Accounting Historians Journal

Volume 30
Issue 2 *December 2003*

Article 10

2003

Accounting Historians Journal, 2003, Vol. 30, no. 2 [whole issue]

Published by
The Academy of Accounting Historians

Praeterita
Illuminant
Postera

The Accounting Historians Journal

December 2003
Volume 30, Number 2

Research on the Evolution of Accounting
Thought and Accounting Practice

Published by
The Academy of Accounting Historians

Praeterita
Illuminant
Posterea

The
Accounting
Historians
Journal

December 2003
Volume 30, Number 2

Research on the Evolution of Accounting
Thought and Accounting Practice

The *Accounting Historians Journal*
Volume 30, Number 2
December 2003

2003 OFFICERS

President
Sarah Holmes
Texas A&M University
(979) 845-7934; FAX: 845-0028
email: sholmes@cgsb.tamu.edu

President-Elect
Richard K. Fleischman
John Carroll University
(216) 397-4443; FAX: 397-3063
email: fleischman@jcu.edu

Vice-President - Communication
Daniel L. Jensen
Ohio State University
(614) 292-2529; FAX: 292-2118
email: jensen.7@osu.edu

Vice-President - Partnerships and International
Gloria L. Vollmers
University of Maine
(207) 581-1979; FAX: 581-1956
email: vollmers@maine.edu

Treasurer
John T. Rigsby
Mississippi State University
(662) 325-1635; FAX 325-1646
email: jrigsby@cobilan.msstate.edu

Secretary
Robert B. Williams
University of Wollongong
61 242 213616; FAX 61 242 214157
email: Robert Williams@uow.edu

2003 TRUSTEES

In addition to publishing the *Accounting Historians Journal*, the Academy publishes *The Accounting Historians Notebook*, Monographs, and reprints of Accounting History Classics. Annual membership dues, including subscriptions to the *Accounting Historians Journal* and *The Accounting Historians Notebook*, are $45 (U.S.) for individuals, $55 (U.S.) for institutions and libraries and $10 for students. Inquiries concerning membership, publications, and other matters relating to the Academy (other than submission of manuscripts to the *Accounting Historians Journal*) should be addressed to Kathy H. Rice, The Academy of Accounting Historians, The University of Alabama, Box 870220, Tuscaloosa, AL, USA 35487.

Praeterita
Illuminant
Postera

The
Accounting
Historians
Journal

December 2003
Volume 30, Number 2

AHJ EDITORIAL STAFF

The *Accounting Historians Journal* is a refereed, scholarly journal published semiannually in June and December, printed by the Birmingham Printing and Publishing Company, 3101 6th Avenue South, Birmingham, AL 35233. ISSN 0148-4182. *AHJ* does not assume responsibility for statements of fact or opinion made by its contributors.

ACCOUNTING HISTORIANS JOURNAL

Semiannual Publication of
The Academy of Accounting Historians

Volume 30, Number 2 **December 2003**

CONTENTS

Statement of Policy

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.

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

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

6. While historians have long debated the ability to assign causation to particular factors, we encourage authors to address and evaluate the probable influences related to the problem or issue examined.

7. Authors should clearly state all their interpretations of results, and the conclusions they draw should be consistent with the original objectives of and data used in the study. Interpretations and conclusions should be clearly linked to the research problem. Authors also should state the implications of the study for future research.

ACCOUNTING HISTORIANS JOURNAL

Guide for Manuscript Submission

Three (3) copies of manuscripts for publication review should be submitted to Professor Stephen P. Walker, Cardiff Business School, Aberconway Building, Colum Drive, Cardiff CF10 3EU, U.K. There is no submission fee, although authors are urged to consider joining The Academy of Accounting Historians by completing the membership application form on the inside of the back cover. Papers which have been published, accepted for publication elsewhere, or are under consideration by another journal are not invited. The *Accounting Historians Journal* will accept a variety of presentation formats for initial submission as long as the writing style is reflective of careful scholarship. Notwithstanding, authors should attend to the following guidelines:

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

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.

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

5. A bibliography of all references cited in the text.

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

Authors will be provided with 3 copies of the *AHJ* issue in which the manuscript is published. Reprints may be ordered by arrangement with the publisher.

Accounting Historians Journal
Vol. 30, No. 2
December 2003

Ignace De Beelde
UNIVERSITEIT GENT

THE DEVELOPMENT OF A BELGIAN ACCOUNTING CODE DURING THE FIRST HALF OF THE 20TH CENTURY

Abstract: Continental European countries are familiar with standardized charts of accounts. Practices in these countries have been quite diverging however, ranging from the voluntary adoption of schemes developed by professionals or associations to state-imposed charts. In the development of these schemes, several Belgian accounting scholars have played an important role, particularly from the end of the 19th century to the beginning of the 20th century. This paper links the charts proposed in Belgium with attempts to develop unified accounting and costing methods and efforts to introduce principles of scientific management around the end of the Second World War. It also seeks to explain why the introduction of decimalized charts took longer in Belgium than other countries such as France.

INTRODUCTION

The observation of significant international differences in financial accounting practices has triggered a large body of research and different types of classifications of accounting systems across countries [for a summary see Nobes and Parker, 2002]. These classifications of accounting systems tend to place those of Belgium and France in the same category. Although there are many similarities between the accounting frameworks of both countries, the historical development of accounting was rather different. Currently, both Belgium and France have an accounting plan. The French 'plan comptable' was introduced after the Second World War and the state was strongly involved in its implementation [Mommen, 1957, CNC, 1957]. It used a decimal classification of the accounts with up to five-digit codes. Development in Belgium was different: a three-digit decimal chart of accounts only became compulsory in 1983, following

Acknowledgment: I am grateful to the two anonymous referees and the editor for their comments which helped to improve the paper significantly.

Submitted August 2002
Revised August 2003
Accepted August 2003

the implementation of the Fourth EC Directive.[1] On the following pages the causes of this divergence in development are discussed. It will be hypothesized that the dominance of the Société Générale de Belgique, the major Belgian holding company, and its preference for the Godefroid [1864] classification of accounts, explains the reluctance to arrive at an officially imposed chart of accounts.

The second half of the 19th century and the 20th century were periods of intensive thinking in Belgium about ways to organize bookkeeping and financial reporting [Vlaemminck, 1956]. Before 1983 there were many proposals from accounting professionals and academics, as well as private initiatives from industrial bodies. This paper examines some of these initiatives.

The French 'plan comptable' is a typical example of accounting charts as they are currently applied in continental Europe [Roberts, 1994]. It is a balance sheet oriented code because many of its classes of accounts relate to that financial statement. It is also an example of a dualist approach to accounting, because accounting for internal transactions, such as the calculation of unit cost, is not necessarily included in the system which culminates in the financial statements. Most of the initiatives that were discussed in Belgium had a monistic perspective and focused on cost calculations. A second hypothesis developed in this paper is that the early attempts to harmonize Belgian accounting codes were driven by a desire to unify cost calculation practices, rather than financial statements.

Literature Review on the Development of Charts of Accounts: The development of charts of accounts was widely discussed in Belgium during the 1950s. This reflected similar interest in other European countries. The Anglo-American world appears to have been less engaged with this discourse [Mommen, 1957]. Although the number of academic articles devoted to the development of accounting charts is generally limited, it is the German accounting plans and the French 'plan comptable' which have

[1] In a few industries there were already mandatory provisions with respect to charts of accounts in Belgium in the 1960s. The best known example of such regulations is a ministerial decree of 22 May 1965 which imposed uniform accounting practices on the colliery industry, including a chart of accounts that also served for cost accounting purposes (see also Olivier, 1979). This regulation is not the focus of our analysis because it was driven by European interventions in the coal industry. A similar situation existed in electricity production. Except for these few examples, the state seems to have played no role before the 1970s.

received most attention [e.g., Forrester, 1977; Standish, 1990; Bechtel, 1995]. A series of articles in *The European Accounting Review* broadened this focus to other countries such as Spain [Chauveau, 1995], and Russia and Romania [Richard, 1995b].

Summarizing this literature, Richard distinguished three phases in the structuring of accounts [1995a]. The first phase is 'formal monism' during which financial and management accounting are integrated in one accounting system. This is followed by a transitional phase. The focus of 'formal monism' was accounting unity, excluding all types of partitioning within an accounting system. Then follows a period of "exclusive recourse to the principle of formal dualism" [Richard, 1995a: 89]. Such systems were characterized by the creation of different subsystems within the accounting system, giving the same results in different ways and linking subsystems to each other using what were called 'mirror accounts'. Typically, one subsystem focused on the preparation of financial statements and another subsystem provided more detailed information that could be used for management purposes. Geertman [1949] uses the same terminology and refers to Löwenstein who apparently introduced these terms. In his discussion of the first phase in the structuring of accounts, Richard stressed the important role of Belgian accountants such as Godefroid and Blairon. Their contributions are discussed in the following paragraphs.

THE EMERGENCE OF CLASSIFICATION IN 'CHAPTERS'[2]

In the 19th and early 20th centuries, the legal requirements with respect to accounting and financial reporting to shareholders in Belgium were very limited. From 1872, the Commercial Law (Book 1, Title III, art. 16-19) prescribed that each merchant had to keep a journal, an inventory book and a book containing copies of all in and outgoing correspondence. Companies were subject to a number of additional requirements, listed in Book 1, Title IX of the Commercial Law. The board of directors had to present a balance sheet and a profit and loss statement to the general meeting of shareholders. The balance sheet had to report assets and liabilities separately. However, no specific format was prescribed. The law merely specified that a distinction

[2] The charts reproduced in this paper are reported on the 'articles' level, or, for the decimalised charts, on a two-digit level. The original charts generally were much more detailed, with for example, account numbers of up to four or five digits.

had to be made between fixed and current assets and between equity, bonds, guaranteed debts (such as those guaranteed by mortgages) and unguaranteed debts. Neither did the Commercial Law impose any format requirements or minimum content of the profit and loss account. It was further prescribed that these financial statements should include 'necessary depreciation', but again, the law did not include guidelines. Apart from these few rules, there were no other mandatory accounting requirements such as standards. Contemporary observers strongly criticized the insufficiency of these regulations, but without success. The statute was not fundamentally changed until 1975 [see for example, Van Ryn, 1954]. The absence of detailed regulations gave companies and accountants a significant degree of freedom in reporting practices. Consequently, different ways of reporting and of structuring accounting systems emerged.

The Ideas of H. Godefroid: As suggested earlier, an author who had a significant impact on the development of accounting codes in Belgium was H. Godefroid. Godefoid's *Cours de Comptabilité Pratique, Industrielle et Commerciale* was published in 1864. Godefroid began his book by stating that: "Of all the books on bookkeeping that have been published, and that are being published every year, there is not one that discusses a complete accounting system as it is understood nowadays in the industrial world" [1864, p. 5].

This orientation towards industry, as opposed to commerce, turned out to be a key factor in the development of the codes discussed in this paper. Because of the importance of manufacturing and extractive industries in Belgium and elsewhere, Godefroid sought to address the lack of appropriate textbooks on accounting. His chart of accounts, reproduced in Table 1 below, was designed for the traditional heavy industries of the period, collieries and iron and steel plants. Godefroid organized the accounts in his system in chapters *('chapitres')* and articles *('articles')*. He explained, "It is certain that the division and categorization of the accounts in titles, in chapters, in articles, is the clearest method, the simplest, the most natural, that one could adopt to give anyone access to the dark catacombs of the accounting entries" [Godefroid, 1864, p. 65].

A structure based on a division in chapters, with further subdivisions in articles, seems to have been an innovation in industrial and commercial accounting. Mommen [1957] considered the structure to be a significant improvement on past practices. However, this vocabulary was already used in the public sector in France in relation to the registration of receipts and payments. Lemarchand [1999] states that in 18th century France public sector accounting imported the account concept from commercial accounting as a permanent unit of classification, mainly oriented towards controlling cash flows between the state and those who financed it. Although the history of the public sector in Belgium has never been studied from this perspective, the common language and the close connections between France and Belgium make it probable that this terminology was also known in Belgium. This specific vocabulary might have been transferred from state organizations to the private sector in Belgium during the 19th century.

In Godefroid's scheme, the initial chapter included the 'first establishment' accounts (essentially, types of fixed assets). A chapter that reported general expenses followed. The third chapter was called 'General stores' and included, for example, coal, coke and metals. The fourth chapter allowed separate accounting for divisions. The fifth 'Particular accounts' chapter reported equity, various debtors and profits and losses. The sixth chapter included cash and the investment portfolio. This structure is illustrated in Table 1.

Godefroid strongly criticized the fact that existing textbooks emphasized accounting frameworks which had been developed for commercial, as opposed to industrial activities. Consequently, these textbooks did not discuss how to account for activities conducted by different divisions, an essential characteristic of larger industrial companies:

> We thought it useful to prepare a simplified accounting course, based on practice and experience, taking as our perspective accounting for a large company that includes different types of industries, such as: iron production, machine construction, coal and minerals exploitation and glass production. By bringing these different industries in one centralizing system based on the same principle, it will become easy to understand the whole mechanism of the accounting entries [Godefroid, 1864, p. 8].

Existing textbooks also failed to offer consistent ways of dealing with different types of expenses incurred by industrial firms. One of Godefroid's objectives was to propose a unified and rational solution to this problem:

> It is necessary for the manager to be able to trace and track all types of production. In this way, one can be

TABLE 1

Chart of Accounts in Godefroid, 1864

CHAPTER 1. First establishment Art. 1 Buildings and real estate Art. 2 Equipment Art. 3 Furniture Real estate divisions Art. 1 Collieries Art. 2 Mines Art. 3 Blast furnaces Art. 4 Rolling mills Art. 5 Constructions workshops Art. 6 Glassworks Preparatory works Art. 1 Collieries Art. 2 Mines Art. 3 Blast furnaces Art. 4 Rolling mills Art. 5 Constructions workshops Art. 6 Glassworks	CHAPTER 4. Divisional accounting Art. 1 Collieries Art. 2 Mines Art. 3 Blast furnaces Art. 4 Rolling mills Art. 5 Constructions workshops Art. 6 Glassworks Art. 7 Balance via particular accounts
CHAPTER 2. General expenses Art. 1 Discounts and interests Art. 2 Interest on working capital Art. 3 Salaries Art. 4 Office supplies Art. 5 Travel expenses and commissions Art. 6 Taxes and patents Art. 7 Cars Art. 8 Insurance Art. 9 Petty costs Art. 10 Various expenses Art. 11 Balance via particular accounts	CHAPTER 5. Particular accounts Art. 1 Equity Art. 2 Shares Art. 3 Reserves Art. 4 Various debtors Art. 5 Profit and loss Art. 6 Divisional profits
CHAPTER 3. General stores Art. 1 Coal Art. 2 Mines Art. 3 Coke Art. 4 Castine Art. 5 Pig iron Art. 6 Cast iron Art. 7 Iron Art. 8 Forged iron Art. 9 Boilers Art. 10 Machines Art. 11 Mechanical objects Art. 12 Consumables Art. 13 Transfer from previous year	CHAPTER 6. Financial service Art. 1 Cash Art. 2 Portfolio

> certain of all items that are part of the unit cost ('prix de revient'), the angular stone of the building . . . to each finished product should be charged related labor costs, the value of raw materials used in production, consumables, direct and indirect expenses, in other words, maintenance expenses for buildings, that have to be depreciated, wear and tear of equipment, salaries, etc [Godefroid, 1864, p. 9].

As Godefroid's chart was oriented towards industrial activities one of its main objectives was to produce reliable cost calculations. It did not focus on the preparation of balance sheets: the balance sheet accounts were mainly found in a few chapters such as chapter 5 'Comptes particuliers' which included accounts such as capital, reserves and debtors. Chapter 2 broke down overhead expenses, chapter 4 also related to expenses, chapter 1 included 'preparatory works' that were normally charged to the profit and loss account, and the fixed and current asset accounts in chapter 1 and 3 were not reported in such detail in the balance sheet (inventories and divisionary fixed assets). The structure of chapters 1, 3 and 4 further shows that this chart was developed for large heavy industry companies.

The Role of the Société Générale de Belgique: Mommen [1957] concluded that Godefroid's chart helped unify accounting systems in different companies. However, Mommen believed that this unification was only partial because: the chart was not based on a 'general logic of economic flows', the structure of the chapters was developed for one type of company only, and the classification could not be used as a rational basis for the balance sheet or for accounting education. However, the chart did attract attention in the steel industry. The Société Générale de Belgique, heavily involved in steel production, choose to further develop the Godefroid scheme and use it as the basis for the classification of the accounts it imposed on the industrial companies under its control.

Godefroid's ideas remained influential in Belgium via the chart of accounts developed by the Société Générale. The Société Générale de Belgique, originally founded in 1822 as 'Société Générale des Pays-Bas pour favoriser l'industrie nationale', was the main Belgian holding company of its day [Crombois, 1994; Watelet, 1993; Laureyssens, 1986, 1989; Bonin, 1988; Van Der Wee, 1982; Janssens, 1985]. Around 1837, it controlled approximately 25% of Belgian heavy industry, mainly colliery companies, furnaces and steel and iron factories.

Its influence increased through the 19th century and around the mid-20th century it had controlling interests in Belgian financial institutions, the production of coal, iron and steel, metalworks, non-ferrous metals, electricity, transport, glassworks, the building industry, chemicals, textiles, paper, as well as about 70% of the economy of Congo [Joye, 1964]. Coalmining was one of the major industries for the Société Générale and this explains why the accounting rules it developed were geared towards colliery companies. Eventually, the scheme was also used in collieries not controlled by the Société Générale and in other industries [NCAB, 1964, De Beelde, 1995].

The Société Générale chart used account classes (called 'comptes généraux' or 'chapitres') and accounts ('articles'). It is illustrated in Table 2. For all account classes and accounts the Société Générale provided a description of contents, often with the name of other accounts to be used jointly when registering an accounting entry.

The affinity with Godefroid's scheme is obvious. The chart did not refer to 'classes of accounts' but to 'general accounts'. It was not described as a 'plan' but was referred to as the 'rules' of the Société Générale (*règles de la Société Générale*). The chart still incorporated many expense accounts, which were often balanced at the end of each accounting period, generally twice a month. Examples are the general accounts, 'travaux préparatoires' (preparatory works), 'frais d'exhaure' (drainage expenses), 'frais d'extraction' (extraction expenses) and 'transports à la surface' (above ground transport). Generally these accounts were debited for all related expenses and credited at the end of the period through the coal account. Consequently, the coal account registered, on its debit side, production expenses and, in a later phase, also the general expenses and selling expenses. Proceeds from sales were recorded on the credit side. Taking account of inventory movements, it was possible to calculate profit and to transfer this to the profit and loss account. Archival evidence shows that actual practice was more complex and divergent [De Beelde, 1995].

In addition to the determination of profit, this system allowed a calculation of unit cost within the traditional accounting system. In this way it comprised an integrated accounting system or an example of 'formal monism' [Richard, 1995a]. Again, archival evidence for the coalmining industry shows a more complex situation in practice. Even in the firms that used the Société Générale system, information in the cost sheets was more detailed than the data found in general ledgers or other

TABLE 2

Chart of Accounts of the Société Générale

CHAPTER 1. First establishment Art. 1 Concessions, land and buildings Art. 2 Office furniture Art. 3 Service equipment Art. 4 Plants Art. 5 Railway network Art. 6 Electric installations Art. 7 Drainage pits Art. 8 Extraction and ventilation pits Art. 9 Coal treatment installations Art. 10 Cokes factory Art. 11 Various installations	CHAPTER 7. Coal
CHAPTER 2. Preparatory works	CHAPTER 8. Stores (Warehouse) Oil and greases Iron and metals Wood Cords Other objects
CHAPTER 3. Drainage expenses	CHAPTER 9. General workplaces
CHAPTER 4. Extraction expenses	CHAPTER 10. Derivatives of coal Coke Deposits
CHAPTER 5. Surface transport	CHAPTER 11. Particular accounts Internal accounts Shares Bonds Legal reserve fund Additional reserves Provisions Profits and losses Work force Social charges . . . Third party accounts Debtors Creditors
CHAPTER 6. General Expenses Debit Art. 1 Interests and financial expenses Art. 2 Wages and salaries Art. 3 Selling expenses Art. 4 Offices supplies and petty costs Art. 5 Various consumption Art. 6 Taxes Art. 7 Rents and damages Art. 8 Maintenance of houses and buildings Art. 9 Maintenance of roads and streets Art. 10 Various expenses Credit Art. 1 Discounts and interests Art. 2 Fines Art. 3 Various rents Art. 4 Revenue from roads Art. 5 Various revenue	CHAPTER 12. Financial service Cash Notes on hand Securities owned Société Générale

preserved accounting books. In the La Haye Colliery, for example, there were monthly summaries of operations, detailing expenses for each pit, balance sheets and data on sales [AEL, Entreprises, Gosson, nr. 206]. The documents mention 'Transferred to accounting', suggesting that they were created in another department. After a series of mergers in 1930-1931, the company became the Gosson - La Haye - Horloz réunis Colliery and in the post-merger period the cost reports became even more detailed [AEL, Entreprises, Gosson, nrs. 299-300 and 641-675]. Some of these documents were titled 'report of the works director', clearly demonstrating the intervention of production rather than accounting staff. In some mines both the accounting departments and the production engineers calculated a (differing) cost price, whereas in other mines they apparently co-operated. This shows that even if we have formal monism, the actual calculation of unit cost could take place outside the accounting system.

Companies operating in the coal industry outside the direct control of the Société Générale generally also based their accounting code on this scheme, but often adapted it slightly [De Beelde, 1995]. Archival records show that some mines implemented a further analytical breakdown of some of the prescribed accounts. Although this accounting code was essentially designed for colliery companies the application of the chart was not resticted to concerns in this sector. It is reported to have been used in many other industries [Mayer, 1964] and the textbook by Ansotte and Defrise [1910] includes many examples of charts for other types of industries based on the colliery scheme. As late as 1964, the chart was still used by some companies in the Hainaut region of Belgium [NCAB, 1964].

THE DEVELOPMENT OF A DECIMAL CLASSIFICATION OF ACCOUNTS

Its adoption by the Société Générale encouraged a focus on the classification of accounts in 'chapters' in Belgium. During the 20th century, this was gradually replaced by a decimal classification of accounts.

The development of decimal classifications was widely discussed in the first half of the 20th century. This discourse can also be traced to the contribution of Melvin Dewey, who devised a general decimal classification scheme in 1873 and whose work was well known in Belgium. Dewey's scheme served as the basis for the universal bibliographic repertory that was to be developed by the International Institute for Bibliography *(Institut International de Bibliographie, IIB),* created in Brussels in 1895 by H. La Fontaine and P. Otlet. The IIB published a first version of *Manuel du répertoire bibliographique universel* in 1905. Between 1927 and 1929, a new version was published as the Universal Decimal Classification. The focus of Otlet and La Fontaine was not originally on accounting. Their objective as documentalists was much broader: "How best was order to be introduced into this proliferating, disorderly mass in such a way that progress in the world of learning could continue efficiently and effectively? … How could the international flow of information . . . become more open and more effective?" [Boyd Rayward, 1990, p. 2].

As part of their ambition to provide a structure that would allow the classification of all knowledge, Otlet and La Fontaine also turned to accounting. Paul Otlet, as Secretary-General of the IIB, published a short article in 1905 on accounting schemes [Otlet, 1905]. He worked with other accounting scholars in the Société Académique de Comptabilité de Belgique [Mommen, 1957]. On October 29, 1909 the Société Academique published a report which argued for a rational classification of accounts. Otlet's ambitions extended further. His greater object was the international harmonization of accounting codes. During the 2nd Accounting Congress in Charleroi in 1911, he founded – with 26 other persons – an International Accounting Association (Association Internationale de Comptabilité). The major aim of this association was the unification and internationalization of accounting systems and the adoption of a universal accounting scheme.

During the Accounting Congress of August 1910, held in Brussels during the International Exhibition, a decimal accounting code was presented but received a limited response. During the Fifth International Accounting Congress in Brussels, 1926, Otlet again presented a report on the future of accounting and its relation to the development of a system that would organize all knowledge of the world [Otlet, 1926]. In 1929, during a congress organized with the Association of Accountants in Catalonia, a decimal classification of accounts was also presented [Forrester, 1996]. Other conferences followed and discussions on accounting plans continued. Two major lines of thought emerged. Followers of Otlet argued for an international chart of accounts that would be linked to an overall record of the world. To them, the harmonization of accounting was a subset of a wider, more ambitious, objective. Others focused on accounting plans that were developed in national contexts, and for which the objectives were more narrowly defined, referring to accounting principles as the basis for accounting plans. Otlet's ideas never gained widespread acceptance in Belgium and his significance gradually waned during the 1930s. He lost his influence on the *Institut International de Bibliographie* and a conflict with the Belgian government and the outbreak of the Second World War impacted negatively on the activities of the other organizations in which he was involved [Boyd Rayward, 1990]. Otlet died in 1944.

Hector Blairon's Chart: The 'accounting principles based' approach was to play an important role in the further evolution of the classification of accounts in Belgium. In 1926 the first edition of Hector Blairon's influential textbook, *Cours complet de comptabilité des industries manufacturières*, was published [Blairon, 1926]. Mommen [1957] shows that the first versions of his 'plan comptable' go back to 1912 and were based on 'chapitres décimalisés'. Table 3 shows the chart of accounts Blairon used in his classes in 1921, as published by Mommen in 1957 [see also Haulotte, s.d.].

Blairon's accounting code represented a major change although it originally kept the title of 'chapters' for the general accounts. Compared with the Société Générale scheme, the structure of Blairon's code is more systematic and closely equates to the structure of the balance sheet. The earlier chart places capital, other types of equity, bank accounts, all debtors/creditors, wages to be paid, and profits and losses together in one 'chapter', 'Comptes particuliers'. The older chart also used what was called a 'mixed coal account'. Although this account recorded movements in the coal inventory, the measurement of inventory was not its only objective. Because it valued coal leaving inventory at selling price, it was also used to determine the results for each accounting period. Contrary to this, Blairon separated, at the 'chapter' level, equity, fixed assets, available assets and realizable assets, and brought debtors and creditors together in a separate chapter. The structure of the expense accounts could also be considered more 'modern', because Blairon distinguished manufacturing costs, maintenance expenses, general overhead expenses and selling expenses. His system offered further clarity by having a separate chapter for allocation accounts (wages, depreciation, and general expenses) and by specifying separate accounts for unit cost calculation, the inventory account being focused only on the measurement of inventory.

TABLE 3

Chart of Accounts by H. Blairon, 1921

CHAPTER 0. Equity and provisions		CHAPTER 5. General administration and selling expenses	
00	Capital	50	General administration expenses
01	Reserves	51	Administrative expenses
02	Various provisions	52	Taxes and insurance
03	Depreciation	53	Selling and marketing expenses
04	Financial revenues		
05	Financial expenses		
06	Various profits		
07	Various losses		
08	Monthly results		
09	Annual results		
CHAPTER 1. Fixed assets		CHAPTER 6. General plant expenses and maintenance expenses	
10	Land	60	Factory expenses
11	Buildings	61	Mainentance expenses
12	Fixed equipment		
13	Movable equipment		
14	Small equipment		
15	Furniture		
16	Intangibles		
17	Formation expenses		
CHAPTER 2. Available assets		CHAPTER 7. Allocation accounts	
20	Cash	70	Allocation of salaries
21	Notes to receive	71	Allocation of transport
22	Securities and participations	72	Allocation of depreciation
23	Postal account	73	General expenses monthly allocated
24	Stamps		
25	Cash transports		
CHAPTER 3. Warehouses		CHAPTER 8. Production accounts	
30	Raw materials	80	Consumption of raw materials
31	Consumables	81	Consumption of consumables
31	Finished goods	82	Direct wages
31	Commercial sales warehouse	83	Part in general administration expenses
		84	Factory expenses
		85	Maintenance expenses
		86	Allocation of depreciation
CHAPTER 4. Debtors and creditors		CHAPTER 9. Sales accounts	
40	Debtors	90	Finished goods sales
41	Creditors	91	Raw materials sales
42	Banks	92	Consumables sales
43	Sales agents	93	Commerical sales
44	Salaries payable		
45	Accounts shareholders		
46	Taxes to be paid		

The decimal classification of accounts was further developed in subsequent editions of Blairon's textbook. 'Account class' replaced the term 'chapter' and the number of accounts was further (and significantly) increased. Four classes of accounts included balance sheet-related accounts while the others formed the profit and loss account. The most developed versions of the code allowed a detailed and separate registration of all types of expenses at individual product level. It is obvious that this code made possible a detailed cost calculation for each individual product on a monthly basis.

TABLE 4.
Chart of accounts of H. Blairon, 1926

00 Capital 01 Reserves 02 Provisions 03 Depreciation 04 Financial revenues 05 Financial expenses 06 Various profits 07 Various profits and losses 08 Monthly results 09 Annual results	40 Debtors 41 Creditors 42 Banks 43 Sales agents 44 Depositories 45 Securities payable 46 Taxes payable
10 Land 11 Buildings 12 Commercial equipment 13 Transport equipment 14 Goodwill 15 Formation expenses . . .	50 Exploitation expenses 59 Selling expenses
20 Cash 21 Postal cheques 22 Bank account 23 Securities receivable 24 Securities portfolio 25 Tax stamps	72 Allocation account for periodical expenses 73 Allocation account for depreciation
30 Warehouse	90 Sales

(Extension for industrial companies; Blairon details these accounts up to four digits)

50 General administration expenses
51 Administrative expenses
52 Social charges
59 Selling expenses
60 General industrial expenses
61 to 69 Industrial expenses for spectific production processes

70 Allocation of salaries
71 Allocation of transport expenses
72 Allocation of periodic expenses
73 Application of depreciation

80 Production expenses for specific products

Blairon was a strong supporter of formal monism:

> The industrialist does not have two distinctive accounting systems: one in which all operations with third parties are registered, and another that reflects the internal movements that follow from the production operations. All economic movements, whatever they are, are centralized in one unique accounting system; that is why it is necessary that, within this one accounting system, there is a perfect unification of both groups of operations; this unification is only possible if the part of the accounting chart that relates to the transactions with third parties is based on exactly the same principles as the part that relates to the industrial operations in their strict sense [1926, p. 9].

Blairon argued that both internal and external transactions should be included in one accounting system. A consequence of this was that there could only be one valuation basis, historical full cost. Historical full cost remained dominant in the Belgian accounting literature during the first half of the 20th century [see for example, Walravens, 1942; Lambert, s.d.; Leemans and Labar, 1949]. The general allocation bases for overhead costs were the number of units produced, the direct cost or the cost of direct labor or direct machine hours, or a mixture of these, depending on type of production and number of products. Blairon did not discuss standard costing in the first edition of his book in 1926. In 1944 and 1951 the textbook included the text of a lecture given by Blairon in 1936, in which he referred to Taylor, Gantt and Harrington Emerson and concluded that standard costing was useful for businesses that manufacture mass products in a continuous way and for those operating in service industries.

FROM BLAIRON TO THE 'UNIFICATION OF ACCOUNTING CODES'

The chart of accounts in the different editions of Blairon's work was widely used in Belgium [Berny, 1920; Bastin, 1944] and his textbook was highly acclaimed until the 1960s [NCAB, 1964]. Although there was no legal initiative with respect to accounting codes, there was probably de facto harmonization from the 1930s to the 1950s because of the widespread use of schemes based on the Société Générale rules and Blairon's proposals. Archival evidence for the coalmining industry shows that both systems were used concurrently [De Beelde, 1995].

The Blairon's scheme was brought to the fore in 1944 when the Belgian National Committee for Scientific Management (*Belgisch Nationaal Comité voor Wetenschappelijke Organisatie/ Comité National Belge de l'Organisation Scientifique*, abbreviated as BNCSM) presented a proposal for a national accounting code [BNCSM, 1946]. The BNCSM was created in 1926 to stimulate scientific management practices and the exchange of information and experience in this area. It had about 3000 members by the 1950s [Vlaemminck, 1956].

The BNCSM's proposal was prepared by a commission established in 1942. The formation of the commission was a response to a request by the Central Industrial Committee (the major industrial association) in August 1941 and interest at the Ministry of Economic Affairs where a similar committee was created on 4 September 1942. The BNCSM initiative was reportedly taken to prevent the occupying German forces from imposing the Goering Plan on Belgian industry [NCAB, 1964]. The main task of the BNCSM Commission was to propose a chart of accounts and a cost calculation method that would be applicable to the whole of Belgian industry. This aim was clearly ambitious. It was envisaged that over time the costing method to be developed would bring all Belgian concerns up to the level of the best managed companies.

The composition of the commission revealed the importance attached to its remit. Its members were either representatives of important companies and associations or were senior professionals [BNCSM, 1946]. The commission consisted of four accounting experts: H. Blairon, H. Delhove (the President of the Société Fiduciaire de Belgique), Ch. Hanon de Louvet (a professor and accountant) and P. Verleysen (Accountant and Secretary of the President of the Société Générale). Representatives of the bodies of professional accountants and bookkeepers were: J. Dumon (President of the Société Académique de Comptabilité de Belgique), P. Mahieux (Secretary of the Chambre des Experts Comptables et Comptables de Belgique), R. Mayer (President of one of the regional sections of the Société Royale Chambre belge des Comptables) and N. Paquet (President of another regional section of the S.R. Chambre belge des Comptables). Major industrial associations were represented by: M. Arendt (Director of the S.A. Electricité et Electromécanique), A. Bouton (Accountant of the Federation of the Belgian Chemical Industry), W. Dierickx (Head of the Department 'Prices' of the Central Committee of the Belgian Industry) and F. Parmentier (Director of the S.A. Usines Cotonnières de Belgique, the largest Belgian textile manufacturer). H. Lepersonne and R. Caussin represented the BNCSM.

As a basis for its work, the commission used a chart of accounts "that had been used in a large number of companies since 1917" (a reference to the chart Blairon had developed - see Mommen, [1957]). This chart was changed in some respects, sent to the main Belgian industries for comment, and reconsidered. Finally, in 1944, a general chart of accounts and method of cost calculation was proposed. In 1946, a Dutch version of the code was published under the title 'Unification of Accounting Methods and Cost Calculation' [BNCSM, 1946].

The proposals of the BNCSM represent a clear example of the integration of financial and cost accounting. However, the focus was more on costing. In the introduction to the report reference was made to previous attempts to harmonize costing methods, including the work of its French counterpart, CEGOS (the Commission Générale d'Organisation Scientifique du Travail, created in 1929 [see Vlaemminck, 1956; Bouquin, 1997]). Reference was also made to general accounting charts used in certain industries (such as coal mining, metal working, electricity production). The report stressed the importance of introducing a general and scientifically based method of cost calculation. It also stated that cost calculation was a task for accounting rather than production departments. As indicated above, archival evidence for the coal industry shows that in a number of companies unit cost was calculated by production departments. The BNCSM commission's report suggested that the system adopted should consider the characteristics of Belgian industry and should not be too expensive to introduce.

The method of cost calculation proposed by the BNCSM was defined as 'production unit cost', excluding dividends or interest expenses. The whole process of cost calculation had to be integrated in a single accounting system incorporating financial reporting. Consequently, the unification of cost calculation methods would be linked to the accounting codes. The accounting code which resulted from the study of the commission included a series of accounts which were ordered in such a way that they followed the logical sequence of transactions. It was argued that these accounts should be found in the accounting codes of all Belgian companies, with the same names and in the same order. The accounts would be decimally classified, including account classes 0 to 5, 7 and 9, the classes 6 and 8 being reserved for industrial accounting. The basic code proposed by the Commission was two-digit, but the specification also included a more detailed code at a three-digit level. Small and medium sized companies could use the two-digit code, but larger companies should use the full scheme and could extend and adapt it to their specific activities.

The following objectives of the accounting code were listed [BNCSM, 1946, pp. 17-18]: the periodic creation of reports with respect to rights and obligations of the company; the periodic calculation of sales and expenses relating to the accounting period; the periodic valuation of stock; the determination of production unit cost; the allocation of indirect costs; and the control of efficiency of production. The first two items were said to be part of all accounting systems, whereas the last four objectives were related to industrial accounting. Essential conditions for an effective industrial accounting system were perceived as a perpetual inventory system, an effective allocation of wages to products or orders, recording numbers of units produced, a rational allocation of expenses, a correct calculation of unit cost and a systematic comparison of cost of goods sold and sales for each product sold. Cost allocation tables were to be included in the accounting system and based only on data generated by this accounting system. Expenses should first be registered by type and then by center, identified by means of one or more digits to be added to the account number. The chart of accounts is shown in Table 5.

The chart of accounts proposed by the BNCSM commission allowed a monthly calculation of results and made standard costing possible by creating 'difference accounts' in class 7. Overall, the chart was very similar to that proposed by Blairon. In its comments on the chart, the commission said that the accounting chart was based on the "dynamics of the transactions: all movements find [in this chart] a logical sequence from the input of capital until the realization of exchange values" [BNCSM, 1946, p. 25]. Its logical structure was explained as follows. The creation of the capital of a company is the point of departure (account class 0). Before production starts the company has to invest in fixed assets (class 1). What remains is available to cover expenses necessary for production (class 2). This is followed by the acquisition of inventory, in order to start production (class 3). Purchases and sales lead to the creation of debtors and creditors (class 4). The production process will not only include expenses related to the acquisition of inventory, but after a short time also wages, maintenance, heating etc. These represent production expenses and the selling expenses (class 5). At the end of the process, goods produced will be sold and the

TABLE 5

Chart of Accounts, BNCSM, 1946

CLASS 0. EQUITY AND RESULTS		CLASS 5. GENERAL AND SELLING EXPENSES	
00	Capital	40	General expenses
01	Reserves and provisions	41	Administrative expenses
02	Reserves	52 to 58	Expenses regarding internal services
03	Depreciation	59	Selling expenses
04	Financial revenue		
05	Financial expenses		
06	Various revenue		
07	Various expenses		
08	Monthly results		
09	Annual results		
CLASS 1. FIXED ASSETS		CLASS 6. PRODUCTION EXPENSES	
10	Land	60	Production expenses, general level
11	Buildings	61	Production expenses, specific production processes
12	Installations: general and auxiliary		
13	Installations: main activities		
14	Equipment		
15	Furniture		
16	Transport equipment		
17	New installations		
18	Financial fixed assets		
19	Intangibles		
CLASS 2. AVAILABLE ASSETS		CLASS 7. ALLOCATION ACCOUNTS	
20	Cash	70	Allocation of salaries
21	Postal account	71	Allocation of transportation expenses
22	Bank accounts	72	Allocation of periodically paid expenses to each month
23	Stamps	73	Allocation of depreciation expenses
		74	Allocation of social charges
CLASS 3. REALIZABLE ASSETS		CLASS 8. PRODUCTION ACCOUNTS	
Different types of inventory, one account for each type		For each type of product, specific accounts registering direct and allocation of indirect expenses	
CLASS 4. DEBTORS AND CREDITORS		CLASS 9. SALES ACCOUNTS	
42	Debtors (trade)	For each type of product, specific accounts registering sales	
43	Creditors (trade)		
44	Various debtors		
45	Various creditors		
46	Shareholders and board members		
47	Bond holders		
48	Banks		
49	Agents and representatives		
50	Creditors to be paid		
60	Participations		

owner of the company will wish to measure performance (class 9, debited for expenses, credited for sales proceeds). Profits that are not distributed will increase the value of class 0, and the scheme starts again in the next accounting period. In this way the chart represents flows of resources through the company.

There are indications that the proposals of the BNCSM were accepted by at least one major Belgian industry. In a publication by three Belgian textile industries, the Belgian Association of Cotton Spinners (*Association Belge des Filateurs de Coton*), the Belgian Association of Weaving (*Association Belge de Tissage*) and the Union of Finishing Industries (*Union des Industries de l'Achèvement*), in 1946, a specific chart was proposed which was identical to the one presented in the BNCSM scheme [ABFC-ABT-UIA, 1946]. The focus of the textile manufacturers was on introducing a uniform method of unit cost calculation. This publication includes references to Belgian traditions, American practices, the work of Cégos in France and the suggestions published by the 'Syndicat Général de l'lndustrie Cotonnière Française' in 1942. With respect to the accounting chart, the textile industries stated that: "the accounting chart corresponds to the one proposed by the BNCSM. That code has already been accepted by a large majority of the Belgian industrialists in such a way that, if a uniform chart would be imposed, it would probably be that chart" [ABFC-ABT-UIA, 1946, p. 16].

AN ALTERNATIVE APPROACH: THE ACCOUNTING CHART OF THE FLEMISH ASSOCIATION OF ENGINEERS

In 1944 there was also an initiative by the Flemish Association of Engineers. They published a chart of accounts, created by a commission called 'Unification of Accounting Methods' ("Eenmaking der Boekhoudmethodes"), part of a larger commission of scientific management ("Commissie voor Wetenschappelijke Bedrijfsleiding"), and the result of cooperation between the "Vlaamsche Ingenieursvereeniging" and the "Vlaamsche Accountantsvereeniging" [TIVI, 1944]. This commission consisted mainly of managers of industrial companies and the railways. The sub commission that developed the chart consisted of practicing accountants. The chart developed does not appear to have been successful [NCAB, 1964]. A partial and tentative explanation for this is that the document was prepared by Flemish associations in December 1943, during the German occupation [TIVI, 1944]. After the war, many Flemish organizations were considered to have collaborated with the Germans, and their initiatives were not supported in the post-war environment. However, the chart, which is shown in Table 6, is discussed here because it differed significantly from the charts referred to above.

The chart devised by the Flemish Association of Engineers used a decimal classification of accounts. It was admitted that this was not generally accepted in practice and that it would not automatically lead to improvements in practice. The authors doubted that harmonization would be possible for the registration of internal transactions (industrial accounting). Therefore, they directed their attempt to harmonize accounting practices to the commercial accounting subsystem. Consequently, a basic premise of the proposed chart was that it should be possible to organize the commercial accounting classes (classes 0 to 5) as independent from the industrial accounts (classes 6, 7 and 8). In this way the supporters of the plan considered it suited to commercial companies and small and medium sized enterprises. A further advantage was that such harmonization would ease the collection of national economic statistics. The order of the different accounts fitted with the structure of the balance sheet and was considered to improve the quality of the published statements.

The way in which the accounts were brought together in classes in this scheme differ significantly from the other charts discussed so far. All equity and liabilities accounts were included in one class. Contrary to what was considered normal practice by many accountants in the 1930s and early 1940s, depreciation was not listed among the equity accounts but subtracted from asset book value. A similar approach was used for provisions. Inventories were classified in the same class as long and short term debtors, securities and cash. This resulted in one working capital class (except for long term debtors). A very specific category was class 3. It included several 'correcting accounts', that is, depreciation and provisions. These two accounts registered the 'bookkeeping depreciation and provisions' (the depreciation and provisions determined by the management of the company at the end of the year). These amounts were not necessarily equal to the amounts that were included in the unit cost during the year. Each month, the latter were registered on the debit side of the appropriate account of class 4 via a credit entry on accounts 32-37.

TABLE 6

Chart of Accounts, Flemish Association of Engineers, 1944

CLASS 0. EQUITY AND DEBTS 00 Capital 01 Reserves 02 Long term debts 03 Commercial short term debts 04 Various creditors 05 Subsidiaries	CLASS 5. RESULTS 50 Sales 51 Cost differences 52 General costs 53 Financial profits 54 Various profits 55 Financial expenses 56 Various costs 57 Inventory adjustments 58 Monthly result 59 Annual result
CLASS 1. FIXED ASSETS 10 Land and buildings 11 Equipment and furniture 12 Transport equipment 13 Intangibles 14 Formation expenses 15 Assets under construction	CLASS 6. ALLOCATION OF COSTS 60 General costs 61 Selling expenses 62 Production expenses
CLASS 2. REALIZABLE AND AVAILABLE ASSETS 20 Inventories 21 Shareholders 22 Long term receivables 23 Commercial receivables 24 Various debtors 25 Securities 27 Cash 28 Bank accounts 29 Money transfers	CLASS 7. PRODUCTION 70 Product 1 71 Product 2 ... 79 Internal consumption
CLASS 3. CORRECTING AND INTERMEDIATE ACCOUNTS 30 Depreciation 31 Provisions 32 Wages payable 33 Periodic expenses to allocate 34 Allocated depreciation 35 Allocated provisions 36 Maintenance fund 37 Allocated expenses not to be paid 38 Off balance sheet accounts	CLASS 8. ALLOCATED EXPENSES 80 Department A 81 Department B ...
CLASS 4. EXPENSES BY NATURE 40 Wages 41 Salaries 42 Social expenses 43 Consumption of consumables 44 Consumption of water, gas, electricity 45 Maintenance 46 Depreciation 47 Taxes, insurance 48 Various expenses 49 Direct costs	

Accounting Historians Journal, Vol. 30 [2003], Iss. 2, Art. 10

DISCUSSION AND CONCLUSIONS

Charts of accounts can be observed in most continental European countries. Currently, they have a statutory basis in nations such as France, Belgium, Greece, Portugal and Spain [Roberts, 1994]. During the period studied in this paper Belgium did not have a mandatory chart of accounts. All initiatives remained private and voluntary with industrial groups imposing the use of common codes in the companies that they controlled. The Anglo-Saxon literature generally is quite critical about the use of mandatory charts of accounts, stressing compromises of form over substance, a bias towards financial reporting and a mechanistic view of accounting. It appears that those who advocated the initiatives discussed above were aware of these risks and stressed that flexibility was an essential characteristic underlying the charts that they proposed. The charts developed by the Société Générale, the BNCSM and even the elaborate schemes of Blairon gave much attention to cost calculations, advancing what they considered best practice while at the same time stressing that adaptations to the specific characteristics of companies and industries might be necessary. The chart of the Flemish Association of Engineers attempted only to harmonize the structure of financial accounting charts, leaving maximum flexibility to companies with respect to industrial accounting subsystems. The focus on flexibility and on cost accounting might be a consequence of the nature of the bodies that developed these charts. Even though the specific commissions that worked out the charts might consist mainly of accountants, the larger commissions that supervised them generally consisted of managers and engineers and often focused on the introduction of scientific management rather than on the technicalities of accounting.

