancient Latin adjective "*diurnus*" (both meaning diurnal or daily). In ancient Rome, a diary or day-book was "*diurnum*". This pre-dates Islam by many centuries". In Zaid [2000] reference is made to the word "Zornal" and the current equivalent "Journal" not as an 'abstract' word but as associated with accounting as suggested by Pacioli. Of course, the words "Journal" or "Zornal" and "Jaridah" existed for centuries before Islam but the important issue is not the words themselves but their use and meanings in the context of accounting. This is the same as with many other words such as the word/name "Mohammad". This word was used before Islam but it was only after Islam that it became exclusively associated with Muslims. The words "Jaridah", "Journal" and "Zornal" were similarly associated with accounting although they could be used and have meanings in different contexts. The issue here is the closeness of the meaning and use of the word "Jaridah" with the meaning and use of "Zornal" and "Journal". It would be useful if Nobes could show whether the word "Zornal" was used in an accounting context in the Italian republics before the Renaissance and in the practice of accounting documented in

Pacioli's book. The focus should not be on the "abstract" word but its meaning and use as an integral part of practice as is the case with "*Zornal*" or "Journal" and "Accounting".

A fourth issue raised by Nobes is "the readers' understanding" of Zaid [2000]. Nobes offers comments such as: "readers might infer", "Readers might well infer", and "might mislead readers". What may be inferred reflects Nobes' personal opinions and understanding of the history of double entry bookkeeping. It would not be conducive to academic debate if Nobes assumed that all accounting historians were to think in the same direction and interpret Zaid [2000] in the same way as himself. This narrowness of view is further suggested when Nobes states "it is vital to establish this because a mass of literature would be overturned if Zaid had proposed and provided support for interpretation 2".

In conclusion, the author appreciates Nobes' comment as a constructive contribution to the ongoing debate and unresolved questions concerning 'when' and 'where' the double entry system was developed and 'who' initiated its development.

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NOTICEBOARD

Call for

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Recent conferences have included:

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Those wishing to offer papers to be considered for presentation at the conference should send an abstract of their paper (not exceeding one page) to:

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The deadline for submissions is 31 May 2002 with earlier proposals for papers encouraged.

Following the refereeing process, applicants will be advised of the conference organisers' decision on *30 June 2002*.

Accounting History

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Management Accounting as Social and Institutional Practice

Increasingly, the role of management accounting in both shaping and being shaped by its social and institutional context is being recognised and underscored (Hopwood, 1994; Puxty, 1993). Management accounting as social and institutional practice, as opposed to objective technique, is particularly discernible in historical research. Historical studies reveal how management accounting serves to create and foster social and institutional arrangements across both space and time. As historians examine management accounting in its contexts, we shed greater light on the intertwining of accounting within organisational and social life. Social and institutional practices do not emerge in a vacuum. Rather, these practices emerge as a result of the impacts of differing historical developments and point-in-time events. Across time and space, management accounting alters the organisational terrain and is implicated in relationships of power and domination. Moreover, management accounting is understood increasingly as a calculative force within the organisation, as compared to a neutral, objective documentor of events and activities.

The objective of this special issue of Accounting History is the examination of social and institutional practice, with a view to articulating the role of management accounting in constituting and re-constituting the organisation. Submissions are sought which explore themes in historical perspective such as:

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References:

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