When compared with France, a country whose approach to accounting is generally quite close to Belgium, decimalized charts of accounts took a longer time to achieve practical application in Belgian industrial firms. This paper has linked the persistence of more traditional classifications of accounts in 'chapters' with the impact of the Société Générale de Belgique. The scheme that was developed by Godefroid in the 19th century continued to be further developed and was applied in a wide range of industries. It was gradually replaced by decimal classifications, of which the schemes developed by Hector Blairon were the most influential. The ideas of Otlet on the international harmonization of accounting, in which charts of accounts could play a key role, seem to have gained less ground. This is probably a consequence of the context in which both Blairon and Otlet developed their ideas. Otlet's ideas on accounting seem to have been linked with a much broader objective, bringing order into knowledge of the world and developing an all-encompassing system. From this perspective, the interest of Otlet in accounting was logical, as accounting is a way of bringing order into the numerous transactions taking place in and between economic entities. However, Otlet's ultimate objective was probably distant from the day-to-day concerns of many businessmen and accountants who seem to have been struggling with more pressing issues such as the calculation of unit cost and the determination of the profitability of products. The framework advocated by Blairon was strongly oriented towards such concerns, and its focus on cost determination made it easier to link his proposals with work undertaken by various commissions in a context of attempts to encourage scientific management and the reconstruction of the Belgian economy after the Second World War.

The different charts that were advanced included quite detailed divisions for expenses. This was a consequence of their orientation toward industrial companies, and the importance attributed to cost calculations. Discussions of the charts in textbooks and the documents in which they were espoused, focused more on cost calculation than on balance sheet preparation. To some extent, this could be expected. Preparing a balance sheet from a sufficiently detailed chart of accounts is less difficult than the allocation of all types of expenses and the determination of the profitability of individual products, especially bearing in mind the dominance of historical full cost concepts. A further explanation might be found in the typical ownership structures of larger industrial companies in Belgium. Holding companies, of which the Société Générale was the most important, dominated. These companies received detailed information on technical aspects of production, sales, budgets and expenses. Often data were available on a monthly or even fortnightly basis. Trading of shares on stock exchanges by small investors was limited, and consequently, the role of the annual financial statements seems to have been less significant.

As stated above, most of the work on charts of accounts was explicitly linked with principles of scientific management. The introduction to the BNCSM commission's publication stated that finding a specific method of cost calculation "is part of the general measures that should introduce the principles of scientific management and standardization in all areas of the economic activity" [BNCSM, 1946, p. 9]. The chart of the Flemish Association of Engineers was also the work of a commission on scientific management.

The focus on cost calculation also suggests a link with models in other countries, especially Germany. Schmalenbach [1961] contrasted his dynamic balance sheet with a static balance sheet. A dynamic balance sheet focuses on the presentation of the internal movements of resources in a company. The most important of these movements are those that have an impact on the financial results of the company. The focus of most of the schemes discussed above on tracing and allocating expenses is in line with Schmalenbach's emphasis on the dynamic aspects of accounting.

Most of the Belgian charts discussed in the paper were monistic, including all internal and external transactions and using the same basis of valuation for these transactions. This is in accord with the situation in major continental European countries during the first half of the 20th century. Schmalenbach's 1927 accounting chart, for example, also integrated cost accounting in the overall accounting system [Jouanique, 1990]. Durand [1992] states that one of the consequences of the French accounting chart of 1947 was that France moved to a strong separation between financial and cost accounting. Before 1947, the issue of whether industrial transactions should be included in the same system as that for constructing the financial statements was widely discussed, not only in France but also in the US and the UK. Durand links these debates with the scientific management movement and the role of accountants and engineers, two professional groups that frequently had different views on the relation between financial accounting and cost calculation. The same was observable in Belgium. In collieries, for example, cost calculations were performed by engineers involved in production, by accountants, or by both. This often led to different costings in different documents. Nevertheless, the dominant position in Belgium remained that cost calculation and financial reporting had to be included in one system. In 1946, the BNCSM stated: "As the fundamental basis for its work, the Commission has accepted the principle that the general accounting system should not only include exchange transactions with third parties, but also the internal movement of values used in the production process" [BNCSM, 1946, p. 16]. A harmonization of accounting charts was considered to be a prerequisite for the harmonization of costing methods. This is quite different from developments in France. Only in the 1960s did Belgian accountants align themselves with developments elsewhere and accept the separation of financial and industrial accounting, referring explicitly to the French model [NCAB, 1964].

In conclusion, this paper has traced the development of accounting charts in Belgium from the late 19th to the middle of the 20th century. It explained the rather slow emergence of decimalized charts in Belgium as due to the dominant position of the Société Générale de Belgique and its method of structuring the accounts of companies under its control, a system imitated in many other industries and companies. Two tendencies appear to have led to the gradual replacement of the 'chapter' structure of charts of accounts by decimal classifications. These were firstly, the introduction of scientific management principles and related attempts to harmonize costing methods within monistic accounting systems; and secondly, the efforts of Otlet and La Fontaine to harmonize accounting internationally. The paper hypothesized that the relative isolation of Otlet explains why he was not successful in securing the implementation of his ideas, whereas the other stream of thought apparently had more impact due to its alignment with industrial and economic developments. However, these ideas on the harmonization of costing in Belgium were never enforced by the state. On the contrary, during the 1960s attempts to harmonize accounting increasingly focused on the balance sheet and the registration of expenses by nature, eventually leading to the three digit statutory accounting chart, imposed under the Royal Decree of 12 September 1983.

REFERENCES

Primary sources

Archives de l'Etat à Liège (Liège State Archives), Collection 'Entreprises':
Gosson, nr. 206, Calcul du prix de revient, 1928-1930.
Gosson, nr. 299, Cédules mensuelles de la comptabilité, 1931-1935, 1937.
Gosson, nr. 300, Prix de revient récapitulatif, 1933.
Gosson, nr. 641-675, Rapports mensuels d'exploitation, 1932-1934.

Secondary sources

ABFC-ABT-UIA (Association Belge des Filateurs de Coton - Association Belge de Tissage - Union des Industries de l'Achèvement) (1946), *Etude des prix de revient et contrôle de la gestion des entreprises dans l'industrie textile* (Ghent: Hoste).

Ansotte, C. and Defrise, A. (1910), *Traité pratique de comptabilité industrielle* (Dour: Vaubert).

Bastin, R., Spillemaekers, F. and Denhaene, G. (1944), *Etude d'un plan comptable unifié* (Brussels: Vioburo).

Bechtel, W. (1995), "Charts of Accounts in Germany," *European Accounting Review*, Vol. 4, No. 2: 283-304.

Berny, A. (1920), *La comptabilité industrielle. Prix de revient. Organisation* (Brussels: Ed. L'avenir).

Blairon, H. (1926), *Cours complet de comptabilité des industries manufacturières (théorie-pratique-organisation-controle)* (Brussels: La Revue Belge des Sciences Commerciales).

BNCSM (Comité National Belge de l'Organisation Scientifique) (1946), *Eenmaking van de boekhoudmethodes en de kostprijsberekening* (Brussels: BNCSM).

Bonin, H. (1988), "Une bataille financière actuelle: la puissance historique de la société générale de belgique (1822-1988)," *Information Historique,* Vol. l, Nos. 3-4: 104-106.

Boyd Rayward, W. (1990), *International Organisation and Dissemination of Knowledge. Selected Essays of Paul Otlet* (Amsterdam: Elsevier).

Bouquin, H. (1997), "Management Accounting in its Social Context: Rimailho Revisited," *Accounting, Business and Financial History,* Vol. 7, No. 3: 315-343.

Chauveau, B. (1995), "The Spanish Plan General de Contabilidad," *European Accounting Review*, Vol. 4, No. 1: 125-138.

CNC (Conseil national de la comptabilite) (1957), *Plan Comptable Général* (Paris: Imprimerie Nationale).

Crombois, J.F. (1994), "Les activités bancaires de la Société Générale de Belgique 1870-1914: facteurs de developpement d'une grande banque mixte belge," *Belgisch Tijdschrift voor Nieuwste Geschiedenis,* Vol. 25, Nos. 1-2: 1-29.

De Beelde, I. (1995), "Industrial Accounting Theory and Practice: Cost Accounting in the Belgian Coal Industry During the First Half of the Twentieth Century," *Accounting, Business and Financial History*, Vol. 5, No. 1: 71-108.

Durand, R. (1992), "La séparation des comptabilités: origine et conséquences," *Revue Française de Comptabilité*, No. 240: 72-81.

Forrester, D. (1977), *Schmalenbach and After* (Glasgow: Strathclyde Convergences).

Forrester, D. (1996), "European Congresses of Accounting: A Review of their History," *European Accounting Review*, Volume 5, No. 1: 91-104.

Geertman, J.A. (1949), *Critiek der rekeningenstelsels* (Ghent: doctoral dissertation).

Godefroid, H. (1864), *Cours de comptabilité pratique, industrielle et commerciale* (Charleroi: Piette).

Haulotte, R. (s.d.), *De Luca Pacioli au P.C.G.B.* (Brussels).

Janssens, V. (1985), "Traits essentiels d'un siecle et demi d'histoire financière de Belgique," *Histoire, Economie et Société,* Vol. 4, No. 4: 563-569.

Jouanique, P. (1990), "Schmalenbach redivivus. Le plan comptable de 1927," *Revue Française de Comptabilité*, No. 218: 72-76.

Joye, P. (1964), *Les trusts en Belgique* (Brussels: Société Populaire d'Editions).

Lambert, C. (s.d.), *Comptabilité et organisation administrative dans l'industrie* (Brussels: La Vie au Bureau).

Laureyssens, J.M. (1986), "Growth of Central Banking: The Société Générale and its Impact on the Development of Belgium's Monetary System During the United Kingdom of the Netherlands (1815-1830)," *Journal of European Economic History,* Vol. 15, No. 3: 599-616.

Laureyssens, J.M. (1989), "Financial Innovation and Regulation: The Société Générale and the Belgian State after Independence (1830-1850)," *Belgisch Tijdschrift voor Nieuwste Geschiedenis,* Vol. 20, Nos. 1-2: 223-250.

Leemans, l. and Labar, A. (1949), *Administration, Organisation et Comptabilité Industrielles* (Brussels: Les Editions Comptables, Commerciales et Financières).

Lemarchand, Y. (1999), "Introducing Double-entry Bookkeeping in Public Finance: A French Experiment at the Beginning of the Eighteenth Century," *Accounting, Business and Financial History,* Vol. 9, No. 2: 225-254.

Mayer, R. (1964), *Application du Plan Comptable Général Belge* (Brussels: Vioburo).

Mommen, M. (1957), *Le plan comptable selon différentes formes d'expressions et son aboutissement international* (Brussels: Cambel).

NCAB (1964), *Nota bestemd voor de heren leraren van de scholen voor boekhoudkundige wetenschappen van het land* (Brussels: NCAB).

Nobes, C. and Parker, R. (2002), *Comparative International Accounting* (Essex: Pearson).

Olivier, H. (1979), *Le plan comptable - het rekeningstelsel* (Brussels: BCNAR).

Otlet, P. (1905), *L'organisation rationelle de l'information et de la documentation en matière économique. Rapport au Congrès de l'organisation rationelle d'expansion économique mondiale* (Mons: IIB).

Otlet, P. (1926), *L'avenir de la comptabilité et ses rapports avec les besoins de l'organisation mondiale. Rapport au 5e Congrès International de la Comptabilité* (Brussels: La Senne).

Richard, J. (1995a), "The Evolution of Accounting Chart Models in Europe from 1900 to 1945," *European Accounting Review*, Vol. 4, No. 1: 87-124.

Richard, J. (1995b), "The Evolution of the Romanian and Russian Accounting Charts after the Collapse of the Communist System," *European Accounting Review*, Vol. 4, No. 2: 305-322.

Roberts, A. (1994), "European Accounting Plans," *Management Accounting*, Vol. 72, No. 8: 50-51.

Schmalenbach, E. (1961), *Le bilan dynamique* (Paris: Dunod). (Translated into French by F. Bruck).

Standish, P. (1990), "Origins of the Plan Comptable Général: A Study in Cultural Intrusion and Reaction," *Accounting and Business Research*, Vol. 20, No. 80: 337-351.

TIVI (Technologisch Instituut VIV) (1944), *Boekhoudplan voorgesteld door de subcommissie 'Eenmaking van de boekhoudmethodes'* (Antwerp: Mercurius).

Van Der Wee, H. (1982), "La politique d'investissement de la Société Générale de Belgique, 1822-1913," *Histoire, Economie et Société,* Vol. 1, No. 4: 603-619.

Van Ryn, J. (1954), *Principes de droit commercial. Tome Premier* (Brussels: Bruylant).

Vlaemminck, J.H. (1956), *La science du travail. L'évolution de l'organisation scientifique et le facteur humain* (Brussels/Paris: Editions l'Avenir).

Walravens, I. (1942), *Traité de mecanographie comptable suivi d'une étude sur les fonctions de la comptabilité dans l'organisation budgetaire* (Brussels: Soc. Royale Chambre Belge des Comptables).

Watelet, H. (1993), "Strategie d'investissement et imprévu en histoire économique: le Grand-Hornu et la Société Générale de Belgique (1800-1850)," *Histoire, Economie et Société,* Vol. 12, No. 1: 119-136.

Accounting Historians Journal
Vol. 30, No. 2
December 2003

Lisa Evans
UNIVERSITY OF EDINBURGH

AUDITING AND AUDIT FIRMS IN GERMANY BEFORE 1931

Abstract: Considerable differences exist between Germany and Anglo-American countries in the development of the statutory audit, the emergence of professional associations of auditors, and the legal and organizational forms of audit firms. This paper examines historical developments in Germany from the late 19th century, to the formal regulation of auditing and the audit profession in 1931. Its main objective is to provide a better understanding of the comparatively slow development of the audit in Germany and reveal attitudes towards the audit and the forms of audit firms. A secondary objective is to examine the use of agency theory frameworks for this type of historical research. The study draws on primary and secondary sources, both of which have been underutilized by previous authors. The paper finds that many of the unique features of the development of auditing in Germany and the solutions adopted there can be traced to historical differences concerning the objectives of the audit, the structure of the audit market and the foundations of the audit profession. It further adds to the critique of agency theory assumptions in historical contexts.

INTRODUCTION

The histories of the statutory audit and the auditing profession in Germany contrast significantly with their development in Anglo-American contexts. In the UK, for example, the statutory corporate audit was first introduced in 1844, abandoned (for most sectors) in 1856 and reintroduced by the Companies Act, 1900. During the 19th century the accounting profession emerged as a number of separate associations – the earliest

Acknowledgments: The author is grateful for help and advice from Reiner Quick, Stephen Walker, Falconer Mitchell, Aage Johnsen, Hugh Brian Markus, and the participants of the 2001 annual conferences of the European Accounting Association and the British Accounting Association Special Interest Group on International Accounting and Finance. Thanks are also due for comments received at the first European Auditing Research Network Symposium, October 2001. Helpful suggestions from two anonymous referees are also gratefully acknowledged.

Submitted November 2002
Revised July 2003
Accepted August 2003

being the organizations formed in Edinburgh and Glasgow in 1853. In Germany, however, both the statutory audit and professional associations were to appear much later. While market demand for the audit developed slowly during the late 19th to early 20th centuries, and audit firms and professional associations emerged to meet this demand, the annual audit of financial statements remained voluntary in Germany until 1931. This was despite active lobbying for state regulation by the heterogeneous profession. A further contrast between the British and German audit markets is the different legal and organizational forms that have been preferred for audit firms. German audit firms, especially larger ones, have traditionally favored a corporate form of organization. Independent practices of sole proprietors or loose forms of partnerships (which mainly served the sharing of resources and were not legal entities) were alternative forms. Partnerships in the British sense are a very recent development in Germany. In the UK on the other hand sole proprietorship and partnership were the only legal forms available to audit firms until 1991.

The objective of the present paper is to shed light on the comparatively slow development of the statutory audit in Germany, examine the different attitudes to the legal and organizational forms of audit firms, and to analyze the development of German auditing and audit firms prior to their statutory regulation in 1931. Specifically, the paper aims to examine the validity of suggestions that the German audit profession was created by the state, unlike that in the UK, which is claimed to have been created by market forces. In examining the origin of the German audit profession, the paper traces the history of two very different groups, whose disputes over market share and audit regulation may have contributed to the need for government interference. Further, the paper focuses on the background to the preference for the corporate form of audit firms in Germany and examines contemporary arguments for and against this form. This issue was significant because it divided the two branches of the profession in Germany. The paper does not attempt to take an overtly comparative approach between Germany and the UK. While professionalization issues have been explored for the latter [see for example, Willmott, 1986; Walker, 1995; Matthews *et al.*, 1998], much less is written on the German case [but see Meisel, 1992; Markus, 1997; Gietzmann and Quick, 1998]. The present contribution seeks to extend understandings of the peculiar development of the institutions of auditing in Germany.

While the author is aware of alternative approaches to historical scholarship the paper is loosely based on an agency theory framework. This approach is adopted for a number of interrelated reasons. Firstly, agency theory claims to explain the development of the independent external audit in the UK and US. Secondly, Watts and Zimmerman [1983] use historical data, namely an examination of the development of the independent audit, as evidence to support their theory. Further, an agency theory approach has been used in historical research by, for example, Gray and Calvasina [1995, p. 35] in the expectation that it would "enhance our understanding of agency relationships and foster[s] greater recognition of the limitations and hazards of historical research using an agency literature framework" [see also Mills, 1993]. Thus a subsidiary objective of this paper is to consider the limitations of Watts and Zimmerman's assumptions, specifically in a historical, non-Anglo-American setting and to extend the critique of agency theory.

Further, and of particular relevance to the focus of this paper, there exists a considerable body of literature on agency theory which confidently declares that the partnership form of business organization is most suited to professional audit firms. However, a rudimentary knowledge of the profession outside the US and UK suggests that the corporate form has been popular among audit firms in other countries [see, for example, the *avant project* – the unpublished working draft – to the Eighth European Union Company Law Directive, Working Party on Auditing, 1972]. These contrasts raise questions about the agency theory framework and invite critical scrutiny.

A combination of primary and secondary sources on the history of German auditing and the audit profession were used for this study. Secondary sources comprised literature in English and German. Primary sources used were German legislation, and commentaries and contemporary views expressed in academic or professional literature. Business journals were established early in Germany. Their content reflects the emphasis on academic education in business subjects, the early creation of business schools, and the fact that it was common for practitioners as well as academics to publish in these journals. As well as journal articles, contemporary academic theses and textbooks provided material for the current study. Many of the latter reveal somewhat amateurish scholarship and are often unashamedly biased. A further rich source was provided by publications in years immediately following the period under investigation, where authors contrasted recent changes with historical experiences.

The remainder of the paper is structured as follows. The next section introduces the agency theory framework. Then follows an overview of the history of the German profession from its beginnings until 1931, when the annual external audit became a legal requirement for large corporations and the profession was regulated by statute. This section focuses in particular on the conflicts between the two branches of the audit profession during the late 19th and early 20th centuries. These conflicts related to regulation, organization and market share. The penultimate section discusses the main findings with reference to the agency theory framework. The final section presents a brief summary and conclusions.

THE AGENCY THEORY FRAMEWORK

Agency problems and costs arise from the separation of ownership and control in modern companies. This separation gives rise to agency relationships between the owners and those who manage the company on their behalf. Jensen and Meckling [1976, p. 308] define an agency relationship "as a contract under which one or more persons (the principal(s)) engage another person (the agent) to perform some service on their behalf which involves delegating some decision making authority to the agent". Problems arising from this relationship relate to the fact that the agent, as utility maximizer, may not act in the interest of the principal.[1] Agency and related theories claim that agency problems between shareholders and management led to the development of the independent external audit (as a monitoring and bonding mechanism) and that the legal form of partnership avoids or minimizes agency problems within the audit firm. Financial reporting is the means by which management (the agents) discharge their accountability to the shareholders (the principals). Watts and Zimmerman [1986] claim that: "[t]he demand for accounting arises from its use in contracts that

[1] The principal can attempt to limit this effect by creating incentives for the agent to act in the principal's interest, and by monitoring the agent's behaviour, or arranging for this to be done on his behalf (giving rise to monitoring costs). The agent may also expend resources to reassure the principal that he will not act against his interest (bonding costs). In spite of these safeguards, however, the agent's decisions cannot be guaranteed to maximise the principal's welfare, which gives rise to an additional cost to the principal (residual loss) [Jensen and Meckling, 1976].

reduce the firm's agency costs. However, those contracts are of little use in reducing agency costs unless their provisions are monitored and enforced. Auditing is one of the ways in which the contracts are monitored" [Watts and Zimmerman, 1986, p. 312].

The assumption that auditing is one of the ways of reducing agency costs led Watts and Zimmerman to examine the suggestion that "independent audits are expected in the earliest firms where the manager did not supply all the capital" [1983, p. 613]. They found that monitoring and auditing existed early in the history of business organizations, and eventually developed into the audit as required in British legislation during the 19th century. They also stated that early audits were carried out by insiders (directors/shareholders). The independent audit, carried out by professionals, did not develop until the mid 19th century in the UK and the early 20th century in the US, and *predated* the legal requirement. Watts and Zimmerman [1983, p. 614] concluded that "the use of professional auditors was due to changes in the market for auditing". These changes resulted from increased numbers of companies, increased company size, and the reduced cost of ensuring auditor competence and independence. The latter was the result of the formation of professional associations from the middle of the 19th century [Watts and Zimmerman, 1983]. Watts and Zimmerman dismiss the alternative suggestion that independent audits in the UK and US were created by government regulation. Contracting theory claims to explain not only the existence of audits but also the significance attributed to audit firm reputation and the existence of professional associations, the organizational form chosen and the audit firms' size and industry specialization. These three claims are explored below.

Reputation and Professional Associations: According to Watts and Zimmerman [1986, Chapter 13], audits only have value if they lead to a reduction of agency costs. This will only be the case if the market is convinced of the auditor's competence (to discover a breach of contract) and independence from management (i.e. the likelihood that he/she will report a breach of contract). The market will only be convinced of the auditor's independence if there are sufficient incentives for the auditor to be independent. Such incentives include reputation (and the ability to charge higher fees) and the existence of professional societies (since a system of accreditation can support the auditor's reputation for competence and independence, which is signaled by a "brand name" such as "chartered accountant") [Watts and Zimmerman, 1986]. Further, since in professional partnerships (including audit firms) there are usually few assets available to serve as a bond against the risks of adverse selection or moral hazard [Milgrom and Roberts, 1992, p. 523], reputation and membership of a professional association can serve as the auditor's collateral (since loss of reputation and/or loss of membership in a professional body would lead to a loss of fee income) [Watts and Zimmerman, 1986]. Further, the fact that partners are residual profit owners increases their motivation to build a strong reputation.

Organizational Form: An advantage of the partnership is that unlimited liability provides, in the form of the partners' personal assets, a larger bond than would be available in an incorporated audit firm with limited liability [Watts and Zimmerman, 1986, p. 317; Milgrom and Roberts, 1992, p. 523]. This is especially because audit firms tend to have few assets which could serve as a bond. Thus: ". . . if auditors incorporate with limited liability, they reduce the amount of assets available as a bond on their actions. The market will appropriately reduce its assessed probability of their independence. Ceteris paribus, unlimited partnerships provide a greater bond on the auditors' independence" [Watts and Zimmerman, 1986, p. 317]. However, a disadvantage of this is that in a partnership with unlimited liability, risk is not divisible or transferable.[2] This will lead investors to spend additional resources on monitoring, or not invest at all [Milgrom and Roberts, 1992, p. 522]. Further: "[t]his factor constrains partnerships from expanding the number of partners and reducing the amount invested by each to permit better diversification. Similarly it makes it expensive for partnerships to expand into different lines of business or into new geographical markets because such moves increase the cost of monitoring" [ibid.]. However, the need for outside capital is generally limited due to low capital requirements – the most important asset of a partnership is human capital. Further, in the partnership form individual partners are jointly and severally liable. Liability for the other partners' work provides a strong incentive for mutual monitoring [Milgrom and Roberts, 1992, p. 523]. Mutual monitoring by partners who are liable for each other's actions, provides further

[2] It may be transferable through insurance. However, it has been argued by the UK profession that it is difficult to obtain sufficient cover at a reasonable cost.

incentives for increasing competence and independence and reduces the risk of an individual auditor bending to management influence [Watts and Zimmerman, 1986].[3]

Greenwood, Hinings and Brown [1990] argue, with respect to *large professional* partnerships, that these contrast with other large organizations in that ownership and governance structures are different, and because work is carried out almost exclusively by "self-contained" professionals. Greenwood *et al* use the accountancy industry as an example and find that: "In summary the task of accounting firms is professional in that it requires the application of professional knowledge to complex situations, and the work itself is individualized, geographically dispersed, and geographically differentiated" [Greenwood *et al*, 1990, p. 733]. As a result, authority and decision making structures in partnerships differ from those in corporations.

Size: Fama and Jensen [1983a] consider size to be an important factor in the context of the separation of ownership and control (or risk-bearing and decision making). In professional partnerships most decisions are made locally: "At this level, however, decision management and decision control are not separate. To control the resulting agency problems, the residual claims in professional partnerships, large and small, are restricted to the professional agents who have the major decision-making roles" [Fama and Jensen, 1983a, p. 316]. In small partnerships, as with sole traders and close corporations, decision-makers are usually the residual risk bearers. However, in large professional partnerships, residual claims are diffused; residual risk-bearing and decision management may be separate. This requires the existence of strong mutual monitoring systems common in other complex organizations. Yet, because all the residual claimants are experts in the professional partnership's activities, there is little demand for monitoring by outside experts [Fama and Jensen, 1983a]. Further, monitoring by outsiders (non-experts) is difficult [Milgrom and Roberts, 1992, p. 523]. Finally, decision control systems are similar between all such types of organization – open corporations, large professional partnerships, financial mutuals and nonprofits etc. [Fama and Jensen, 1983a, but see

[3] For example, Watts and Zimmerman [1986, pp. 316-317] argue: "It is interesting that before the development of the professional audit firm the audit was conducted by a committee of shareholders. The committee form makes it more difficult for the manager to bribe the auditor, particularly with mutual monitoring by the committee members".

Greenwood *et al.*, 1990, above]. Firm size may also be related to independence and competence, since larger firms provide economies of scale for the development of brand-names, offer larger bonds and better opportunities for mutual monitoring [Watts and Zimmerman, 1986].

The validity of many of these explanations for the development of the external corporate audit and the organization of audit firms could, and to some extent have been, subject to criticism in the UK context. While it is not within the scope of this paper to provide a critique of agency theory in Anglo-American settings, it should be noted that critics of positive theory, of which agency theory forms a part, challenge its philosophical foundations [Tinker, Merino and Neimark, 1982; Chua, 1986] and the neo-classical assumptions which underpin agency theory [Chua, 1986; Hunt and Hogler, 1990]. The theory's methodology is also challenged, in particular, the fact that few attempts have been made to test the theory through conventional scientific approaches of falsification [Christenson, 1983]. Further, Hunt and Hogler [1990] question Jensen and Meckling's [1976, p. 310] assumption that the firm is a "legal fiction which merely serves as a nexus for contracting relationships" and consider it a weakness that agency theory appears unable "to address issues that do not revolve around identifiable, market-based contracting relationships, or to analyze imbalances of power inherent in the social context of an organization" [Hunt and Hogler, 1990, p. 443; see also Chua, 1986]. They also criticize the theory for its ideological foundation and the assumption that accountants behave as objective, unbiased experts, with no concern for policy and social consequences [see also Tinker, *et al.*, 1982; Chua, 1986; Broadbent, Dietrich, and Laughlin, 1996]. Observations on the suitability of agency theory in an accounting history context will be made later in the paper.

In summary, this section has aimed to provide a brief overview of explanations offered by agency and contracting theories for the existence of the independent external audit, and of certain features of audit firms and regulation. The following section explores the development of the audit and audit firms in Germany as a basis for the subsequent discussion of the applicability of the agency theory framework.

THE DEVELOPMENT OF AUDITING AND AUDIT FIRMS IN GERMANY

Early "Audits": The modern audit in Germany emanated from the internal audit, and the employment by the courts of legal experts and professional trustees [Meisel, 1992, p. 39]. The need for internal audit arose in the 15th century with the development of large merchant houses (such as the Fugger and the Welser) and of state-owned companies, and resulted from the physical separation of owners from remote branches of their firms [Meisel, 1992, pp. 35-38]. From the 16th century, and increasingly in the 17th and 18th centuries, external "audits"[4] were carried out by *gerichtlich vereidigte* or *beeidete Bücherrevisoren* (auditors sworn in court). These were expert witnesses in legal disputes [Meisel, 1992, pp. 39-46], who were engaged to review and correct financial information [Henning, 1990].

The first business corporations developed during the 17th century in The Netherlands, France, and England. However, it was not until the second half of the 19th century that the *Aktiengesellschaft* (AG – public share company) began to dominate the economy in Germany. Its growth was due to increased demand for capital required by industrial expansion, in the transport sector in particular [Meisel, 1992, pp. 60-61]. The early AGs were subject to a *Konzessionssystem* (licensing system), that is, they required a license and were subject to state supervision [Meisel, 1992, p. 62]. This was the case in the first German law regulating AGs, the Prussian *Gesetz über Aktiengesellschaften* (Stock Corporation law) of 1843 [Meisel, 1992, p. 61]. Specific accounting and publication requirements for AGs were laid down in the *Aktienregulativ* of 1856 [Schröer, 1993; Schneider, 1995]. However, there was no legal requirement for an external audit (although internal, or voluntary external audits, were not uncommon [Schröer, 1993]).

[4] A brief note is required on the translation of terminology across languages and time. The term "audit" is used here in a wider sense than understood in the context of the modern external audit in the UK or US. However, there are no exact equivalents in translation between languages, and the old German term for auditor does not mean exactly the same as "auditor" or "chartered accountant". Each of these are technical terms that can only be fully understood within their unique contexts. The problem is exacerbated by translation across time. Mills (1989) warns against the possibility that we may be misled by vocabulary in historical contexts. The old German term approximately equivalent to "audit" is *Revision* (the modern German term (since 1931) is *Wirtschaftsprüfung*). The texts examined here use the terms *Revision* and *Prüfung*, which are treated as synonyms [Meisel, 1992]. Especially during the 1920s, German authors tend to use the terms (*Bücher-*)*Revisor*/*Revision* in translation when they discuss the UK auditor and audit. While German authors were more or less aware of the differences in status, organisation, techniques, etc., they appear *in principle* to consider the German *Bücherrevisor* to be comparable to the British auditor [e.g. Raschenberger, 1929; Schwäbische Treuhand-Aktiengesellschaft, 1931].

The first company law for all German states was created with the *Allgemeines Deutsches Handelsgesetzbuch* (ADHGB – General German Commercial Code) of 1861. This represented the first codification of the internal organization of the AG – regulating the *Generalversammlung* (general meeting), the *Vorstand* (management board) and the (optional) *Aufsichtsrat* (supervisory board[5]) [Meisel, 1992, p. 63]. The latter, if appointed, was responsible for monitoring management and the auditing of the accounts [Article 225]. The law was reformed in 1870 [*Gesetz betreffend die Kommanditgesellschaften auf Aktien und die Aktiengesellschaften*]. Changes included the removal of the licensing system and its replacement by a new *Normativsystem* ("normative" system). This meant AGs no longer required licensing by the state and were no longer subject to state supervision [§ 2 Article 249a; see also Quick, 1990; Meisel, 1992, p. 63] but instead, once registered, they were subject to general rules and regulations. The new regulation was intended to provide better protection for shareholders; the individual company should be subject to continuous supervision and control through its owners [Reich, 1979]. The supervisory board became obligatory; it had to consist of at least three members selected from the shareholders [§ 1 Article 209 (6)]. Article 225a required that the supervisory board monitor the management of the AG. It also gave its members rights of access to documents and information, required them to audit the accounts and proposals for profit distribution and to report to the annual general meeting [ibid., see also Klausing, 1933, pp. 172-173; Karoli, 1934]. The members of the supervisory board were jointly and severally liable for certain breaches of the law such as the unlawful distribution of profits [Article 225b]. The board would at times employ professional auditors to fulfill their duties [Quick, 1990].

Advancing industrialization and the financial inflow of French reparations after the Franco-Prussian War of 1870-1871 contributed a dramatic increase in company formations and corporate expansions and mergers [Meisel, 1992, p. 64]. Associated with these changes was the increasing separation of ownership and control and growing shareholdings by banks [Gietzmann and Quick, 1998, p. 88]. Easier access to the vehicle of the AG, and its *de facto* weaker regulatory system, appears to

[5] The two-tier board structure, which remains a feature of modern German public companies, allows different stakeholder groups to be involved in the governance of the firm.

have been one of the factors leading to the subsequent economic crisis of the early 1870s (*Gründerkrise*) which was associated with increased formation of AGs, bankruptcies, liquidations, speculation and fraud [Reich, 1979; Meisel, 1992, p. 63]. The extant law was too vague in its requirements regarding the supervisory board's monitoring duties, and supervisory board members often failed to perform even these duties. Their boards' understanding of financial statements was also doubted [Gietzman and Quick, 1998]. Further, the growing involvement of supervisory board members in the management function threatened their independence [Karoli, 1934], thereby "calling into question whether there did in fact exist an independent two-tier form of corporate governance" [Gietzmann and Quick, 1998, p. 88].

The crisis during the 1870s led to calls for the introduction of a statutory audit [Haibt, 1998]. This demand was not met when the law was further amended in 1884, in the form of a new *Gesetz betreffend die Kommanditgesellschaften auf Aktien und die Aktiengesellschaften*.[6] The new law extended the rights and duties of the supervisory board regarding monitoring, auditing and reporting.[7] The general meeting or, under specific circumstances a minority of 10 percent of the shareholders, could demand the appointment of external auditors [§ 1 Article 239a]. The 1884 law did introduce one form of compulsory audit – an audit of the company formation process by the supervisory board and the management board. Article 209h, which dealt with this

[6] The *Begründung* (explanatory memorandum) to the 1884 law is an interesting source of data regarding company foundations and failures from 1870. Before the 1870 law, Prussia had a total of 203 AGs. A further 843 new AGs were founded in the following three years alone. The memorandum laments the fact that the average (initial) share capital of the AGs had fallen from almost 11 million Marks among the old AGs to a third of this, and that some AGs had share capital of less than 100,000 Marks. Many of the new AGs were conversions of private enterprises, rather than new company foundations [*Begründung*]. Frauds had apparently been expected to follow the change from the licensing system, but not to the extent that they actually occurred [ibid.]. The abuses of the system led to serious consideration of the abolition of the legal form of AG [ibid., p. 242].

[7] For example, Article 225 (translation) states that "the members of the supervisory board may not delegate their duties to other persons". Article 225a prohibited the same individuals from being members of the supervisory board and management board. Article 226 made the members of the supervisory board and management board jointly and severally liable for damages arising from the breach of certain legal provisions.

audit, required the appointment of *besondere* ("special"), external auditors where members of either board were also founders of the company, had made contributions in kind to the company,[8] or had negotiated particular advantages for themselves [see also e.g. Beigel, 1924; Karoli, 1934, see also below]. The benefit of this audit was subsequently questioned because the "clients" were the company founders, who would have been in a strong position to influence the auditors [Hintner, 1926, p. 21; see also below].

Apart from these specific audit provisions, the external audit remained voluntary. The law assumed the competence and integrity of the supervisory board and the intelligence of the general meeting, with its potential power to appoint independent auditors [Quick, 1990]. However, this right was rarely used, "since it was generally perceived that this might signal to the financial community that the organization was experiencing financial difficulties" [Gietzmann and Quick, 1998, p. 88]. The general meeting had been intended as the highest decision-making organ; in practice it did not fulfill this expectation [Reich, 1979]. Further, after the 1884 law, the supervisory board was still perceived to be an impossible hybrid, and remained involved in the companies' management and/or did not meet its control function [Karoli, 1934; Reich, 1979]. Its members continued to lack the necessary expertise and time required for effective monitoring. While the board often drew on the services of professional auditors, this did not happen in all cases.

One interesting and far-reaching change implemented by the 1884 law was the raising of the minimum value of a share to 1000 Mark [Article 207a]. This effectively closed the AG to small and medium-sized enterprises and made it the typical legal form of large enterprises. It also led to the increasing role of banks as providers of capital [Reich, 1979]. The lack of access to the limited liability legal form for small and medium-sized enterprises resulted in the creation of the *Gesellschaft mit beschränkter Haftung* (GmbH – private limited company) in 1892.

A new *Handelsgesetzbuch* (HGB – Commercial Code) in 1897 introduced few new accounting and auditing rules [Schröer, 1993], although §§ 192-194 somewhat strengthened the position of those charged with the audit of the foundation

[8] *Sacheinlagen* ("contributions in kind") rather than *Bareinlagen* ("cash subscriptions").

process.[9] While conceding that this audit had proved successful, Voß [1927, p. 17] argued that the legal provisions were not sufficient to ensure that the legislator's intentions had been met, in particular because the audit was usually carried out by the companies' management and the supervisory boards, and only under *specific conditions* by "special" auditors. Voß considered this to be a defect in the law, frequently used as a "loophole", which allowed companies to circumvent the requirement to appoint external auditors. For example:

> Straw men have been placed onto the management board or supervisory board; that has in fact happened, for example when auditors had been appointed by the chamber of commerce, who did not suit the company concerned, or one has – and that is the main point at issue – set up a so-called veiled *Sachgründung* [company formation based on non-cash capital contributions]; that is, initially a company was founded through *Bargründung* [company formation by cash subscription], but it was planned from the start that this company should purchase certain assets - the *Sachgründung* was therefore carried out as the second step, by a detour [ibid., translation, see also footnote 8].

Such cases of deliberate deception apart, the perception was that the control function of the supervisory board had not improved since the 1884 law. Römer [1905, p. 262, translation] complained: "How can somebody who holds 35 supervisory board positions or who has never seen a book of account, let alone kept one – and we have such supervisory board members! – be able to discharge their incumbent statutory duties of control?"

Apart from the compulsory audit of the company foundation process, approximately 60% of German AGs were, by the 1920s, undergoing either a form of internal or voluntary external audit [Klausing, 1933, pp. 173-174].[10] It appears though that

[9] It described what specifically was to be audited and dealt with potential conflicts between auditors and founders, which had to be decided by the responsible chamber of commerce [see also Gareis, 1900, pp. 180-184 and Hintner, 1926, pp. 20-21]. Further, the auditor was granted the right of access to all books and records, cash balances, stock etc. [§ 267, 1; see also Hintner, 1926].

[10] Leffson [1988] estimates that by 1900 almost 60% of German AGs were voluntarily undergoing an *external* audit. An internal audit would have been carried out by members of the supervisory board or employees of the auditee, i.e. by parties who were not independent. An external audit, on the other hand, would have been performed by an independent individual or company carrying

initally the external audit was of limited benefit and mainly consisted of a comparison of the accounts with books and records [Quick, 1990]. Many enterprises which would have benefited from an independent external audit due to the limited competence of their management were either not audited or arranged for a "*Scheinrevision*". The latter referred to an audit opinion which was "bought" from "so-called" auditors in order to present the appearance of orderly accounting and management, until the company finally collapsed [Klausing, 1933, p. 174].

Auditors and the Emergence of Audit Firms : External audits were mainly carried out by *vereidigte Bücherrevisoren* (sworn in auditors) and notaries [Meisel, 1992, p. 76]. Originally the *Bücherrevisoren* (BR)[11] were sworn-in by the courts only in relation to specific appointments, but during the second half of the 19th century they were increasingly granted this status on a permanent basis. In 1895 approximately 140 individuals were thus licensed in Germany. A further 20 auditors were appointed by the chambers of commerce of the cities of Hamburg, Bremen and Lübeck [Penndorf, 1932; Meisel, 1992, p. 91]. In 1900 the *Gewerbeordnung* (Trade Regulations Statute) was amended to permit the licensing of auditors by authorities other than the courts, most notably the state and the chambers of commerce [Klausing, 1933, p. 174; Meisel, 1992, pp. 94-95]. However, questions regarding the quality of some of the individuals thus appointed soon arose [Quick, 1990]. For example, there appears to have been a lack of commercially educated, independent BR fully conversant with double entry [Klausing, 1933, p. 174].

Although audit work was only part of the BRs' work [Römer 1905, pp. 119-120], at around the turn of the century they began to face competition from the new *Treuhandgesellschaften* (THG - trust companies). The first such company was the *Deutsche Treuhand Gesellschaft* (originally: *Deutsch-Amerikanische Treuhandgesellschaft*), which was founded in 1890 and based on the example of American trust companies [Meisel, 1992, pp. 6-7]. The *Deutsche Treuhand Gesellschaft* was founded by the

---

out similar work for other clients (but see below regarding the problem of firms related to the auditee). As it was voluntary, the scope of the audit would have varied, depending on the supervisory board's requirements. The auditors would have reported to the supervisory board, which may have referred to the auditors' report in *its* report to the General Meeting.

[11] In 1943 the name was changed to *vereidigte Buchprüfer*.

Deutsche Bank AG, the Bankhaus Jacob S.H. Stern and others, and was intended as a finance and trust company for the benefit of shareholders in foreign enterprises [Hintner, 1926, pp. 14-15, 115; Meisel, 1992, p. 7]. After 1900 the *Deutsche Treuhand Gesellschaft* was often involved in company reconstructions, which usually required the help of auditors[12] and it soon developed its own audit department. When economic conditions improved and company reconstructions became rarer, this audit department made its services available to the general public [Meisel, 1992, p. 7; Haibt, 1998]. The audit was offered as a preventative device, a periodic control to support the monitoring function of the supervisory board. The audit was utilized to assess potential threats to the financial stability of the company and determine how these could be averted [Henning, 1990], and thus to prevent company collapses [Hintner, 1926, p. 16]. Hintner [ibid.; with reference to Lansburgh, 1908] points out that this function was very successful. The *Deutsche Treuhand Gesellschaft* carried out 27 such external audits in 1903, 70 in 1904, and more than 400 in 1907.

From 1906 auditing was the *Deutsche Treuhand Gesellschaft*'s main activity [Hintner, 1926, p. 59; Rosendorff, 1906]. Its success led to the formation of similar companies, especially by banks [Haibt, 1998; see also Klausing, 1933, p. 174]. By the early 20th century audit work was the main occupation of many THGs [Haibt, 1998], but in spite of the firms' changing remit their old organizational and legal forms were retained. They also became the model for new THG foundations [Hintner, 1926, p. 119]. While company collapses in 1900-1903 led to renewed pressure for the introduction of a statutory external audit, the foundation of the THGs initially appears to have abated this. The numbers of BR and of audit THGs increased considerably. However, a lack of formal regulation of the emerging profession meant that there was no control over quality, and there was concern that poorly qualified individuals might damage the reputation of those more competent to perform audits [Gietzman and Quick, 1998]. Römer [1905, p. 270, footnote 1, translation] complained:

[12] They had to establish firstly whether a successful reconstruction was possible, then may have been involved in carrying out regular audits, i.e. to attest the accounts in order to establish, for example, whether conditions imposed by creditors were complied with [Hintner, 1926, pp. 15-16].

> How *Bücherrevisoren* are sometimes "trained" in Germany and Austria, or how it is at least attempted to "train" them is shown by the following two advertisements, of which one was repeatedly published in Austrian, the other in Berlin papers:
>
> No. 1. "For 50 Marks anybody can [train to] become a good *Bücherrevisor* with me. If he does without instruction in *Geschäftswesenheit* (!),[13] including commerce and *Aktiengesellschaft*, and without the trial audit of forged company accounts, the fee only amounts to 30 Marks!" – No. 2. "Audit course including exam and diploma 30 Marks!" – Is that not more than shameful? I have often been asked by young and old people how to become *Bücherrevisor* in Germany, and I have only ever had one answer: "By accident!" That such a state is unworthy of Germany does not need saying.

Another statement from a provincial newspaper highlighting the same problem also appears in Römer [1905, p. 271, footnote 1, translation]: "Warning! Recently unemployed individuals, who understand neither double entry bookkeeping nor accounts preparation, have frequently been promoting themselves as *Bücherrevisoren*. Are they "*Bücherrevisoren*"? When will this issue be remedied?"

From the end of the 19th century, and especially during the first decades of the 20th century, common standards for audit work and standardized fee rates were developed [Beigel, 1924, p. 43]. Further, a number of professional associations were formed, representing the THGs and the BR respectively [Meisel, 1992, pp. 129-150; Markus, 1997, p. 3-9; Haibt, 1998]. These included the *Verband Deutscher Bücherrevisoren* (VDB) which was founded in 1896. It was hoped that membership of this association would raise the reputation of its members [Penndorf, 1932].[14] The *Verband Deutscher Treuhand- und Revisionsgesellschaften* was created in 1920 in order to represent the interests of the smaller THGs not linked to banks. The fact that the small audit firms created associations effectively forced the larger firms to do the same in order to be able to represent their interests before relevant authorities and the public. Thus

[13] Note that this is not a meaningful term in German. In general the German in the original advert is poor.

[14] According to Hintner [1926, pp. 54-55], by 1925 the VDB had 842 members, while the number of sworn-in BR active in Germany at about this time was estimated as approximately 2000.

the *Reichsbund Deutscher Treuhand-Aktiengesellschaften* was created to represent the large THG AGs [Hintner, 1926, pp. 82-84].

Although pursuing contrasting agendas in other respects, the different associations united in their demand for the legal regulation of the external audit [Meisel, 1992, pp. 151-167; Markus, 1997, pp. 12-13]. They were supported in this by the banks, the legal profession [Quick, 1990; Haibt, 1998], academics and the trade press [Klausing, 1933]. At the same time demands were made for standardized regulation of the education, training, appointment and licensing of members of the audit profession [ibid.]. By 1924 the VDB had drafted suggestions for legislation governing the regulation of the audit and the educational, ethical and other criteria for entry to the profession. A second version was later drafted jointly with representatives of other associations of BR. However, both these attempts were rejected because of concerns that they were intended to protect the interests of the BR by implementing restrictive practices detrimental to the public interest [Gietzmann and Quick, 1998, pp. 88-89]. Voß [1927, p.1, translation], a syndic of the VDB, and thus an interested party, commented as follows:

> . . . the discussion of the problem in the public domain has been infected by the most diverse interests. One can choose to retain the corporation law in its current content, one may choose to reform it, in any case economic interests are at risk, which appear to be diametrically opposed and whose representatives in turn, and in excluding each other, claim their interests alone represent those of the public.

Thus the diverging interests of the various professional groups comprised an obstacle to the regulation of the audit and the profession [Klausing, 1933, p. 176]. Their views on how the profession should be controlled differed considerably, on issues such as legal and organizational forms, self-regulation or state-control, and the regulation of education, training and licensing [see also Meisel, 1992, p. 151]. Other (and earlier) arguments against the introduction of the statutory audit related to a perceived lack of suitably qualified auditors [Klausing, 1933, pp. 175, 177]. Weber-Boun [1904, p. 30, translation] compared *inter alia* the training of British accountants with the situation in Germany. He concluded that Germany was not ready for regulation because "suitable individuals in sufficient number are not available, a shortfall which at best could only be corrected in a number of years".

The lack of comprehensive regulation of the audit resulted in a reluctance by foreign lenders and investors to provide capital to German firms unless they had been audited by the lenders' or investors' own auditors [Markus, 1997, pp. 13-17; Haibt, 1998]. Foreign capital was required as a result of the economic crisis following World War I. This led a number of Anglo-American audit firms to establish branches in Germany [Markus, 1997, pp. 14-17]. It also gave rise to suggestions to introduce an external audit based on Anglo-American models (which were rejected) [Haibt, 1998]. However, the economic crisis of the 1920s led to renewed pressure for the introduction of the statutory audit [Meisel, 1992; Quick, 1990; Haibt, 1998]. It also encouraged increasing state intervention in the economy. In 1925 the state-owned *Deutsche Revisions- und Treuhand-AG* (*Treuarbeit*) was created, which increasingly carried out audits of enterprises in which the state owned shares, and additionally gained appointments through the representatives of private enterprise on its own supervisory board. Many of these audits had previously been carried out by BR working as sole-proprietors or in small firms [Haibt, 1998, p. 33].

By the late 1920s the German audit (at its best) had developed from being a *formelles* ("formal") audit, concerned with presentation and legal compliance, to a *materielles* ("material" or "substantial") audit, concerned with examining the economic validity of measurements and valuations and assessing the situation of an enterprise as a whole [Schwäbische Treuhand-Aktiengesellschaft (Schitag), 1931]. However, until it was regulated by law, the scope of the audit remained under the control of the supervisory board which commissioned it, and was often limited [Schitag, 1931]. The state still hesitated to introduce reforms until spectacular collapses took place between 1929 and 1931 (especially that of Favag, summer 1929). These convinced the legislature that the control function of the supervisory board and the voluntary or internal audit were insufficient, that the audit profession required regulation, and that a compulsory annual audit was required [Klausing, 1933, p. 177].

Further, by this time the different associations of BR and THGs had, after long negotiations, jointly founded the *Institut für das Revisions- und Treuhandwesen* (August 1930), which in early 1932 became the *Institut der Wirtschaftsprüfer* [ibid.]. The statutory audit was finally introduced (although initially only for very large companies), the profession of *Wirtschaftsprüfer* (WP) formally "created", and additional accounting and publication requirements implemented with the reform of the corporation law through the presidential decree *Verordnung des Reichspräsidenten über Aktienrecht, Bankenaufsicht und über eine Steueramnestie* in 1931. The new law contained specific rules on the appointment, independence and rights and duties of the auditor [Quick, 1990; see also Meisel, 1992, pp. 168-203; Markus, 1997, Chapter 2].

Bücherrevisoren versus Treuhandgesellschaften: As indicated above, the differing objectives and ensuing power struggle between the two "faces" of the profession, the BR and the audit THGs, encouraged regulation by the state and contributed to the delay in introducing the statutory audit. Disputes between the groups centered on two main issues: the THGs' increasing share of the audit (and related services) market, to which their link with the banks and/or state was a contributing factor, and the question of organizational and legal forms. In relation to the latter, the question arose as to whether a corporation (AG or GmbH) could be a suitable legal form for the so-called *freie Berufe* ("free professions")[15] with their ideologies of independence, public service, responsibility, and individual judgment. Two publications in the 1920s illustrated the different positions – Beigel's [1924] *Lehrbuch* (teaching textbook) on accounting and auditing contained a political condemnation of the THG audit corporations, which he considered reflected the political agenda of capitalism. Beigel considered THGs to be "obedient servants of capitalist-speculative interests" [ibid., pp. 14, 52]. Hintner's [1926] more moderate *Habilitationsschrift*[16] stressed the advantages of the bank-owned THGs. He distinguished three types of audit THG AGs: *bankmässig orientierte* (those owned by banks); *erwerbsmässig orientierte* (those founded by individual or small numbers of BR), and; *konzernmässig orientierte* (those founded by commercial enterprises/groups) [ibid., 1926, p. 60].[17]

One of the important differences between the different types of legal forms and sizes of audit firms related to their financial capital. On behalf of the large bank-owned THGs it was argued that their share capital, which was usually considerable,

---

[15] For a discussion of the differences between the terms "profession" (in the UK) and "*freie Berufe*" (in Germany) see Vieten [1995, p. 487] or Kocka [1990, p. 62].

[16] Second thesis required of those aspiring to an academic career.

[17] At around Hintner's time of writing there were 22 *bankmässig orientierte* THG AGs, 85 *erwerbsmässig orientierte* THG AGs, and 12 *konzernmässig orientierte* THG AGs [ibid., pp. 62-78].

provided a security or bond against damages caused by auditors' mistakes.[18] The reputation of the associated banks themselves, as well as that of the audit firms, also provided a source of non-financial security. An established audit corporation had incentives to avoid damage to reputation as much as an individual practitioner. The reputations of the management and supervisory board members offered an additional bond. This provided incentives for the large firms to implement careful personnel and monitoring policies. The *konzernmässig orientierten* THGs, especially if older, also often had a reputation which could act as security. But, according to Hintner [1926] the share capital, and thus the financial bond, was considered to be too low.[19] He suggested that the title THG AG might have been intended to mislead the market as to the size of the enterprise.

According to Beigel, it would have been impossible to sue auditors for errors, because the law held the supervisory board solely responsible and liable for the supervision of management [see HGB 1897 §§ 246-249]. In his view, the financial bond was, therefore, of limited significance. He further stressed that the audit was carried out by employees of the corporations. An error by one of these employees would have led to a reprimand or perhaps dismissal, but did not threaten the existence of the corporation. While the unincorporated sole practitioner had no large financial bond to offer, Beigel [1924, pp. 31-32, 52-53] stressed that the loss of reputation might have meant the loss of one's livelihood. Hintner conceded that the sole practitioner, with his personal liability, provided a stronger bond than the *small* THG AGs, whose owners risked only their share capital and damage to the reputation of the firm. Both corporations and individuals could increase the guarantees they provided through insurance, but it was not always easy for individual auditors to obtain such cover [Hintner, 1926, p. 94].

One of the strongest perceived advantages of the BR was the personal relationship of trust with the client. This was linked to

[18] Hintner also pointed out that it was common for only 25% of the share capital to be paid up. This suggests that it was mainly intended as a security for the client rather than being required for the running of the company.

[19] For example, he considered RM 5,000-10,000 to be too low. For the bank-related THGs the share capital ranged from RM 5000 to RM 1,200,000, with an average of approximately RM 120,000. For the *erwerbsmässig orientierten* the average was less than RM 40,000 and for the *konzernmässig orientierten* RM 157,000. Note that these sums cannot be compared with those in footnote 6 because, following the hyperinflation of the early 1920s, a new currency, the *Rentenmark* (RM, later *Goldmark*) was introduced in 1923.

personal liability. The relationship between the employees carrying out audits on behalf of the THGs and the THGs' clients was less strong. Hintner considered this to be an advantage, because it strengthened independence. Further, large THGs attempted to provide continuity in the staff that served particular clients, in order to create personal trust relationships similar to those offered by the sole BR. They had, however, the opportunity to rotate staff if necessary to protect independence [Hintner, 1926, p. 94]. BR also relied on employees to carry out audit work on their behalf. Beigel [1924, p. 54] argued that they merely used their employees, under supervision, to carry out minor tasks while the employees of the THGs used a formulaic approach, and the audit report was signed by the THGs' directors without any audit work being reviewed in detail.

A further controversial point was the competence and skill available to the different types of audit organizations. The knowledge and abilities of the BR varied considerably. According to Hintner, many did not have the necessary skills. Voß [1927] lamented the fact that, while BR appointed by state or regional authorities (such as the chambers of commerce) were subject to some degree of regulation and disciplinary sanctions, in general the title *Bücherrevisor* was not protected. Anybody could call themselves *Bücherrevisor*, found an audit firm and carry out audit work, without having to provide any evidence of suitability for this work. Voß stated: "It is no secret that there are many among these individuals who have a criminal record or who otherwise had a shady reputation and who are probably least likely to be suited, in particular for such a trust-based profession as that of the auditor" [ibid., p. 29, translation]. Being formally licensed was thus a desirable goal for sole practitioners because it would raise their reputation in the eyes of the public [Hintner, 1926, p. 53]. However, there seemed to be little consistency in what was required of BR by the chambers of commerce. Hintner [1926, p. 23] points out that the strong position of the THGs in the audit market was partly due to the fact that they had access to better trained personnel than was the case for the BR and their larger capital base permitted them to obtain better staff and allow a certain degree of industry specialization. Further, more experienced staff could leave routine tasks to their assistants. Also, a separation of audit from closely related work would not be feasible nor desired by clients. Thus a knowledge of both tax and legal matters was required, which could be more easily provided by the larger firms.

One of the main criticisms of the THGs concerned auditor independence. It was argued that the audit firms founded by banks and commercial/industrial groups lacked independence from their clients. Clients often belonged to the same group and were given little choice in the appointment of auditors. So, for example, Römer [1905, p. 138, translation] stated: "It is probably of more concern that the German *Treuhandgesellschaft* as auditor cannot be considered independent according to the English meaning: it should not have pitched its tent in the palace of the *Deutsche Bank* and should have turned towards the pure banking business less energetically!"

Hintner [1926, p. 100] by contrast, argued that attacks on the independence of the *bankmässig orientierten* THGs were unjustified, because the banks would have no interest in influencing an audit opinion (but see below). With regard to the *konzernmässig orientierten* THGs he argued, though, that the audit was merely equivalent to an internal audit function, as audit clients were owners (and members of the supervisory board) of the audit firm and could thus influence the scope of the audit and the audit process. This might not have been known to external shareholders of the auditee [ibid., pp. 100-101].[20] On the other hand, the more substantial capital base of the large THGs strengthened their independence because it rendered them less dependent on the fees of an individual client [Hintner, 1926, p. 95]. Theermann [1930, p. 43, translation], a director of a THG AG, claimed that bank-owned audit firms were *less* dependent than the firms without such links because the latter were economically dependent on those who made appointments:

> I would even like to claim that a bank audit firm often faces the auditee more "independently" in that it receives the audit appointment directly from the supervisory board and does not have to make an effort with the auditee to obtain the appointment. . . . many "free" auditors are finding themselves in the most difficult personal economic struggle and for this reason very often are "unfree" when facing their clients. Many criminal court cases of recent times give a sad verdict on this.

A concern related to the lack of independence was client confidentiality. Beigel claimed that THGs would breach confidentiality by disclosing sensitive information to the banks with which they were linked:

[20] See also Klausing, 1933, p. 241, for a critique of the apparently common practice to disguise or window dress such links between auditor and auditee.

> To the outside these companies present themselves as independent organizations, and the firms which place themselves, with their books and balances, into their care for the purposes of auditing appear not to know that a double role is taken in this, in that the results of the audit are presented to the client; then however also the bank[21] will receive a report regarding the turnover, credit and asset situation, in short covering everything which may be of interest to it. In suitable cases the audit firm receives particular instructions from the bank regarding which points to keep a special eye on during the audit [Beigel, 1924, pp. 22-23, translation].

Further: "Businessmen as well as *Aktiengesellschaften* have repeatedly complained about the fact that private commercial activities had become known to non-authorized agencies" [ibid. p. 24, translation].[22] [23] However, Hintner [1926, pp. 121-127] disagreed and claimed that many THGs had developed internal rules to prevent breaches of client confidentiality.

Part of the objection to the corporate form appears to have been related to the THG AGs' large size. The GmbH is a corporate form more suitable for small and medium-sized enterprises and has a lower minimum capital requirement. Share ownership is not anonymous and can be more easily monitored and controlled. According to Hintner [1926, pp. 81-82] the number of GmbH audit firms increased dramatically after World War I, but many disappeared just as rapidly. Hintner considered this legal form unsuitable because it lacked the financial backing to provide security, no longer guaranteed the personal relationship with the client which the sole practitioner offered, and was not publicly accountable. Further, the auditor was usually the

[21] Beigel uses the term *Großbank* (lit.: "large/major bank").

[22] As further evidence Beigel [1924, pp. 28-29] quotes as follows from the journal *Die Bank*: "Concerning the fees which the audit firms are claiming … the costs of the audit are that highly calculated, that really only candidates for company foundations can normally afford the luxury to charge an audit firm with the audit of its management. A number of years ago, for example, the *Deutsche Treuhandgesellschaft* was involved in a court case because a foundry would not accept its fees (500 M. for the first, 100 M. for each of the following days). Later, incidentally, the fees of some firms were somewhat reduced. It showed that knowledge of others' balance sheets brings so many indirect advantages, that a little bit of fee income more or less is not relevant" [Buxbaum, 1910, quoted in Beigel, 1924].

[23] It was alleged, for example, that banks founded audit THGs in order to use them to identify investment targets. This claim is dismissed by Hintner [1926] as crude and unfeasible, and as not justified by the behaviour of the banks.

founder, shareholder and director, while friends or family members formed the management board. No supervisory board was required. In other words, no monitoring or control needed to be provided [ibid.]. Some GmbHs attempted to enhance their reputation (and bonds) through membership of professional associations. Size-related advantages of the THGs meant that the big firms were often more suitable for larger clients and that higher staff numbers allowed better mutual monitoring and control, as well as specialization and the ability to tackle larger appointments (see above). On the other hand, the larger THGs would be less profitable than sole practitioners because salaried staff commit resources; high salaries were necessary to attract and retain quality staff. The larger THG also incurred greater overheads [Hintner, 1926].

From the early 1900s onwards, but especially in the second and third decades of the 20th century, the audit market, which had initially belonged exclusively to the BR, became divided: the *bankorientierten* THGs were mainly involved in audits of companies in which banks had invested and were represented on the supervisory boards, i.e. their appointment was not a voluntary choice by the client. The small private business, on the other hand, preferred the BR as auditor, because relationships of personal trust with an individual were more important. The secured market share of the THGs restricted the BRs scope for expansion. Competition for the independent sole practitioner also arose from the foundation of small independent THGs, which were unable to compete in the market with the larger bank- and group owned THGs and instead pursued the audits of smaller enterprises [Hintner, 1926, pp. 128-127].

DISCUSSION

The Audit Requirement and Professionalisation: An examination of the development of the corporate audit in Germany reveals early similarities with the experience of the UK. For example, the internal audit contributed to the development of the external audit; early audits were carried out by shareholder/director committees; the development of the audit profession predated the statutory audit requirement; voluntary audits predated regulation, and; the profession attempted to introduce some degree of self-regulation. For Watts and Zimmerman, such features provide evidence in support of contracting theory. Nevertheless, it appears that despite the above parallels, auditing, the audit profession, and audit firms developed differently in Germany.

For example, it is usually suggested that the "modern" German profession was created by the state, while the UK profession was created by practitioners [see Vieten, 1995, pp. 504, 487]. Also, the earliest associations of accountants in Britain were officially recognized (through Royal Charter) eighty years before the German profession achieved a similar status through state recognition [ibid., p. 494].

Perhaps the most important causes of differences relate to the respective economic contexts, particularly the growth of joint stock corporations [Matthews *et al.*, 1998, p. 242]. Hintner [1926, p. 137] claimed that in England,[24] unlike in Germany, no fixed share capital had to be raised to found a corporation, and that the existence of much private wealth enabled enterprises to raise capital from investors without the help of banks. The British capital market always differed from that of other European countries because: "it started earlier, benefited from the ready availability of local finance, was granted a cheap and easy mechanism for incorporating with limited liability, and operated in a laissez-faire environment in which the audit was the main safeguard that the market, through contractual arrangements between investors and management, came to insist on" [Matthews *et al.*, 1998, p. 245].

These factors are related to a further important difference, namely the respective corporate governance arrangements. In Germany, companies were traditionally financed by banks, and the banks were usually represented on companies' supervisory boards. Thus the banks had a much closer involvement with corporations, including the company formation process, than was the case in the UK. Banks (in theory) exerted a degree of monitoring over their investments from which other stakeholders benefited [Hintner, 1926, p. 136; see also Gietzman and Quick, 1998]. The foundation by the banks of the audit THGs was a means to facilitate such monitoring [Hintner, 1926, p. 137]. In the UK and US, by contrast, management motivation was (and is) effected through "a market for corporate control" and fear of takeovers [Gietzmann and Quick, 1998, p. 83]. Hintner [1926, pp. 130-136] suggested that the audit developed more slowly in Germany than in England because German law provided better protection for shareholders and creditors through provisions relating to the supervisory board, accounting

[24] Note that German authors frequently focused specifically on England, or used the term "England" with reference to the whole of the UK.

and publication requirements, and minimum share capital. Therefore the need for an audit would only have been felt in exceptional cases, such as when there was suspicion of fraud or other particular problems were being experienced. The British law, however, lacked the protection for shareholders provided by the German law, and shareholders created their own protection by demanding an external audit. Therefore, according to Hintner [ibid., p. 136], the re-introduction of the statutory audit in the UK in 1900 was merely the codification of existing practice. On the other hand, with the exception of the bank initiatives, due to the form of corporate governance the demand for the audit in Germany was limited, and this restricted the growth of the audit industry [ibid., p. 129]. Further, as discussed above, in Germany the auditors' reporting responsibilities were to the supervisory board rather than to the shareholders, and the scope of their work was usually more restricted [Gietzmann and Quick, 1998, p. 85].

A further difference relates to the role played by the state in the professionalization process. While in the UK professions tended to develop "spontaneously" as a result of initiatives by voluntary associations, in Germany they were created as a result of "reform from above" through state initiatives [Neal and Morgan, 2000, pp. 9, 46]. Parliamentary democracy developed in Germany later than in the UK, and the reforms of the Napoleonic regime continued to shape administration and jurisprudence [ibid., p. 21]. The result of this was that "bureaucratic authority and constitutional government developed hand in hand", "social reforms were the result largely of the civil service rather than any popular movement" and "[i]n Germany professional practitioners were far more inclined to look to the state to organize and regulate the professions" [ibid., p. 9].[25] For example, Hintner [1926, pp. 141-166] argued that the audit profession should be subject to formal external supervision. Given its authoritarian nature the support of the state was required. However, in spite of the German profession's efforts to obtain regulation, the state remained reluctant. Gietzman and Quick [1998, p. 90] speculate that this may have been because the members of the profession were unable to "credentialize their expertise" and

[25] The most popular means of organising associations was in the form of *Vereine* (associations, societies), which are regulated by law and require registration and approval of their articles. This permits the authorities to control the associations' activities [Neal and Morgan, 2000]. The associations of auditors were generally registered as *Vereine*.

that therefore the profession chose a deliberate strategy of involving academic and state bureaucracies in their development. As a result these bureaucracies, including higher education, became more influential and led the profession to develop with a different identity from those in Anglo-American countries [ibid.]. In consequence "German auditors found it less problematic to view the state and thus society as in part constituting the client, unlike the more parochial view of British auditors" [ibid., pp. 90-91].

Education also formed part of the German and British professions' differing strategies. In Germany, business schools were founded as early as 1898 – the *Handelshochschule* in Leipzig was the first and offered a course for auditors in 1907. Others soon followed [Karoli, 1934, p. 23]. In the UK, initiatives to introduce accounting at universities remained rare: "the subject was largely ignored by British universities while, for their part, the accounting associations remained entirely committed to their own pupillage and examination system of qualification" [Matthews *et al*., 1998, p. 260].

Vieten suggests that when the state eventually intervened in Germany, the recognition of the auditing profession was an attempt to control companies and to allow the state to protect the economic system and society in a much wider sense than was the case in the UK where the emphasis was on the protection of shareholders and creditors. According to Neal and Morgan [2000, p. 20; also Vieten, 1995, p. 487], given the governments' *laissez-faire* policies, the professions in Britain would have been expected to regulate themselves, as there were few[26] precedents for state regulation. Thus professional status was linked in Britain to membership of elite organizations, rather than to state recognition, as was the case in Germany. The creation of associations also provided a limited safeguard against competition.

In summary, and with reference to the agency theory assumptions outlined earlier in the paper, it can be concluded that a separation of ownership and control existed in German enterprises before, and increasingly after the development of the AG. This appears to have been the case to a lesser extent than in the UK for two reasons. Firstly, there were fewer public companies. Secondly, companies were financed differently, by financial institutions rather than individual external shareholders [see Zysman, 1983]. The financial institutions were represented

[26] Rare exceptions existed (for example, medicine).

on companies' supervisory boards, were thus party to inside information and in a position to monitor management's behavior. This reduced the separation between ownership and control and the pressure for financial reporting and the independent external audit as means of discharging the manager-agents' accountability. This indicates that existing agency problems were not tackled in the same way in Germany. Monitoring was supposed to be carried out by the supervisory board. As late as 1930, von Falkenhausen (a lawyer, 1930, p. 442, translation) commented critically: "It is thought that the English regulations can be implemented into German law, without considering that the "auditors" of the English law have to fulfill a large part of the functions of the German supervisory board. … a new independent control organ [would] have no separate scope, its powers would overlap to a large extent with those of the supervisory board".

For monitoring to lead to a reduction of agency costs, the market (or the principal) has to be convinced of the monitoring agency's competence and independence. However, the supervisory boards were consistently criticized for their members' lack of expertise and involvement in companies' management. The explanatory memorandum to the 1884 *Gesetz betreffend die Kommanditgesellschaften auf Aktien und die Aktiengesellschaften* actually argued that some involvement by supervisory board members in the management activities of the company would enable them to better meet their supervision and monitoring duties [p. 289]. However, this involvement became increasingly problematic, especially when finance from non-German sources was required and foreign investors had to be attracted. The supervisory boards began to appoint professional auditors to help with the discharge of their responsibilities. The external audit also struggled to convince the market of the auditors' competence and independence. In particular the smaller BRs seemed to suffer from a poor reputation regarding a lack of competence, or at least a perceived lack of consistency in the quality of the service provided. They were further unable to serve larger clients and to compete in a market increasingly controlled by complex groups, including influential banks and their related audit firms. The majority of the larger THGs, while perhaps able to offer a better quality product, suffered from a lack of independence. They could certainly not be considered as independent in the sense expected of British auditors [see Römer, 1905, quoted above]. However, with the exception of foreign investors, there appears to have been less need to convince the market, as a market share was guaranteed through group structures and networks. It appears that the audit was only one of a number of ways of dealing with agency problems, and that the supervisory board remained the main mechanism, supported by more detailed company law. It remained liable for the monitoring of the company, even when external auditors were appointed [see above, also Gietzman and Quick, 1998, p. 85 and Beigel, 1924]. Further, while according to agency theory auditing is one of the ways of reducing agency costs, in Germany an independent external audit appears to have been expensive [see e.g. Buxbaum, 1910], unless it could be provided by a firm within the same group.

If self-regulation had been more successful, professional associations might have been a means of reducing the cost of ensuring auditor competence and independence and the audit might have provided better value for money. However, in Germany the profession failed to sufficiently convince the market or the state of their members' competence. Nevertheless, there appears to have been a perception that an audit regulated by the government would ensure the required quality and reduce agency costs.

The audit developed differently from that in the UK. Its scope in Germany was narrower and the auditors saw the supervisory board, rather than the shareholders, as their main principal. It can be argued that an external audit was not really required to the same extent as in the UK, because, as suggested above, due to different corporate governance arrangements the separation between ownership and control was limited.

Agency theory and related assumptions regarding the organizational and legal forms of audit firms are now examined in the German context, under the headings established earlier in the paper.

Reputation and Professional Associations: As outlined above, reputation and membership of professional associations can serve as the auditor's collateral bond [Watts and Zimmerman, 1986, Chapter 13]. Further, membership of a professional association signals the auditor's competence and independence [ibid.]. In the UK professional associations have a long history, as has professional self-regulation. Velayutham [1996] argues that corporatization is detrimental to professional self-regulation because this is achieved through the control of individuals, i.e. firms that take the form of partnership are more easily regulated through their individual owners. As we have seen, in Germany the different professional groups also began to form associations long before the profession was regulated by the state. The question arises whether these associations were founded for the same reasons, intended to serve the same purposes as their British counterparts, and whether their creation supports Watts and Zimmerman's arguments.

It appears that the motives for professional organization were perhaps more heterogeneous in Germany than in the UK. Clearly, the motivation of the BR, who founded the earliest association (the VDB), was similar to that of their UK counterparts. It could also be argued in support of Watts and Zimmerman's assumption that the BR intended to raise their members' reputation by standardizing audit quality and education requirements, thus signaling their competence. As suggested by Hintner [1926], those firms who had little to offer by way of financial bonds would have benefited from organization – essentially letting reputation and membership of an association serve as a bond. The associations formed by the smaller THGs seemed to have been driven by similar considerations. The *Verband Deutscher Treuhand- und Revisionsgesellschaften*, for example, did not accept bank-owned THGs as members because of concerns over independence [Haibt, 1998]. However, it appears that in the UK reputation and membership of professional associations were more important than in Germany because English law did not provide much guidance to the auditor and the audit opinion was to a larger extent based on subjective professional judgment. Thus the reputation of the auditor was crucial in adding credibility to the audited accounts [Hintner, 1926, p. 140]. Hintner seems to consider the "good name" of the auditor in the UK as synonymous with the title of chartered accountant.

In Germany, for the large audit corporations, especially those owned by banks, the motivation for forming professional associations was probably different. They did not require non-financial bonds to the same extent as the BR, and while they were not independent, they had less need for a reputation of independence. However, when the BR and the smaller THGs attempted to achieve regulation of the audit and the profession, the larger THGs required an organization to represent their interests. Following Velayutham's [1996] suggestion, their resultant associations would have found it more difficult to regulate their members and would have been unlike the associations formed by the British profession.

Probably to a greater extent than the British profession, in the 1920s the German associations lobbied the government for audit regulation. This may have been an attempt to gain market control. It may also have been due to the fact that, while the German profession looked towards the UK profession as a model [see e.g. Karoli, 1934, p. 21], its members misunderstood the role of the state (and of the Royal Charter) in the UK. Karoli's interpretation of the developments in the UK suggest that he believed there to be a considerable degree of state interference [1934, pp. 19-20]. It is possible that such perceptions of state initiatives in the UK was an additional reason why German auditors lobbied for state intervention. It is perhaps more likely that, as a result of the environmental and cultural differences discussed above, the German profession employed a different strategy to "credentialize its expertise" by relying on academic education and state regulation [Gietzmann and Quick, 1998, p. 90].

Organisational Form: Agency theory/contracting theory makes the following claims: unlimited liability provides larger collateral bonds in the form of the partners' personal assets [Watts and Zimmerman, 1986, Chapter 13]; unlimited liability signals the auditors' independence to the market [ibid.]; risk is not divisible or transferable, hence larger resources are required for monitoring and only limited capital is available for expansion and diversification [Milgrom and Roberts, 1992, p. 522]; joint and several liability provides strong incentives for mutual monitoring [ibid.]; mutual monitoring increases incentives for competence and independence [Watts and Zimmerman, 1986, Chapter 13]; and, audit firms have few assets - the most important asset being human capital [Milgrom and Roberts, 1992, pp. 522-523].

In 1926 Hintner [pp. 120, 138] argued that the large accountancy firms in the UK were comparable to the German audit corporations because they, too, relied on the division of labor. They were managed by a number of owners and often employed a staff of up to 100, and as a rule more than 10. The only and purely external difference, according to Hintner, was that the German audit firms were legal entities, while the English firms were partnerships. This was an oversimplification. Many of the agency theory/contracting theory assumptions do not apply to German THGs, especially the large ones linked to banks or commercial groups. If formed as an AG, they would have had to meet the considerable capital requirement legally prescribed for this form. If founded by the government or banks, the raising of this capital would not have been a problem and, as argued above, would be available as a substantial collateral bond. The limitation of liability would have reduced the incentives for mutual monitoring. The need for monitoring would have been (in theory at least) partially met by the supervisory boards, although it is unlikely that these were involved in monitoring the audit work itself as they lacked the expertise and would have been prevented by confidentiality rules. Firms founded and owned by banks could not be considered to be independent, especially if their shares were held by audit clients. However, this also meant that they were less dependent on a free market and, therefore, did not need to signal their independence and competence in order to compete. The German legal definition of the audit client differed from that in Anglo-American countries as a result of the role of banks in corporate governance [Gietzmann and Quick, 1998, p. 82].

Finally, Fama and Jensen [1983b, p. 334] suggest that the residual claims of professional partnerships are characterized by flexible sharing rules, inalienability and limited horizons. These features distinguish them from the residual claims of other organizations and are retained when professional partnerships become corporations.[27] This does not apply to German THGs during the period under investigation, since it was possible to sell ownership shares in an audit firm to non-auditor outsiders (although Hintner, [1926, p. 60] claims that this was not common).

Size: Agency theory/contracting theory suggests that larger firms can offer larger bonds, provide greater opportunities for mutual monitoring and may be better able to develop brand names [Watts and Zimmerman, 1986, Chapter 13]. This situation applied to German corporate firms. However, while in the UK, with its large professional partnerships, the residual claimants were also audit experts, this was not the case in German audit corporations. This had implications for the need for monitoring, which was to some extent carried out by the audit firms' supervisory boards. Also the suggestion that decision control systems would be similar for different types of organizations did not apply in Germany, but the crucial factor appears to have been less the size or even the legal form of the audit firm, but rather whether it was owned and controlled by auditors or by external owners. Other size-related factors were the ability of the larger audit firms to provide specialization and offer a range of

[27] This appears to be supported by van Lent's [1999] evidence regarding KPMG in the Netherlands.

services, which enabled them to increase their market share. Further aspects of size have already been covered, where relevant, under the other two headings above.

SUMMARY AND CONCLUSIONS

This paper examined the development of auditing and attitudes to the legal and organizational forms of audit firms in Germany prior to the formal regulation of the audit and the audit profession in 1931. It concluded that there were parallel developments in the UK and US, drawn on by Watts and Zimmerman [1983] as evidence for certain agency theory assumptions, and that, in particular, a separation of ownership and control and similar agency problems existed. However, due to different financing and corporate governance arrangements in Germany these occurred to a lesser extent than in the UK and US. Further, it was not generally accepted until relatively late that an independent external audit would provide the best solution to these problems. When the independent external audit was considered, it was only in addition to the monitoring functions of the earlier German solution, the supervisory board, and its acceptance appears to have been strongly influenced by the British example. Thus auditing developed much later in Germany as a secondary device to facilitate the supervisory board's monitoring duties.

The paper's findings suggest that explanations offered for the partnership form of audit firms by agency theorists may be over-generalizing the role of professional organizations in familiar Anglo-American cultural contexts. These theories may also have limited explanatory value in relation to different cultures and traditions. The findings of this paper suggest that different attitudes to the organizational features of audit firms appeared only partly to be determined by legal form. Perhaps greater explanatory value is offered by the factor of size. This is supported by Fama and Jensen's [1983a, 1983b] claim that certain features of professional firms are retained even when these firms incorporate. Van Lent's [1999] more recent findings regarding KPMG in the Netherlands also suggests that the organizational/governance structure did not change significantly when the firm incorporated. However, an alternative, and possibly even more significant explanatory factor for audit firms' features is ownership, i.e. by auditors versus external non-auditors, and thus the question whether decision makers are also the residual risk-bearers. The *ownership* of KPMG in the Netherlands did not change when the firm altered its legal form, and thus its governance did not change.

Further, as the audit market in Germany during the period under investigation was structured differently from that in the UK or US, it was less important to signal independence because appointments were often arranged through the banks as joint owners/capital providers of audit firms and clients. Finally, the objective of the audit differed. In Germany the emphasis was (and to some extent still is) more on compliance with law and regulations, and less (as in Anglo-American countries) on the assessment of fair presentation or true and fair view. This was linked to different ownership and corporate governance structures in German compared to Anglo-American audit clients. As a result, German auditors acted as agents to the supervisory boards rather than to the shareholders [Gietzmann and Quick, 1998, p. 83] and were intended to aid the supervisory board in discharging its accountability to shareholders. This again suggests that independence was seen to be less important.

With regard to the paper's subsidiary objective, the examination of the limitations of Watts and Zimmerman's and more general agency theory assumptions, it appears that, although Watts and Zimmerman [1983] utilize historical evidence in support of their approach, agency theory is flawed as a basis for historical theorization. The findings of the current study reinforce Gray and Calvasina's [1995, p. 35] warning against "extending modern rational expectations and assumptions to earlier periods of history". On closer examination and in the light of recent developments, much of the agency theory explanation for the legal and organizational form of audit firms is also suspect in the UK and US contexts. For example, Lee [1993, p. 111] argues that the suggestion that auditor liability is an incentive for competence and independence [see Watts and Zimmerman, 1986, pp. 316-318]: "is inconsistent with recent developments in the US and elsewhere to incorporate audit firms with limited liability – that is, the position taken by such bodies as the AICPA in the US that incorporation is permissible as a means of restricting the exposure of auditors to the considerable financial loss of litigation".

It may be concluded that agency theory is less suitable as a foundation for historical theorization than approaches which analyze historical events within their social contexts [see Mills, 1993]. In other words, agency theory, its philosophical and methodological shortcomings aside, is too narrow to form a satisfactory basis of explanation. This highlights the importance of analyzing developments in the history of German auditing in their particular contexts. The present paper has attempted to provide an overview of these developments. Further detailed study is required to better understand the complex history of auditing and the organizational forms of audit firms in Germany.

REFERENCES

Allgemeine Begründung zum Gesetz betreffend die Kommanditgesellschaften auf Aktien und die Aktiengesellschaften (1884), Verhandlungen des Reichstags, 5. Legislaturperiode, Session 4, Aktenstück Nr. 21: 236-350.

Beigel, R. (1924), *Lehrbuch der Buchführungs- und Bilanz-Revision*; fourth edition (Dresden: Verlag von Gerhard Kühtmann).

Broadbent, J., Dietrich, M. and Laughlin, R. (1996), "The Development of Principal-agent, Contracting and Accountability Relationships in the Public Sector: Conceptual and Cultural Problems," *Critical Perspectives on Accounting*, Vol. 7, No. 3: 259-284.

Buxbaum, R. (1910), *Die Bank*, Septemberheft 1910.

Christenson, C. (1983), "The Methodology of Positive Accounting," *Accounting Review*, Vol. 58, No. 1: 1-22.

Chua, W.F. (1986), "Radical Developments in Accounting Thought," *Accounting Review*, Vol. 61, No. 4: 601-632.

Fama, E.F. and Jensen, M.C. (1983a), "Separation of Ownership and Control," *Journal of Law and Economics*, Vol. 26, June: 301-326.

Fama, E.F. and Jensen, M.C. (1983b), "Agency Problems and Residual Claims," *Journal of Law and Economics*, Vol. 26, June: 327-349.

Gareis, R. (1900), *Handelsgesetzbuch vom 10 Mai 1897 nebst dem Einführungsgesetze vom 10 Mai 1897* (München C.H. Beck'sche Verlagsbuchhandlung).

Gesetz betreffend die Kommanditgesellschaften aud Aktien und die Aktiengesellschaften (1870), Bundes-Gesetzblatt 25 June 1870.

Gesetz betreffend die Kommanditgesellschaften aud Aktien und die Aktiengesellschaften (1884), Reichs-Gesetzblatt 31 Juli 1884.

Gietzmann, M. and Quick, R. (1998), "Capping Auditor Liability: the German Experience," *Accounting, Organizations and Society*, Vol. 23, No. 1: 81-103.

Gray, O.R. and Calvasina, R.V. (1995), "The 1926 Contract for Construction of Facilities at the Pensacola Naval Station and its Implications for Historical Research using Agency Theory," *Accounting Historians Journal*, Vol. 22, No.1: 35-55.

Greenwood, R., Hinings, C.R. and Brown, J. (1990), "P2- form Strategic Management: Corporate Practices in Professional Partnerships," *Academy of Management Journal*, Vol. 33, No. 4: 725-755.

Haibt, H. (1998), *Kapitalbeteiligung Berufsfremder an Wirtschaftsprüfungsgesellschaften* (Bonn: Deutscher Anwaltverlag).

Handelsgesetzbuch (1897), Reichsgesetzblatt. Nr. 2388. 10 May 1897: 219-436.

Henning, F. (1990), "Die externe Unternehmensprüfung in Deutschland vom 16. Jahrhundert bis zum Jahre 1931," *Vierteljahrschrift für Sozial- und Wirtschaftsgeschichte*, Vol. 77, No. 1: 1-28.

Hintner, O. (1926), *Das Treuhandwesen in der deutschen Volkswirtschaft*; Habilitationsschrift (Muenchen/ Berlin/Leipzig : J. Schweitzer Verlag).

Hunt, H. G. and Hogler, R. L. (1990), "Agency Theory as Ideology: A Comparative Analysis Based on Critical Legal Theory and Radical Accounting," *Accounting, Organizations and Society*, Vol. 15, No. 5: 437-454.

Jensen M. C. and Meckling, W. H. (1976), "Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure," *Journal of Financial Economics*, Vol. 3, October: 305-360.

Karoli, R. (1934), *Bilanzprüfung und Prüfungsergebnis, ihr Wesen und ihre Bedeutung für Unternehmung, Öffentlichkeit und Prüferberuf*; Dissertation (Leipzig: Hugo Günther & Co).

Klausing, F. (1933), *Reform des Aktienrechts* (Berlin/Wien: Industrieverlag Spaeth & Linde).

Kocka, J. (1990), "'Bürgertum' and Professions in the Nineteenth Century: Two Alternative Approaches," in Burrage, M. and Torstendahl, R. (eds), *Professions in Theory and History. Rethinking the Study of the Professions* (London: Sage): 62-74.

Lansburgh, A. (1908), "Revisionsgesellschaften", *Die Bank*.

Lee, T. (1993), *Corporate Audit Theory* (London: Chapman & Hall).

Leffson (1988), *Wirtschaftsprüfung*; fourth edition (Wiesbaden: Gabler Verlag).

Markus, H.B. (1997), *The History of the German Public Accounting Profession* (New York/London: Garland).

Matthews, D., Anderson, M. and Edwards, J.R. (1998), *The Priesthood of Industry. The Rise of the Professional Accountant in British Management* (Oxford: Oxford University Press).

Meisel, B.S. (1992), *Geschichte der Deutschen Wirtschaftsprüfer* (Köln: O. Schmidt).

Milgrom, P. and Roberts, J. (1992), *Economics, Organization and Management* (Englewood Cliffs, NJ: Prentice Hall).

Mills, P. A. (1989), "Words and the Study of Accounting History," *Accounting, Auditing and Accountability Journal*, Vol. 2, No. 1: 21-35.

Mills, P. A. (1993), "Accounting History as Social Science: A Cautionary Note," *Accounting, Organizations and Society,* Vol. 18, No. 7/8: 801-803.

Neal, M. and Morgan, J. (2000), "The Professionalization of Everyone?. A Comparative Study of the Development of the Professions in the United Kingdom and Germany," *European Sociological Review*, Vol. 16, No. 1: 9-26.

Penndorf, B. (1932), "Die berufliche Organisation des Revisionswesens in Deutschland. Entwicklung des Revisionswesens in Deutschland," *Die Betriebswirtschaft*, Vol. 25, No. 11/12: 311-313.

Quick, R. (1990), "Die Entstehungsgeschichte der aktienrechtlichen Pflichtprüfung in Deutschland," *Zeitschrift für Unternehmensgeschichte*, Vol. 35: 217-236.

Raschenberger, M. (1929), *Internationales Revisions- und Treuhandwesen* (Wien: Hölder-Pichler- Tempsky A.G.).

Reich, N. (1979), "Auswirkungen der deutschen Aktienrechtsreform von 1884 auf die Konzentration der deutschen Wirtschaft," in Horn, N. and Kocka, J. (eds) *Recht und Entwicklung der Großunternehmen im 19. und frühen 20. Jahrhundert*, (Göttingen: Vandenhoeck & Ruprecht): 255-273.

Römer, E. (1905), *Die Bücherrevisoren-Praxis in Deutschland und England*; first and second editions (Berlin: E. E. Römer's Verlag).

Rosendorff, R. (1906), "Treuhandgesellschaften und ihre Funktionen," *Conrads Jahrbücher für Nationalökonomie und Statistik*, III. Folge, 31. Band, Jena.

Schneider, D. (1995), "The History of Financial Reporting in Germany," in Walton, P. (ed.) *European Financial Reporting. A History*, (London: Academic Press).

Schröer, T. (1993), "Germany in: Company Law and Accounting in Nineteenth-century Europe," *European Accounting Review*, Vol. 2, No. 2: 335-345.

Schwäbische Treuhand-Aktiengesellschaft (1931), *Die Revision* (Stuttgart: Schwäbische Treuhand-Aktiengesellschaft).

Theermann, A. (1930), "Pflichtrevision und Banktreuhandgesellschaften," *Bank-Archiv*, Vol. 30: 42-44.

Tinker, T., Merino, B. and Neimark, M.D. (1982), "The Normative Origins of Positive Theories: Ideology and Accounting Thought," *Accounting, Organizations and Society*, Vol. 7, No. 2: 167-200.

van Lent, Laurence (1999), "The Economics of an Audit Firm: The Benefits of Partnership Governance," *British Accounting Review*, Vol. 31, No. 2: 225-254.

Velayutham, S. (1996), "Corporatization and the Regulation of Accounting Services," *British Accounting Review*, Vol. 28, 4: 351-368.

Verlag der Königlichen Geheimen Ober-Hofdruckerei (1867), *Allgemeines Deutsches Handelsgesetzbuch und Einführungs-Gesetz vom 24 Juni 1861* (Berlin: R. v. Decker).

Vieten, H. (1995), "Auditing in Britain and Germany Compared: Professions, Knowledge and the State," *European Accounting Review*, Vol. 4, No. 3: 485-511.

von Falkenhausen (1930), "Aufsichtsratsfrage und Pflichtrevision", *Bank-Archiv*, Vol. 29, No. 22: 439-443.

Voß, W. (1927), *Die obligatorische Revision im Rahmen der Reform des Aktienrechts* (Berlin: Carl Heymanns Verlag).

Walker, S. P. (1995), "The Genesis of Professional Organization in Scotland: A Contextual Analysis," *Accounting, Organizations and Society*, Vol. 20, No. 4: 285-310.

Watts, R. L. and Zimmerman, J. L. (1983), "Agency Problems, Auditing, and the Theory of the Firm: Some Evidence," *Journal of Law and Economics*, Vol. 26, October: 613-633.

Watts, R. L. and Zimmerman, J. L. (1986), *Positive Accounting Theory* (Englewood Cliffs, NJ: Prentice Hall).

Weber-Boun, A. (1904), "Die Revisoren der englischen Aktiengesellschaften," *Bank-Archiv*, Vol. 3: 27-30.

Willmott, H. (1986), "Organising the Profession: A Theoretical and Historical Examination of the Development of the Major Accountancy Bodies in the U.K.," *Accounting, Organizations and Society*, Vol. 11, No. 6: 555-580.

Working Party on Auditing (1972), *Working Paper* (Brussels: Commission of the European Communities).

Zysman, J. (1983), *Governments, Markets and Growth: Financial Systems and the Politics of Industrial Change* (Oxford: Martin Robertson).

Accounting Historians Journal
Vol. 30, No. 2
December 2003

Richard K. Fleischman
JOHN CARROLL UNIVERSITY
and
R. Penny Marquette
UNIVERSITY OF AKRON

THE IMPACT OF WORLD WAR II ON COST ACCOUNTING AT THE SPERRY CORPORATION

Abstract: The impact of World War II on cost accountancy in the U.S. may be viewed as a double-edged sword. Its most positive effect was engendering greater cost awareness, particularly among companies that served as military contractors and, thus, had to make full representation to contracting agencies for reimbursement. On the negative side, the dislocations of war, especially shortages in the factors of production and capacity constraints, meant that such "scientific management" techniques as existed (standard costing, time-study, specific detailing of task routines) fell by the wayside. This paper utilizes the archive of the Sperry Corporation, a leading governmental contractor, to chart the firm's accounting during World War II. It is concluded that any techniques that had developed from Taylorite principles were suspended, while methods similar to contemporary performance management, such as subcontracting, emphasis on the design phase of products, and substantial expenditure on research and development, flourished.

INTRODUCTION

It has long been hypothesized by accounting historians that advanced cost accounting *theory*, featuring time-studies, standard costing, and variance analysis, was born in the U.S. in the early 20th century during the age of Taylor and scientific

Acknowledgments: The authors acknowledge with gratitude sabbatical support from the University of Akron and funding support from Andersen, LLP, the KPMG Faculty Fellowship at the University of Akron, and the Jack Wasmer Fellowship at John Carroll University without which this project could not have been undertaken. Our thanks are also extended to Marge McNinch and her staff at the Hagley Museum.

Submitted July 2002
Revised February 2003
Accepted April 2003

management. More contentious is the argument that these innovations flourished in industrial managerial *practice* in succeeding decades. Traditional histories of cost accounting, such as Littleton [1933], Solomons [1952], Garner [1954], and Wells [1978], among others, have supported standard costing specifically as a key component of what Solomons [1952, p. 8] labeled "the costing renaissance." Standard costing has become a virtual surrogate for the methods that Taylor and others were espousing. Later-day historians, representing the major paradigmatic schools that have studied U.S. industrialization [Johnson and Kaplan, 1987, pp. 49-50 for economic rationalism; Miller and O'Leary, 1987, p. 238 for Foucauldianism; and Hopper and Armstrong, 1991, p. 433 for Marxism/labor process], have all seconded this judgment, albeit interpreting developments from widely differing perspectives. There can be no question that the theoretical basis of standard costing and variance analysis was laid in the significant outpouring of the period, featuring the work of Taylor [1903, 1911], Whitmore [1908], Emerson [1908-09], Harrison [1930], and others.

Many accounting historians have advanced the argument that Taylorism and scientific management were not merely *theoretical* successes at the turn of the 20th century, but *practical* successes as well. Among the authors who have espoused this view are many of the best known and respected names in accounting history and cost accounting theory, including the authors of the traditional histories mentioned above, as well as more recent scholars of standard costing, Sowell [1973] and Epstein [1978]. Standard costing and variance analysis are generally believed to have been one, if not the single, most important innovation arising from the work of Frederick W. Taylor [Epstein, 1978].

In fact, time-and-motion studies, the development of labor standards, the calculation of variances, and the analysis of results were actually the contribution of engineers (like Taylor), not accountants [Wells, 1978]. Nevertheless, the benefits of these new systems have clear application to cost accounting for purposes of both decision making and control. It is a natural assumption that the U.S. industrial sector would have implemented into practice the new methods advanced in the theoretical literature.

Only recently have several accounting historians begun to question whether the theoretical success of scientific management can be seen in a parallel expansion of scientific management techniques in general practice, at least in the U.S.

[Fleischman, 2000b; Fleischman and Tyson, 1999, 2000].[1] These works, based on archival research, revealed little evidence of sophisticated cost accounting or standard costing prior to the World War II period. The same theory/practice schism discussed by Fleischman [2000 a, b] was also observed by DeBeelde [1995, p. 91] in a study of the Belgian coal industry and by Anderson [2003] in an investigation of World War II munitions provisioning in Australia that parallels this paper in some respects.

School is still out with regard the prevalence of scientific management practice prior to World War II. Oakes and Miranti [1996] found that Louis Brandeis had popularized Taylorism in urging standard costing for regulating rates on U.S. railroads in the pre-World War I era. Bhimani [1993] felt that World War I had actually precipitated scientific management at Renault. By contrast, McKinstry [1999] and Brown [1993] found no evidence of standard costing in case studies of Albion Motors and Meccano, Ltd. respectively. Edwards et al. [1995, p. 37, fn. 45] observed the lag of scientific management's advance in the U.K. and France, both in terms of theory and practice, but in so doing accepted the traditional view of its prevalence in the U.S. In point of fact, Boyns [1998] referenced Ashton et al. [1995] and Locke [1979] to support the contention that scientific management's real introduction into the U.K. followed the Anglo-American Council of Productivity visits to the U.S. after World War II. Zimnovitch [1997] came to a similar conclusion in a study of standard costing at Saint-Gobain saying that the introduction of U.S. methods in France awaited the "productivity missions" of 1948-51.

There have been several studies based on the actual records of Frederick Taylor. Nelson [1974] conducted archival research into the Taylor archive at the Stevens Institute of Technology and found less than 50 firms mentioned by Taylor or his associates as having implemented elements of scientific management. For half of the firms mentioned, Nelson found the archives to be unclear regarding a company's degree of adoption of scientific management techniques. In a similar study, Epstein [1978] found only 36 firms mentioned in the Taylor archives that clearly exhibited adoption of Taylor's methods. In 1915, R.F. Hoxie, a University of Chicago economist, visited 30 firms

[1] Loft [1986, 1990] observed a number of scientific management practices in the British government's provisioning processes during World War I, findings that do not correspond to Marriner's [1980] work.

whose names had been supplied by Taylor and his competitor consultants, Emerson and Gantt, as having implemented scientific management principles. Hoxie [1920] reported back to the U.S. Commission on Industrial Relations that there was considerable variability in application and that no single firm had implemented all elements of a system recommended by any of the trio.

When Fleischman [2000b] merged these three lists (those of Nelson, Epstein, and Hoxie), eliminating the duplicates, he found only 80 firms that had been offered by Taylor and his colleagues as examples of scientific management in practice; a small group out of thousands of large U.S. businesses. At the end of World War I, Morris Cooke, an engineer and proselytizer for Taylor's methods, was reputed to have said, "We could not sell scientific management 30 years ago, and we can hardly sell it today" [quoted in Haber, 1964, p. 120].

A large stumbling block when attempting to implement scientific management techniques was the post-World War I rise of industrial unions, a group both philosophically and practically opposed to scientific management on several grounds. Time-study in particular seemed to offend workers who found it humiliating and saw it as a way to break tasks into tiny components, essentially "deskilling" and devaluing labor. Taylor's failure to convince labor that scientific management was in its best interest may have slowed the spread of standard costing and other scientific management techniques during the years between the two world wars [Hoxie, 1920; Nadworny, 1955; Braverman, 1974; Epstein, 1978; Hopper and Armstrong, 1991; Kanigel, 1997]. It has also been argued that scientific management and standard costing were simply too complex and too expensive for widespread adoption [Nelson, 1975; Montgomery, 1987]. Regardless of the reasons, there is only weak evidence suggesting the widespread implementation of standard costing prior to the end of World War II. In earlier research into two episodes of large-scale governmental intrusion into the American industrial economy, the War Industries Board of World War I and the National Recovery Administration of the Great Depression, Fleischman and Tyson [1999, 2000] found that little evidence existed of standard costing systems in this country.

Despite the lack of evidence thus far, there are reasons to expect that the advent of World War II might have provided impetus for the increased adoption of sophisticated cost accounting techniques. "Cost keeping," the antecedent of modern cost accounting, first arose in New England at the beginning of the 19th century in large industries such as mining, textiles, and arms-making [Johnson, 1972; Porter, 1980; Tyson, 1990, 1992; Hoskin and Macve, 1996; Fleischman and Tyson, 1998] – all important industries in times of war. Prior to the Civil War, the most sophisticated user of cost accounting control method was the Springfield Armory, supporting the notion that arms manufacture lends itself to sophisticated cost accounting techniques [Chandler, 1977; Hoskin and Macve, 1988, 1994, 2000; cf. Tyson 1990, 1993, 2000]. Several incidents of labor unrest can be traced to governmental attempts to install time-and-motion studies at government arsenals and other facilities, attesting to the fact that the government was seriously interested in these techniques and their application to military installations. Prominent among these labor disruptions were those at the Naval Shipyard at Mare Island and the Watertown Arsenal. The strike at Watertown in 1911, reported to be a result of labor's hostility to time-and-motion studies, was so severe that Congress passed legislation prohibiting time-studies in governmental arsenals and shipyards, a prohibition that lasted from 1915 to 1949 [Montgomery, 1987, p. 221]. Nevertheless, increased patriotism and labor shortages during World War II might have been expected to counter organized labor's resistance to scientific management techniques. Finally, Loft [1986, 1990] has argued that the World War I relationship between munitions suppliers and the British government resulted in significant advances in cost accounting practices in Great Britain. Montgomery [1979, pp. 121-122] argued that scientific management's appeal increased in the U.S. during World War I. Perhaps the World War II experience would be similar. The American industrial sector was fully mobilized to support not only the country's own war effort but to function as well as "the arsenal of democracy". Would governmental contracting mandate a more careful attention to costs than had been the case previously? Would the genesis of standard costing in practice be in evidence at this rather late date in U.S. cost accounting history?

Although certainly not without its problems [Johnson, 2000], Fleischman [2000a] has argued that it is largely through the agency of archival research that the extent and existence of such theory/practice schisms can be more fully identified and evaluated. Accordingly, we have chosen the Sperry Corporation, a leading manufacturer of aircraft components and a "prime" governmental contractor, as a case study. Sperry has several advantages as a subject for this study of scientific management techniques during World War II. First, and most obvious, is the existence of a large archive of Sperry material housed at the Hagley Library and Museum in Wilmington, Delaware.[2] Second is the fact that Elmer Sperry was, first and foremost, an engineer and, thus, more likely to embrace scientific management techniques. Third, Sperry Corporation had excellent labor relations. The archives are replete with examples of the president or general manager of the company sending personal letters to clerical and factory workers congratulating them on the births of their children or sending well wishes to ill or hospitalized employees. As early as 1940, 57% of Sperry's workers had been on the job for less than one year. By mid-1945, over 16,000 Sperry employees had entered the armed forces. Yet, throughout the war, despite stressful working conditions and the constant turnover in employees, there was not a single work stoppage or labor dispute at a Sperry installation [Acc 1910, #024].[3]

THE WORLD WAR II ACCOUNTING ENVIRONMENT

To understand accounting developments at Sperry Corporation during World War II, it is necessary to grasp the larger environment of the war's impact upon existing methodologies and the effect of large-scale governmental contracting on preexisting conditions. To this end, we surveyed the cost accounting journal literature of the wartime period as represented by the *National Association of Cost Accountants* (NACA) *Bulletins* and *Yearbooks*, the *Accounting Review*, and the *Journal of Accountancy.*

Most speakers at the NACA annual conventions did not convey much hope that cost accountancy had broached the schism with theory, particularly with regard to standard costing. Howell [1942, pp. 10-11], the NACA's president in 1942, observed in his presidential address, "It is astonishing to find the number of our members who, while they recognize the vocabulary of standard costs, do not comprehend its meaning". He went on to suggest that although standard cost accounting "marked a great advance in the science of cost accounting," it did have its "shortcomings and obscurities". Massell [1941, p. 6], a cost consultant with the

---

[2] The reader is directed to the Hagley's website at www.hagley.lib.de.us/1915.htm.

[3] References to the Sperry archive are by accession number (Acc 1910) and item number (#024). Where large amounts of information are located within a single accession number, references may also include box, file, and/or folder numbers.

Office of Production Management, pointed out to delegates that costs and prices in defense contracting had not been very closely related in the past and that cost estimating would have to become " more significant factor in price policy". Bennett [1945, p. 118], with the accounting firm of Cooley & Marvin, summed up the prewar milieu in flowery fashion: "Not many years ago the advocates of standard costs were like voices crying in the wilderness. They were looked upon sometimes kindly, more often not, by the orthodox brethren as adherents of some strange and slightly heretical faith".

The National Industrial Conference Board conducted a survey in 1938 that revealed that only 152 of 818 respondents carried work-in-process inventory at standard. McEachren [1940, p. 681] of Ernst and Ernst, in referencing this report, observed that although these statistics were not conclusive about the extent of standards utilization, they did "indicate that a large proportion of manufacturing companies probably do not have a standard cost system". A number of speakers at wartime NACA conventions suggested that standard costing was around, but that it was not particularly effective because these systems were adequate for control but not for pricing [Nourse, 1945, p. 37], were inflexible in the face of changing conditions [Bullis, 1945, p. 12], and had achieved a measure of sophistication only with regard their engineering (physical) as opposed to their accounting (bookkeeping) aspects [Bennett, 1945, pp. 125-127].

In our view, the state of the cost accounting art as America went to war belied the prevalent theoretical outpouring of the interwar period. Speeches to NACA delegates [Myers, 1943; Caminez, 1944; Greer, 1944; Bennett, 1945; Burke, 1945], although preaching to the choir, urged the value of standard costing and variance analysis in very rudimentary terms. One would expect more substantial issues related to standards had the methodology been more universally known. Finally, the standard costing addresses by Caminez [1944] and Bullis [1945] were delivered in sessions respectively named "Tomorrow's Cost Accountant" and "The Job Ahead," suggesting that current practice did not reflect the methodology thought to be so prevalent.

Government Contracting: The Legislation: The U.S. government, in its role as the "arsenal of democracy," was most concerned that the "disastrous results" of war provisioning in World War I, where cost-plus-percentage-of-cost contracting had fleeced taxpayers of an extra $15 billion according to Baruch's estimate, should not be repeated [Taggart, 1941a, p. 35; Taggart, 1941b;

see also Fleischman and Tyson, 2000]. In point of fact, the government had forbidden cost-plus contracts, opting instead for cost-plus-fixed-fee (preferred at the onset of hostilities) and, subsequently, fixed-price contracts with escalator clauses [Stewart, 1943, p. 20]. Moreover, the Office of Price Administration and Civilian Supply (OPA) was founded in spring 1941 to spearhead price stabilization and cost auditing efforts. Even earlier, on June 28, 1940, Treasury Decision (TD) 5000 had specified those costs that the government was not prepared to reimburse. The "Green Book" ("Explanation of Principles for Determination of Costs under Government Contracts") reiterated TD 5000 in April 1942. Public Act 528, also of April 1942, was the primary "renegotiation" statute that enabled the government to recapture "unintentionally realized excess profits" resulting from volume manufacture and learning curve improvements in the manufacture of war materiel [Seybold, 1942, p. 131].

Government Contracting: The Realities: It would appear on the surface that this magnitude of governmental control would precipitate a greater cost awareness and control among contractors. Indeed, the magnitude of data that governmental agencies required was staggering and the source of frequent complaint [e.g., Bullis, 1945, p. 9]. Seybold of Westinghouse [1942, p.130] spoke of the "unreasonable demands" of the questionnaires whose completion required the time and attention of 100 people. Two very distinguished accountants, Kohler and Cooper [1945, p. 270], decried the plethora of data-collecting agencies, suggesting that the OPA should standardize the reporting process. Wellington [1945, pp. 3-4], a public accountant with long ties to the NACA, identified the crux of the problem to be that the government was more interested in the formats in which costs were presented for reimbursement rather than in the processes by which costs could be controlled or reduced. Much of the early war literature noted the difficulties that ensued from the excessive number of field auditors and quality inspectors representing the various governmental agencies involved in contracting [Healey, 1941, p. 241; Seybold, 1942, p. 133; Camman et al., 1943, p. 7]. Seybold called for a single cadre of auditors rather than individual investigators from the Navy Department, the Signal Corps, the Maritime Commission, the OPA, and those charged with the enforcement of income tax, excess-profits tax, state tax, the wage and hour law, etc.

Not only were the efforts of cost accountants deflected by the government's statistical mandates, the system reflected by the legislation did not function to induce cost-cutting attention. As observed by Taggart, a University of Michigan professor and the prime accounting figure in the National Recovery Administration, the cost-plus-fixed-fee contracting, in effect for most of the war, was intrinsically the same as the outlawed cost-plus contract in terms of lacking incentives to reduce cost [Taggart, 1941a, p. 37]. Although Kelley [1942, p. 373] called for cost standards to evaluate the efficiency of contractors, comparable cost data, and uniform procedures for reporting costs, it never happened. Rather, governmental agencies generally accepted whatever accounting methods contractors had historically used [Miller, 1942, p. 96]. It was believed that control would come via the renegotiation process wherein governmental adjustors would allow efficient and low-cost producers to retain a greater profit margin [Hoyt, 1943, p. 95; Caminez, 1944, p. 147]. Moreover, as Caminez [1944, p. 147] pointed out, efficient contractors would also reap public-relations benefits and advantage in termination- contract negotiation as the government's need for armaments was reduced when the war wound down. Once again, renegotiation fostered loose cost control and pricing as it was thought that the system would correct errors [Kohler and Cooper, 1945, p. 285].[4]

Standard Costing: There was universal agreement among all observers that the war negatively impacted standard costs, whatever the state of the art in the prewar milieu. Stempf [1943, p. 500; see also Wellington, 1945, p. 6] observed in the *Journal of Accountancy* that "prewar standards have become relatively meaningless, and, in general, industry has been forced to fall back on actual costs". It is easy to understand why standard costing was not appropriate in the industrial environment of World War II, even apart from the government's preference for dealing with actual costs. Factors included inexperienced workers, high labor turnover, unfamiliar products, lack of time-study engineers, material shortages, uncontrollable prices, small-lot emergency purchases, frequent specification changes, new inspection requirements, numerous artificial controls, etc. [Hoyt, 1943, p. 93; Caminez, 1944, p. 146]. Burke [1944, p. 253] put the blame squarely on the head of government:

---

[4] Although it is not directly relevant to costing practice during the war, renegotiation apparently did not reward the efficient producers as many had expected [Wellington, 1945, p. 4].

> Standard costs have received a definite setback in favor of actual costs. The existence of CPFF [contract-plus-fixed-fee] contracts and the manufacture of new products under rapidly changing conditions have been factors in this trend, but a more basic reason is the universal insistence of government officials on costs that are near actual as possible. Standard costs were accepted only where they could be converted to actual by the application of actual variance percentages.

The post-war NACA Committee on Research [1947, p. 919] likewise confirmed the requirement of actual costs as the basis for CPFF contracts, renegotiation, and termination.

Kohler and Cooper [1945, p. 306] concluded their 41-page survey of World War II accounting in the *Accounting Review* by observing that "accounting practice suffered perceptibly and even degenerated as the result of the war". However, Bullis viewed this retreat as an opportunity to advance the craft. "The postwar period will provide greater opportunity for accounting than any previous period in history" [Bullis, 1945, p. 17]. Unfortunately, he had said almost the exact thing in his NACA presidential address in 1933 on the occasion of the passage of the National Industrial Recovery Act [Fleischman and Tyson, 1999, pp. 52-53].

THE SPERRY CORPORATION AND ITS ARCHIVES

Sperry's archive (76 linear feet) is housed at the Hagley Museum in Wilmington, Delaware. Although voluminous by virtue of the lengthy, chronological run of the holdings (1910-1970), the collection is incomplete from a cost accounting perspective. Following the formation of Sperry Corporation in 1933, the most complete set of surviving records emanates from the Planning Department for 1935-1960, compiled by F.S. Hodgman. Unfortunately, Planning was a component of the Engineering Division and, as such, was staffed by engineers rather than accountants.

According to a provenance note written by the Hagley staff, the Sperry records at the Hagley were assembled by the Advertising and Public Relations Departments. "Unfortunately, given the way it was assembled, the original provenance was destroyed as documents were pulled out of context and filed into a Public Relations' Department vertical file" [Acc 1915, #060]. Many of the surviving documents related to Sperry's prewar story are contained in a file titled "National Defense – Mobilization Plans Survey of Emergency Procurement Requirements

1938-1939". The perilous situation with respect to record survival is illustrated by Lea's (vice president of sales) claim in 1956 that he staged an eleventh-hour rescue of these materials prior to their destruction [Acc 1915, box 53, folder 8]. As might be expected, the archive is far more complete in terms of newspaper articles, in-house newsletters, and publicity pieces than it is in terms of cost and accounting records. Furthermore, after the formation of Sperry Corporation, the types of surviving records in the archive changed radically. For the earlier period, a smaller volume of materials exists, but what is there is of a more traditional accounting type. During the World War II era, by contrast, most existing records were generated at the corporate level (Board of Directors' minutes, correspondence with government, planning). As previously mentioned, only the Planning Department's records have been preserved *in toto*, at least in the Hagley collection. Notwithstanding the incomplete holdings specifically related to cost accounting, there is still much to be learned about this leading governmental contractor.

Sperry Corporation Prior to World War II: Elmer A. Sperry (1860-1930) started his entrepreneurial career while studying electrical engineering at Cornell University. His invention of a modified dynamo to increase the output of electric current resulted in a contract to build a generating station for Syracuse's new, downtown, arc-lighting system. At 21, Sperry had already attained a national reputation. It was during his work on electrical systems that he developed and patented an automatic, electromagnetic regulator. Based on a closed feedback loop, the regulator could shut down all the lamps in an arc-lighting system in the event of an electrical overload. Although he left the field of electrical generation and manufacture in 1889, the concept of an automatic feedback loop, combined with a mechanism of self-correction, formed the basis for many of the inventions that would make Sperry successful and support the U.S. military in two world wars.

Sperry founded Sperry Gyroscope in Brooklyn, N.Y. in 1910, ostensibly to provide a business setting for the application of Leon Foucault's 1854 invention of the gyroscope to the aviation and maritime industries.[5] Using both Foucault's gyroscope

[5] Elmer's son Lawrence, the developer of the gyrostabilizer, founded his own company (Lawrence Sperry Aircraft) in 1915, but the enterprise failed after its founder perished in an airplane accident in 1924.

and his own automatic guidance and feedback control technology, Sperry developed a ship's gyroscope that would control the ship's engine and steering mechanism, automatically holding the ship on a predetermined course ["Safety-Minded Genius," Acc 1915, #056].

Working closely with the U.S. Navy, Sperry installed the first ship's gyroscope on the battleship *U.S.S. Delaware* in 1911. By 1915, the marine gyroscope was standard equipment on all naval vessels. In 1913, the first gyrostabilizer, controlling pitch and yaw as well as speed and direction, was installed on the *U.S.S. Worden*. The new technology was quickly adopted by commercial steamship companies as well [Acc 1915, #060].

Sperry Gyroscope established a subsidiary in London in 1915 to service the Allies in World War I. In 1929, the elder Sperry sold his company to Clement Keys, the president of Curtiss Aero and Motor. In 1933, General Motors absorbed the Curtiss-Keys combination, but the Sperry Corporation was created as a management and holding company. At this time, Ford Instruments became a part of the conglomerate, with subsequent expansion to include Waterbury Tool (1935), Vickers, Inc. (1937), New Holland Farm Machinery (1947), and Dillinger Manufacturing (1948), precedent to the formation of Sperry-Rand in 1955, and thence into Unisys in 1986. In the years between the two world wars, Sperry and his engineers developed the automatic pilot, the first airplane stabilizer, gyrostabilized bomb sights, and automatic-fire control systems. By the 1920s, Sperry Corporation had become known as the "Brain Mill for the Military".

In the 1930s and the 1940s, Sperry engineers worked with researchers at Stanford University and MIT to develop the microwave technology that forms the foundation of modern radar systems. At the beginning of World War II, Sperry was supplying approximately 100 highly technical products to the U.S. military, including directors (automated firing devices), sound locators, high-intensity search lights, gyropilots, bomb sights, gyrocompasses, range finders, and automatic gyrohorizons [Acc 1915, #053].

Business Organization: A 1931 organization chart shows Sperry's 367 employees divided into four large divisions: Sales, Engineering, Factory, and Finance with 58, 62, 138, and 99 employees respectively. There were only ten employees at the corporate level, a remarkably lean organizational structure by modern standards. Of the 58 members of the Sales Division, 33 were service representatives located around the country. Engineering was divided both by function (specifications, standards, research, and drafting) and by product line (gyrocompass, gyropilot, searchlight, etc.). The Factory Division, by far the largest, was subdivided by functional activities (pattern making, inspection, plating, tool making, grinding, etc.). All facets of inventory control were handled by Production Control, a department within the Factory Division.

The 99 members of the Finance Division performed the treasury and internal audit functions. The Treasurer's Office had a small number of employees performing typical clerical functions, but was comprised mainly of people who would most likely be categorized as maintenance in modern organizations. The auditor's function was comprised of 22 people (number of employees in parentheses), including the auditor (1), general accounting (6), cost accounting (12), and estimating and price making (3) ["Organization Chart, Sperry Gyroscope Company, Inc., November 19, 1931," Acc 915, #025].

New Sperry products began in the Methods Department where the actual process of manufacture would be designed, including the selection of machine tools that would be most suitable, the proper sequence of manufacturing steps, and engineering estimates of the time required for the different operations. This work was then codified on "operations sheets". Once the Methods Department had completed its work, the factory would be given permission to proceed, and the Production Control Department would assume responsibility for securing raw materials and overseeing their proper use and control.

When production commenced, the Inspection Department followed various pieces through the different departments to ensure proper compliance with manufacturing specifications. The completed apparatus would be checked at the time of shipment, and the required information would be provided to the Accounting Department for billing purposes. "Cost records carefully maintained and compared with estimates so that errors in sales prices may be avoided in future work . . ." [Acc 1893, #044] would appear to have been the task of the three individuals in Estimating and Price Making in the Auditor's Department, although the documents do not specifically say so.

Record keeping at Sperry prior to the end of World War II was largely a manual affair. Cost data were collected on ledger sheets or cards, hand-ruled and handwritten during World War I and pre-printed during World War II. Final reports were prepared on manual typewriters with two-color ribbons so that totals appeared in red. Many input records (production figures, journal entries, and others) were handwritten on the backs of "scrap paper" and unused forms.

Cost Accounting at Sperry before the War: While it is unknown how many accountants were employed in the earliest years, we have seen there was a substantial complement of cost accountants responsible to the head internal auditor. It is also the case that scientific management methods espoused by Taylor were known to Sperry. A 1920 article in the firm's newsletter, authored by C.S. Doran, the general manager, discussed the advantages of a scientific layout of the factory and the utilization of engineers to conduct time-studies and thereby establish optimal work routines. Employee suggestions for both processes were solicited. The Inspection Department was to maintain cost records comparing actual production to estimates.

Perhaps the best indication of the early state of cost accounting at Sperry Gyroscope in this era is contained in the minutes of a conference of the leading executives on September 10, 1918. F.C. Pinkham, the chief financial officer, said that the details of cost accounting had been worked out and that operationalization would follow. R.E. Gillmor, second in command only to the senior Sperry, observed that the Cost Accounting Department had the staffing to collect masses of data but that going forward the system should "answer three things" that were apparently unanswered theretofore [Acc 1893, folder 9, #045]:

> (a) It should be satisfactory to the manufacturing division as a means of providing them information wherewith to judge the performance of each department as far as the factory is concerned and that department heads and supervisors can use.
>
> (b) It should also satisfy the sales division and provide them with all the information they need to fix prices properly and see if a certain line of products is profitable.
>
> (c) It should provide a basis for the reports to the board of managers to enable them to judge as to the profitability of various lines.

Doran suggested that the expense of productive and non-productive labor and materials be separated, that research and development costs be segregated from manufacturing costs, and that the cost accounting staff should visit each department to become familiar with the department's functioning and its accounting system.

Although cost keeping was moderately successful, the language above suggests that early cost accounting at Sperry was fairly rudimentary. This nascent state of Sperry's accounting was particularly evident in the area of overhead cost allocation. In 1918, a dispute with Price Waterhouse over whether factory overhead should be carried to cost of goods sold rather than finished goods resulted in a change of auditors [Acc 1915, #049]. Sperry's attempt to allocate overhead on the basis of direct-labor dollars was not a success. During a period of several months in 1918, Sperry Aircraft angered the A.S. Heinrich Corporation, a customer, by raising its application rate from 100% of direct-labor cost to 125% on contracts and even noting that the new rate "is abnormally low to allow on semi-experimental work of this character" [Acc 1893, folder 9, #033]. Perhaps the culmination of the problem came in a "Jobs Completed" schedule for May and June 1924 when the firm noted [Acc 1915, #016]:

> Due to the fact that adding 100% of Productive Labor as cost of Factory Overhead is not sufficient to cover actual cost of Factory Overhead and also because apparently the proper amount of Factory Overhead had not been charged to the jobs completed before March 31, 1924, there had to be added to the cost of the above jobs the sum of $2,543.12 as additional factory overhead.

The magnitude of this adjustment is told by the fact that it took the allocation to approximately 250% of direct-labor dollars. C.W. Nutt, the auditing firm, suggested in its notes to the firm's financials for 1924 that 180% would have been a more reasonable allocation than 100% [Acc 1915, #016].

Despite the overhead allocation difficulties, the Cost Accounting Department did produce some wonderfully detailed monthly reports. One such schedule, "Comparative Statement of Productive Labor and Burden Expense by Productive Departments," provided data (current month in black, the preceding in red) for 47 departments. Data categories included the costs of inspection and testing, idle time, deficient work, and burden rate per hour for both the current month and year-to-date [Acc 1893, box 22]. Another monthly report contained data related to specific product lines, including the percentage of total hours devoted to each and the average rate per hour for manufacturing expenses and engineering/drafting [Acc 1893, box 22]. These monthly reports, truly impressive in their magnitude, were commented upon by Pinkham and sent directly to E.A. Sperry.

Nevertheless, Gillmor's observation that cost accounting during the early years generated much data with basic questions yet to be answered continued to hold through the Great Depression. The Cost Accounting Department was churning out monthly reports that were superficially very impressive. However, the system was not able to address the vital problem of overhead application. Moreover, there is no indication that standard costing was utilized despite the technique being the theoretical state of the art. The firm had the cost accounting staff, an appreciation of cost accounting's importance, and innovative management that demanded the flow of cost accounting data. Would the productive mandates of World War II, the closer relationship with government, and the reorganization into Sperry Corporation bring the benefits of the more sophisticated cost accounting practice suggested by the literature?

The Road to World War II: On April 10, 1935, six years before America's entry into World War II, R.B. Lea, vice president of sales, and L.B. "Bo" Coon, the planning manager, met with representatives of the Munitions Board, inaugurating a series of conferences to discuss the types and quantities of armaments that would be required once war broke out (always referred to as "M Day").[6] Lea claimed that Sperry was much more proactively involved in planning than other munitions providers.

The archive contains a remarkable document, dated March 16, 1936, in which were recorded the Sperry products required by various governmental agencies with data provided as to the quantities needed and the monthly units anticipated, reflecting a learning curve. Recipients of this output included the Ordnance Department, the Corps of Engineers, the Air Corps, the Bureau of Navigation, the Bureau of Ordnance, the Bureau of Engineering, and the Bureau of Aeronautics.

Acting out of fear that Sperry might be commandeered during wartime, Lea went to Colonel H.K. Rutherford, Director of Planning for the U.S. Ordnance Department, to request updated specifics as to what each governmental bureau would require.

[6] Many of the documents that relate the prewar story are contained in a file titled "National Defense —Mobilization Plans Survey of Emergency Procurement Requirements 1938-39" [Acc 1915, box 53, folder 8]. Unless otherwise cited, documents referenced in this section can be found at this location.

Perhaps as a result of that visit, Sperry commenced the operationalization of its "Emergency Procurement Plan" in fall 1938. Coon sent Lea an "Outline Procedure" on October 20 in which he elaborated how Sperry would calculate the direct-labor needs, the required machinery, the assembling capability, the non-productive labor, the appropriate floor space, and other miscellaneous requirements to attain the level of production specified in 1936. Additional data were now provided as to man-power requirements, machinery and floor-space needs, subcontractor assistance, and sources of supply for direct materials. While these calculations related to capacity constraints rather than to costs, time allowances from the files of the Estimating Department and cost figures from recent orders were deployed. One gets the impression that time-studies had been undertaken to assess how long machine functions were to take, but that these data had not been incorporated into a standard costing system. Moreover, Sperry was apparently in arrears in terms of physical layout. In his cover letter, Coon wrote: "No consideration has been given in any of these write-ups as to different methods of tooling or rearrangement of factory departments for conveyerizing (sic) of modern production methods. This could also be done in a detailed study".

Based upon Sperry's Emergency Procurement Plan, Colonel Rutherford, in April 1939, supplied a revised schedule of emergency requirements that has not survived in the file although the transmittal letter has. Lea, in his 1956 recollection [Acc 1915, box 53, folder 8], wrote of the high praise Sperry received for planning work that the Munitions Board "used in encouraging other companies to make specific plans and studies for M Day requirements". When the U.S. finally entered the war two years later, this planning was obsolete for the most part as Sperry was now called upon to produce "quite a different set of apparatus" than had been envisioned.

A more sophisticated planning process was reflected in certain documents contained in a file entitled "War Plans 1935-1938" [Acc 1915, box 53, file 5]. On July 11, 1935, Sperry was sent an "Accepted Schedule of Production" from the Ordnance Department of the War Department for 600 M3 directors, at a unit price of $38,000, with ten to be delivered four months after the procurement order, 20 in the fifth month, and 30 for months six through 24. On July 30, 1935, Coon sent to Lea and others three alternative plans for producing 100 "Antiaircraft Directors M3." According to Plan 1, there would be no change in existing equipment, layout, or tooling. The schedule would be:

1 – 9 months	0	13th month	4
10th month	2	14th month	5
11th month	3	15th – 27th month	6
12th month	3	28th month	5
		Total	100

Under Plan 2, there would be an outlay of $300,000 for tool design, layout alteration, new machine tool equipment, etc. Production would then be:

1 – 12 months	0
13th month	5
14th month	10
15th month	10
16th – 20th months	5
Total	100

Plan 3 required an outlay of $55,000 beyond Plan 2, producing the result:

0 – 12 months	0	
13th month	5	
14th month	10	
15th month	20	
16th month and beyond	30	
Total	100	in 17½ months

Coon's plans were provided as schedules for the time it would take to produce 100 directors under peacetime (Plan 1) and two emergency scenarios (Plans 2 and 3). It was estimated that a peacetime production plan would save eight months for the first 100 directors in contrast to commencing production from ground zero. It is not known how the Ordnance Department responded to these data. While this particular production/learning curve exercise is the most complex, it is by no means an isolated negotiation.[7]

This theme of the advantages to be gained from peacetime production was underscored in a letter from R.E. Gillmor to the National Research Council, Committee on Aircraft Production, on April 26, 1940 [Acc 1915, box 40, #026]. Sperry's general manager addressed the issue of productive capacity and unit

[7] The materials estimation process was likewise done with great care. There exists an aluminum study for 100 directors dated November 25, 1938. It includes a standard scrap calculation per pound of finished product [Acc 1915, box 53, folio 6, #059].

cost under three conditions which he labeled "normal," "emergency," and "war". Increased unit cost under "normal" conditions would result only from increased product quality. In "emergency" situations, cost increases would be a function of relatively untrained workers and the need to write off special tool investment. Finally, in "war" unit cost increases would result from overtime and other wasteful methods. Gillmor urged that these cost increases "could be ameliorated by looking upon national defense as a continuing problem," thereby smoothing distinctions among these conditions.

SPERRY DURING WORLD WAR II

As a leading contractor, Sperry was intimately involved in the system established by the government to regulate war-materiel provisioning. The archive contains many references to the renegotiation process. The minutes of Board of Directors' meetings suggest that Sperry considered itself the "leader" in renegotiation [Acc 1910, box 23, vol. 9]. The claim was made in the August 29, 1945 minutes that Sperry was the first to propose renegotiation and to reduce prices voluntarily. The first mention of renegotiation in the minutes occurred on April 14, 1942, when the firm agreed to renegotiate because its subcontractors were making excessive profits in light of the lower production costs associated with a "considerably expanded rate". It is unclear, however, whether these savings were the result of a learning curve, capacity considerations, or both [Acc 1910, box 23, vol. 7, no. 1]. In a document called "Report for 1943 Renegotiation" [Acc 1915, box 82, p. 3], Sperry called it company "policy" to lower the prices of its products when manufacturing experience, reflected by reduced prime costs, was gained. Initial ceiling prices on new products were lowered to a firm price, most frequently retroactive to first delivery. It is difficult to assess the magnitude of repayments to the government as they were in a state of flux since price reductions could take place years after the point of sale. However, one Sperry document called "The Story of the Sperry Corporation" alleged that through the end of 1943, $128 million had been returned to the government through the renegotiation process [Acc 1915, box 40, #023, p. 57].

In 1943, the U.S. military asked its prime contractors to prepare histories of the various products they supplied. The Sperry archive contains a document that provided precise instructions as to how these histories were to be prepared. The first section was to be a description of the product, the process of its development and initial production, the contribution of the product to the war effort (including its limitations), and the anticipated "continuation of improvement" through research and development. A second section supplied the sales price by contracts, labor costs over time, and additional information to track efficiency as reflected in lower product cost and sales prices. Most statistically complex was the concluding section on production history. Here manufacturing accomplishments and difficulties, relations with prime and subcontractors that had participated in the product's manufacture, quantities required, and associated delivery schedules and contract performance were to be discussed. A number of these individual product histories have survived [Acc 1915, box 40, #029]. What is interesting about them is their reflection of time rather than cost management, a more contemporary manufacturing philosophy. It is not to be suggested that Sperry was 40 years ahead of its time. As the company itself observed, its was not a typical manufacturing environment because of the precision instrumentation required for products with hundreds of moving parts [Acc 1915, box 40, #029].

Despite the sophistication of Sperry's planning and renegotiation processes, the firm had many of the same complaints about contracting issues with the government that were referenced in the cost accounting literature of the period. In a March 17, 1943 statement submitted by Sperry Corporation to Mr. S.C. Coleman of the U.S. Navy, a Sperry representative explained that while the company understood the necessity for speed, that pressure to get war materiel "into production before design and tooling is complete . . . [resulted in] a continuous series of changes . . ." As an example, Sperry cited a product placed into production only six months earlier that had undergone 1,489 changes in a single month [Acc 1915, #029]. In April 1940, Gillmor complained to the National Research Council about the "useless perfectionism" of governmental quality inspectors [Acc 1915, box 40, #026]. In the same correspondence, Gillmor launched a protest against the auditors of the War, Navy, and Treasury Departments who disallowed certain items of overhead, such as selling expense. In general, Gillmor was protesting a fixed limit on profits, urging that "profit limitation provides every incentive for increasing costs and none for decreasing them".

Sperry was keenly aware of the importance of the design phase of operations as we have seen in describing the activities of the Methods Department. The complaint was lodged that the pressures of wartime militated against thorough trials being conducted before product launch [Acc 1915, box 40, #024]. A rather amusing, undated, handwritten page appears in a file entitled "World War II Renegotiation of Government Contracts, 1942" [Acc 1915, box 40, #031]. The anonymous author averred that in the 20 years leading up to 1935, research and development failures had cost Sperry $1.3 million in losses. It was noted that the company maintained a museum of these costly failures.

Finally, the company was most concerned about losses it anticipated as a result of the termination of contracts as the war ran down. This was a realistic concern. Table 1 below provides some indication of the investment in men, material, and equipment that Sperry made during, and specifically for, the war [Acc 1910, #024, figures rounded]:

TABLE 1

Sperry World War II Statistics

	Employees	Land and Buildings	Machinery and Equipment
January 1, 1940	5,400	$1,308,000	$2,411,000
Wartime peak	56,000	5,926,000	4,376,000
December 31, 1945	15,000	1,694,000	1,902,000

The government, however, was not willing to allow these future costs to be factored into pricing or negotiation. Costs here included inventory buildups of wartime products unsuitable for sale in peacetime, the consolidation of plants as demand decreased, the cost of retooling for peacetime, and the cost of superfluous fixed assets. T.A. Morgan, the president of Sperry Corporation, complained to the House Committee on Naval Affairs that the various price adjustment boards with which the firm had to deal did not allow a provision for reserves for termination expenses as a current cost in renegotiation [Acc 1915, box 40, #026]. These termination issues were fully discussed in "The Story of the Sperry Corporation" [Acc 1915, box 40, #023, p. 62].

Sperry's wartime contribution was significant. By 1943, the company was manufacturing 300 different products for the war effort, two-thirds of which had been developed within the prior ten years. The following excerpt from an internal Sperry document [Acc 1915, #023] provides a picture of how some of these products worked together:

> The sound locator picks up approaching planes before they are visible and determines their exact position, speed, and direction of flight. . . . Simultaneously, the anti-aircraft director, functioning as a computing mechanism, determines the direction, elevation, and setting required to aim the anti-aircraft gun at the approaching airplane and transmits this information automatically to the guns through a remote control system.

Not only did Sperry invent and manufacture these products during the six-year period from 1939 to 1945, Sperry also ran in-house schools where they housed, fed, and trained over 77,000 military and naval personnel in the use and maintenance of Sperry equipment.

Subcontracting: A very significant aspect of Sperry's relationship to the U.S. military in World War II was the firm's role in defining a model for subcontracting. The archive contains an extensive file of articles and other publicity regarding Sperry and subcontracting [Acc 1915, box 40]. The firm's Publicity Department was quite expert in placing articles in a wide variety of periodicals that published information about Sperry's contribution to the war effort. The details were typically the same, featuring Sperry's pioneering efforts to establish a subcontracting network and, subsequently, to institute quality-control procedures for its supply of component parts.

Sperry's subcontracting for government provisioning commenced long before the outbreak of hostilities, as had the planning processes for "M Day". Sperry surveyed 1,000 New York City area firms in spring 1937 in order to evaluate those most fit for a subcontracting relationship [Norcross, 1941, p. 77]. The first subcontract was negotiated in 1937 with the American Machine & Foundry Co. (AMF) and called for 2,000 machine hours of work. AMF, a manufacturer of bakery and tobacco-processing equipment, would eventually dedicate 90-95% of its capacity to 13 government contractors, without ever having a direct defense contract [Gesner and Beckley, 1941]. From this modest beginning, Sperry's outsourcing grew exponentially, reaching 486,000 machine hours per month from 145 sources by October 1941 [Morgan, 1941, p. 7]. A report of November 29, 1943 averred that 50% of the dollar value of Sperry's shipments was materials either subcontracted or bought from suppliers, and that 35% of all man-hours charged were from subcontracted work. Even at those levels, the volume of subcontracting was down from peak levels the year before [Acc 1915, box 40, #027].

More significant than the volume of Sperry's subcontracting was the relationship between the firm and other munitions manufacturers, both prime and subcontractors. Prime contractors were those that delivered entire instruments to the military and held contracts directly from some government agency for that provisioning. Included were such industrial giants as Ford, National Cash Register, IBM, and Chrysler. The minutes of the March 6, 1942 Board of Directors' meeting contained approval for a policy that granted prime contractors and their subcontractors licenses to manufacture certain patented items without royalty for the duration of the war. This resolution was reiterated at the March 18 meeting, along with Sperry's commitment to provide engineering and manufacturing assistance at cost [Acc 1910, box 23, vol. 7, no. 1]. By the end of the war, 140 Sperry products were being manufactured by 26 prime contractors under a royalty-free plan [Acc 1910, box 23, vol. 8, minutes of August 29, 1945].

Equally significant were the relationships the corporation forged with its suppliers. As early as September 1938, with the articulation of the "Emergency Procurement Plan" Sperry had identified the shortfalls of direct labor, machine equipment, and floor space required for the volume of armaments the government was requesting. At that time, 14 subcontractors had been selected on the basis of past experience that "were qualified and trained to our close tolerances and the Sperry standard of work . . ." [Acc 1915, box 53, folder 8, #053]. By spring 1939, the company expected to inform the War Department of additional subcontractors that were currently being investigated. As of August 28, 1939, a finalized list of subcontractors had been developed with both additions to, and deletions from, an original list of 32 previously articulated [Acc 1915, box 53, folder 8]. By 1943, the number was to grow to 500 ["Report for 1943 Renegotiations," p. 22, Acc 1915, box 82].[8]

According to an article that appeared in the *New York World Telegram*, Sperry required 60,000-70,000 parts, almost 50% of which were farmed out to 76 subcontractors. The paper quotes a spokesman from the N.J. Gear and Manufacturing Company [Williams, 1941]:

---

[8] A "Report on Subcontracting." dated November 1943 [Acc 1915, box 40, #027], claimed that the number had not changed materially since 1941, but that new firms had been added and old ones weeded out.

> [Our] first attempts at Sperry Gears were mostly rejected. Then the Sperry Engineers came . . . and assisted . . . in adjusting…machines to close tolerances. . . . After six months of patient toil [we were able] to produce gears that passed inspection. I learned . . . that when Sperry engineers said 'one one-thousandth of an inch,' they mean one one-thousandth of an inch.

The significance of Sperry's subcontracting operations is demonstrated by the fact that the gyroscope subsidiary alone had a staff of 150 people employed to handle the details of external relations [Morgan, 1941, p. 7]. L.B. Coon [1941], the planning manager, wrote an informative article for *Mechanical Engineering* in which he discussed how to establish a subcontracting organization. A separate subcontracts department, it was recommended, should be established with reporting responsibility to the planning manager. This department should include methods engineers to supervise data collection on the subcontractors' capacities in terms of machine time and floor space, a corps of clerical workers to provide monthly reports, and a group of production expediters ("follow-up" men) to circulate among the subcontractors to ensure compliance to schedules. There were also to be inspectors at the suppliers' installations to ensure the quality of component parts. Sperry learned early on that it was expeditious and cost/beneficial to locate the inspection process at the source of supply. The prime contractor's methods department would be deployed to provide details as to how work should be performed and how much time should be allowed for various functions. Cost accountants would be involved in helping to establish price quotations based upon the subcontractor's actual cost experience. Coon observed that subcontractors tended to under-quote prices in order to get relationships established. The subcontracted price would be established by determining a money rate per hour for each plant, taking into account individual wage scales, burden rates, and reasonable profit, and then multiplying that rate by the predetermined time estimate.

In summary, Coon [1941, p. 516] advanced six points to define all subcontracting operations:

1. Preliminary planning is essential for determining subcontract requirement.
2. The regular organization is not adapted to absorbing the subcontract program. Greater control can be obtained through the medium of a special structure.

3. A systematic and thorough training period will pay dividends.
4. Evolve a flexible system of cost control which will ensure a fair profit to the subcontractor, without necessitating lengthy and time-taking negotiations.
5. Maintain close personal contact between both organizations to insure delivery and cost control.
6. Do not in any case 'walk away' from the subcontractor's internal difficulties. Accept them as your own and lend assistance.

A more widely circulated set of principles for Sperry's subcontracting process was its twelve-step "creed" (Exhibit 1) [Norcross, 1941, p. 77; Morgan, 1941, p. 8]:

EXHIBIT 1

THE SPERRY CREED FOR SUB-CONTRACTING

1. Schedule the amount and types of your sub-contracting as far in the future as possible.

2. In surveys of potential plants, secure complete information on size of building, type of machines, kind of product being made, skill of personnel available, output, possibilities for expansion.

3. When you have chosen your sub-contractors, provide them with as much help as though they were new departments of your own company.

4. Provide complete blueprints, job sheets, and cost sheets. Don't hold back any manufacturing secrets.

5. Set a fair price, preferably a cost-plus basis on early orders. Your sub-contractor must make a profit to stay with you. Admit to yourself that there is always considerable scrap on early orders.

6. Lend or help to secure for your sub-contractor, if necessary, any tools or new equipment he may need.

7. Give freely of your supervisory help. Send in methods engineers and shop men who have the "know how" on the product to be made.

8. Keep complete machine charts as to work done and work on order. Watch for bottlenecks in methods and materials.

9. Help your sub-contractor with training and personnel problems if needed.

10. Remember that educational orders may be necessary for six months on difficult work.

11. Follow-through on every production detail.

12. Don't be over-optimistic as to early results. Sub-contracting is a long, tough job.

Reproduced courtesy of the Hagley Museum and Library

Sperry received full credit for its subcontracting network. For example, *Farming Out Bulletin No. 5* of the U.S. Labor Division (1941) contained a full description of the system in "Subcontracting Methods of the Sperry Gyroscope Co." [Acc 1915, box 40, #023, pp. 19-27]. The November 6, 1941 edition of the *Utica Observer Dispatch* proclaimed: "The Sperry Company is pointed to as the prize exhibit of how subcontracting can best be done" [Acc 1915, box 40, #023].

Growth: The Sperry archive contains a plethora of statistical data charting the meteoric growth of the company as a result of the World War II experience. In addition to its own employees, an April 1942 document that placed the then Sperry labor force at 25,000 estimated an additional 75,000 employees at the plants of prime contractors and subcontractors working on Sperry products [Acc 1915, box 40, #013]. Other personnel growth numbers from 1943 measured an increase in engineering and research from 600 to 4,000, of licensed engineers from 120 to 680, and of women in the work force from 10% to 43% [Acc 1915, box 82, pp. 25-26]. Other growth indicators were net income and sales. Table 2 below illustrates as well the low margins government contractors were permitted during the war [Acc 1915, box 55, files 1-4]:

TABLE 2

Sperry Sales Revenue and Net Income

Year	Sales	Net Income	Margin
1933	$ 3,571,630	$ 495,630	13.88%
1936	15,220,446	2,570,568	16.89
1939	24,827,498	5,462,060	11.00
1942	249,318,939	5,777,961	2.32
1945	217,452,692	6,954,438	3.20
1948	120,859,852	8,770,552	7.26

Research and Development: New product development was an essential component of Sperry's operations. In point of fact, the company claimed that, "we are the only company in the country which maintained continuous research on military instrumentation between the last war and this" [Acc 1915, box 40, #024]. According to the same source, 1,700 people were employed in the research organization, "engaged solely on new developments".[9] At the beginning of World War II, Sperry estimated that 85% of its sales revenue came from products developed during the Depression decade [Acc 1915, box 53, folder 7, #057]. During the war itself, Sperry expended $35 million on research and development, with the government funding 45% of the cost. One hundred and forty new products resulted [Acc 1910, vol. 9,

[9] A March 1943 report to the Navy put the number engaged in research at 1,600 [Acc 1915, Box 40, #026].

#052, minutes of August 29, 1945]. A lengthy list of new products developed during the 1930s and the early war years are provided in a February 1944 document, "Nature of Pre-War Business . . ." [Acc 1915, box 40, #030].[10] They included the automatic pilot, radar-detection equipment, engine-control instruments, radio-navigation systems, power controls for land and naval guns, electronic telescopes, and many others [Acc 1910, #024].

A typed listing of "experimental expenses" for 1925-1946 was compiled with 1947 and 1948 handwritten at the bottom [Acc 1915, box 53, folder 14, #055]. The impact of World War II on R&D is immediately apparent as reflected in Table 3:

TABLE 3

Experimental Expenses

1937	$183,831	1943	$2,563,295
1938	269,739	1944	3,799,707
1939	459,233	1945	3,287,095
1940	571,356	1946	2,864,299
1941	1,363,753	1947	843,989
1942	1,383,129	1948	565,713

There have survived in the archive monthly reports on research and development contracts undertaken with the military during the war [Acc 1915, box 53, folder 17, #055]. These reports are typed on huge folio pages with numerous data categories. The contract price is given, along with the costs-to-date divided into factory labor & burden, engineering labor & burden, design labor & burden, and material and sundry expense. Information is provided for those contracts where expenditure had exceeded contract price, both for the current year-to-date and for prior years. Current costs are recorded for the month of the report and for year-to-date. Finally, there is a schedule of engineering and development expense generated by the Engineering Division, referenced as "Schedule X". Here the budget for the specific subdivision is provided (e.g., aeronautical, armament, marine), along with the amounts authorized for specific jobs. Actual expenses are recorded for (1) shop labor & overhead, (2) material, (3) engineering labor & overhead (4) drafting labor & overhead, (5) sundries, and (6) air lab & marine lab [Acc 1915, box 53, folder 14, #055]. The amount of detail maintained on

[10] Morgan wrote to the House Committee on Naval Affairs in July 1943 to the effect that Sperry was producing 300 different war products [Acc 1915, box 40, #026].

research and development expenditures is one of the most impressive aspects of the Sperry archive.

Labor Control: The Sperry Corporation had an exceptionally structured organizational plan. Gillmor [1941, p. 4] described how “all lines of authority and responsibility are clearly shown on the Organization Chart mounted in the Executive Offices”. More importantly, the Sperry organization plan was detailed in four manuals. The “Organization Manual” defined the distribution of responsibility and was, in the first instance, the aforementioned chart in narrative form. The “Standard Practice Manual” defined operating procedures, including detailed instructions as to how work was to be performed. This specificity for job functions seems very much in the scientific management tradition. The most interesting of the manuals was the “Salary and Wages Administration Manual”. Gillmor averred that the skills and characteristics required for each occupation were described, along with the procedures for rating performance and determining eligibility for promotion. Individual workers were to submit to semi-annual reviews by a committee comprising the department head, the division chief, and a member of the Personnel Department, although no evidence survives that these evaluations were ever undertaken. There also existed an “Accounting Manual”, about which Gillmor [1941, p. 4] only observed that it “specifies the distribution of operating expenses by responsibility”. It is unfortunate that none of these manuals has survived in the archive.

It would appear that a structure existed for labor control, both through the definition of tasks and the establishment of performance standards subject to semi-annual review. However, we have no evidence that the system functioned as theoretically envisioned. In point of fact, an anonymous, undated collection of comments maintained in a miscellaneous file indicates that labor “control” was very different from that envisioned by Taylor [“What the Company Does”, Acc 1915, box 40, #024]. On the “nature of discipline” the author observed:

> . . . not to be associated with severity or punishment, but with the Biblical origin of the word which means the processes of training by which the individual becomes a disciple for that in which he believes and a disciple of his leader, able to carry on without direction.

Perhaps a more compelling illustration that the system was not functioning according to Taylorite principles is contained in the following damning quotation from the same source:

> An explanation that operation sheet times are at present nothing more than very approximate guesses and likely to be one-quarter of the time necessary or four times the time necessary. Practically all of them have had to be determined hurriedly with no opportunity to observe the operation in practice and often times without knowing the particular machine tool that will be used. They serve one important purpose, and that is that on the average over several hundred operations they are very close to correct and provide a good guide for estimating costs and for scheduling. When it comes to a particular operation, however, the worker is his own best judge as to what the time should be and as to whether he is doing well or badly. Eventually the times will be correct, as we are now making studies of the operations on the job, but it will take months to accomplish this.

The impact of World War II on the labor force is reflected in Exhibit 2 [Acc 1915, box 53, folder 7, #057] where 56.6% of Sperry's employees had less than a year's experience with the firm.

There is evidence that, during the war, statistics were maintained to curb absenteeism with chronic offenders terminated [Acc 1915, box 53, folio 8, # 053]. A report of the Industrial Relations Research Department for February 1944 compared worker termination rates to other companies and found conditions at Sperry favorable on that parameter [Acc 1915, box 40, #029]. However, wartime dislocations militated against more effective forms of labor control. In Gillmor's 1940 letter to the National Research Council [Acc 1915, box 40, #026], the general manager related how the firm had to take complex tasks that skilled operatives would perform and break them down into simple, repetitive tasks appropriate for lower-skilled workers. Amazingly, the deskilling process described predated America's entrance into the war by 20 months!

ANALYSIS AND CONCLUSIONS

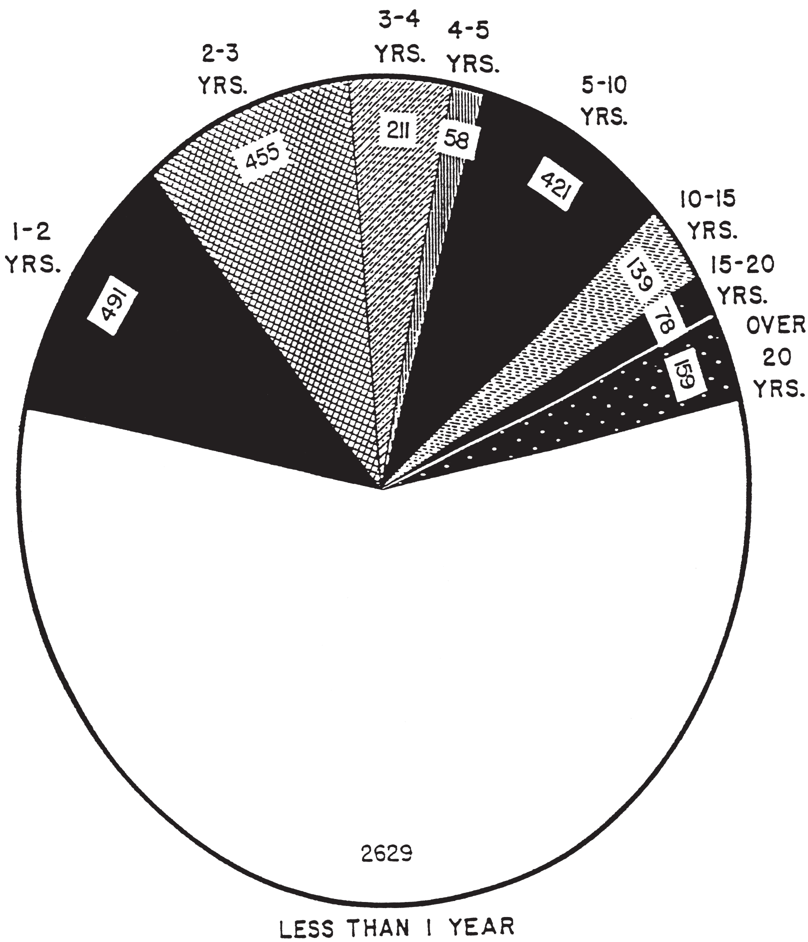
In terms of Sperry's cost accounting, the company had adopted a number of state-of-the-art methodologies reflecting scientific management theory. The company had deployed time-study to determine scientifically the processes for accomplishing tasks, with rules for work collected into manuals. Sperry had a Methods Department almost from its inception that issued instructions on manufacturing methods and time allowances for various operations taken in sequence. The advice of shop-floor workers was solicited in the process [Mills, 1920, p. 12], with the

EXHIBIT 2

SPERRY GYROSCOPE COMPANY, INC.

DISTRIBUTION OF EMPLOYEES BY LENGTH OF SERVICE

OCTOBER 1, 1940



TOTAL: 4641 EMPLOYEES

Reprinted by permission of Unisys Corporation. All rights reserved.
Reproduced courtesy of the Hagley Museum and Library

resulting procedures subsequently codified into the Standard Practices Manual. A report to the Navy in March 1943 discussed how standardized practices had grown since 1937 because of labor turnover and expansion and how 15 industrial engineers in the Organization and Procedures Department and 50 in Manufacturing Engineering were attempting to cope with these issues on an ongoing basis [Acc 2925, box 40, #026].

Procedures were also codified for the evaluation and reward of operatives, although again, evidence does not exist of their utilization. Sperry also approached the question of physical plant layout in engineering terms. However, there is no evidence that the company ever instituted a standard costing/variance analysis system as part of its package of scientific management methodologies.

World War II represented a step backwards for Sperry's scientific management in that labor-force shortfalls and inexperience rendered older, time-study-based routines and evaluation techniques dead letters. Only further study will reveal whether the prewar measures were recaptured post-1945. Although Sperry did not have a standard costing system in place itself, the costing literature of the period indicates just how detrimental an effect the wartime experience had on companies that did have such a system. The impact of the war on Sperry's labor-control processes serves as an indication of how World War II dislocations were dysfunctional to purposeful cost accounting, at least historically.

It is true that governmental contracting can spawn a greater costing awareness, featuring the expansion of cost accounting departments to generate the masses of data needed for contract pricing [see also Anderson, 2003 for corresponding developments in Australia during World War II]. However, this exercise was rather low-level and artificial costing, particularly because governmental costing exclusions (as in TD 5000) are inappropriate for peacetime.

Sperry was not alone in its failure to have an adequate system of cost control. M.L. Black and H.B. Eversole of the OPA were quoted in the "Cost Current" section of the *NACA Bulletin* [1946, Vol. 28, No. 8, p. 517]: "The predominance, in systems, of process or actual costs and, in overhead distribution methods, of direct labor costs suggests the standard costs and more studied application of overhead are still in the earlier stages of adoption with respect to industry as a whole".

The OPA's chief accountant, H.F. Taggart, attempted to quantify the problem. He estimated that only 15% of the country's manufacturing companies had cost systems worthy of the name, representing approximately 25% of total industrial output [*New York Certified Public Accountant*, 1947, p. 1444].[11]

Notwithstanding its spotty record in adopting scientific management techniques, the Sperry Corporation was a very innovative and sophisticated enterprise. It had a distinctive vision of its future, reflected by exceptional planning processes. Exhibit 3 is a sales forecast for 1945 and 1946 that typifies graphic presentations common in the archive. It is interesting to note that Sperry anticipated the war's termination as indicated by the decline of sales from $13 million in June 1945 to $8 million in September 1946. It should also be noted that the graph reflects the phasing out of old products and the introduction of new ones [Acc 1915, box 53, folder 7, #057].

An interoffice memo from F.S. Hodgman of the Engineering Division to Lea in 1939 advised that, henceforth, costs were going to be investigated by individual product lines rather than at more macro-levels. In addition to allocating a share of common costs, the plan called for costing out the design phase [Acc 1915, box 53, folder 5]. As early as 1941, the company began to reserve one percent of sales to cover postwar readjustment of facilities and personnel [Acc 1910, series I, volume 6, minutes of March 31 and June 13, 1941].

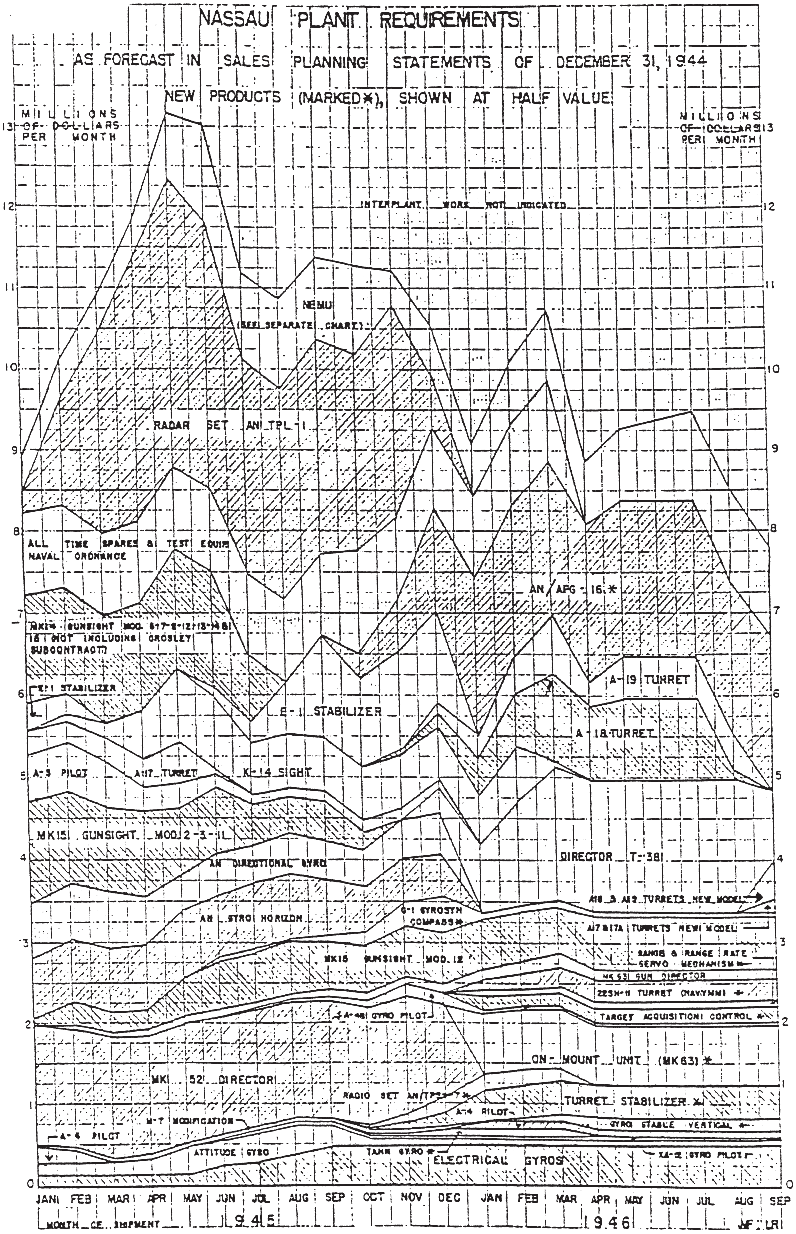
The experience at Sperry Corporation cannot be generalized uncritically to other wars or other companies. The pressure at Sperry was probably greater. Sperry's ability to create new instruments and new equipment actually widened the military's tactical options. To the extent that Sperry instrumentation supported expanding military capabilities, it was significant in allowing the military to continually alter its weaponry and, hence, to respond quickly to the changing tactics of the Axis Powers. Nevertheless, inspection of industry-based articles in the *NACA Bulletins* and *Yearbooks* from 1938 to 1945 did not unearth any articles claiming that the war had advanced the practice of cost accounting. At best, the majority of the articles remained "tutorial" in nature, supporting the claim that sophisticated cost accounting was still not generally practiced.

---

[11] The NACA's Committee on Research undertook a substantial project on standard costing that was published in five installments in the *NACA Bulletin* in 1948 [Vol. 29, Nos. 11, 14, 19; Vol. 30, Nos. 3, 8]. The study concentrated on how standard costing was used in 72 manufacturing firms. The issues of the extent of standard costing and the selection method that identified the surveyed firms were not addressed.

EXHIBIT 3

Sales Forecast, 1945-1946



Reproduced courtesy of the Hagley Museum and Library

While we did not find advances in sophisticated cost accounting techniques, what we did find in the Sperry archive was equally interesting and rather unexpected. With parallels to Japanese management innovations of the 1980s, Sperry realized the advantages to be gained from managing *time* as distinct from *cost* [Stalk and Hout, 1990; Blackburn, 1991]. As early as 1920, I.H. Mills [1920, p. 13], the factory superintendent, observed in *The Sperryscope*:

> The importance of time can scarcely be overemphasized. It forms the larger part of the cost of production and when its value is fully appreciated, the way is opened for economics of production which make it possible to conduct a business profitably and allow it to be established on a sound financial basis. It is a widening circle—economy in the use of time, lessens the cost of production . . .

At a later point in time, it was disclosed in the Office of Production Management's piece on Sperry in the *Farming Out Bulletin* that monthly variance reports that the firm demanded from its subcontractors were measured in time rather than cost [Acc 1915, box 40, #023, p. 22].

Finally, what was most singular in the Sperry archive, in our opinion, were certain techniques developed at Sperry that sound strangely modern. These methods include a substantial awareness of the product-launch component of operations, featuring an orientation toward research and development, the allocation of design-phase costs to product, and the ramifications of the learning curve [Tanaka, 1989; Cooper, 1995].

Sperry was in the vanguard of subcontracting expertise, today's outsourcing, albeit more as a function of capacity constraints than cost/benefit [Horngren et al., 2003]. This aspect of Sperry's operations could have constituted a primer for the proliferation of outsourcing in today's industrial sector. Perhaps even more directly related is how the Sperry experience presaged the influence that major companies, such as Toyota, exercise over their suppliers in JIT environments today [Fruin and Toshihiro, 1993].

REFERENCES

Anderson, R.H. (2003), "Costing Australian Munitions Production in World War II," working paper.

Ashton, D., Hopper, T., and Scapens, R.W. (1995), *Issues in Management Accounting*, 2nd edition (London: Prentice Hall).

Bennett, C.W. (1945), "Standards for Cost Control," *NACA Yearbook*, Vol. 26: 118-154.

Bhimani, A. (1993) "Indeterminacy and the Specificity of Accounting Change: Renault 1898-1938," *Accounting, Organizations and Society*, Vol. 18, No. 1: 1-39.

Blackburn, J.D. (1991), *Time-based Competition* (Homewood, IL: Business One Irwin).

Boyns, T. (1998), "Budgets and Budgetary Control in British Businesses to c. 1945," *Accounting, Business and Financial History*, Vol. 8, No. 3: 261-301.

Braverman, H. (1974), *Labor and Monopoly Capital* (New York: Monthly Review Press).

Brown, K.D. (1993), "Through a Glass Darkly: Cost Control in British Industry: A Case Study," *Accounting, Business and Financial History*, Vol. 3, No. 3: 291-302.

Bullis, H.A. (1945), "Transition Problems for the Accountant," *NACA Yearbook*, Vol. 26: 8-17.

Burke, W.F. (1944), "The Influence of the War on Cost Accounting," *NACA Bulletin*, Vol. 26, No. 2: 251-262.

Burke, W.F. (1945), "Practical Problems in Pricing the New Line and New Order," *NACA Yearbook*, Vol. 26: 87-96.

Caminez, D.B. (1944), "Controlling Costs with Physical Unit Budgets," *NACA Yearbook*, Vol. 25: 143-169.

Camman, E.A., Hoyt, F.F., Rockey, K.H., Bogen, J.I., and Brink, V.Z. (1943), *Cost and Profit Control in Wartime* (New York: American Management Association).

Chandler, A.D. (1977), *The Visible Hand: The Managerial Revolution in American Business* (Cambridge: Harvard University Press).

Coon, L.B. (1941), "Subcontracting Problems," *Mechanical Engineering* (July): 105-109 (Acc 1915, Box 40, #023).

Cooper, R. (1995), *When Lean Enterprises Collide* (Boston: Harvard Business School Press).

DeBeelde, I. (1995), "Industrial Accounting Theory and Practice: Cost Accounting in the Belgian Coal Industry during the First Half of the Twentieth Century," *Accounting, Business and Financial History*, Vol. 5: No. 1: 71-108.

Doran, C.S. (circa 1920), "Achieving Success," *The Sperryscope*, 9-10 (Acc 1893).

Edwards, J.R., Boyns, T., and Anderson, M. (1995), "British Cost Accounting Development: Continuity and Change," *Accounting Historians Journal*, Vol. 22, No. 2: 1-41.

Emerson, H. (1908-09), "Efficiency as a Basis for Operation and Wages?" *The Engineering Magazine*, Vols. 35-36.

Epstein, M.J. (1978), *The Effect of Scientific Management on the Development of the Standard Cost System* (New York: Arno Press).

Fleischman, R.K. (2000a), "The Contribution of Archival Research towards Evaluating the Theory/practice Schism in Cost Accounting History," in *Accounting and History* (Madrid: Asociación Española de Contabilidad y Administración de Empresas): 24-50.

Fleischman, R.K. (2000b) "Completing the Triangle: Taylorism and the Paradigms," *Accounting, Auditing and Accountability Journal*, Vol. 13, No. 5: 597-623.

Fleischman, R.K. and Tyson, T.N. (1998), "The Evolution of Standard Costing in the U.K. and U.S.: From Decision Making to Control," *Abacus*, Vol. 34, No. 1: 92-119.

Fleischman, R.K. and Tyson, T.N. (1999), "Opportunity Lost? Chances for Cost Accountants' Professionalization under the National Industrial Recovery Act of 1933," *Accounting, Business and Financial History*, Vol. 9, No. 1: 51-75.

Fleischman, R.K. and Tyson, T.N. (2000), "Parallels between U.S. and U.K. Cost Accountancy in the World War I Era," *Accounting, Business and Financial History,* Vol. 10, No. 2: 191-212.

Fruin, W.M. and Toshihiro, N. (1993), "Supplying the Toyota Production System," in Kogut, B. (ed.), *Country Competitiveness: Technology and the Organizing of Work* (New York: Oxford University Press).

Garner, S.P. (1954), *Evolution of Cost Accounting to 1925* (Tuscaloosa: University of Alabama Press).

Gesner, P. and Beckley, J. (1941), "Subcontracts Only!-and Plant Hums," *Chicago Times* (November 6) (Acc 1915, Box 40, #023).

Gillmor, R.E. (1941), "Some Notes on the Expansion of the Sperry Gyroscope Co.," *The Sperryscope*, Vol. 9, No. 5, pages unknown (Acc 1915, Box 40, #023).

Greer, H.C. (1944), "Cost Requirements of a Competitive Economy," *NACA Yearbook*, Vol. 25: 101-126.

Haber, S. (1964), *Efficiency and Uplift* (Chicago: University of Chicago Press).

Harrison, G.C. (1930), *Standard Costs* (New York: The Ronald Press Company).

Healey, J.P. (1941), "Defense Contracts and the Industrial Accountant," *NACA Yearbook*, Vol. 22: 232-268.

Hopper, T.M. and Armstrong, P. (1991), "Cost Accounting, Controlling Labour and the Rise of Conglomerates," *Accounting, Organizations and Society*, Vol.16, No. 5/6: 405-438.

Horngren, C.T., Datar, S.M., and Foster, G. (2003), *Cost Accounting: A Managerial Emphasis*, 11th edition (Upper Saddle River, NJ: Prentice Hall).

Hoskin, K.W. and Macve, R.H. (1988), "The Genesis of Accountability: The West Point Connections," *Accounting, Organizations and Society*, Vol. 13, No. 1: 37-73.

Hoskin, K.W. and Macve, R.H. (1994), " Reappraising the Genesis of Managerialism: A Re-examination of the Role of Accounting at the Springfield Armory, 1815-1845," *Accounting, Auditing and Accountability Journal*, Vol. 7, No. 2: 4-29.

Hoskin, K.W. and Macve, R.H. (1996), "The Lawrence Manufacturing Co.: A Note on Early Cost Accounting in U.S. Textile Mills," *Accounting, Business and Financial History*, Vol. 6, No. 3: 337-361.

Hoskin, K.W. and Macve, R.H. (2000), "Knowing More as Knowing Less? Alternative Histories of Cost and Management Accounting in the U.S. and U.K.," *Accounting Historians Journal*, Vol. 27, No. 1: 91-149.

Howell, H.E. (1942), "Wartime Responsibilities of the Industrial Accountant," *NACA Yearbook*, Vol. 23: 7-17.

Hoxie, R.F. (1920), *Scientific Management and Labor* (New York: D. Appleton & Co.).

Hoyt, F.F. (1943), "Cost Control in Wartime," *NACA Yearbook*, Vol. 24: 81-97.

Johnson, H.T. (1972), "Early Cost Accounting for Internal Management Control: Lyman Mills in the 1850s," *Business History Review*, Vol. 48, No. 4: 466-474.

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

Johnson, R.T. (2000), "In Search of E.I. DuPont de Nemours & Company: The Perils of Archival Research," *Accounting, Business and Financial History*, Vol. 10, No. 2: 129-168.

Kanigel, R. (1997), *One Best Way* (New York: Viking Press).

Kelley, H.C. (1942), "Cost Analysis of a Cost Plus Contract," *Accounting Review*, Vol. 17, No. 4: 370-376.

Kohler, E.L. and Cooper, W.W. (1945), "Costs, Prices and Profits: Accounting in the War Program," *Accounting Review*, Vol. 20, No. 3: 267-308.

Littleton, A.C. (1933), *Accounting Evolution to 1900* (New York: American Institute Publishing Co.).

Locke, R.R. (1979), "Cost Accounting: An Institutional Yardstick for Measuring British Entrepreneurial Performance circa 1914," *Accounting Historians Journal*, Vol. 6, No. 2: 1-22.

Loft, A. (1986), "Towards a Critical Understanding of Accounting: The Case of Cost Accounting in the U.K., 1914-1925," *Accounting, Organizations and Society*, Vol. 11, No. 1:137-169.

Loft, A. (1990), *Coming into the Light* (London: Chartered Institute of Management Accountants).

Marriner, S. (1980), "The Ministry of Munitions 1915-1919 and Government Accounting Procedures," *Accounting and Business Research*, Vol. 10: 130-142.

Massell, M.S. (1941), "Accounting under the Defense Program," *NACA Yearbook*, Vol. 22: 5-18.

McEachren, J.W. (1940), "Can Standard Costs be Standardized?," *NACA Bulletin*, Vol. 21, No. 11: 681-692.

McKinstry, S. (1999), "Engineering Culture and Accounting Development at Albion Motors 1900- c. 1970," *Accounting, Business and Financial History*," Vol. 9, No. 2: 203-223.

Miller, H.C. (1942), "Cost Inspection in the United States Navy," *Accounting Review*, Vol. 17, No. 2: 94-99.

Miller, P. and O'Leary, T. (1987), "Accounting and the Construction of the Governable Person," *Accounting, Organizations and Society*, Vol. 12, No. 3: 235-265.

Mills, I.H. (1920), "Manufacturing When Men Help," *The Sperryscope*, 12-14 (Acc 1893, Box 22, #043).

Montgomery, D. (1979), *Workers' Control in America* (Cambridge: Harvard University Press).

Montgomery, D. (1987), *The Fall of the House of Labor* (Cambridge: Cambridge University Press).

Morgan, T.A. (1941), "Sperry and Subcontracting," *The Sperryscope*, Vol. 9, No. 8, 1-8 (Acc 1915, Box 40).

Myers, H.J. (1943), "Do Standard Costs Aid War Production?," *NACA Bulletin*, Vol. 25, No. 1: 3-16.

NACA Committee on Research (1947), "Trends in Cost Control Practice," *NACA Bulletin*, Vol. 28, No. 14: 915-926.

Nadworny, M.J. (1955), *Scientific Management and the Unions* (Cambridge: Harvard University Press).

Nelson, D. (1974), "Scientific Management, Systematic Management, and Labor, 1880-1915," *Business History Review*, Vol. 48, No. 4: 479-500.

Nelson, D. (1975), *Managers and Workers* (Madison: University of Wisconsin Press).

New York Certified Public Accountant (1947), book review of Taggart, F.H., *Recent Developments in Cost Accounting*, reprinted in *NACA Bulletin*, Vol. 28, No. 22: 1444.

Norcross, C. (1941), "Sperry Lets George do it," *Aviation Magazine* (June): 76-77, 168-169 (Acc 1915, Box 40).

Nourse, E.G. (1941) "Cost Finding and Price Determination," *NACA Yearbook*, Vol. 26: 27-39.

Oakes, L.S. and Miranti, P.J. (1996), "Louis D. Brandeis and Standard Cost Accounting: A Story of the Construction of Historical Agency," *Accounting, Organizations and Society*, Vol. 21, No. 6: 569-586.

Porter, D.M. (1980), "The Waltham System and Early American Textile Cost Accounting 1813-1848," *Accounting Historians Journal*, Vol. 7, No. 1: 1-15.

Seybold, R. (1942), "War Contracts—Industrial Accounting Problems," *NACA Yearbook*, Vol. 23: 120-134.

Solomons, D. (1952), *Studies in Costing* (London: Sweet & Maxwell).

Sowell, E.M. (1973), *The Evolution of the Theories and Techniques of Standard Costs* (Tuscaloosa, AL: University of Alabama Press).

Stalk, G. and Hout, T.M. (1990), *Competing Against Time* (New York: The Free Press).

Stempf, V.H. (1943), "War Contracts, Costs, and Profits," *Journal of Accountancy*, Vol. 75, No. 6: 496-509.

Stewart, J.H. (1943), "Recent Developments and Trends Affecting War Contract Accounting," *NACA Yearbook*, Vol. 24: 19-28.

Taggart, H.F. (1941a), "Accounting in the National Defense Program," *Accounting Review*, Vol. 16, No. 1: 33-40.

Taggart, H.F. (1941b), "Price Stabilization and Control," *NACA Yearbook*, Vol. 22: 218-232.

Tanaka, M. (1989), "Cost Planning and Control Systems in the Design Phase of a New Product," in Monden, Y. and Sakurai, M. (eds.), *Japanese Management Accounting: A World Class Approach to Profit Management* (Cambridge: Productivity Press).

Taylor, F.W. (1903), *Shop Management* (New York: Harper and Brothers).

Taylor, F.W. (1911), *The Principles of Scientific Management* (New York: Harper and Brothers).

Tyson, T.N. (1990), "Accounting for Labor in the Early Nineteenth Century: The U.S. Arms Making Experience," *Accounting Historians Journal*, Vol. 17, No. 1: 47-59.

Tyson, T.N. (1992), "The Nature and Environment of Cost Management among Early Nineteenth Century U.S. Textile Manufacturers," *Accounting Historians Journal*, Vol. 19, No. 2: 1-23.

Tyson, T.N. (1993), "Keeping the Record Straight: Foucauldian Revisionism and Nineteenth Century U.S. Cost Accounting History," *Accounting, Auditing and Accountability Journal*, Vol. 6, No. 2: 4-16.

Tyson, T.N. (2000), "Accounting History and the Emperor's New Clothes: A Response to 'Knowing More as Knowing Less?' . . . ," *Accounting Historians Journal*, Vol. 27, No. 1: 159-171.

Wellington, C.O. (1945), "The Effects of Wartime Pressures on Industrial Accounting," *NACA Yearbook*, Vol. 26: 3-7.

Wells, M.C. (1978), *Accounting for Common Costs* (Urbana, IL: Center for International Education and Research in Accounting).

Whitmore, J. (1908), "Shoe Factory Cost Accounts," *Journal of Accountancy*, Vol. 4, No. 1: 12-25.

Williams, F.J. (1941), "Manufacturing Ultra-Fine Precision Gears is Defense Task of Small Newark Factory," *New York World Telegram*, February 8.

Zimnovitch, H. (1997), "The Development of Standard Costing at Saint-Gobain, 1920-60: Forty Years of Quarantine?" *Accounting, Business and Financial History*, Vol. 7, No. 3: 345-365.

Accounting Historians Journal
Vol. 30, No. 2
December 2003

Philip O'Regan
UNIVERSITY OF LIMERICK

ACCOUNTABILITY AND FINANCIAL CONTROL AS 'PATRIOTIC' STRATEGIES: ACCOMPTANTS AND THE PUBLIC ACCOUNTS COMMITTEE IN LATE 17TH AND EARLY 18TH - CENTURY IRELAND

Abstract: The decades immediately following the Glorious Revolution in 1688 witnessed a variety of political, social and structural responses to this cataclysmic event. In Ireland, religious conflict and economic under-development, as well as the devastation of war from 1689 to 1691, combined to ensure that the Anglo-Irish body politic found it difficult to capture the fruits of success from an English polity that had gradually accreted to itself much of the political power and economic wealth of the country. By 1704, however, the Anglo-Irish had managed to appropriate to themselves some of the economic and constitutional benefits of the Revolution by exploiting various parliamentary practices and structures. One of their strategies centered around developing and leveraging the role of the Public Accounts Committee as a means of imposing accountability on the executive and its officials. To achieve this the members were required to understand, contest and reconfigure official accounting information.

INTRODUCTION

The cultural construction of state power attends all imperial projects [Said, 1993; Wilson, 1995; Landes, 1998]. An appreciation of this has allowed recent scholarship to map more comprehensively those cultural aspects of early modern European expansionism that both complemented and supplemented this politico-military endeavor [Bowen, 1996]. One consequence is that the entire experience of the colonized is now more capable of being articulated within a literature that eschews the earlier elision of socio-cultural aspects of the imperial process: defeated

Acknowledgments: Thanks are due to the two anonymous referees and those attending a seminar at Edinburgh University in March 2002.

Submitted December 2002
Revised May 2003
Accepted June 2003

peoples encountered not only the might of armies but also the tyranny of clerks. Thus, issues of language, religion, professionalisation and race are now regularly summoned to contour more thoroughly the impact of colonization [Johnson and Caygill, 1971; Said, 1978, 1993; Johnson, 1982; Wilson, 1995; Bowen, 1996; Chua and Poullaos, 1998; Annisette, 2000].

As part of this process the ways in which accountants, accounting information and accountability formed elements of the armory of imperialism have begun to be explored [Tinker, 1980; Chew and Greer, 1997]. Distinguishing between 'hardwares' of imperialism, such as military arms, and 'softwares,' such as language, disease and accounting [Fanon, 1963; Headrick, 1981, 1988; Miller and Rose, 1990; Said, 1993; Bell *et al.*, 1995; Neu, 2000a, b] various authors have identified and tracked the manner in which these technologies facilitated the process of conquest and colonization. The vocabulary of colonialism has been useful, therefore, in contextualizing the manner in which accounting helped to translate imperial objectives into practical effect, in the process mediating the relationship between the colonial power and the colonized [Davis and Huttenback, 1988; Miller and Rose, 1990; Preston *et al.*, 1997; Neu, 1999, 2000a, b].

This paper extends our understanding of the ways in which accounting information can be used to affect the regulative and distributive ambitions of powerful elites [Miller and Rose, 1990; Preston *et al.*, 1997]. It does so by recounting an episode in which accounting information was not only used by the colonial power to impose government from a distance, but was also successfully employed by that power's erstwhile agents to contest legislative, jurisdictional and property rights [cf. Davie, 2000]. Consequently, it not only identifies accounting as a tool of colonialism, but also elaborates upon the consequences of conflict within the colonial power, where the principal and agent imagine, construct and deconstruct tools of oppression for their own purposes. Thus, it explores an area to which little attention has been given: the conflicts existing between the metropolitan centre and a colonial elite - a conflict that was of relatively semantic importance to the colonized – and the extent to which accounting information was used and exploited by the respective players within this hierarchy of powers [Neu, 2000b]. Focusing on the role of accountability and financial control in constituting relationships of domination and subordination, it describes a situation in which a politically and economically vulnerable colonial elite succeeded in leveraging its command of budgetary procedures and accounting detail to secure significant constitutional concessions. While presenting accounting information as one means by which the relationship between colonizer and colonized could be reinforced, therefore, it is primarily concerned with the way in which those perceived by the defeated natives as representatives of the imperial power marshaled accounting information to advance their claims to jurisdictional authority and economic aggrandizement vis-à-vis the mother country.

OUTLINE

The period immediately following the Glorious Revolution in England and the subsequent war in Ireland from 1689 to 1691, witnessed a struggle between the bodies politic in both countries as each tried to appropriate the political and economic spoils that followed the defeat of James II. For the parliament in London, which had effectively legislated for Ireland for much of the previous three decades, it offered the opportunity to copperfasten its claims to legislative and judicial supremacy over Ireland. For the minority Anglican Anglo-Irish community, the traditional representatives of the colonial power, it presented an opportunity to exploit its loyalty to the Williamite cause with a view to shaping a political and constitutional settlement for Ireland that would secure its ascendancy over not only the defeated Catholic population, but also its erstwhile allies, the dissenting Protestant community. The ambitions of the Anglo-Irish could only be secured, however, if the legislative and jurisdictional supremacy of the Irish parliament, which they controlled, could be reasserted. This required that the more 'patriotic' members of the Anglo-Irish body politic gradually regain power and influence over Ireland's affairs from the mother parliament in London [Hayton, 1987; Connolly, 1992; Bartlett, 1992; O'Regan, 2000; Barnard, 2003].

This paper recounts one aspect of this ongoing struggle, one in which accounting information and issues of accountability, transparency and financial control emerged as proxies by which the broader constitutional agenda was advanced. In essence, as one means by which they sought to re-assert their legislative prerogative, some members of the Irish parliament attempted to exploit their part in the cumbersome process by which the Money bill [or "supply"] was determined. Their strategy revolved around developing the importance and independence of the Public Accounts Committee. Their aim was to control and strengthen the role of this committee in the supply process such that the English parliament and executive would be forced to concede the Irish parliament's demands for more regular sittings. By reversing the marginalization of the Irish parliament that had occurred over recent decades, they hoped to advance their more immediate goal of ensuring that the Anglo-Irish community would play a central role in determining the post-Revolution constitutional and land settlements for Ireland.

Realizing this ambition required a degree of political and financial sophistication not previously evidenced by these Anglo-Irish politicians as they sought to counter moves by the English authorities to retain control over the budgetary and fiscal systems. As part of this endeavor they were required to understand, contest and reconfigure financial information and forecasts presented by the English government and officials. In this, the members of the Irish parliament were facilitated by a confluence of the interests of a powerful Anglo-Irish Whig faction as well as the idiosyncrasies of the Irish political system. By 1704 they had successfully secured a scheme that placed the Public Accounts Committee at the centre of the fiscal process. Much to the chagrin of the English body politic, this ensured that issues of accountability, transparency and control became central to the manner in which the relationship between the English and Irish parliaments would henceforth be mediated.

The paper is divided into four sections. The first section outlines the background which gave rise to Ireland's unique constitutional status vis-à-vis England and the political and economic conditions within which the resulting constitutional conflict was played out. The second section traces the emergence of the Public Accounts Committee in William III's first Irish parliament in 1692 and its evolution during William's second Irish parliament from 1695 to 1699 when a compromise was achieved in relation to the granting of supply. The third section deals with the parliament of 1703-04 during which the Public Accounts Committee became a critical element in the attempt by Anglo-Irish Whig 'patriots' to ensure a greater degree of control over the legislative and judicial process. The final section provides some concluding observations.

BACKGROUND

Originally invaded in the 12th century by a Norman force that had the blessing of both the king of England and the pope, Ireland's history had been intricately intertwined since that point with that of its larger neighbor. For four hundred years the pattern was one of gradual subjugation of the native Gaelic population by an increasingly dominant English interest that couched its actions in terms of an obligation to 'civilize' unruly natives [Canny, 1988; Leerssen, 1988; Said, 1993]. With Henry VIII's repudiation of the temporal authority of the pope, the struggle in Ireland assumed a religious dimension. Positions of authority and influence were now only entrusted to those who supported the new state Anglican Church. By the time of Elizabeth I's death in 1603, a small but politically and militarily dominant Anglican, Anglo-Irish minority, had secured political and economic control. And while this Anglo-Irish elite sought to parade their own parliament and constitutional history as evidence of sovereignty, Ireland nevertheless exhibited many of the hallmarks of a colonial outpost [Bottigheimer, 1992; York, 1994; McLoughlin, 1999].[1]

A series of 'plantations' over the course of the 17th century, in which tens of thousands of Protestant settlers were planted into Ireland, especially in the Northeast corner, complicated the ethnic, religious and political mix further. The bulk of those settled in the Northeast hailed from Scotland and traced their Protestant heritage to a dissenting Presbyterian tradition that made them suspect even to the Anglican authorities in Dublin. Both Anglican and dissenting traditions were united, however, in their hatred and fear of the numerically superior native Gaelic Catholic population. On two occasions during the 17th century this fragile Protestant alliance had occasion to be tested. When the Catholic population rebelled in 1641 and again in 1688, the Protestant minority, reinforced from England, succeeded in overturning initial Catholic gains. The war from 1689 to 1691, which saw the Catholic population summarily defeated, laid the basis for over a century of Protestant ascendancy. One immediate consequence was a land settlement under which the

---

[1] On the one hand, the Anglo-Irish political nation liked to present Ireland as a sovereign kingdom answerable to the monarch as king of Ireland, with its own parliament, Privy Council and executive. However, the reality, as the English parliament constantly liked to remind its Irish counterpart, was that effective political and military power and authority resided in London. Thus, while the Irish parliament claimed independence, various statutes, particularly Poynings' Law, effectively neutralized its capacity to initiate legislation, and the English House of Lords regularly overturned decisions made by the Irish Lords. Likewise the 'chief executive' of the Irish government, the Lord Lieutenant, was appointed by the king at the behest of the English government, while the Irish Privy Council and executive were comprised of English placemen and individual Irishmen considered loyal to whichever political faction happened to be in power in London [Connolly, 1992; York, 1994; Hayton, 1995; McLoughlin, 1999].

native Catholic majority retained less than one seventh of the land. This subjugation was codified into a legal scheme known as the 'Penal Laws' in which religious affiliation was assumed to be a proxy for ethnicity and political loyalty [Foster, 1988; Connolly, 1992; Bartlett, 1992; O'Regan, 2000].

While Ireland was seeking to recover from the devastating effects of war and the resulting economic stagnation, England was experiencing a financial transformation facilitated in part by the Glorious Revolution. The growth in indirect taxation, the professionalisation of the treasury and the emergence of embryonic forms of credit financing provided the context within which the increased financial demands that accompanied prolonged war with France could be satisfied by a resurgent parliament and a nascent financial market. By 1695, the English parliament had seized to itself an authority to influence financial policy to an extent unimaginable under the Stuarts [Dickson, 1967; Brewer, 1989; Neal, 1990; Braddick, 1994, 1996].

In stark contrast, Ireland was little affected by the changes in the financial system and outlook then occurring in England [Kiernan, 1930; McGrath, 2000].[2] There were a number of reasons for this. One was the country's stage of economic development. A peripheral island without any central financial focus such as that supplied by the City of London in England, Ireland did not enjoy the level of economic, financial or political maturity conducive to such an evolution. However, the country's undeveloped financial and taxation structures could be traced, in the main, to the almost feudal nature of its fiscal system and the retarding effect of the Restoration Settlement that had accompanied the accession of Charles II in 1660. The primary means by which the Irish civil and military costs [or 'establishments'] were financed was the hereditary revenue, a perpetual revenue stream available to the crown without parliamentary consent. The principal sources were various crown rents, drink licenses and other casual duties. However, as part of the settlement under which Charles II assumed the throne, in 1666 the Irish parliament granted additional quit rents, customs, duties, taxes and licenses

[2] While considerable attention has been paid to the English public revenue in the 17th and early 18th centuries, little work has been done on its Irish equivalent. One of the most comprehensive studies remains Kiernan's [1930] *A History of the Financial Administration of Ireland to 1817*. This has only recently been supplanted by Ivar McGrath, [2000] *The Making of the Eighteenth Century Irish Constitution*, which places the revenue and supply functions at the centre of the constitutional process. I would like to thank Ivar for his comments and observations on an earlier draft of this paper.

to the crown in perpetuity. An improving economy, together with a Stuart policy for Ireland which placed a premium on ensuring that it was neither a drain on resources nor a source of unease, meant that the monarch was soon in a position to govern the country without having to consider recalling parliament to augment supply. The result of the Irish parliament's largesse, therefore, was that Ireland was governed for the following 26 years without a parliament in Dublin. In the interim the mother parliament in London managed to advance its claim to judicial supremacy over the Irish parliament [Connolly, 1992; Bartlett, 1992; McGrath, 2000; O'Regan, 2000].

Such a situation could only continue while these hereditary revenues exceeded the establishment. But one obvious and immediate effect of the war of 1689-91 was that costs increased dramatically at a time when revenues were almost non-existent. In these circumstances the initiative returned to the Irish parliament, since only an increase in the range and/or rates of the hereditary revenue would allow the civil and military establishments to be met. By early 1692 the new monarchs, William and Mary, were left with little option but to summon parliament to meet in Dublin later that year [Hayton, 1981, 1995; Bartlett, 1992; Connolly, 1992].

THE PARLIAMENTS OF 1692 AND 1695-1699: SOLE RIGHT, ACCOUNTABILITY AND COMPROMISE

Those who gathered in Dublin in October 1692 for the first Irish parliament in almost thirty years knew well that their capacity to reap the rewards of victory over James was linked to their ability to re-establish the sovereignty of the Irish parliament in matters relating to Ireland. The lesson from the lengthy break between parliaments was that this, in turn, was related to the level of control that members could establish over the determination of the quantum and the length of supply. Thus, Anglo-Irish interests would be best served by ensuring that supply was only granted for a limited period, preferably two years, and at relatively low levels [Conolly, 1992; McGrath, 2000].

However, an issue of more immediate concern to members was the post-Revolution land settlement. When, in the first session, the government managed to stymie debate on this, they expressed their resentment in other ways. In particular, they attempted to obstruct various measures intended to alleviate the immediate financial crisis. This was evident at first when the Commons came to deal with the Money bill. Contention on this issue centered on the question of 'sole right', i.e. the claim by the Irish Commons as a sovereign parliament to have the 'sole right' to initiate legislation in this area. As evidence that the executive could by no means presume a pliant parliament in voting a supply sufficient to cover the Civil and Military establishments, the members first insisted that they be given access to the various financial and accounting records on which the calculations of revenue and establishment costs were based. On October 12 a committee was appointed 'to search precedents how the committee of grievances may come at records, accompts and papers in the hands of any of their majesties officers of the revenue and others' [*Commons Journal Ireland* [hereafter: CJI] 12 Oct. 1692]. This led to demands by members that full accounts be laid before the House. Reluctant revenue officials eventually acceded. This in turn prompted further disputes between the members and the executive with regard to both the quantum and the length of supply. Only after the intervention of the monarch were the members persuaded to grant additional duties. However, while allowing certain duties to be increased, members refused to consider more than a two-year supply [CJI, 12 Oct. 1692; Bartlett, 1992; O'Regan, 2000].

In 1695, when a similar dispute threatened, a compromise initiated by Lord Deputy Capel, whereby the government was seen to retain the right to initiate the process, while the Irish Commons was given the right to determine the ways and means by which an additional supply was to be collected, ensured that the 'sole right' issue was defused [CJI, 6 Sept. 1695]. Under this scheme the government drafted and presented an initial supply bill for one year. The significance of this lay in the fact that the crown was seen to have initiated the process. The compromise then allowed the Commons to raise Heads of a bill for the collection of more substantial additional duties over subsequent years. The result was a Commons inspired supply bill that, while signaling the unhappiness of members at parallel initiatives of the English parliament in relation to duties on woolen exports from Ireland, provided the government with a significant amount of additional income. Indeed, so successful was this compromise that it was repeated in 1697 and again in 1699, despite the fact that, in a maneuver opposed by those championing greater Irish parliamentary sovereignty, the executive did manage to secure various additional duties on tobacco and some other goods for a period of four years from 1699 [CJI, 21 Jan. 1699; McGrath, 2000].

THE PARLIAMENT OF 1703-1704: SECURING ACCOUNTABILITY

The additional hereditary revenues and duties granted in 1699 meant that the revenue would be in surplus up to and including 1702. By 1703, however, unless parliament was summoned and additional supplies granted, the cost of the establishment would begin to exceed income. There were a number of reasons, not related to the financial situation, why the ministry in London found that this long interval suited its purposes. These could be traced to the worsening relations between the two parliaments that had followed the dissolution of William's second Irish parliament in 1699. For a start, the constitutional fracas over legislative and judicial supremacy between London and Dublin had escalated into a full-scale legal and political *cause celebre* [O'Regan, 2000]. On the one hand a series of court cases initiated in Ireland sought to have the jurisdictional prerogative of the Irish parliament clearly established. On the other hand the English parliament took every opportunity to encourage plaintiffs to appeal decisions of the Irish Lords to England where the authority of the English Lords was promptly re-asserted. These tensions were fuelled by a series of pamphlets and books that were unabashed in their championing of the appellate jurisdiction of the Dublin parliament [Foster, 1988; Kelly, 1988; Connolly, 1992; O'Regan, 2000].

The English parliament had also been to the fore in several other episodes that had further soured relations. The passage of a series of mercantilist laws in London had effectively ruined a healthy Irish woolens trade in order to satisfy an English west-country lobby. The linen trade, introduced into Ireland and funded by a series of Linen Acts, was perceived by a generally unappreciative populace to be an inappropriate and insufficient replacement. Anglo-Irish grievances had been aggravated further by the Act of Resumption passed in London in April 1700 that had voided many of the land settlements concluded over the previous decade [Kelly, 1980; Connolly, 1992; Bartlett, 1992]. Apart altogether from the constitutional implications of such a statute, the manner in which the Commissioners of Forfeiture had gone about their business had inspired accusations of corruption and favoritism. The fact that individuals such as Alan Brodrick and William Conolly, the principal parliamentary managers in Ireland, had been deprived of some of their lands meant that this anger was bound to be reflected in the members' attitude to the government's parliamentary program whenever parliament eventually reconvened. There was also strong resentment that the establishment was being further burdened by the upkeep of several regiments based in the West Indies, as well as the seemingly profligate manner in which the construction of new barracks was being managed. The general economic malaise that had begun in mid-1701 merely compounded Irish politicians' and merchants' sense of being seriously disadvantaged by a constitutional arrangement that seemed to allow Irish political and economic priorities to be subordinated to the whims and avarice of disparate English interest groups [Foster, 1988; Bartlett, 1992; Connolly, 1992].

Ever alert to the potential for Irish politics and politicians to complicate the domestic situation, English ministers were unwilling to bring upon themselves, until absolutely necessary, the disaffection that they were sure would follow the summoning of a new Irish parliament. With the additional duties due to expire by mid-1703, however, it eventually became counter-productive for the ministry to defer summoning members to meet. In early 1703, therefore, it was announced by Queen Anne that a parliament was to be summoned to assemble in Dublin that autumn. As this was the first parliament of the new monarch's reign it would be preceded by an election [Connolly, 1992; Bartlett, 1992].

Anglo-Irish politicians preparing for parliament in Dublin in the autumn of 1703 were conscious of how their power had again been eroded by the time-lag between parliaments, an interval that had only been made possible by the generosity of the previous parliament. Those attuned to the constitutional aspects of the ongoing struggle were determined to ensure that this did not occur again. Much depended, therefore, upon the ability of the members, particularly in the Commons, to ensure that there was no repeat of the carelessness of their predecessors in terms of either the quantum or the length of supply. This would require that Anglo-Irish politicians seize greater control over the supply process, investigate official calculations of budgetary projections more closely and ensure that the Civil and Military establishments were scrutinized assiduously [Connolly, 1992; Bartlett, 1992; O'Regan, 2000].

This keener espousal of the place of parliament within the body politic coincided with the emergence of the Brodrick family and its 'Cork Squadron' as a significant force in the Irish House of Commons. Growing out of a general unhappiness at the gradual marginalization of the Anglo-Irish interest in Irish polity, this had crystallized by the early 1700s into a quasi-Whiggish position on the importance of parliament and the need for accountability of the executive in Dublin, its officers and placemen. It marked the beginning of almost thirty years of influence on the part of Alan Brodrick and various members of his family. The fact that this faction found itself opposed by a series of governments in London controlled by Marlborough, Godolphin and Harley that were at least sympathetic to the Tories, and which were in turn supported by an Irish 'Court' faction in parliament as well as an embryonic Irish Church party, increased the likelihood of conflict [Jones, 1978; Kenyon, 1978; Holmes, 1987; Connolly, 1992].

The members of the Irish Commons were by now well aware that the issues of legislative supremacy, economic influence and supply were inter-linked, and, prompted by Brodrick, a small majority appeared willing to press for change. Since recent sessions had made it clear that parliaments in Dublin were only summoned when supply needed to be secured, it was obvious that supply bills of shorter duration would result in the more regular convening of members. It was imperative, therefore, that those orchestrating the 'patriotic' stance ensure that the process by which supply was granted be managed more closely than before. This would necessitate the diligent attention of various parliamentary managers, as well as careful scrutiny of both the supply process and the officials responsible for its formulation and management. In fact, what resulted was a system for determining supply that represented a subtle but significant shift in emphasis from the compromise of the 1695-99 parliament. It succeeded in further securing the role of the Irish Commons in the supply process, while at the same time not trespassing on the prerogative powers of the crown. The crucial factor would be a keenly managed Public Accounts Committee whose Whig members would succeed in imposing a degree of accountability and financial control not seen before in Ireland. In this the capacity of the members to marshal, contest and manipulate accounting information would be crucial. And it was a process in which various members who were accomptants would play a key role [McGrath, 2000].

Parliamentary Preliminaries: The advice to the government in London from the executive in Dublin prior to parliament convening had been that it should seek to continue the pattern established in 1695-1699 by introducing the initial supply bill providing for an extension of additional duties for one year. The Commons could then introduce a bill for further additional duties covering at least one extra year, and possibly two. This process, while tortuous, would at least allow the government to argue that the right to initiate the supply process remained with the executive and the crown. It was obvious, therefore, that the government's own officials had accepted the 1695 compromise as a workable solution to the supply conundrum, one that might ensure that the supply question would not prejudice debates on constitutional grievances or complicate other items of business. Brodrick, however, was determined to see that these arrangements were modified more to parliament's advantage. In various meetings with the Dublin executive he argued that the Irish Parliament had by now established its 'sole right' in the area of supply and that the whole matter should be left to the Commons. He warned that the political and economic climates were such that any other approach might see supply rejected altogether. In any case, he considered it unlikely that supply would be granted for more than a one-year period. In response, Lord Lieutenant Ormonde let it be known that, while he would attempt to continue the 1695 compromise, he expected the Commons to reciprocate with additional duties for a further two-year period [Anon. [Brodrick, St.J.], 1701; Victory, 1989; McGrath, 2000].

The Dublin executive's carefully arranged plan ran into immediate difficulties when the London government refused to endorse any plan that did not explicitly guarantee more than a one-year supply. Determined to ensure that the Irish Whigs would not be allowed to exploit this issue to ensure more regular sessions, the government in London countered Brodrick's lobbying by insisting that a three-year supply bill be introduced at the start of the session. However, a series of warnings from Ormonde in Dublin that a more conciliatory approach would be required eventually persuaded the government in London to be less confrontational. In accordance with protocol, by late July a one-year Money bill had been forwarded from London. The understanding in England was that this would lead to a further supply bill from the Commons in Dublin that would augment supply and extend it for a period of more than one year. In the meantime, officials in both London and Dublin assumed that they had secured Brodrick's compliance by virtue of their promise to support his candidature for the position of Speaker of the House of Commons, a post that brought with it considerable power and patronage [Connolly, 1992; McGrath, 2000; O'Regan, 2000].

There were some indications that this consensus might break down shortly before parliament convened. In particular, rumors that the ministry in London would seek an additional supply over three years of £210,000 on the basis of a £70,000 *per annum* increase in the additional duties, had begun to circulate. It caused many parliamentary leaders to balk. In fact, this was merely a ploy to make the government's actual intentions seem more palatable. Without informing the executive in Dublin, the London government had quietly explored the possibility of securing a two-year supply, seeking £50,000 *per annum* in additional duties, while at the same time requiring that the parliament undertake to pay off an opening debt at 30 September 1703, which government officials estimated at £103,368. In effect, they were asking for almost the same amount over a two-year period as had been mooted for the three-year supply [McGrath, 2000].

While calculated to intimidate the Irish members, the English government's disingenuous policy was merely complicating an already fraught situation. Conscious of the widespread nature of the discontent, Ormonde had already informed his superiors in London that a pliant parliament should by no means be presumed. There were persistent rumors that the Anglo-Irish were organizing to obstruct government business unless their grievances were addressed. If some additional legislation acceptable to the members were not offered, then there would be considerable difficulty in securing the passage of any supply. One measure that the Lord Lieutenant had suggested was a bill disabling Catholics further in the matter of inheriting land. This would be especially appreciated in the light of the many claims submitted by Catholics to the Commissioners of Forfeiture. To assist the London government in its deliberations a bill intended to satisfy this purpose had been framed by the Privy Council in Dublin and forwarded to England. A second bill, designed to impose severe penalties on Catholic priests who came into Ireland from abroad, had also been enclosed. However, in England there was resistance to the measures proposed to the extent that when parliament convened in Ireland in September neither of the two bills forwarded by the Irish Privy Council to London had been returned. Only after repeated calls from the Dublin executive was the bill 'to prevent priests coming in' sent back. The more contentious bill 'to prevent the further growth of popery', which was intended to disable Catholics from retaining or inheriting certain lands, was withheld pending further consideration. As a result an impatient Irish Commons, in which Brodrick's Cork Squadron was beginning to prove very difficult, framed an even more vindictive bill. It was forwarded to England with the explicit threat that any amendment to its contents would jeopardize supply [Connolly, 1992; O'Regan, 2000].

Contesting Financial Information and 'Great Discoveries': The centrality of supply, and the difficulties that the government anticipated were hinted at in the Lord Lieutenant's opening speech to the new parliament on 24 September, when he alluded to an opening deficit that had accrued as a result of additional expenditure incurred by the government on the island's security:

> . . . the Government has expended a very considerable sum toward the building of the Barracks, more than was given by the Parliament for that purpose; and when you are fully informed of the particulars, I have no doubt but you will give as great testimonies of respect and affection to her Majesty as you have given to any of her Royal Predecessors [CJI, 24 Sept. 1703].

To assist members he had 'ordered all the accompts to be laid before you, by which you will perceive' that government protestations of the existence of a sizeable opening deficit were accurate. He was not reassured, however, by the rather curt response from the members. While indicating a willingness 'to do all in our power, under our present circumstances, for discharging the debts of the nation, and defraying the expense of the establishment under the best of Queens and your Grace's most happy government', they promised nothing by way of the quantum or length of supply [CJI, 25 Sept. 1703].

The process of voting supply commenced on September 29 with the laying before the Commons of the revenue accounts and records. This was followed by the nomination of various members to the Public Accounts Committee. Despite considerable Court party opposition, Laurence Clayton, a close associate of Speaker Brodrick, was appointed as chairman. Other supporters of Brodrick, including his brother, Thomas and Oliver St George also took key positions. Only at this point did the Commons, acting as a supply committee of the whole house, vote to receive the government's own supply bill. The implication was clear - members saw it as their right to initiate the supply process. The intentions of the house became even more evident when it voted to defer consideration of the amount of supply until after a full investigation of the accounts by the newly elected Public Accounts Committee. Essentially, the quantum would not be discussed until the members had had an opportunity to examine the accounts for themselves [CJI, 29, 30 Sept, 1703; CJI, 2 Oct. 1703; McGrath, 2000].

This put the focus on the Public Accounts Committee and its members in a way that had not occurred before. It also meant that the members now had a forum which acted as a proxy for other matters and which, properly managed, could be used to place tangible constraints on the executive and its officials. In all of this the capacity of members to master and manipulate the mass of accounting data with which they would be confronted would be a key factor in determining the success or otherwise of the Whig strategy. In order to assist the committee in analyzing and understanding the revenue accounts, particularly the very detailed records presented by Sir William Robinson, Deputy Vice-Treasurer, it was decided that 'all merchants and accomptants' that were members of the Commons would be automatically entitled to join the committee. It was official recognition that individuals with the skills to audit and investigate financial records had a role to play. It was also an acknowledgement of the fact that, in an environment in which 'gentlemanly' status was seen as a crucial determinant of social standing, their function was not perceived as being at odds with respectability. Their skills would be needed, as Clayton had set out a course of action that would involve intense scrutiny of both officials and their records. Over a three-week period, members would be required to sit through long hours of dreary committee work and undertake a thorough investigation of a voluminous quantity of vouchers, books and returns submitted by revenue officials, Sheriffs and collectors. Clayton later described the committee's *modus operandi*:

> In obedience to the order of this House, the Committee for taking into their consideration the public accounts of the Nation have met and divided themselves into several sub committees and have sat *de die in diem* early and late both mornings and afternoons to give the quicker dispatch to that great affair committed to their charge. [Public Accounts Committee minutes, Frazer Ms 10, 2/465/23, unfoliated [hereafter: PAC Minutes]].

The accounts received from the Deputy Vice-Treasurer appeared, at first sight, to support the government's case for an immediate and substantial increase in the additional supply. His schedule of charges for the nine months to Michaelmas 1703, less payments made to date, indicated an amount outstanding of £103,368, relating principally to pay arrears [see Exhibit 1].

EXHIBIT 1

Arrears due to Clear the Civil and Military Lists to 29 September 1703

	Charge of the Eſtabliſhment for 9 Months to Michaelmas, 1703.			Paid to Michaelmas, 1703.			Remains due.		
	£.	s.	d.	£.	s.	d.	£.	s.	d.
Civil Liſt	40157	5	3	21877	—	0½	18280	5	2½
General Officers	8021	—	—	3923	15	2½	4097	4	9½
Contingencies and Incidents	1627	10	—	1627	10	—			
Three Regiments and a Squadron of Horſe	29854	14	4½	2 960	5	—	7894	9	4½
Two Regiments and two Troops of Dragoons	14841	16	3	10806	15	10¾	4035	—	4¼
Twelve Regiments of Foot	101369	12	6	77265	3	11¾	50884	—	4¾
Three in the Indies returning	26779	11	10½						
Ordnance and Trayn	2730	—	—	1151	3	3½	1578	16	8½
Additional Pay for Duty in Dublin	1811	6	3	1250	5	3	561	1	—
Governors of Garriſons	1738	6	3	403	15	—	1334	11	3
Penſions	2882	8	9	593	9	10½	2288	18	10½
Barracks	7377	7	6	7377	7	6			
Engliſh Half-pay	5269	19	4½	1326	5	—	3943	14	4½
	244460	18	4½	149562	16	0½	94898	2	4
Debt remaining due to clear the Eſtabliſhment to Michaelmas, 1703	—	—	—	—	—	—	94898	2	4
Beſides that Debt there is due for Powder, Arms, and Ammunition ſent from England	—	—	—	—	—	—	8470	6	—
Total of the Debt	—	—	—	—	—	—	103368	8	4

N O T E.

	£.	s.	d.
That the Half-pay on the Eſtabliſhment is per Ann.	9809	7	6
Perſons provided for, diſmiſt, or dead	2782	15	—
	7026	12	6
The ¾ of that is	5269	19	4½

Wm. Robinſon, Dep. Rec. Gen.

Source: Commons Journals of Ireland, Appendix cv

In yet another schedule he indicated that arrears would increase substantially over subsequent years if additional duties were not granted by parliament [see Exhibit 2].

Even allowing that the establishment remained the same as for 1703, i.e., £325,947, projected income from the hereditary revenue of £240,000 would leave a deficit for the forthcoming year of almost £85,947. This would result in a total debt of just over £275,000 after two years if no additional revenues were granted. The various Public Accounts sub-committees for expen-

EXHIBIT 2

A State of the Present Revenue Debt due at Michaelmas 1703 . . . (Extract)

No. 2. Debt due to cleare the Eſtabliſhment to Michaelmas, 1703.	The preſent Charge of the Eſtabliſhment for the Yeare 1703, amounts to the Sume of 325947l. 17s. 10d. therefore nine Months, ending at Michaelmas, 1703, is — — —	244460	18	4½	
	Whereof paid to that Time — —	149562	16	0½	
	Remains due to cleare the Eſtabliſhment to Michaelmas, 1703 —	94898	2	4	
	To this add a Debt due to the Office of the Ordnance in England for Arms and Ammunition ſent from thence ſince Midſummer, 1699 —	8470	6	—	
	Totall of the Debt due at Michaelmas, 1703, (as by Particulars in Paper No. 2.) —	——	—	—	103368
No. 3 Revenue at preſent ſhort of the Charge.	The preſent annuall Charge of the Eſtabliſhment for Civill and Military Affaires amounts to — — —	325947	17	10	
	By the annexed Computation, made by the Commiſſioners of the Revenue, the annual Produce of the preſent Branches amounts to the Sume of —	240000	—	—	
	By which it is apparent that the Revenue, as now computed, falls ſhort of the annuall Charge on the Eſtabliſhment the Sum of — — (as by Particulars appears in Paper No. 3.)	85947	17	10	

Source: Commons Journals of Ireland, Appendix cvi

diture on the barracks, non-resident pensions, vouchers for all payments, and examining the establishment, immediately summoned revenue officials to provide documentation dating back to 1694. These were to include information relating to the ways in which individual collectors throughout the country managed their affairs as well as vouchers, receipts and expenditure rolls from the exchequer in Dublin Castle. When the revenue officials delayed, the members threatened them with censure. News of the activities of the various sub-committees began to filter back to the Commons where Brodrick attempted to exploit matters by allowing various motions condemning excess expenditure of £60,000 on a new barracks, the imposition of additional non-resident pensions, laxity in the issuance of receipts and an increase in official salaries. The Speaker's followers then attempted to bring attention to specific additions to the pension list. Government supporters countered that the House should simply agree to provide for all pay arrears as well as the projected deficit. When this was defeated buoyant Whigs taunted government supporters with threats of 'great discoveries' by the Public Accounts Committee. With this attention returned to the committee and its eagerly awaited first report [PAC Minutes, *passim*; CJI, 30 Sept, 6 Oct, 1703; McGrath, 2000].

The Public Account Committee continued to meet daily prior to a critical session of the House supply committee scheduled for 7 October. Amid reports of alarming 'discoveries' in the accounts, Whig members began to complain about delays on the part of some officials in forwarding accounts, as well as of the huge mass of documentation being submitted by others. Even with the assistance of the newly recruited accomptants, it was proving impossible to carry out more than a cursory audit. Court supporters countered that Whigs were simply seeking excuses to prolong their investigation and proposed that a report be drafted immediately. With the assistance of the Speaker, the committee again secured more time to investigate the accounts and records. At this point government officials intervened in an attempt to broker a compromise. In a private meeting, Chief Secretary Southwell reminded Brodrick that reports of his conduct had reached the queen, who had expressed annoyance that a man entrusted with the position of Speaker was now working to counter official policy. Brodrick replied that he was acting in the interests of his country and refused to consider anything other than a one-year supply. He intended, he warned, to exploit the supply issue to ensure that there were annual parliaments in Ireland, a view he repeated in private meetings with various government officials [CJI, 20 Oct. 1703; PAC Minutes, *passim.*, O'Regan, 2000; McGrath, 2000].

When the Public Accounts Committee convened on October 12 to finalize its first Report, it did so confident that it had the support of the Speaker and the bulk of the speaking members of the Irish Commons. Clayton began his presentation by complaining of the difficulties presented by uncooperative officials and the sheer mass of documentation they had had to work through:

> The Books are so very voluminous, the Articles so very many, the papers that were necessary for our information not being made up in time by the proper officers but above all the shortness of the days given us to bring in our report, rendered it impossible to give in a full and exact account of the several branches of the Establishment…[PAC Minutes].

Nevertheless, using figures provided by the revenue officials, and by Sir William Robinson in particular, the committee had managed to put together a detailed nine-page Report in draft form that dealt with a range of items in considerable detail. It was introduced by a rough outline of the financial position drawn up by the committee that completely reconfigured the accounting information provided by officials [see Exhibit 3].

EXHIBIT 3

Report from the Committee to Examine Public Accounts

	Debtor. £.	s.	d
Paid by Sir William Robinſon, ſince Chriſtmas, 1702, to Michaelmas, 1703, as by the Vice Treaſurer's Accompt —	149562	16	0½
By Arrears due, to clear the Civil and Military Liſt, from 25 December, 1702, to the 29 September, 1703, as by ſaid Accompt —	94898	2	4
Due for Powder, Arms, and Ammunition ſent from England, as per ſaid Accompt, marked No. V. —	8470	6	—
To be allowed for the Management of the Revenue, from Chriſtmas, 1702, to Michaelmas, 1703	33000	—	—
	285931	4	4½

Contra.	Creditor. £.	s.	d.
By Ballance of Money, in the Vice Treaſurer's Hands at Chriſtmas, 1702, as per his Account, No. I. —	10510	2	1
By Caſh remaining in the Collector's Hands at Chriſtmas, 1702, as by the Accomptant-General's Abſtract, marked No. II. —	53061	10	8¾
By Arrears ſtanding out at Chriſtmas, 1702, on the ſeveral Branches of the Revenue, returned to be ſolvent by the ſaid Accomptant, No. II.	43200	—	—
By Arrears of Subſidy —	3119	8	5½
By Caſh, repaid by Bartholomew Vanhomrigh, Eſq; to Sir William Robinſon, it being employed to carry the Forces to Portugal, as per Vanhomrigh's Accompt, marked No. III.	3300	—	—
By an Abſtract of the groſs Produce of the Revenue, for ſix Months, given in by the Accomptant-General, marked No. IV.	185484	16	5½
By three Months Produce of the ſaid Revenue, from Midſummer to Michaelmas, 1703, No. IV. pro Rata — —	66916	16	10
	365592	14	6¾
The Debit	285931	4	4½
Remains	79661	10	2¼

I am further directed to report to you, that Sir William Robinſon, the Deputy Vice Treaſurer, did this Morning deliver us a Paper, No. VI. of ſeveral Sums by him alledged to be paid out of the Produce of what came to his Hands ſince Chriſtmas laſt, being in full diſcharge of the Civil and Military Liſt to Chriſtmas laſt, amounting in the Whole to 42390l. 15s. 9¾d.

But the ſame not being referred to us by the Houſe, we humbly ſubmit it.

Law. Clayton.

Source: Commons Journals of Ireland, Appendix cv

With a view to challenging the government's contention that substantial arrears existed, the committee proceeded to put together a statement that did not follow the traditional approach of the Exchequer. For a start, opening cash amounts of £53,061 indicated as in the hands of collectors in records submitted by officials were included as opening balances immediately available to the government. In fact, they were merely charges against Collectors that were unlikely ever to be received by the Exchequer. Furthermore, collection arrears of £43,200 were also indicated as part of the government's income, despite the fact that many dated back to pre-war years and were unlikely ever to be collected [McGrath, 2000]. By these and other means, including incorporating several of Robinson's own figures for receipts and payments, the committee believed it had established that the true position at September 30 was actually a surplus of £79,661. This was radically at odds with the opening debt of £103,368 put forward by the government. Even after allowing for additional expenditures of £42,390 submitted by Robinson just prior to the meeting, the committee was satisfied that the state of the nation's finances was far healthier than the executive was allowing [PAC Minutes; CJI, 12 Oct, 1703 and Appendices cx-cxviii].

When the committee's report was presented to the Commons on October 13 Brodrick and the majority of speakers enthusiastically endorsed it. On a motion, members resolved that the monies granted by the 1699 parliament had been sufficient to clear all debts up to September 1703. There would be no need, therefore, for additional duties to cover any arrears for the period to date: government demands for sufficient funds to clear the supposed opening deficit of £103,368 could be dismissed. Furthermore, members refused to speculate on the amount that would be required for 1703-04, as they would not allow their investigations to be prejudiced by questions of the quantum. In addition, they recommended that only additional duties sufficient to cover 'necessary branches of the establishment' be granted: the house was effectively allowing itself scope to continue to investigate the government's expenditure and to determine for itself what was and what was not 'necessary' [CJI, 13, 14 Oct. 1703].

In the debates that followed the contributions of both Whigs and Court party supporters were even more rancorous. Whigs concentrated on the 'designed fraud' perpetrated by the government and its officials in the accounting figures that underpinned their calculations. This led them to propose that only a one-year supply be granted, arguing that the annual parliaments that would result were the best means of ensuring that there would be no repeat of the deception now uncovered. However, in impugning the Lord Lieutenant, Brodrick pressed matters too far. Seizing the initiative, and persuading various moderate members to support them, the Court party succeeding in obtaining a small majority, 122-119, in favor of a counter motion that the supply be for two years. At Brodrick's initiative, Whigs once more rallied: the committee and its work was highly commended and it was:

> Resolved that the thanks of this House be given by the Speaker to the committee appointed to inspect and examine the public Accompts of the nation, for their great care and faithful and diligent discharge of the trust reposed in them, whereby they have saved the kingdom the sum of £103,368/8/4 which by misrepresentation was charged as a debt on the nation. And accordingly Mr Speaker gave the thanks of the house to Major Clayton, chairman, and the rest of the gentlemen of the said committee.

Nor could the Court party protect Vice-Treasurer Robinson, who was declared unfit for any public employment and committed to the Constable of Dublin Castle where he was to be incarcerated [CJI, 14, 16 Oct. 1703; McGrath, 2000].

Encouraged by their success in recruiting those country members who were anxious to bring the session to a conclusion so that they could return to their properties, the Court party immediately attempted to raise the matter of the quantum. They suggested that an amount of £170,000 over two years would be sufficient. This was a significant reduction on earlier demands and an implicit acknowledgment that the Public Accounts Committee's actions had effectively sabotaged government attempts to have the opening deficit covered by the supply process. Whigs countered that this was presumptuous given that other branches of the establishment remained to be examined and so the total requirement could not yet be determined. Their resistance was boosted by Brodrick who had initiated an *Address* to the queen on the state of the nation. This reflected the anger of the Anglo-Irish at the way in which corrupt officials and forfeiture trustees had undermined Ireland's constitution. It also explicitly articulated the link between regular parliaments and accountability that Whigs had been trying to establish:

> The want of holding frequent parliaments in your majesty's Kingdom of Ireland has been a great encouragement to evil-minded men, who intend nothing but their own gain, though accompanied with the ruin and oppression of your majesty's good subjects. Many civil officers are arrived at such a pitch of corruption, through hopes of impunity, as is almost insupportable; thereby getting vast estates in a short time in a poor country, and others in considerable civil employments, do dwell and reside for the most part out of the kingdom, thereby neglecting the personal attendance on their duties; whilst in the meantime their offices (which in effect are made mere sinecures) are but indifferently executed, to the great detriment of your majesty's good subjects and the great failure of justice. So that we, your majesty's dutiful subjects, are fully convinced, that nothing but frequent parliaments, with a permission for them to sit and do business of the nation, can prevent or reform so great and notorious abuses [CJI, 20 Oct. 1703].

Government Resistance and the Dilution of Controls: In the aftermath of several days of contention that had shown the Whig and

Court parties to be roughly equal in strength, attention now focused once again on the Public Accounts Committee, which had undertaken to produce yet another report, this time intended to focus specifically on ways in which the cost of the establishment could be reduced [CJI, 14, 16 Oct. 1703; PAC Minutes; McGrath, 2000]. With a view to such a report, the committee had been continuing its investigations of the accounts and various officials. The members focused in the main on the charges on the establishment, and in particular on the large number of pensions being paid to people outside of the country. The intention was to reduce expenditure to such an extent that a small supply would be sufficient to cover the establishment until 1705. On October 19 a second report from the Public Accounts Committee was laid before the house. It listed a number of expenditures with which the committee had problems. These ranged from pensions paid to individuals living outside the kingdom to the *regium donum*, a subvention paid to support dissenting ministers. They amounted in total to £86,667.[3] However, when the Report was examined, government officials pointed out that the bulk of these commitments were by patent, meaning that they could not be reduced or removed. With this much of the Whig impetus was lost [PAC Minutes; CJI, iii, Appendices cxx-cxxii; McGrath, 2000].

The Dublin executive and Court party were now in the ascendant and Whig strategy was reduced to merely attempting to so complicate the discussion on the quantum that the executive would be forced to concede a lower figure. With the intention of undermining the government's proposal that £170,000 be accepted as the quantum, Clayton quickly put together a third Report. With its various appendices, this Report contained details of a variety of expenditures and outlined several ways in which the establishment might be reduced. The Commons received it on October 22 and resolutions were passed approving 19 of the 21 recommendations. These called for reductions in, or cancellations of, various pensions and other charges. By this late stage, however, the Whig faction realized that there was little prospect of further exploiting the supply process to achieve broader political aims. When the committee returned to a

[3] The following items were specifically identified as worthy of investigation: Pensions to individuals who reside out of the kingdom: £14,613; pensions due in respect of to French Regiments and officers, etc., £24,226 Half-pay officers, £6,278; Quit Rent concessions granted to papists, £13,995; particular grants on his majesty's letters over and above the establishment, £27,555.

discussion of quantum a compromise of £150,000 over two years to September 1705 was quickly agreed. Significantly, and much to the discomfort of Secretary Southwell, who envisaged a repeat of the accounting techniques employed earlier by the Public Accounts Committee to create projected surpluses, the quantum was only approved subject to the provision that this figure would be reduced by any amount that could subsequently be shown as due from the government to the nation [PAC Minutes; CJI, 22, 25 Oct., 10 Nov. 1703 and Appendix cxxiii].

Once the length of supply and the quantum had been determined, questions relating to supply now moved out of the ambit of the Public Accounts Committee and reverted to a 'ways and means committee'. And with the Court party in the ascendant, additional excise duties were quickly agreed for a two-year period from November 1703. Within days Heads of a Money bill had been agreed and transmitted to England for the approval of the Privy Council there. However, as Southwell had feared, Whig members did succeed in insinuating into the budget a projected surplus for Quit Rents, based on their own calculations, of £31,213 for the half-year to September 1703. Nevertheless, the initiative remained with the government and the Court party. In early November the government secured an additional excise of £30,000 on the second year as well as a renewal of various other duties to the value of £8,000 [CJI, 8, 10, 12, Nov. 1703]. By the end of the month the principal heads of the Money bill had been secured and the session was prorogued until the New Year. When returned from England in February 1704 the bill enjoyed an easy passage through the Lords and was eventually given the royal assent on March 4 [CJI, 4 Mar. 1704].

For an executive used to cajoling and bribing its way to having its policies implemented, this had been a traumatic session. Despite having been ultimately stymied in their ambition to see the length of supply reduced to one year, the Whig faction, primarily by exploiting the possibilities offered by their dominance of the Public Accounts Committee, had succeeded in materially impacting the entire fiscal process. Thus, members' authority to censure officials and access all accounts and vouchers had been confirmed; the committee had secured the right to determine what was and what was not 'necessary' expenditure; and, most critically, official calculations of an opening debt had effectively been dismissed, thus materially impacting the quantum granted, while ongoing estimates of projected revenues and expenditures were open to revision. Ormonde, who had been both humiliated and weakened by the episode, was unable to refrain from indicating the executive's disapproval. Conscious of the subtle, if significant, change in procedures that had seen the Irish parliament secure a greater level of accountability over the actions of the executive, he alluded in his closing address to the accounting policy instituted by the public accounts committee in its assessment of government budgetary requirements as the principal, if misguided, source of official anxiety:

> It were indeed to be wished that you . . . could have now provided for what is still owing to the civil and military lists; and the rather, because the arrears (a state of which the commissioners of the revenue were ordered by me to lay before you at the opening of parliament) must be applied to make good the deficiencies of the current year, as has been done in former governments . . . [CJI, 4 March, 1704].

As the Lord Lieutenant and his executive saw it, the members of the Public Accounts Committee had succeeded in introducing a fundamental change into the nature of the relationship between the government and the governed. And this had been achieved, primarily, by forcing a change in the manner in which items were accounted for - arrears were no longer to be 'applied to make good the deficiencies of the current year, as has been done in former governments', but incorporated as part of the projected income for future periods.

CONCLUSIONS

The parliament of 1703-1704 saw the evolution of a more sophisticated process for formulating and securing supply. In this the Public Accounts Committee was a central player, its actions and reports shaping the eventual supply bill in terms of both its quantum and longevity. And the functioning of the Public Accounts Committee itself reflected a more focused and formalized approach to the task at hand, with accomptants recruited to assist in the investigation and audit of government records and officers. The financial reports that resulted, and the accounting calculations underpinning them, were more extensive and comprehensive than the Anglo-Irish polity had heretofore produced. They were also instrumental in ensuring the centrality of accounting information as a key, mediating factor in the relationship between a government and those it preferred to categorize as dependants, but who imagined themselves as equals.

In securing a critical accountability and financial control function for the Public Accounts Committee, this Irish Whig faction succeeded in changing the dynamics of the constitutional arrangement between England and Ireland. Principles of accountability and financial control were now firmly established as part of the supply process. The colonial power could no longer assume the pliant acquiescence of its erstwhile agents. The 'sole right' and constitutional issues had been inextricably linked and a forum in which the ambitions of the political nation might be advanced had been identified and secured. By exploiting and leveraging their command of accounting information, parliamentary procedures and the simmering resentment of the political nation, an Irish Whig faction had succeeded in appropriating to the Irish parliament various elements of the Revolution Settlement that they believed to be rightfully theirs.

This episode extends our understanding, therefore, of the role of accounting information within the colonial context, in particular as it is used to realize the regulative and distributive ambitions of powerful elites. The language and impulses of colonialism are useful in highlighting the fact that the fissiparous tendencies of colonial enterprises are both constrained and unleashed by technologies of control such as accounting [Neu, 1999, 2000b]. Thus, accounting information can be shown to represent not only a means of exerting control from a distance, but also of subverting relationships within the hierarchy of powers that constitute the imperial force. Accounting information not only inscribes and expresses the unequal power relations that exist between the colonial power and the colonized [Tinker, 1980], but also represents a potent medium by which the constantly mutating relationship that exists between the metropolitan centre and its agents can be both imagined and mapped.

REFERENCES

Annisette, M. (2000), "Imperialism and the Professions: The Education and Certification of Accountants in Trinidad and Tobago," *Accounting, Organisations and Society*, Vol. 25, No. 7: 631-659.

Anonymous, [Brodrick, St. J.] (1701), *Short Remarks Upon the Late Act of Resumption of the Irish Forfeitures, and Upon the Manner of Putting that Act in Execution* (London).

Barnard, T. (2003), *A New Anatomy of Ireland*, 1649-1770 (New Haven: Yale University Press).

Bartlett, T. (1992), *The Fall and Rise of the Irish Nation: The Catholic Question, 1690-1830* (Dublin: Rowman & Littlefield).

Bell, M., Butlin, R. and Heffernan, M. (1995), *Geography and Imperialism: 1820-1940* (Manchester: Manchester University Press).

Bottigheimer, K.S. (1992), "The Glorious Revolution and Ireland", in L.G. Schwoerer, (ed.) *The Revolution of 1688-1689* (Cambridge: Cambridge University Press): 234-241.

Bowen, H.V. (1996), *Elites, Enterprise and the Making of the British Overseas Empire, 1688-1775* (London: Macmillan Press).

Braddick, M.J. (1994), *Parliamentary Taxation in Seventeenth-century England: Local Administration and Response* (Woodbridge: Royal Historical Studies: London).

Braddick, M.J. (1996), *The Nerves of State: Taxation and the Financing of the English State, 1558-1714* (Manchester: Manchester University Press).

Brewer, J. (1989), *The Sinews of Power: War, Money and the English State, 1688-1783* (London: HarperCollins).

Canny, N. P. (1988), *Kingdom and Colony: Ireland in the Atlantic World 1560-1800* (Baltimore: Johns Hopkins University Press).

Chew, A. and Greer, S. (1997), "Contrasting World Views on Accounting: Accountability and Aboriginal Culture," *Accounting, Auditing & Accountability Journal*, Vol. 10, No. 3: 276-298.

Chua, W.F. and Poullaos, C. (1998), "The Dynamics of "Closure" Amidst the Construction of Market, Profession, Empire and Nationhood: A Historical Analysis of an Australian Accounting Association, 1886-1903," *Accounting, Organisations and Society*, Vol. 23, No. 2: 155-187.

Commons Journal of Ireland (1790) Vols. ii and iii, and Appendices (Dublin: Government Stationery Office).

Connolly, S.J. (1992), *Religion, Law and Power: The Making of Protestant Ireland, 1660-1760* (Oxford: Oxford University Press).

Davie, S. S. K. (2000), "Accounting for Imperialism: A case of British-imposed Indigenous Collaboration," *Accounting, Auditing and Accountability Journal*, Vol. 13, No. 3: 330-359.

Davis, L. and Huttenback, R. (1986), *Mammon and the Pursuit of Empire* (Cambridge: Cambridge University Press).

Dickson, D. (1987), *New Foundations: Ireland 1660-1800* (Dublin: Irish Academic Press).

Dickson, P.G.M. (1967), *The Financial Revolution in England, 1688-1756* (London: Ashgate Publishing Co.).

Fanon, F. (1963), *The Wretched of the Earth* (New York: Grove Press).

Foster, R. F. (1988), *Modern Ireland, 1600-1972* (London: Penguin).

Frazer Mss 10, 2/465/23, Public Accounts Committee Minutes, (1703), National Archives Ireland, Dublin.

Hayton, D. (1987), "Anglo-Irish Attitudes: Changing Perceptions of National Identity Among the Protestant Ascendancy in Ireland *ca*. 1690-1750," *Eighteenth Century Culture*, Vol. 17: 145-157.

Hayton, D.W. (1981), "The Crisis in Ireland and the Disintegration of Queen Anne's Last Ministry," *Irish Historical Studies*, Vol. 22: 193-215,

Hayton, D.W. (1995), "Constitutional Experiments and Political Expediency, 1689-1725", in Ellis, S. and Barber, S. (eds.) *Conquest and Union: Fashioning a British State, 1485-1725* (London: Addison-Wesley): 276-305.

Headrick, D. (1981), *The Tools of Empire* (New York: Oxford University Press).

Headrick, D. (1988), *The Tentacles of Progress* (Oxford: Oxford University Press).

Holmes, G. (1987), *British Politics in the Age of Anne* (London: Hambledon & London).

Johnson, T.J. (1982), "The State and the Professions: Peculiarities of the British," in Giddens, A. and McKenzie, G. (eds.) *Social Class and the Division of Labour* (Cambridge: Cambridge University Press): 186-208.

Johnson, T.J. and Caygill, M. (1971), "The Development of Accountancy Links in the Commonwealth," *Accountancy and Business Research*, Vol. 1: 155-173.

Jones, J.R. (1978), *Country and Court, England, 1658-1714* (London: Arnold).

Kelly, P. (1980), "The Irish Woollen Export Prohibition Act of 1699: Kearney Revisisted," *Irish Economic and Social History*, Vol. 7: 22-44.

Kelly, P. (1988), "William Molyneux and the Spirit of Liberty in Eighteenth Century Ireland," *Eighteenth Century Ireland*, Vol. 3: 133-48.

Kenyon, J.P. (1978), *Revolution Principles: The Politics of Party, 1689-1720* (Cambridge: Cambridge University Press).

Kiernan, T.J. (1930), *A History of the Financial Administration of Ireland to 1817* (London: P.S. King & Son).

Landes, D. (1998), *The Wealth and Poverty of Nations* (London: Abacus).

Leerson, J. Th. (1988) "Anglo-Irish Patriotism and its European Context: Notes towards a Reassessment," *Eighteenth Century Ireland*, Vol. 3: 7-24.

McGrath, C.I. (2000), *The Making of the Eighteenth-Century Irish Constitution: Government, Parliament and the Revenue*, *1692-1714* (Dublin: Four Courts Press).

McLoughlin, T. (1999), *Contesting Ireland: Irish Voices against England in the Eighteenth Century* (Dublin: Four Courts Press).

Miller, P. and Rose, N. (1990), "Governing Economic Life," *Economy and Society*, Vol. 19, No. 1: 1-31.

Neal, L. (1990), *The Rise of Financial Capitalism: International Capital Markets in the Age of Reason* (Cambridge: Cambridge University Press).

Neu, D. (1999), *"Discovering Indigenous Peoples: Accounting and the Machinery of Empire," Accounting Historians Journal,* Vol. 26, No. 1: 53-82.

Neu, D. (2000a), 'Accounting and Accountability Relations: Colonization, Genocide and Canada's First Nations,' *Accounting, Auditing & Accountability Journal*, Vol. 13, No. 3: 268-288.

Neu, D. (2000b), '*"Presents" for the "Indians": Land, Colonialism and Accounting in Canada," Accounting, Organizations and Society*, Vol. 25, No. 2: 163-184.

O'Regan, P. (2000), *Archbishop William King (1650-1729) and the Constitution in Church and State* (Dublin: Four Courts Press).

Preston, A., Chua, W. and Neu, D. (1997), "The Diagnosis-related Group Prospective Payment System and the Problem of Government Rationing of Health Care to the Elderly," *Accounting, Organisations and Society*, Vol. 22, No. 2: 147-164.

Said, E. (1978), *Orientalism* (New York: Vintage Books).

Said, E. (1993), *Culture and Imperialism* (London: Vintage Books).

Tinker, T. (1980) "Toward a Political Economy of Accounting: An Empirical Illustration of the Cambridge Controversies," *Accounting, Organisations and Society*, Vol. 5, No. 1: 147-160.

Victory, I.L. (1989), "The Making of the 1720 Declaratory Act," in G. O'Brien, (ed.) *Parliament, Politics and People: Essays in Eighteenth-Century Irish History* (Dublin: Irish Academic Press): 9-29.

Wilson, K. (1995), "The Good, the Bad, and the Impotent: Imperialism and the Politics of Identity in Georgian Britain," in Bermingham, A. and Brewer, J. (eds.) *The Consumption of Culture, 1600-1800: Image, Object, Text* (London: Routledge): 237-262.

York, N.L. (1994), *Neither Kingdom nor Nation: the Irish Quest for Constitutional Rights 1698-1800* (Washington D.C.: Catholic University of America Press).

Accounting Historians Journal
Vol. 30, No. 2
December 2003

Sarah J. Williams
DEAKIN UNIVERSITY

ASSETS IN ACCOUNTING: REALITY LOST

Abstract: While the contemporary view of assets in accounting is of 'future economic benefits', the appropriateness of this definition for financial reporting purposes continues to be questioned. Samuelson [1996, p. 156] argued that assets should be defined as 'property rights' while Schuetze [1993, p. 69] proposed that assets should be defined simply as cash, claims to cash and items that could be sold separately for cash. These notions are not new. Up until the latter part of the 19th century the emphasis in the accounting literature was on the recording of 'property' or 'effects', commonly understood to be things or rights which were exchangeable for cash. The aim of this paper is to trace changes in the definitional concept of assets in an attempt to discover why professional accounting bodies in the major English speaking countries have adopted the problematic abstract 'future benefit' notion, which is so far removed from the simple concept of assets as exchangeable things or rights. It is suggested that in the future financial reporting requirements for business entities include a statement of 'separably exchangeable property' and legal obligations at the reporting date.

INTRODUCTION

The starting point of any accounting, once the entity is defined, is the identification of assets. Such a fundamental element of accounting would be expected to be based on a straightforward definition. The following study shows that reality is quite removed from such simplicity as accounting has moved from commonly understood concepts of effects and property to the abstract notion of future economic benefits.

The term 'assets' was rarely used in the accounting literature of the major English speaking countries until the latter part of the 19th century. The words 'property' or 'effects' were most commonly used and understood to mean things owned—the wherewithal to meet financial obligations.

Acknowledgments: I would like to thank Dr. R.W. Gibson and the anonymous refereees for comments on this paper.

Submitted December 2001
Revised July 2003
Revised August 2003
Accepted August 2003

Toward the end of the 19th century the term assets, which was understood in commerce and law as meaning property available for the payment of debts, began to feature prominently in the accounting literature. Alongside the view that assets or property represented what was owned there appeared a contrary view of assets as representing deferred (unallocated) costs. Outlays which were argued not to relate solely to the current period were reported in the balance sheet as assets, without regard for whether such outlays represented assets in the commonly understood sense of rights of ownership or objects owned that could be exchanged for cash. Subsequently, the notion that assets were unallocated costs was popularized - especially by those who argued that the focus of accounting should be on the profit and loss statement. For example, Paton and Littleton [1940] emphasized the importance of the matching of efforts and accomplishments, as measured by costs and revenues [see also Littleton, 1953, pp. 22-23; Engleman, 1954, p. 385]. The emphasis was on the allocation of revenues and expenses to accounting periods to determine income. Solvency, or debt paying power, was considered of secondary importance.

The changed emphasis was an important factor in the subsequent adoption of the much broader concept of assets as representing 'service potential', and more recently, 'future economic benefits'. This popular view of assets is reflected in the definitions promulgated by professional accounting bodies in the United States [Financial Accounting Standards Board (FASB), 1980, para.19], United Kingdom [Accounting Standards Board (ASB), 1999] and Australia [Australian Accounting Research Foundation (AARF), 1992, para. 12].

This paper traces the change in underlying definitional concepts through the accounting literature of those English speaking countries where accounting concepts and standard setting followed a similar model. The aim is to gain insight into why the abstract notion of assets adopted in the concepts statements issued in these countries has moved so far away from, and is so out of step with, the legal and commonly understood notions of assets as property available for the payment of debts, or exchangeable things or rights. The implications of this change are discussed. On the basis of this historical analysis it is suggested that along with other relevant information about resources and liabilities, business entities should be required to produce a statement of 'separably exchangeable property' and legal obligations at the reporting date.

The study is based on an investigation of the discourse of accountants in a randomly selected sample of English language accounting literature, principally of the 18th, 19th and 20th centuries.[1] The emphasis is on the literature published in the UK and the US and while differences in these environments are considered important in the context of this study it is generally assumed that this literature forms one whole.

ETYMOLOGY AND DEFINITION OF 'ASSET'

The *Oxford English Dictionary* [*OED*] provides illustrations of early English usage of the word asset dating back to 1531.[2] The origin of the English use of the word asset was the Anglo-French law phrase *aver assetz* meaning 'to have sufficient' to meet certain claims. *Assets* then passed as a technical term into the vernacular [*OED*, 1989, Vol. I, p. 710]. Used originally as a legal term meaning sufficient estate or effects to satisfy a testator's debts and legacies, by the early 1800s the word was used both in law and commerce in the sense of the effects of an insolvent debtor or bankrupt applicable to the payment of debts. The meaning was later extended to all the property of a person or company which could be made liable for his or their debts [*OED*, 1989, Vol. 1, p. 710], for example, in *The History of British India* James Mill [1817] wrote: "The assets or effects of the London Company in India fell short of the debts of that concern". It is significant that the word asset has retained its original meaning at law – "property available for the payments of debts" [*Mozley and Whiteley's Law Dictionary*, 1977, p. 28; *Jowitt's Dictionary of English Law*, 1977, p.144; *Osborn's Concise Law Dictionary*, 1993, p. 32].

ETYMOLOGY AND DEFINITION OF 'EFFECTS' AND 'PROPERTY'

The use of the words 'effects' and 'property' in the context of what is available to a person or organization to meet debts indicates that these terms were used to represent things that belonged to, or were owned by, a person or organization. Ownership underpins exchangeability and therefore debt paying power. These terms gained ascendancy in the literature at different times.

[1] References are made to earlier works where relevant.

[2] The English word asset was adopted from the Anglo-French word *assets,* a later form of the Old french *asez* meaning 'enough'. *Asez* derived from the Latin *ad satis* - 'to sufficient' - meaning in sufficient quantity.

According to the *OED* [1989, Vol. V, p. 79] the word 'effects' was used in the sense of one's 'goods and chattels', and also more broadly as in the phrase 'to leave no effects'—to leave nothing to one's heirs. In the case of Hogan v. Jackson [1775 1 Cowp.299] Lord Mansfield stated that "real and personal effects are synonymous to substance, which includes everything that can be turned into money". Early French regulation [Code Savary, 1673], aimed at preventing fraudulent bankruptcies, required that merchants prepare regular statements of "effects and debts". In the case of bankruptcy these were used to determine the property available to creditors at the latest statement date.

The word 'property', in its original sense, meant the condition of being owned or belonging to some person or persons, or rights of ownership [*OED*, 1989, Vol. XII, p. 639]. Around the 17th century property also began to be used in the sense of: "That which one owns; a thing or things belonging to or owned by some person or persons; a possession (usually material), or possessions collectively; (one's) wealth or goods" [ibid.].[3] The French *Code de Commerce*, based on the earlier *Savary Bill*, required that an inventory of "property and debts" be made yearly [*Bulletin des Lois*, 1807 cited in Howard, 1932, pp. 95-96]. If these requirements were not met the merchant could be declared bankrupt [Littleton, 1953, p. 84]. As with the earlier bill the emphasis was on exchangeable things or rights.

Property is an interest recognized and protected by law; a right or rights that can be enforced against others:

> The right of property is best conceived not as a single right but as a bundle of distinct rights, some or even many of which may be relinquished temporarily without loss of ownership. The kinds of rights which a right of property confers over objects of that right vary according to the nature of the object, but they normally include the rights to possess, use, use up, abuse, lend, let on hire, grant as security, gift, sell and bequeath the object [*The Oxford Companion to Law*, 1980, p. 1007].[4]

An owner may surrender some of the rights attached to owner-

---

[3] And in reference to a piece of land owned.

[4] For similar definitions of Property and Ownership *see Halsbury's Laws of England* [1981, para.301 & 1127]; *Jowitt's Dictionary of English Law* [1977, p. 1447]; *Stroud's Judicial Dictionary* [1986, p. 2057]; Austin [cited in *Osborn's Concise Law Dictionary*, 1983, p. 242] and *The Oxford Companion to Law* [1980, p. 1008].

ship, such as the right of possession, while retaining others: "Ownership may be held by different persons for different interests, for example when a freehold owner grants a lease" [*A Concise Dictionary of Law*, 1983, pp. 255-256].[5]

DEVELOPMENT OF THE 'PROPERTY' NOTION IN ACCOUNTING

A review of the accounting literature, principally of the 18th and 19th centuries, indicated that the word asset was rarely used until the latter part of the 19th century.

'Effects'[6] was the word most commonly used in the 18th century accounting literature. The role of accounts in recording an inventory of all effects and debts to allow the determination of the whole estate or financial state of affairs was emphasized [see North 1714/1986, p. 119; Gordon,1765/1986, pp. 13,21; Malcolm, 1731/1986, p. 2; Clark, 1732 cited in Foster, 1852/1976, p. 15; Thompson, 1777/1984, pp. 67-68, Rolt, 1761 in Sheldahl, 1989, p. 101; Cronhelm, 1818/1978, p. 3; Montgomerie, 1858, p. 24]. Littleton [1946, pp. 340-341] suggested references to statements of 'effects and debts' in early accounting manuals[7] may have been influenced by the early French regulation, and the handbook of mercantile practice written by French author Savary [1712] in which Savary expounded the regulation in appropriate sections. The emphasis in the early regulation was on solvency and this was clearly reflected in the accounting discourse of the 18th and 19th centuries. In this context effects, and later property, represented what was owned—legally enforceable interests or rights, which was transferable or exchangeable and therefore applicable to the payment of debts.[8]

North's description of the Personal Estate account emphasized this relationship between effects and debts: "The Personal

[5] See *Eglinton v. Norman,* 46 L.J.Q.B. 559; see also *Chauntler v. Robinson,* 4 Ex. 163; *Lister v. Lobley,* 6L.J.K.B.200. and *Russell v. Shenton,* 3 Q.B.449.

[6] See for example, Dodson [1757/1984, p. iii]; Gordon [1765/1986, p.59]; Malcolm [1731/1986, p. 3]; North [1714/1986, p. 118]; Dilworth [1794, p. 10]; Clark [1732 cited in Foster, 1852/1976, p. 15]; Postlethwayt [1751, p. 313]; Mair [1786, p. 5] and Wicks [1797, p. 20]. See also the later works of Isler [1810 cited in Foster 1852/1976, p. 21]; Cory [1839, p. 6]; Bennett [1842/1976, p. 38] and Montgomerie [1858, p. 46].

[7] Books describing or explaining the bookkeeping process.

[8] See for example, North [1714/1986, pp. 118-119]; Malcolm [1731/1986, p. 20]; Dodson [1757/1984, p. iii]; Gordon [1765/1986, p. 59]; Mair [1786, p. 5]; Hamilton [1788/1982, pp. 266,268]; Thompson [1777/1984, pp. 5, 8]; Turner [1794, pp. 6,14]; Morrison [1834, p. 63] and Montgomerie [1858, p. 46].

Estate, this on the Cr. side will carry the inventory of all the present Effects, and Dependencies, that are properly the Accomptants own. . . . And the Dr. side . . . all that is owing, or outgoing, from the proprietor, which may lessen his Interests in Credit on the other side . . . so that here will at first be a perfect synopsis of the personal estate" [North, 1714/1986, pp. 118-119].[9]

Clarke [1732 quoted in Foster, 1852/1976, p. 15] wrote that "the balance account will contain the particulars of my effects and debts; the difference between the two sides, being my net capital or deficiency". Dodson was more explicit: *"[L]et the Account of Stock be made Debtor, for all Sums due from the Accountant; and let it be made Creditor, for the ready Money, Goods and Debts, that belong to him* ... Hence ... if the Debtor Side therof exceeds the Creditor; the Balance will Shew how much he is in *Debt*, more than his effects will pay" [Dodson, 1750/1984, p. iii, original emphasis].[10]

These manuals [see also Dodson, p. i] illustrate the emphasis placed on knowing what means are available to pay debts, what obligations exist, and whether one is in a better or worse position than before. Other authors who articulated this role of accounts include Jones [1796/1978, p. 21], Gordon [1765/1986, p. 21], Hamilton [1788/1982, p. 268] and Mair [1793/1978, p. 1].[11]

The term 'property', which was also used in some 17th and 18th century accounting works, became more common in the 19th century literature. Those who wrote of accounting for 'property' included Kelly [1801, p. 7], Cronhelm [1818/1978, p. 1], Montgomerie [1858, p. 46], and Dyer [1897, p. 22].[12] Many

[9] For similar statements see also Malcolm [1731/1986, p. 20] and Montgomerie [1858, p. 24].

[10] Dodson [1750/1984, p. ii] described stock as "the Aggregate or Total of the Accountant's Estate or Effects, whatever be the nature, or kind of the Particulars".

[11] This focus is consistent with the practice of closing the books of account annually. In 1741 Mair wrote that "Merchants commonly once a year balance or close their ledger, and raise from it the Materials of an Inventory to a new Set of Books, for the ensuing Year". Yamey [1940, p. 21] found that practice was not uniform, however, of the six records of double entry that he examined covering periods 1731 onwards five closed accounts and raised new balances annually. The sixth balanced six times in nine years.

[12] See also Monteage [1675 cited in Foster 1852/1976, p. 13]; Gordon [1765/1986, p. 59]; Hamilton [1788/1982, p. 285]; Jones [1796/1978, p. 21]; Wicks [1797, p. 15]; Isler [1810 cited in Foster 1852/1976, p. 21]; Morrison [1834, p. 43]; Mayhew [1884, p. 8]; and Thornton [1895].

authors classified property or effects accounts as 'real' and 'personal', suggesting a legal influence: "Real accounts include all accounts of effects or things which a person possesses" [Mayhew, 1884, p. 176]; "Property accounts are by some termed 'Real', from the Latin word *res* meaning a thing" [Inglis, 1881, p. 5].[13] Property, like effects, was used in the sense of things which were exchangeable for money: "The Dr. side [of the Stock account] shows the debts due by you at the opening of the books; the Cr. side your gross stock, or what you have in property and debts due you. The difference between the two sides, if the Cr. be the greater, is your nett stock, but if the Dr. be the greater of the two, the balance is what you owe over what you have property to meet" [Bennett, 1842/1976, p. 67].[14]

Cronhelm [1818/1978, p. 3] wrote of bookkeeping as a record of all property, described as "Money, Goods convertible to Money, and Personal Debts".

The word asset was not used in the accounting literature examined for this study until the middle of the 19th century. A factor influencing the use of the word 'asset' in the accounting literature may have been its use in the British Companies Acts of 1856 and 1862. The model balance sheet contained the heading 'Assets and Property'. As with bankruptcy law legislators were concerned with the availability of property or assets for the payment of debts. Littleton [1946, p. 344] wrote that banks were the first to use 'assets' regularly in statement headings, the Bank of England using 'Liabilities and Assets' in 1839. This would be consistent with an emphasis on solvency. In the 19th century accounting literature 'asset' was used synonymously with 'property'. For example, Dyer [1897, p. 11] wrote "Capital is the excess of Assets over Liabilities, the excess of what I have and have owing to me over what I owe. . . . My assets are my property - what I already have, and what is owing *to* me". Foster [1849, p. 3] wrote of "property or assets". Other writers also described assets in terms of 'property', or 'property and money owing' [de Morgan, 1853/1982, p. 17; Crittenden, 1860, p. 120; Nelson, 1871, p. 10; Inglis, 1881, p. 103; Norton, 1894/1976, p. 11; Thornton, 1895, p. 3; Sprague, 1880, p. 51].

---

[13] See also Hamilton [1788/1982, p. 267]; Kelly [1801, p. 6]; Bennett [1842/1976, p. 17] and Thornton [1895]. At law a distinction was made between 'real' and 'personal' property.

[14] Similar descriptions are given by Gordon [1765/1986, pp. 7,57]; Dilworth [1794, p. 10] and Dyer [1897, p. 22].

With regard to the notion of assets as exchangeable property, assets were described as "available means" [Crittenden, 1860, p. 120]; and "all the property and rights belonging to a business that have a money value" [Lisle, 1900/1976, p. 67]. Cayley [1894, p. 20] wrote of "real assets", or assets "capable of realisation", as opposed to items such as preliminary expenses not written off which were "not real assets". Carter [1890, p. 81] wrote that the difference between a trader's assets and liabilities "is his CAPITAL, or, as may be the case, his uncovered debt". Dyer [1897, p. 16] explained: "I am solvent when my Assets at least equal my Liabilities; insolvent when assets are less than liabilities". Cronhelm [1818/1978, p. 5], de Morgan [1853/1982, p. 17] and Lisle [1900, p. 70] also described the deficit of assets of a trading concern over liabilities as a measure of insolvency.

COSTS CARRIED FORWARD

Continued support for the simple notion of assets as exchangeable things or property can be found in the 20th century accounting literature.[15] However, during the latter part of the 19th century the emphasis moved away from property rights, to cost and cost allocation. A new school of thought emerged which challenged the conventional notion of assets and the function of the balance sheet. A number of factors appear to have contributed to this.

The accounting literature examined revealed the use of, and strong support for, market values over several centuries.[16] However, conventional accounting is firmly rooted in the historical cost based record, despite its widely acknowledged inconsistencies. The origins of recording assets at cost may be found in the rules associated with double entry, and the personification of

[15] Pixley [1906, p. 512 cited in Chambers, 1995, p. 420]; Sprague [1907/1972, p. 44]; Cole [1908/1976, p. 50]; Paton, [1922/1973, p. 30]; Kester [1922, p. 14]; Cropper [1927, p. 661]; Rorem [1928/1982, p. 20]; Fieldhouse *et al*. [1930, p. 28]; Saliers [1935, p. 12]; Sanders et al. [1938/1968, p. 58]; AIA [1931, p. 10]; Chambers [1966, p. 103]; Goldberg and Hill [1968, p. 17]; Dixon et al. [1966, p. 7]; Edwards et al. [1979, p. 68]; Sterling [1979, pp. 161,162]; Schuetze [1993] and Samuelson [1996, p. 156]

[16] For example see Hayes [1741, p. 79]; Hamilton [1788/1982, p. 285, p. 28]; Kelly [1801, p. 120]; Foster [1837, p. 57]; Cory [1839, p. 28]; Bennett [1842/1976, pp. 69,78]; Harris [1842, from Littleton, 1933, p. 151]; de Morgan [1853/1982, p. 9]; Montgomerie [1858, pp. 14, 44]; Fulton and Eastman [1872, pp. 133, 195]; Cayley [1894, p. 11]; Mason [1933, pp. 209-215]; Vance [1933, p. 224]; Ramsay [1956, p. 198]; Chambers and Wolnizer [1991, p. 208]; Chambers [1994].

accounts. It was not uncommon for early accounting teachers and writers to present double entry accounting as a series of rules.[17] The personification of accounts was the basis for such rules. For example Donn [1765, p. 5 cited in Jackson, 1956, p. 297] wrote: "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". Other writers to link account personification to cost include Stevin [1604 cited in Littleton, 1933, pp. 49-50], King [1717, cited in Littleton, 1933, pp. 49-50], Clark [1732 cited in Foster 1852/1976, p. 14], Malcolm [1731/1986, p. 13], de Morgan [1853/1982, p. 13] and Sprague [1901, XII/1984]. It could be surmised, in the absence of evidence to the contrary, that initial costs recorded were carried forward on the closing of the books or into periodic summaries as part of the 'rules' of double entry. It should also be noted that some writers supported cost on the basis that it avoided the recognition of unrealized gains [see for example, Malcolm, 1731/1986, p. 89].

A factor which promoted the use of cost, and thereby contributed to the changing notion of assets, was the industrial revolution. This encouraged companies with large capital investment, and led to uncertainty as to how to account for such long-lived investment. Accounting for the effects of fluctuations in values of long-lived assets on profit was considered by some to be impractical [Garcke and Fells, 1887, p. 102; Matheson, 1893, p. 15], and it was not uncommon for large limited liability companies to carry long-lived assets, often not easily exchangeable, in the accounts at cost indefinitely. However, in the UK during the 1840's large amounts of invested capital were lost to owners as a result of railway companies paying dividends out of capital. It was subsequently argued that a regular charge, a percentage of cost, should be made out of profit for wear and tear on assets 'occasioned by use'. The 'depreciation' charge was regarded as a recoupment of capital outlay. Prior to the 19th century, depreciation in accounting was commonly regarded as an adjustment of value [Brief, 1966, p.15]. While some railroad companies in the USA—as early as 1839—and the UK, adopted a form of cost-based depreciation it was abandoned in most cases when such

[17] For a discussion of this see Donn [1765 cited in Jackson, 1956, p. 5]; North [1714, p. 10]; Foster [1863: p. 4]; and Littleton [1933, p. 49].

provisions were found inadequate to replace fixed assets [Pollins, 1956, p. 349].

Toward the end of the 19th century discussion of depreciation as cost recovery (to allow for the physical deterioration of assets), extended beyond the railway context to encompass factories. Matheson [1893] outlined a variety of methods for systematically recognizing depreciation in factories [see also Guthrie, 1883]. While systematic depreciation does not appear to have been an accepted method in the UK or the USA at the time[18] the idea began to appear in the literature [Editorial, *Accountant*, 1880, p. 5; Turner, 1894/1976, p. 547; Lewis, 1896, p. 389]. Depreciation was regarded as a measure of wear and tear. With respect to properties not for sale but for business use, Pilsen [1877, cited in Littleton, 1933, p. 226] proposed that an entity "take off a percentage rate of total cost for wear and tear". Inglis [1881, p. 18] recommended a yearly deduction of 5 to 10 percent.[19] While there were no legal requirements in the UK or the USA to provide for depreciation the 1878 British tax law permitted a deduction for "diminished value by wear and tear" [see Lamb, 2002].

The Going Concern Notion: The cost allocation view of depreciation was consistent with the emerging going concern notion. In 1883 Guthrie [1883, p. 7] argued that the 'going concern' nature of business justified ignoring fluctuations in the cost of plant and other property; "matter and things fixed in a permanent working position must not be treated in account as following the fluctuations of the market" [Guthrie, 1883, p. 7]. This point was made earlier by Lardner in his book *Railway Economics* [1850]. Dicksee [1892/1976] adopted a similar view with regard to certain parliamentary companies constituted for the purpose of undertaking definite public works. He wrote that in order for the capital expenditure account to show that the capital raised had been spent only on the authorized works, it was necessary that the actual amount expended on the works alone be debited to the account, regardless of any fluctuations in value that might

---

[18] See Garcke and Fells [1887, p. 101]; Hatfield [1909, p. 124]; Leake [1912, pp. 3-4]; Hatfield [1927, p. 140] and Chatfield [1974, p. 233].

[19] See also Murray [1885, p. 13]; Bogle [1889, p. 692]; Lewis [1896, p. 389] and Matheson [1893/1976, pp. 24,55]. Later references to depreciation as a measure of wear and tear, and/or obsolesence, include Spicer and Pegler [1910, p. 33]; Montgomery [1912/1976, p. 119]; Carter [1923, p. 600] and Hatfield [1927/1971, p. 76].

afterwards occur. He argued that as it was contemplated that these companies should 'permanently' carry on business, such fluctuations could not in any way practically affect the company and therefore consideration of such fluctuations was superfluous [Dicksee, 1892/1976, p. 118]. Dicksee [1903/1976, p. 5] later used this argument to justify ignoring fluctuations in the value of the 'fixed' assets of non-public entities:

> . . . these assets have been acquired, and are being permanently retained, not with a view to their being eventually realised at a profit in the ordinary course of business, but with a view to their being *used* for the purpose of enabling trading profits to be made in other ways. . . . For practical purposes, therefore, these fluctuations may fairly be said to be of no account (original emphasis).

The distinction between 'fixed' and 'floating' assets was commonly made by economists, and in some legal cases where the payment of dividends was at issue.[20] The continuing, or 'going concern', nature of business was frequently volunteered as the rationale for recording 'fixed assets' at cost.[21] Changes in market values were ignored on the basis that 'realization was not contemplated; such assets were bought to be used, not to be sold at a profit' [Chatfield, 1974, p. 234].[22] This was an important factor in the change in emphasis from exchangeable things to cost and cost allocation.

Consistent with the focus on 'value in use' writers began to describe depreciation as the allocation of the cost of an asset over the period of its use. Pixley [1881, p. 118] noted that the amount written off as depreciation was normally based on cost "the object being to charge the Revenue Account of the period with a proper sum for the use of the plant". Ladelle [1890, p. 659] described the cost of an asset as "joint to the periods during which it is in use" [see also Guthrie, 1883, p. 6]. Unrecovered costs were to be carried forward and reported in balance sheets

---

[20] See for example Verner vs The General and Commercial Investment Trust 63 LJ Ch 246 [1894].

[21] See Lisle, 1900/1976, p. 53]; Montgomery [1912/1976, p. 119]; Esquerre [1927, p. 173]; Leake [1929, p. 12]; Hatfield [1927, p. 76]; Kester [1930, pp. 542-543]; Rowland and Magee [1934, p. 283]; Dohr [1941, p. 214]; May [1943, p. 86] and Goldberg [1948, p. 45].

[22] See also Montgomery [1912/1976, p. 119]; Esquerre [1927, p. 173]; Hatfield [1927]; Kester [1930, pp. 542-543]; Dohr [1941, p. 214] and Goldberg [1948, p. 45].

as assets. While it appears that "few accountants in 1900 saw depreciation as an allocation problem" [Chatfield, 1974, p. 233] the idea of depreciation as cost allocation gradually gained support. Hatfield [1927/1971, p. 131] wrote: "The cost of more permanent assets, serving for productive use during a period of years, should be spread as an expense during the period of use". Other writers made similar statements.[23] Hatfield [1927/1971, pp. 140, 279] suggested that income-tax law stimulated the adoption of systematic depreciation by companies in the US.

In common parlance to depreciate means to "diminish in value" [*OED*, 1989, Vol. IV, p. 486]. While a diminution in value is a result of real events and conditions, the allocation of the cost of an asset over its useful life is an arbitrary process based on estimates of the asset's useful life, its residual value and the pattern of benefits. The following references highlight the ambiguity of mixing systematic cost allocation with concepts of market value. Spicer and Pegler [1910, p. 43] defined depreciation as the "shrinking in value of an asset from any cause during a period". However, they went on to describe depreciation as a process whereby the original cost of the asset is written off each year [p. 43]. Leake [1912, p. 77] wrote: "It has been shown that depreciation is the fall in exchangeable value of industrial plant computed on the basis of cost expired during the period of its use in seeking profits, and that this fall is due to natural decay, wear and tear and obsolescence".[24] Smails [1927, p. 105] highlighted this confusion, by accountants, of cost and value: "Do we not too often speak of depreciation as 'shrinkage in value due to wear and tear, obsolescence, etc.,' leaving the layman (who inevitably associates the word 'value' with exchange value) to solve the paradox of an asset bought in 1941 for $1000 shrinking in value steadily at the rate of five per cent per annum and yet possessing today a value of, say, $1050?"

In addition to the practical problems resulting from accounting's departure from reality, the resulting information only served to confuse those it was designed to inform.

Assets as Deferred Costs: The idea that the cost of long-lived assets should be spread over periods from which benefits are derived transposed to other costs. The authorization of the car-

---

[23] See Montgomery [1912/1976, p. 119]; Leake [1912, p. 79]; Smails [1927, p. 105] and Hatfield [1927/1971, p. 76].

[24] See also Fieldhouse and Fieldhouse [1930, p. 76]; Saliers [1935, pp. 204-205] and Dickinson [1913/1987, p. 153].

rying forward of costs, "which may in Fairness be distributed over several Years", by the [UK] Companies Act, 1862 [sec.80] may have contributed to this practice in the United Kingdom. As Edwards and Webb [1982, p. 259] commented it is likely that directors of early joint stock companies, in their search for guidance on accounting matters, gave some attention to the prevailing legal situation. Some public utility companies in the late 19th century began carrying forward a variety of costs such as those of securing private Acts of Parliament, and fixed asset construction costs. 'Preliminary expenses' and 'goodwill' began to appear in balance sheets notwithstanding the disagreement amongst accountants and in the courts as to whether 'goodwill' constituted property.[25]

Lord Eldon described goodwill as "nothing more than the probability that the old customers would resort to the old place".[26] However, during the 19th century courts began to recognize that certain rights attached to the carrying on of a business or professional activity, and that these rights should be protected.[27] In some cases around the turn of the century judges drew on accounting practice in determining whether goodwill constituted property.[28] In *Re Leas Hotel Co*[29] it was held: "If as regards a partnership the words 'partnership assets' or 'effects' cover goodwill, it would seem that the word 'property' must also cover 'goodwill'". Such decisions were made in the context of determining the rights of particular parties, such as the rights of a deceased partner in relation to partnership assets, or the right to use a business name. It was ascertained that accounting goodwill represented expected financial benefits, not enforceable rights. It was held in *Wilmot v Alton*[30] that 'property' did not comprise future receipts in a person's business: "There must be a definite interest; a mere expectancy as distinguished from a conditional interest is not a subject of property" [*Jowitt's Dictionary of English Law*, 1977, p. 1447]. On the occasions when the

[25] Chatfield and Vangermeersch [1996, p. 282] suggests that goodwill was first discussed in the accounting literature in the mid-1880s. Writers were concerned with the valuation of goodwill on the retirement or death of a partner or proprietor.

[26] *Crutwell v. Lye* [1803] per Lord Eldon.

[27] Such as the right to represent that you are carrying on a business which has been carried on previously, and hence the right to prevent another person from holding out that they are carrying on the business.

[28] *Public Trustee v Schultz* [1964] 111 CLR 482.

[29] [1902] 1 Ch. 332, per Kekewich, J., at pp. 333, 334.

[30] Exp. Nichols, [1897] 1 Q.B. 17.

courts held that goodwill in the accounts of a business was property it must be assumed that this 'goodwill' was an enforceable right, or rights, attaching to the business, and not a 'mere expectancy'. However, these interpretations by the court may have been seen as condoning the recording and subsequent reporting of amounts representing 'goodwill' as assets, despite the different contexts.

Some accounting writers expressed concern at the recording, or retaining, of 'goodwill' in the accounts of a business [More, 1891, p. 286; Dicksee, 1897, p. 46]. Harris [1883, p. 10] supported the recording of goodwill as an asset on the basis that "it is worth money and could be converted into that commodity whenever the owner liked to sell". However, goodwill was deemed inseparable from a business and only exchangeable as part of the whole. Where goodwill had been paid for it was assumed that the goodwill was of value and therefore had a rightful place on the balance sheet [Roth, 1929, p. 103; Dicksee, 1910]. Dicksee [1892/1976, p. 27] described the amount recorded in the accounts as goodwill as "absolutely meaningless".[31] However, he was not critical of the carrying forward of such amounts as assets. By 1900 balance sheets included many items that were "not strictly assets (such as expenditure being spread over a period)" and items that were "not really liabilities" [Dawson, 1900, p. 131. See also Pixley, 1906, p. 512 cited in Chambers, 1995, p. 411; Dicksee, 1910, pp. 218-219]. A move away from the view of assets as property and the growing emphasis on costs enabled costs per se to be considered as assets. The idea was introduced that an asset was something of value for the reason that it would provide a benefit in the future.

Definitions of assets in terms of costs and unexpired costs began to appear in the literature during the early 20th century. The commonly understood notion of assets as exchangeable property was ignored: "[T]he organisation expense of a corporation . . . is not property owned nor legal rights to property, nor does it strictly represent a prepaid service . . . Nevertheless, it is accepted by accountants as a proper asset if other treatment would result in a violation of any accounting principle" [Couchman, 1924/1982, p. 28]. Mason stated that "the asset account may well be thought of as a deferred charge to operations" [1937, p. 13]. According to Gilman "That portion of an

[31] Thornton [1895, p. 158] made the same comment in relation to preliminary expenses.

expenditure the beneficial effect of which is expected to be experienced measurably in future fiscal periods is commonly called an 'asset'" [1939, p. 292]. Some writers suggested that the term 'assets' be dropped and a more descriptive term such as deferred charges, unallocated costs, or debit balances be adopted [Editorial, *Australian Accountant*, 1936, p. 75; Fitzgerald, 1938, p. 86; Whitney, 1941, p. 430].

The deferred cost concept was considered deficient in a number of respects. Vatter [1947, p. 15] argued: "The definition of an asset in terms of unamortised cost is weak in that it does not include all the things that are commonly regarded as assets; further, it does not specify the underlying thread of relationships- the basic uniformity of substance with which assets and related terms are concerned".

Such definitions exclude from assets all items which are not represented by 'costs' and which are not subject to amortization. Financial claims cannot be fitted into the pattern of amortization which is suggested by such a definition of assets. Cash, bank deposits, and receivables are indisputably assets but they are not 'costs'; they do not represent charges awaiting future revenue. Definitions of assets as deferred charges or unamortized costs do not take into account how they are to be applied as there is no defined basis for determining what portion of the cost should be recorded as an asset and what portion of the cost should be treated as an expense. Deferred costs are not representative of actual conditions or events. It is easy to note the criticism: "Obviously, accountants cannot determine what part of the original cost of depreciating assets ought to be written off" [Whitney, 1941, p. 430. See also Kelley, 1941, p. 511].

Shift in Emphasis to the Profit and Loss Statement: This emphasis on cost based accounting was consistent with a reduced focus on the information value of the balance sheet. There is evidence of the shift in attention away from the balance sheet to the profit and loss statement throughout the accounting literature.[32] Canning [1929b, p. 8] was an early advocate of income as the central concept of accounting [see also Carter, 1910, p. 562]. The failure of the balance sheet to present a current assessment of the present value of the proprietors' worth was one explana-

[32] May [1943, p. 5] and Gilman [1939, p. 28] comment on the shift in emphasis. See also Sprouse [1970, p. 92]; Hylton [1965, p. 824]; Sprouse and Moonitz, [1962, p. 4]; American Institute of Certified Public Accountants [1953a, p. 7] and Most [1977, p. 214].

tion offered for the shift [Editorial, *Accountant*, 1946, pp. 293-294]. It was the perceived decision making needs of investors for information relating to the entity's future cash flows or earning power that was emphasized in the accounting literature [American Institute of Accountants (AIA), 1934, p. 5; Nelson, 1947, p. 348; May, 1943/1972, p. 5; Backer, 1966, p. 441]. Previts and Merino [1998, p. 278] concluded that "by the end of the 1930's the NYSE, the SEC and CPAs had come to the view that investors were primarily interested in 'future income' and the income statement must be the focal point of accounting". The Special Committee on Cooperation with Stock Exchanges of the AIA [1934, p. 10] asserted that "earning capacity is the fact of crucial importance in the valuation of an industrial enterprise, and that therefore the income statement is usually far more important than the balance sheet".

The focus on income was particularly evident in the work of Paton and Littleton [1940] who emphasized the importance of the matching of efforts and accomplishments, or costs and revenues—a principle endorsed by the American Accounting Association [AAA, 1941, p. 55]. The matching of effort and accomplishment was elevated to an imperative of income determination: "[I]f a given procedure can be asserted to conform to the matching concept, nothing else need be said; the matter is settled and the procedure is justified" [Hylton, 1965, p. 824]. The matching process resulted in balance sheets that were "simply the connecting links of a series of income statements" [Dohr, 1941, p. 218]. The headings 'assets' and 'liabilities' were considered totally misleading. Items so described were merely items left over from the calculation of profit.[33] The Committee on Cooperation with Stock Exchanges [AIA, 1934] declared that to speak of the balance sheet as reflecting the values of assets and liabilities on a particular date seems "to involve a misconception of the nature of the balance sheet". Kollaritsch [1960, p. 488, original emphasis] wrote: "[the purpose of] the general balance sheet ... is <u>not</u> to reveal the financial position, but rather it is to show the <u>deferred charges</u> and the <u>unconsumed</u> or <u>unapportioned</u> <u>values</u> for future operations and their financing".[34]

[33] See Cropper [1927, p. 127]; Parkinson [1931, p. 546]; Smith [1931] and Tovey [1946, p. 2].

[34] According to Bottrill [1973, p. 143] this was also the view taken by the Company Law Revision Committee of England [1945]. See also Sanders, Hatfield and Moore [1938/1968, p. 59]; AIA [1940, p. 2]; Paton and Littleton [1940/1970, p. 67]; Baxter and Davidson [1962, p. viii]; Anthony [1983, p. 269].

Perceptions of accounting as essentially an allocation process were manifested in the Tentative Statement issued by the AAA in 1936 [AAA, 1936, p. 61]. This was the first of a series of statements issued between 1936 and 1948 that developed the historic cost allocation model [Paton and Littleton, 1940; AAA, 1948; AIA, 1941]. In Accounting Research Bulletin No. 9 [AIA, 1941, p. 70] it was stated that any expenditure which is properly applicable to the future is presumptive grounds for carrying the balance forward [See also AAA, 1948, p. 14]. However, there was no accompanying explanation as to what expenditure would be "properly applicable to the future". Neither was an explanation forthcoming in Accounting Terminology Bulletin No.1 in which assets were defined as: "Something represented by a debit balance that is or would be properly carried forward upon a closing of books of accounting … on the basis that it represents either a property right or value acquired, or an expenditure made which has created a property right, or is properly applicable to the future" [American Institute of Certified Public Accountants (AICPA), 1953a, para. 26].[35]

The failure of the American accounting profession to address the problems associated with the cost allocation doctrine is evident from their second formal attempt to define assets [Accounting Principles Board (APB), 1970, para. 132] which was entirely dependent upon arbitrary accounting practice.[36] Descriptions of assets in terms of 'unexpired costs' or 'deferred charges' continued. For example: "A cost residue is the unexpired portion of a cost outlay; it may properly appear on the asset side of the balance sheet" [Finney and Miller, 1963, p. 242]. Littleton [1953, pp. 87-89] described assets as productive factors or invested costs.[37]

The change in emphasis from the balance sheet and solvency, to cost allocation and income, lead to the next stage in this definitional saga.

ASSETS AS SERVICE POTENTIAL

The shift in emphasis away from the balance sheet and debt paying ability, to the profit and loss statement and future earning power, provides some explanation for the development of

[35] This definition was a slightly modified version of the definition developed by the Committee on Terminology in 1941 [AIA, 1941, p. 70].

[36] The balance sheet as a list of leftovers, is also manifested in *APB Statement No.4* [Accounting Principles Board, 1970].

[37] See also [Fitzgerald, 1963, p. 130]; Paton & Paton [1971, p. 7]

the notion of assets as service potential or future economic benefits. As cost allocations (such as depreciation), based on expectations of future earnings and asset usage came to dominate practice, the accounting profession struggled to provide a theoretically defensible definition of the unallocated costs reported in the balance sheet. A criterion of service potential or future economic benefit provided a rationale for most items appearing under the asset heading in the balance sheet; not only items with an 'exchange' value or a value to the entity as a 'going concern' but also deferred charges. This notion was consistent with the practice of carrying forward costs on the basis that they related to future periods.

Influence of Economists: An explanation for the introduction and subsequent adoption of the service potential definition may be found through an examination of the influence of economists on accounting thought. That accounting has much in common with economics may be demonstrated by reference to two of the most highly regarded economic thinkers. According to Marshall "Economics ... examines that part of individual and social action which is most closely connected with the attainment and with the use of the material requisite of well being" [1947, p. 1]. Mill stated "[T]he economic activity of man looks to a provision of the material means to satisfy his wants and those of his household" [1909/1976, p. 4]. Both accounting and economics are concerned with the transactions and events by which wants are satisfied.

It is apparent from the literature examined that the introduction, and subsequent general acceptance by the accounting fraternity, of the definition of assets as 'future service potential' or economic benefit was influenced by accountants having drawn, directly and indirectly, on the writings of economists, in particular Fisher and Canning. Fisher and Canning's influence may also have extended through their teaching. Previts and Merino [1998, p.51] suggested that a 'California School' of accounting theorists informed by the work of Fisher and Canning could be identified.

Fisher [1906] was concerned to clarify the distinction between concepts of wealth and property. He described wealth as "existing means toward *future* services", and property as "constituting an interest in the *present* means" [pp. 33-34, original emphasis]. Other economists also defined wealth in terms of property rights—rights or objects that are exchangeable for money [Smith, 1893, p. 23; Seligman, 1907, p. 19; Mill, 1909/1976, pp.

6, 9; Keynes, 1917, p. 95]. Fisher described *services* as the benefits of wealth: "The services of an instrument of wealth are the desirable changes effected (or the undesirable changes prevented) by means of that instrument. For instance, the services of a loom consist in changing yarn into cloth, or what is called weaving. Similarly, a plow performs the service of changing the soil in a particular manner" [p.19].[38]

There is similarity between Fisher's concepts of wealth and property, and the notion of assets that emphasizes legal substance—rights of ownership or objects owned. In promoting the concept of capital as a "stock of wealth at an instant in time" Fisher discussed the meaning of capital among businessmen, referring to Sprague [1904] and others. Considering the capital accounts employed in business, Fisher defined the assets or resources of the owner as "all his property-rights" [p. 68]. "The assets include both the property which makes good the liabilities, and the property, if any, in excess of the liabilities" [p. 68]. He also wrote: "A wise merchant . . . will not only keep his assets in excess of his liabilities by a safe margin, but will also see his assets invested in the right form so as to enable him to cancel each claim at the time and in the manner agreed upon" [p. 82].

Fisher emphasized the uncertainty associated with the benefits of wealth, which "are always and necessarily future services". He stressed that services are a possible consequence of wealth but the services are not wealth, "swift horses are wealth, but not their swiftness" [Fisher, 1906, p. 39]. However, it was Fisher's [1906, p. 324] emphasis on the services to be derived from wealth that is reputed to have influenced accounting writers.

In 1907 Sprague wrote that assets could be considered in "one of seven ways". He suggested that in one respect assets are a "storage of services to be received" [p. 46]. Fisher's influence is clearly evident when Sprague wrote: "a disservice (*to use Professor Fisher's word*) may have occurred through various causes, so that the services once anticipated appear impossible of entire realization" [p. 46, emphasis added]. He also commented on the view, put forward by Fisher [1906], that all assets are capital. Given Sprague's references to Fisher [1906], who based his framework of ideas on the notion of income as a "stream of services through time", and defined the value of any capital

[38] This idea can be found in the works of other economists, for example Bohm-Bawerk [1891] and Seligman [1907, p. 16].

good as "the discounted value of that income" [p. 223], we can infer that with regard to his discussion of assets as a store of services Sprague was influenced by Fisher's writing. This inference is supported by the apparent lack of any reference in his earlier writings to the 'services' aspect of assets.[39] It was suggested in Chatfield and Vangermeersch [1996, p. 549] that Sprague's book had a large impact upon the practice of accounting; that prior to this most of the books on bookkeeping were practice manuals, whereas Sprague "attempted to explain the 'why' rather than just the 'how' of accounting. This was a departure from the traditional American or English approach, resembling instead the approach used in Germany". As Sprague had spent some time in Germany he may also have been influenced by German practice and ideas. Weigmann [1932] discussed legal and economic concepts of the balance sheet in Germany. He made reference to the dynamic view of the purpose of the balance sheet discussed in an article by Schmalenbach in 1920. According to this view "property and debts were regarded as expenses and services which are already, or are still to be, accounted for (as income-producing factors)" [Weigmann, 1932, p. 105].

Sprague [1907/1972] is cited frequently in the accounting literature as 'authority' for the notion of assets as 'stores of services'. Paton and Stevenson [1916/1976] may have been influenced by the writings of Sprague to which they refer. They included in property or assets, services which represent a future benefit [p. 21].[40] Gilman [1939, p. 291] alleged Sprague referred to assets as "a storage of services to be received". Nelson [1935, p. 314] wrote: "Sprague *declares* that assets are a storage of services to be received" (emphasis added). Kelley [1935, p. 51], revealing the influence of Sprague, described every asset of a business as "in essence a storage of service", and in a later work defined an asset as "a storage of service, or anything that renders or is capable of rendering a service to the enterprise" [Kelley, 1941, p. 511]. Sprague's influence is also evident in Paton's later work with Littleton: "Behind accounting's array of

---

[39] This idea is not referred to in 'The Algebra of Accounts' printed in *The Book-keeper* in which assets were described as resources, or property and debtors [Sprague, 1880, p. 51], nor the lecture series 'The General Principles of the Science of Accounts' in which assets were described as "property and debts due us" [Sprague, 1901, III].

[40] Paton [1922/1973, p. 107]; Couchman [1924/1982, p. 30] and Rorem [1928/1982, p. 287] also wrote of the services to be derived from assets.

figures, which laymen may think represent values or money, or, at best, price, lie the tangible and intangible embodiments of services" [Paton and Littleton, 1940/1970, p. 13]. They described 'service' as the "significant element behind the accounts" [p.13]. Expenses are described as "services received" [p. 26], the implication being that 'assets' are services yet to be received, or expected future services. Sprouse and Moonitz [1962, p. 19] referred to Sprague's description of assets as "store of services". Moonitz and Jordan [1963, p. 162] professed that Sprague asserted that assets are a storage of services to be received. Kam [1990, p. 102] wrote that Sprague saw an asset as a storage of services to be received.

Staubus [1961, p. 29] also described assets as "stores of services" and in a later work he listed the seven ways in which Sprague proposed that assets could be considered. He described the breadth of the listing as indicating a potential for confusion, "and Sprague did not emphasize any one view enough to dispel it" [1977, p. 122]. Miller and Islam [1988] presented the same list. They wrote that "Sprague expressed some significant ideas such as 'all our 'things' may be looked upon as merely rights of dominion" [p. 44] and assets "are a storage of services to be received" [p. 46], and concluded: "But these ideas were given no more stress than many other blurring notions" [p. 11]. These conclusions would indicate that neither Staubus, nor Miller and Islam, read Sprague closely. In his discussion of the balance sheet Sprague emphasized the notion of property or assets as something owned and/or rights of ownership, and its representation of debt paying ability. He wrote that the balance sheet must comprise: "The values of assets, consisting of property and claims, to which the person, or collection of persons, has title" [1907, p. 30].[41] He also wrote that the values on the asset side of the balance sheet are composed of two classes: "Things and rights", or "Things belonging to us and debts owing to us", or again: "Possessions and Expectations". "We shall see that these classes imperceptibly blend into each other and that every asset may be looked upon either as a 'thing' or as a 'right'" [p. 44]. That exchangeability was considered an important characteristic of assets is evident in the following quotation: "The personality of the proprietor, his skill, his experience, though important elements of his capital, can never be brought into his balance

[41] In previous writings Sprague described assets in terms of "property and debts due" [Sprague, 1901/1984, lecture III, 1904/1984, p. 6].

sheets. They cannot be bought nor sold and they only make themselves manifest through the services which he does sell" [Sprague, 1907, p. 36].[42] Sprague stressed that "the aspect of assets as the present worth of future services is entirely based upon opinion" [1907, pp. 46-47].

More authoritative in developing this trend was the work of Canning. As he acknowledged in the preface to his book *The Economics of Accountancy* [1929a], Canning was strongly influenced by the writings of fellow economist Fisher. Notwithstanding, Canning sought to base his work on accounting practice. Fisher's influence is clearly evident throughout Canning's book, in which he attempted to clear away some of the confusion that surrounded economists' understanding of accounting concepts. Fisher's influence is clearly evident in Canning's asset definition, described as the professional accountant's implied definition: "An asset is any future service in money or any future service convertible into money (except those services arising from contracts the two sides of which are proportionately unperformed) the beneficial interest in which is legally or equitably secured to some person or set of persons. Such a service is an asset only to that person or set of persons to whom it runs" [1929a, p. 22].

From his observation of accounting practice Canning concluded that ownership, and therefore transferability, were not essential to the existence of an asset. Canning stressed that the essential idea of an asset is that it stands for a separable series of future services. He linked the concept of a series of services (Fisher's income notion) with the concept of assets: "For income in essence is services - the desired element in economic events. Change the sign and you have the undesired element in economic events, disservices, or expense. Consider the sources of service and you think of tangible assets" [1929b, p. 8]. Under Canning's definition, an asset is not a resource, a right or an object but a future service. In Canning's words: "It is the anticipated service, the payment of money at some future time, that is valued and that is fundamental to the existence of the asset" [p. 15]. He argued that one could have an enforceable right to the services of a thing and have no asset: "The service must either be itself a money income or it must have a money income consequence" [p. 20].

As is clear from the previous discussion 'future services' was not the accepted view of assets in accounting during the 1920s

[42] See also Sprague [1907/1972, pp. 49-50].

and 30s.[43] Canning's influence can be found throughout the accounting literature. Nelson [1935] relied heavily on Fisher and Canning, citing them throughout his discussion. He argued: "Wealth and property are evidence of an expectation, but they are not assets . . . Assets are future enterprise services" [1935, p. 313]. Gilman [1939] referred extensively to Canning throughout his book which was directed primarily to "the accountant in search of accounting 'principles' articulating with present day practice". When discussing assets, Gilman quoted both Canning and Sprague. He also quoted Perry Mason [1937, p. 13] who described an investment in an asset as the price paid for a series of future services.

Notwithstanding the above evidence, some authors have attributed the introduction of the idea of assets as future services to Vatter.[44] Vatter [1947] described assets as "embodiments of future want satisfaction in the form of service potentials that may be transformed, exchanged, or stored against future events . . . assets are service potentials, not physical things, legal rights, or money claims" [p. 53]. Vatter was not the originator of this notion as there is a clear link to the sources discussed above. Vatter [p. 52] quoted Canning [1929a, p. 188] who had described the essence of enterprise assets as constituting "the assured, separable service-series" and Paton and Littleton's reference to "service" and "service potentialities". Vatter [p. 54] suggested that "there may be different aspects of service potentials that ought to be considered". However, he did not discuss these different aspects. Vatter was a member of the AAA which subsequently adopted the service potential notion.

During the 1960s and 1970s the notion of assets as future services, or stores of services, was taken up with enthusiasm. Finney and Miller [1963] and Paton and Paton [1971] were among those to make the point that the notion of assets as future benefits was becoming generally accepted.[45] Staubus [1961/1971, p. 29] noted that the 'service' aspect of assets had been emphasized by other writers. He made specific reference to Vatter [1947] and Paton and Littleton [1940/1970]. In a later work Staubus [1977, p. 122] quoted Canning. Sprouse and

[43] Canning [1929a, pp. 12-13] noted that asset definitions in accounting texts were "confusingly diverse".

[44] See Kenley and Staubus [1972, p. 93] and Staubus [1977, p. 123].

[45] See Sprouse [1970, p. 100]; Staubus [1977, p. 123]; Kenley and Staubus [1972, p. 93]; Sorter and Horngren [1962, from Davidson et al, p. 194] and Lall [1968, p. 133].

Moonitz [1962, pp. 19-20] referred to Sprague's 'description' of assets as 'store of services'; to Paton and Littleton's statement that service is the significant element behind the accounts; to Vatter's description of assets as 'service potentials'; to the definition promulgated by the Committee on Terminology [AICPA, 1953a], in which assets were defined in terms of generally accepted accounting practice; and to the Committee on Concepts and Standards of the AAA [1957, p. 538] which stated that assets are "aggregates of service-potentials". Sprouse and Moonitz [p. 20] adopted the majority view.

Moonitz and Jordan [1963, pp. 162-163] quoted Sprague: assets were "a storage of services to be received"; Canning – "any future service in money"; Vatter, "embodiments of future want satisfaction"; and the AICPA [1953a]. They concluded that despite some differences the definitions agreed on certain essentials. They defined an asset as a "right, residing in the owner, to prospective benefits" [p. 163]. The existence of some future service or benefit is also the cornerstone of the definition proposed by Kenley and Staubus [1972, p. 94].[46]

Professional Pronouncements: The economic benefits notion reflected a move away from an emphasis on legal form to economic substance or rights. The subject of accounting for leases demonstrated this. Concern for the economic substance of lease transactions led to the issue of *Bulletin No. 38* by the AICPA Committee on Accounting Procedure in 1949. For a year or two prior to the issue of the Bulletin a number of journal articles had called attention to the growing importance of leases, some writers advocating that leased assets and the related liability be placed upon the balance sheet. A major argument was that the accountant should look through the form of the transaction to its substance [Myers, 1962, p. 2]. Myers [1962, p. 40] used Canning's asset definition to support the recording of leased property as an asset. The recommendation of the Committee was that the 'leased' property should be recorded as an asset where it was clearly evident that the transaction involved was "in substance a purchase". This recommendation was restated in

[46] Future benefits are also emphasised by Sorter and Horngren [1962, from Davidson et al, 1964, p. 194]; Dixon, Hepworth and Paton [1966, p. 6]; Lall [1968, p. 133]; Sprouse [1970, p. 100]; Sorter and Ingberman [1987, pp. 100-101] and in a document published by Arthur Andersen and Co in 1984 [p. 24]. The latter was in contrast to the definition proposed ten years earlier which specified exchangeability as an essential asset characteristic [Arthur Andersen, 1974].

Accounting Research Bulletin No.43 [AICPA, 1953b], and reinforced in *APB Opinion No. 5* [APB, 1964, p. 30], in which it was argued that the substance of the arrangement, rather than its legal form, should determine the accounting treatment. It may be noted that subsequently *Substance over Form* was included as one of the basic features of financial accounting in *APB Statement No 4* [APB, 1970]. It was argued that such an emphasis resulted in information that "better reflects the economic activities represented" [APB, 1970, para.127].[47]

The adoption of the abstract future benefit concept of assets in the pronouncements of accounting bodies is testament to the extent of its general (but not universal) acceptance. In 1957 the Committee on Concepts and Standards of the AAA, of which Vatter was a member, abandoned the definition of assets as 'rights in property' [AAA, 1948, p. 14] in favor of an economic notion of assets as "aggregates of service potential" [AAA, 1957, p. 538]. What constituted service-potentials was not explained. Prospective cash inflows, or future services, service potentials or future economic benefits, were described as essential characteristics of an asset in the FASB discussion memo *Elements of Financial Statements and Their Measurement* [FASB, 1976]. The definitions proposed by Canning [1929a], Vatter [1947], the AAA [1957], Sprouse and Moonitz [1962], Mautz [1970], and in *A Statement of Basic Accounting Postulates and Principles* [Study Group at the University of Illinois, 1964, p. 60] were quoted. The FASB codified this popular view of assets in *Statement of Financial Accounting Concepts* (*SFAC) No.6* [1985].[48] Assets are defined in that document as "probable future economic benefits obtained or controlled by a particular entity as a result of past transactions or events".[49]

These professional pronouncements were supported in later academic writing and Canning's definition continues to be cited as an authority for the definition of assets as service potential or future economic benefits. Hendrikson [1977, p. 257] quoted Canning and concluded that the emphasis on economic resources representing service potentials or rights to prospective benefits provides for an all-inclusive definition. Henderson and Peirson [1984] discussed Canning's asset definition at length.

[47] See also AARF [1990c].

[48] This followed a discussion memorandum in which service potential was argued to be an essential characteristic of an asset [FASB, 1976, p. 60].

[49] *SFAC No. 6* replaces the earlier *SFAC No. 3* [FASB, 1980] which contained the same definition of assets.

They concluded, without critique: "There is no reason to believe that the characteristics of an asset identified in 1929 are not the same as the characteristics of an asset in contemporary accounting" [p. 30]. They proceeded to define an asset "as that term is understood in contemporary accounting" in the same terms as Canning.[50]

Similar professional pronouncements followed in other parts of the world. The professional accounting bodies in Australia [AARF, 1992, para. 12] adopted a similar definition to that promulgated in *SFAC No.6*.[51] The UK Accounting Standards Board [1999] also adopted the notion of assets as future benefits.[52]

Measurement of Future Economic Benefits: While the service aspect of assets cannot be disputed, critical examination of this notion of assets in the context of financial reporting reveals considerable difficulty in rationalizing the concept.

The broader notion of assets as future economic benefits was argued to be more consistent with the needs of users for future oriented information as a basis for prediction [Canning, 1929a; Nelson, 1935; Kenley and Staubus, 1972, p. 93; Staubus, 1977, p. 119; Most, 1977, p. 217]. Kenley and Staubus [1972, p. 93] argued: "If a balance sheet is to be thought of as a useful statement of financial position it should give a future-oriented report of the current stocks of the wealth-related items it covers". This is assumed to result in information that is indicative of future cash flows and therefore useful in assessing short-term debt paying ability, solvency, and the capacity to take advantage of opportunities that may arise. However, the untenable consequence of this emphasis on the future is that users are deprived of reliable information about "current stocks of the wealth-related items".

Supporters of the future benefits notion argue that the value of any asset is the present value of its service potentials. "Con-

---

[50] See also Kam [1990, pp. 102-104] who quotes Sprague [1907]; Canning [1929a]; Paton and Littleton [1940]; Vatter [1947] and the AAA [1957].

[51] The definition was recommended in a monograph prepared by Miller and Islam [1988]. The definition of an asset adopted by the Australian Accounting Standards Review Board, in Release 100, also focuses on future benefits [1985, para. 38].

[52] The definition proposed in ED 42 [ASC, 1988, para. 14] was almost identical to that in the American *SFAC No.6* [FASB, 1985]. Solomons [1988, p. 20] and the IASC [1988, para. 49] proposed similar definitions. These are quoted with approval in ED 47 [ASC, 1990, Appendix, para.9].

ceptually, this is the sum of the future market prices of all streams of service to be derived, discounted by probability and interest factors to their present worth" [AAA, 1957, p. 4].[53] That assets may have different kinds of service potential was recognized in *SFAC No.3* [FASB, 1980]. "Money . . . is valuable for what it can buy", money's "command over resources" - its purchasing power - is the basis of its value and future economic benefits [FASB, 1980, para. 23]. "Assets other than cash benefit a business enterprise by being exchanged for cash or other goods or services, by being used to produce or otherwise increase the value of other assets, or by being used to settle liabilities" [FASB, 1980, para. 24]. Chambers suggested that a nonmonetary right or object may simultaneously have four kinds of service potential: "It may be able to produce a certain quantity of a class of products . . . It may serve as a liquidity reserve; it may be sold if any circumstance, such as a liquidity crisis or a change in output composition, justifies its sale. It may serve as part of a borrowing base . . . And it may serve as a hedge against inflation, to the extent that its resale price rises as the general level of prices rises" [Chambers, 1975, p. 100].

If an asset can simultaneously have four kinds of service potential no amount can be assigned which will represent the sum of those service potentials. The service to be derived from an asset in the future can only be imagined, it cannot be measured. Further, the benefits provided by a particular asset such as the shelter provided by a building, or the lifting power of a crane or hoist, cannot be disentangled from the benefits provided by a complex combination of assets that contribute to the production of a product or service. An asset may be made to yield quite different benefits depending on the way it is combined with other assets. This is the essence of the following quotations:

> The economic theorist . . . will tell us that a capital instrument, for example, a lathe in a machine shop, derives its value from the value of the lathe's future services and disservices - that the true valuation of the machine is determined by capitalizing its future money - valued service and disservice series. But unless the service of the lathe consists of bringing in a sale price either for the lathe itself or for a separately sold sched-

[53] For further examples of this view see Rorem [1928/1982, p. 287] and Staubus [1977, p. 140].

> ule of its technical services no series of future services independently valued in money can exist outside the imagination [Canning, 1929b, p. 5].

> Even if the selling price of the product is 'assured,' the portion of that selling price attributable to the particular input under examination - a raw material, an item of supplies, a machine, - cannot be determined in any objective way. This 'allocation problem', . . . is . . . a weakness in the reliability of the discounted future cash flow method' [Staubus, 1977, p. 168].[54]

Given the uncertainties and subjectivity associated with estimating and valuing future services, accountants made the convenient assumption that "the value of the asset is equal to its money cost, less a deduction to provide for that proportion of its power to render service which has been used up" [Kelley, 1935, p. 51]. "Assuming a free market, acquisition cost expressed in the bargained price of an asset is presumed to be a satisfactory quantification of future service expectations at the time of acquisition" [AAA, 1957, p. 4].[55] The AAA accepted the use of cost as a surrogate measure without critical comment:

> The value of an asset is the money equivalent of its service potentials. Conceptually this is the sum of the future market prices of all streams of service to be derived, discounted . . . to their present worths. However, this conception of value is an abstraction which yields but limited practical basis for quantification. Consequently, the measurement of assets is commonly made by other more feasible means . . . Non-monetary assets . . . are typically stated at acquisition cost or some derivative therof [AAA, 1957, p. 4].[56]

The notion of assets as future economic benefits is completely at odds with the recording of assets at historical cost. There is no evidence to suggest that cost represents or is equivalent to any expected physical or financial benefit. As Schuetze [1993, p. 69] argued, "the probable future economic benefit of a successful, direct-response advertising campaign may be many multiples of the cost. The future benefit of a discovery of mineral deposits

---

[54] See also Moonitz and Jordan [1963, p. 166] and Bottrill [1973, p. 146].

[55] See also Dicksee [1903/1976, p. 26]; Paton [1922/1973, pp. 26, 345]; Rorem [1928/1982, p. 313]; Saliers [1935, p. 390]; Paton [1948, p. 288]; Anton [1956, p. 119]; Sprouse and Moonitz [1962, p. 26] and Arthur Andersen [1974, p. 41].

[56] See also Edwards [1938, p. 81]; Sprouse and Moonitz [1962, p. 25]; Sorter and Horngren [1962]; Staubus [1977, p. 118].

generally bears no relationship whatsoever to the costs of finding the deposits. The future benefits of successful research and development also bear little or no relationship to the costs incurred". The probability that a past cost, or an unallocated (residual) cost will represent the expected future benefit is extremely remote. Decisions as to whether expenditures will result in a future benefit rely on individual judgment. Estimates of the extent of future benefits or services are personal, subjective and changeable over time. So too, the determination of the extent to which the cost or value of services have, or have not, been consumed is necessarily ad hoc and dependent on individual judgment.

While the emphasis on cost remains, an examination of practice confirms that cost has not been accepted as a universal surrogate for future economic benefits and highlights the ongoing difficulty of rationalizing the measurement of 'future benefits'. With the shift in ideas away from assets as real means for paying real debts to abstract notions of future benefits the valuations appearing under the asset heading in periodic statements became a diverse mixture of costs, unallocated costs, net realizable values and money equivalents. While valuation at cost was advocated for 'fixed assets', valuation at lower of cost or market became the generally accepted practice in the case of inventories.[57] There is evidence that deficiencies in these valuation criteria were acknowledged early in the move towards adopting the future benefits definition. Dickinson [1913/1975, p. 117] accepted this practice for both inventories and investments despite his contention that a balance sheet is required to show the true financial position as a going concern, and that the inventory at actual cost may represent more or less than the market value, and, therefore, overstate or understate the assets [p. 94]. Montgomery [1912/1976, p. 104] argued that placing "a higher value on an inventory item than the price at which the same thing can be duplicated in the open market . . . deceives the banker, creditor, and stockholder who have a right to believe that the values stated are real values as at the date of the balance sheet". However, he advocated that "when purchases have been made in a rising market and where the goods cannot be duplicated, except

[57] The inconsistency of the lower of cost and market rule has attracted strong criticism. See for example Paton and Stevenson [1916/1976, p. 104]; Paton [1922/1973, p. 453]; Hatfield [1927/1971, p. 251] and MacNeal [1939/1970, p. 43].

at a higher price . . . the conservative course is to carry the items at cost and thus do away with the objectionable practice of anticipating a profit" [p. 104].

Revaluation of non-current assets is permitted in some countries, such as the UK and Australia. The revaluation by companies of certain non-current assets, for example land and buildings, is common practice in Australia.[58] While *AAS 10 Accounting for the Revaluation of Non-Current Assets* [AARF, 1981] prescribes methods of accounting for the revaluation of non-current assets it does not prescribe how or when assets should be revalued except to require that non-current assets are to be revalued downwards when their carrying amount is greater than recoverable amount. There have, however, been moves by the Australian accounting profession towards the reporting of market prices for certain assets. In *AAS 25 Financial Reporting by Superannuation Plans* [AARF, 1990a, para. 39] it is argued that in the case of "defined benefit plans"[59] measuring assets at net market value as at the reporting date "provides more relevant information to users about the resources available to pay benefits than does the cost basis of measurement". *AAS 26 Financial Reporting of General Insurance Activities* [AARF, 1990b, para. 78] requires that "Investments that are integral to the reporting entity's general insurance activities shall be measured at net market values as at the reporting date". It is commented that in many cases the net market values of assets are far removed from their costs. "This can be of major concern in relation to assets held as investments which are integral to the reporting entity's general insurance activities because increments in the net market values of such assets may be relied upon by insurers to meet their liabilities for outstanding claims" [para. 88]. A wider current issue is the valuation of financial instruments at fair value. A Joint Working Group of national standard setters has proposed that virtually all financial instruments be measured at fair value; the UK ASB has issued a discussion paper on the subject; and the FASB in the USA has issued a draft standard on the valuation of derivatives. Thus the confusion in attempting to link future benefits and balance sheet valuation continues.

---

[58] See for example, Chambers [1957]; Standish [1972]; Gibson [1976]; Ryan et al [1980] and Ryan et al [1993].

[59] Defined in AAS 25 [para. 10] as "a superannuation plan where the amounts to be paid to one or more members . . . are specified, or are determined, at least in part, by reference to a formula based on their years of membership and/or salary levels".

CONCLUSIONS

The accounting notion of assets has undergone considerable change. Until the late 19th century, the words 'property' and 'assets' were used in the accounting literature in the sense of real things, existing things or rights, which were exchangeable for cash. In the latter part of the 19th century various 'costs' began to appear under the asset heading in balance sheets. Definitions of assets in terms of costs and unexpired costs began to appear in the literature, and in professional pronouncements. The idea that assets were a source of services appeared in the literature in the early 20th century. The economic notion of assets as service potential provided a rationale for all manner of items in the balance sheet which were not assets in the commonly understood sense, but which resulted from the carrying forward of costs to future periods.

The broader notion of assets as future economic benefits was argued to be more consistent with the needs of users for information about the future. Relevance and reliability are cited frequently as essential characteristics of accounting information if it is to be useful for decision-making. However, with the broadening of the notion of what constitutes an asset the boundary around what is or is not an asset has become hazy and ambiguous. Schuetze [1993, p. 67], former Chief Accountant of the Securities and Exchange Commission, described the FASB's definition as:

> . . . so complex, so open-ended, so all inclusive, and so vague that we cannot use it to solve problems. It does not require exchangeability, and therefore it allows all expenditures to be considered for inclusion as assets. The definition does not discriminate and help us to decide whether something or anything is an asset. That definition describes an empty box. A large empty box. A large empty box with sideboards. Almost everything or anything can be fit into it.

It is stated in SAC3 [AARF, 1990c] that reliability will be determined by the correspondence between what the information conveys to users and the underlying transactions and events that have occurred [para.16]. Future events are not representative of existing conditions; they are not representative of "transactions and events that have occurred". The benefits expected to be derived from assets are generally a result of combining those assets with other assets to produce a particular output. The future benefits attached to a particular input cannot be determined in an objective way.

If a definition is to have real world application it must be defined in real world terms. Expected future benefits do not have real world significance. As Schuetze [1993, pp. 69-70] argued:

> Abstract future benefits cannot be sold, pledged, or given away . . . I think that ordinary people who are not accountants think that when they see an asset in a balance sheet that the asset is something real, and that it represents value, that is, if it is not cash or a claim to cash, that it can be sold separately for cash. Accounting should result in financial statements that ordinary people will understand and therefore be able to use to make investment and credit decisions.

An accounting that is divorced from reality can only serve to confuse. This examination of the historical development of what constitutes an asset demonstrates that the ordinary person will have misplaced their trust if they retain simple everyday notions of what constitutes an asset.

The accounting profession continues to face significant challenges in providing relevant information to a wider range of users. In the past accountants have, for the most part, attempted to address and take account of wide-ranging changes in business' activity within conventional financial statements. The balance sheet was traditionally a representation of a present state of affairs. The balance sheet of today, due partly to the abandonment of the property notion of assets, is a complex mixture of the past, present and future. It does not have a clearly defined purpose and might be argued to have outlived its usefulness.

All parties who have an interest in a commercial enterprise are concerned about the ability of the entity to remain solvent. For this reason it is argued that companies should present a statement of 'separably exchangeable property' and legal obligations, at the reporting date. Consistent with this notion, 'property' should be stated at current market values where these exist. Where appropriate a range of values should be reported. This clearly indicates to the users of financial statements that the numbers in the accounting reports are not certain. Where an active market for property does not exist that property should be listed separately and clearly identified as valued at 'estimated' exchange value. Separate schedules could provide details of shareholders equity, contingent liabilities, and additional relevant information about items such as leases, specialized equipment, goodwill and other intangibles, which may add value to a firm in the future.

"While financial statements should be presented in a manner that will assist as much as possible in assessing the future and its risks, the role of accounting and the resulting financial statements is not to predict or to interpret the future" [Arthur Andersen, 1974, p. 15]. The current emphasis on users' needs for information about future benefits, results in users' needs for reliable information about present means being ignored. Accounting must focus on providing interested parties with information which will "assist as much as possible in assessing the future and its risks".

REFERENCES

Accounting Principles Board (1964), *APB Opinion No. 5: Reporting of Leases in Financial Statements of Lessee* (New York: AICPA).

Accounting Principles Board (1970), *APB Statement No. 4: Basic Concepts and Accounting Principles Underlying Financial Statements of Business Enterprises* (New York: AICPA).

Accounting Standards Board (1999), *Statement of Principles for Financial Reporting* (London: Institute of Chartered Accountants in England and Wales).

Accounting Standards Committee (1988), *Exposure Draft 42: Accounting for Special Purpose Transactions, Current Cost Accounting* (London: ASC).

Accounting Standards Committee (1990), *Exposure Draft 47: Accounting for Goodwill* (London: ASC).

Accounting Standards Review Board (1985), *Release 100: Criteria for the Evaluation of Standards* (Melbourne: ASRB).

American Accounting Association (1936), "Tentative Statement of Accounting Principles Affecting Corporate Reports," *Accounting Review*, Vol. 11, No. 2: 187-191.

American Accounting Association (1941), *Accounting Principles Underlying Corporate Financial Statements* (Columbus, Ohio: AAA).

American Accounting Association (1948), *Accounting Concepts and Standards Underlying Corporate Financial Statements 1948 Revision* (Columbus, Ohio: AAA).

American Accounting Association (1957), "Accounting and Reporting Standards for Corporate Financial Statements - 1957 Revision," *Accounting Review*, Vol. 32, No. 4: 536-546.

American Institute of Accountants (1931), *Committee on Terminology, Accounting Terminology* (New York: AIA).

American Institute of Accountants (1934), *Audits of Corporate Accounts - Correspondence between the Special Committee on Cooperation with Stock Exchanges and the Committee on Stock List of the New York Stock Exchange* (1932-1934) (New York: AIA).

American Institute of Accountants (1940), *Accounting Research Bulletin No. 7, Report of the Committee on Terminology* (New York: AIA).

American Institute of Accountants (1941), *Accounting Research Bulletin No. 9, Report of the Committee on Terminology* (New York: AIA).

American Institute of Certified Public Accountants (1949), *Committee on Accounting Procedure, Bulletin No. 38* (New York: AICPA).
American Institute of Certified Public Accountants (1953a), *Committee on Terminology, Review and Resume, Accounting Terminology Bulletin No. 1* (New York: AICPA).
American Institute of Certified Public Accountants (1953b), *Committee on Terminology, Review and Resume, Accounting Research Bulletin No. 43* (New York: AICPA).
Anthony, R.N. (1983), *Tell it Like it Was: A Conceptual Framework for Financial Reporting* (Homewood, Illinois: Richard. D.Irwin).
Anton, H.R. (1956), "Depreciation, Cost Allocation and Investment Decisions". Reprinted in Brief, R. (ed.) (1984), *Depreciation and Capital Maintenance* (New York and London: Garland Publishing, Inc.): 31-48
Arthur Andersen & Co. (1974), *Accounting Standards for Business Enterprises Throughout the World* (Chicago: Arthur Andersen & Co).
Arthur Andersen & Co. (1984), *Objectives of Financial Statements for Business Enterprises* (Chicago: Arthur Andersen & Co).
Australian Accounting Research Foundation (1981), *Statement of Accounting Standards AAS 10 Accounting for the Revaluation of Non-Current Assets* (Melbourne: AARF).
Australian Accounting Research Foundation (1990a), *Statement of Accounting Standards AAS 25 Financial Reporting by Superannuation Plans* (Melbourne: AARF).
Australian Accounting Research Foundation (1990b), *Statement of Accounting Standards AAS 26 Financial Reporting of General Insurance Activities* (Melbourne: AARF).
Australian Accounting Research Foundation (1990c), *Statement of Accounting Concepts SAC3 Qualitative Characteristics of Financial Information* (Melbourne: AARF).
Australian Accounting Research Foundation (1992), *Statements of Accounting Concepts SAC4 Definition and Recognition of Assets* (Melbourne: AARF).
Backer, M. (1966), *Handbook of Modern Accounting Theory* (Englewood Cliffs, New Jersey: Prentice Hall, Inc).
Baxter, W. and Davidson, S. (1962), *Studies in Accounting Theory* (London: Sweet and Maxwell Ltd).
Bennett, J. (1842), The *American System of Practical Book-Keeping* (New York: Arno Press), 1976, reprint.
Bogle, J.D.S. (1889), "The Writing off of Depreciation on the Wasting Assets of a Joint Stock Co." Reprinted in Brief, R.P. (1976), *The Late Nineteenth Century Debate over Depreciation, Capital and Income* (New York: Arno Press): 691-696.
Bohm-Bawerk, E.V. (1891), *The Positive Theory of Capital* (London and New York: MacMillan and Co.).
Bottrill, G.W. (1973), "Accounting for Changing Values," *The Australian Accountant*, April: 142-148.
Brief, R.P. (1966), "The Origin and Evolution of Nineteenth Century Asset Accounting." Reprinted in Brief, R.P. (ed.) (1993), *The Continuing Debate over Depreciation, Capital and Income* (New York and London: Garland): 57-79.
Bulletin des Lois, September 10 - September 25 (1807) from Howard, S.E (1932), "Public Rules for Private Accounting in France, 1673 and 1807," *Accounting Review*, Vol. 7, No. 2: 91-102.
Canning, J.B. (1929a), *The Economics of Accountancy: A Critical Analysis of Accounting Theory* (New York: Ronald Press).

Canning, J.B. (1929b), "Some Divergences of Accounting Theory from Economic Theory," *Accounting Review*, Vol. 4, No.1: 1-8.

Carter, F.W. (1890), *Practical Book-keeping* (London: Bell & Bradfute).

Carter, E.M. (1910), "What is an Annual Balance Sheet?," *The Accountant*, 22 October: 560-566.

Carter, R.N. (1923), *Advanced Accounts* (London: Pitman).

Cayley, A. (1894), "The Principles of Book-keeping by Double Entry". Reprinted in Brief, R. (ed.) (1982), *Four Classics on the Theory of Double-Entry Bookkeeping* (New York and London: Garland Publishing Inc).

Chambers, R.J. (1957), "The Implications of Asset Revaluations and Bonus Share Issues," *The Australian Accountant*, November: 507-531.

Chambers, R.J. (1966) *Accounting, Evaluation and Economic Behavior* (Englewood Cliffs, NJ: Prentice-Hall Inc.).

Chambers, R.J. (1975), "Profit Measurement, Capital Maintenance and Service Potential: A Review Article," *Abacus*, June: 97-104.

Chambers, R.J. (1994), "Historical Cost - Tale of a False Creed," *Accounting Horizons*, Vol. 8, No.1: 76-89.

Chambers, R.J. (1995), *An Accounting Thesaurus: 500 years of Accounting* (Tarrytown, New York: Pergamon).

Chambers, R.J., and Wolnizer, P.W. (1991) "A True and Fair View of Position and Results: The Historical Background," *Accounting, Business and Financial History*, Vol.1, No.2: 197-213.

Chatfield, M. (1974), *A History of Accounting Thought* (Hinsdale, Illinois: The Dryden Press).

Chatfield, M. and Vangermeersch, R. (eds.) (1996), *The History of Accounting: an International Encyclopedia* (New York: Garland).

Cole, W.M. (1908), *Accounts: Their Construction and Interpretation* (New York: Arno Press), 1976, reprint.

Concise Dictionary of Law (1983) (New York: Oxford University Press)

Cory, I. (1839), *A Practical Treatise on Accounts* (London: William Pickering).

Couchman, C.B. (1924), *The Balance Sheet: Its Preparation, Content and Interpretation* (New York & London: Garland Publishing, Inc), 1982, reprint.

Crittenden, S.W. (1860), *An Inductive and Practical Treatise on Bookkeeping* (Philadelphia: E.C. & J. Biddle & Co).

Cronhelm, F.W. (1818), *Double Entry by Single* (New York: Arno Press), 1978, reprint.

Cropper, L.C. (1927), *Book-keeping and Accounts* (London: MacDonald Evans).

Dawson, S.S. (1900), "Balance Sheets," *The Accountant*, 3 February: 131-138.

de Morgan, A. (1853), "On the Main Principle of Book-Keeping, The Elements of Arithmetic". Reprinted in Brief, R. (ed) (1982), *Four Classics on the Theory of Double-Entry Bookkeeping* (New York and London: Garland Publishing Inc).

Dickinson, A. L. (1913), *Accounting Practice and Procedure* (Houston, Texas: Scholars Book Co.), 1975, reprint.

Dicksee, L.R. (1892), *Auditing: A Practical Manual for Auditors* (New York: Arno Press), 1976, reprint.

Dicksee, L.R. (1897), "Goodwill and its Treatment in Accounts," *The Accountant*, January 9: 40-48.

Dicksee, L.R. (1903), *Advanced Accounting* (New York: Arno Press), 1976, reprint.

Dicksee, L.R. (1910), *Auditing: A Practical Manual for Auditors* (London: Gee and Co. Ltd).

Dilworth, T. (1794), *The Young Book-keeper's Assistant: shewing him in the most plain and easy manner, the Italian was of Stating Debtor and Creditor*. Reprinted in Sheldahl, T.K. (1989) *Accounting Literature in the United States before Mitchell and Jones* (1796) (New York and London: Garland Publishing, Inc): 293-460.

Dixon, R.L., Hepworth, S.R., and Paton, W.A. Jnr. (1966), *Essentials of Accounting* (New York: The Macmillan Co).

Dodson, J. (1750), *The Accountant, or, the Method of Bookkeeping, Deduced from Clear Principles* (New York and London: Garland Publishing, Inc), 1984, reprint.

Dohr, J.L. (1941), "What is an Asset?," *Journal of Accountancy*, Vol. 71, No. 3: 213-218.

Dyer, S. (1897), *A Common Sense Method of Double Entry Bookkeeping* (London: G. Philip & Son).

Editorial (1880), *The Accountant*, 10 April: 5.

Editorial (1936) "Is the Balance Sheet an Anachronism?," *The Australian Accountant*, Vol. 1, No.2, 25 March: 74-77.

Editorial (1946), "The Status of the Balance Sheet," *The Accountant*, 7 December: 293-294.

Edwards, R.S. (1938), "The Nature and Measurement of Income – II," *The Accountant*, 9 July: 45-47.

Edwards, E.O., Bell, P.W. and Johnson, L.T. (1979), *Accounting for Economic Events* (Houston, Texas: Scholars Book Co.).

Edwards, J.R and Webb, K.M. (1982), "The Influence of Company Law on Corporate Reporting Procedures, 1865-1929: An Exemplification," *Business History*, Vol. 24, No. 3: 259-79.

Engleman, K. (1954), "In Search of an Accounting Philosophy," *Accounting Review*, Vol. 29, No. 3: 383-390.

Esquerre, P.J. (1927), *Accounting* (New York: Ronald Press Co).

Fieldhouse, A. and Fieldhouse, E.E. (1930), *The Students' Elementary Commercial Book-keeping* (London: Simpkin Marshall, Ltd).

Financial Accounting Standards Board (1976), *Scope and Implications of the Conceptual Framework Project, Discussion Memorandum Conceptual Framework for Financial Accounting and Reporting: Elements of Financial Statements and Their Measurement* (Connecticut: FASB).

Financial Accounting Standards Board (1980), *Statement of Financial Accounting Concepts No. 3: Elements of Financial Statements of Business Enterprises* (Connecticut: FASB).

Financial Accounting Standards Board (1985), *Statement of Financial Accounting Concepts No. 6: Elements of Financial Statements* (Connecticut: FASB).

Finney, H.A. and Miller, H.E. (1963), *Principles of Accounting* (New Jersey, Englewood Cliffs: Prentice Hall).

Fisher, I. (1906), *The Nature of Capital and Income* (New York: Augustus M. Kelley), 1965, reprint.

Fitzgerald, A.A. (1938), "Balance Sheet Problems," *The Australian Accountant*, 25 September: 81-87.

Fitzgerald, A.A. (ed.) (1963), *Fitzgerald's Accounting* (Sydney: Butterworth & Co.(Australia) Ltd).

Foster, B.F. (1837), *A Concise Treatise on Commercial Book-keeping* (Boston: Perkins.

Foster, B.F. (1849), *Double Entry Elucidated* (London: C.H. Law).

Foster, B.F. (1852), *The Origin and Progress of Book-keeping* (New York: Arno Press), 1976, reprint.

Foster, B.F. (1863), *Double Entry Elucidated* (London: C. H. Law).
Fulton, L.S. and Eastman, G.W. (1872), *A Practical System of Book-keeping by Single and Double Entry Containing Forms of Books and Practical Exercises, Adapted to the use of the Farmer* (Toronto: James Campbell & Son).
Garcke, E. and Fells, J.M. (1887), *Factory Accounts: Their Principles and Practice: A Handbook for Accountants and Manufacturers* (New York: Arno Press), 1976, reprint.
Gibson, R.W. (1976), The Uniformity Problem and the State of Australian Company Financial Reporting, unpublished PhD thesis (University of Cincinnati).
Gilman, S. (1939), *Accounting Concepts of Profit* (New York: Ronald Press Co).
Goldberg, L. (1948), *A Philosophy of Accounting* (Melbourne: Accountants Publishing Company Ltd).
Goldberg, L. and Hill, V.R. (1968), *The Elements of Accounting* (London & New York: Melbourne University Press).
Gordon, W. (1765), *The Universal Accountant and Complete Merchant, Volume II* (New York and London: Garland Publishing, Inc.), 1986, reprint.
Guthrie, E. (1883), "Depreciation and Sinking Funds," *The Accountant*, 21 April: 6-10.
Halsbury's Laws of England (1981) (London: Butterworths).
Hamilton, R. (1788), *An Introduction to Merchandise Parts IV and V*. (New York: Garland Publishing, Inc.), 1982, reprint.
Harris, W. (1883), "Depreciation and Sinking Funds," *The Accountant*, 1 September, No. 456: 9-10.
Hatfield, H. R. (1909), *Accounting: Its Principles and Some of Its Problems* (New York and London: D. Appleton).
Hatfield, H. R. (1927), *Accounting, its Principles and Problems* (Lawrence, Kansas: Scholars Book Co), 1971, reprint.
Hayes, R. (1741), *The Gentleman's Complete Bookkeeper* (London).
Henderson, S. and Peirson, G. (1984), *Issues in Financial Accounting* (Melbourne: Longman Cheshire).
Hendrikson, E.S. (1977), *Accounting Theory* (Homewood, Illinois: Richard D. Irwin, Inc.).
Hylton, D. (1965), "On Matching Revenue and Expense," *Accounting Review*, Vol. 40, No. 4: 824-828.
Inglis, W. (1881), *Book-keeping by Single and Double Entry* (London: W. & R. Chambers).
International Accounting Standards Committee (1988), *Proposed Statement: Framework for the Preparation and Presentation of Financial Statements* (London: IASC).
Jackson, J.G.C. (1956), "The History and Methods of Exposition of Double Entry Book-keeping in England," in Littleton, A.C., and Yamey, B.S. (eds) *Studies in the History of Accounting* (London: Sweet and Maxwell): 288-312.
Jones, E.T. (1796), *Jones's English System of Book-Keeping, by Single or Double Entry* (New York: Arno Press), 1978, reprint.
Jowitt's Dictionary of English Law (1977) (London: Sweet and Maxwell Ltd).
Kam, V. (1990), *Accounting Theory* (New York: John Wiley & Sons).
Kelley, A.C. (1935), "Value as an Accounting Concept," *Journal of Accountancy*, Vol. 59, No. 7: 50-52.
Kelley, A.C. (1941), "Terminology of the Balance Sheet," *Journal of Accountancy*, Vol. 72, No. 6: 510-513.
Kelly, P. (1801), *Elements of Book-keeping* (London: J. Whiting).

Kenley, W.J., and Staubus, G.J. (1972), *Objectives and Concepts of Financial Statements, Accounting Research Study No. 3* (Melbourne: Australian Accounting Research Foundation).

Kester, R.B. (1922), *Accounting Theory and Practice, Vol. 1* (New York: Ronald Press Co).

Kester, R.B. (1930), *Accounting Theory and Practice, Vol. 1* (New York: Ronald Press Co).

Keynes, J.M. (1917), *The Scope and Method of Political Economy* (London: MacMillan and Co., Ltd.).

Kollaritsch, F.P. (1960), "Can the Balance Sheet Reveal Financial Position?," *Accounting Review*, Vol. 35, No. 3: 482-489.

Ladelle, O.G. (1890), "The Calculation of Depreciation," *The Accountant*, 29 November: 659-660.

Lall, R.M. (1968), "An Enquiry Into the Nature of Assets". Reprinted in C.J. Gibson, G.G. Meredith and R. Peterson (eds) (1972), *Accounting Concepts: Readings* (Australia: Cassel): 241-245.

Lamb, M. (2002), "Defining 'Profits' for British Income Tax Purposes: A Contextual Study of the Depreciation Cases, 1875-1897," *Accounting Historians Journal*, Vol. 29, No. 1: 105-172.

Leake, D. (1912), *Depreciation and Wasting Assets* (New York: Arno Press), 1976, reprint.

Leake, D. (1929), *Balance Sheet Values* (London: Gee & Co.).

Lewis, J.S. (1896), *The Commercial Organisation of Factories* (London: E & F.N. Spon).

Lisle, G. (1900), *Accounting in Theory and Practice* (New York: Arno Press), 1976, reprint.

Littleton, A.C. (1933), *Accounting Evolution to 1900* (New York: American Institute Publishing Co).

Littleton, A.C. (1946), "The Accounting Exchange," *Accounting Review*, Vol. 21, No. 3: 337-44.

Littleton, A.C. (1953), *Structure of Accounting Theory* [Urbana, Illinois] (American Accounting Association).

MacNeal, K. (1939), *Truth in Accounting* (Lawrence, Kansas: Scholars Book Co.), 1970, reprint.

Mair, J. (1741), *Book-keeping Moderniz'd* (Edinburgh).

Mair, J. (1786), *Book-keeping Moderniz'd* (Edinburgh: Bell and Bradfute).

Mair, J.(1793), *Book-keeping Moderniz'd* (New York: Arno Press), 1978, reprint.

Malcolm, A. (1731), *A Treatise of Bookkeeping, or Merchants Accounts; in the Italian Method of Debtor and Creditor*. . . . (New York: Garland Publishing, Inc.), 1986, reprint.

Marshall, A. (1947), *Principles of Economics* (London: MacMillan & Co.).

Mason, P. (1933) "Illustrations of Early Treatment of Depreciation". Reprinted (1978) in Garner, S. and Hughes, M. (eds) *Readings on Accounting Development* (New York: Arno Press): 209-218.

Mason, P. (1937), *Principles of Public Utility Depreciation* (Chicago: American Accounting Association).

Matheson, E. (1893), *The Depreciation of Factories, Mines and Industrial Undertakings* (New York: Arno Press), 1976, reprint.

Mautz, R.K. (1970), *Basic Concepts of Accounting,* in Davidson S. (ed) *Handbook of Modern Accounting* (New York: McGraw-Hill Book Co.): 1-44.

May, G.O. (1943), *Financial Accounting: A Distillation of Experience* (Kansas: Scholars Book Co.), 1972, reprint.

Mayhew, I. (1884), *The Eclectic Complete Book-keeping* (New York: American Book Company).
Mill, J.S. (1909), *Principles of Political Economy* (New Jersey: Augustus M Kelley), 1976, reprint.
Miller, M.C. and Islam, M.A. (1988), *The Definition and Recognition of Assets* (Melbourne: Australian Accounting Research Foundation).
Montgomerie, A. (1858), *Book-keeping for Every Business: A Manual on the Principles of Book-keeping by Single and Double Entry* (Glasgow: George Watson).
Montgomery, R.H. (1912), *Auditing Theory and Practice* (New York: Arno Press), 1976, reprint.
Moonitz, M. and Jordan, L.H. (1963), *Accounting, An Analysis of its Problems, Vol. 1* (New York: Rinehart & Winston).
More, F. (1891), "Goodwill," *The Accountant*, 11 April: 282-287.
Morrison, C. (1834), *A Complete System of Practical Book-keeping* (Edinburgh: Stirling and Kenney, London: G B Whittaker and Thomas Tegg).
Most, K. (1977), *Accounting Theory* (Columbus, Ohio: Grid Inc).
Mozley & Whiteley's Law Dictionary (1977) (London: Butterworths).
Murray, A. (1885), "Erroneous and Objectional Entries in Balance Sheets," *The Accountant*, 7 March: 12-14.
Myers, J.H. (1962), *Accounting Research Study No. 4: Reporting of Leases in Financial* Statements (New York: AICPA).
Nelson, J. (1871), *Book-keeping by Double Entry* (Edinburgh and Glasgow: John Menzies & Co).
Nelson, E.G. (1935), "That Balance-sheet Approach," *Accounting Review*, Vol. 10, No. 4: 313-317.
Nelson, E.G. (1947), "A Brief Study of Balance Sheets," *Accounting Review*, Vol. 22, No. 4: 341-352.
North, R. (1714), *The Gentleman Accomptant* (New York and London: Garland Publishing, Inc.), 1986, reprint.
Norton, G. (1894), *Textile Manufacturers' Book-keeping* (New York: Arno Press), 1976, reprint.
Osborn's Concise Law Dictionary (1983) (London: Sweet & Maxwell, Ltd.).
Osborn's Concise Law Dictionary (1993) (London: Sweet & Maxwell, Ltd.).
Oxford Companion to Law (1980) (Oxford: Clarendon Press).
Oxford English Dictionary (1989) (Oxford: Clarendon Press).
Parkinson, O.W. (1931), "The Analysis of a Balance Sheet," *The Accountant in Australia*, November: 545-549.
Paton, W.A. (1922), *Accounting Theory* (Lawrence, Kansas: Scholars Book Co), 1973, reprint.
Paton, W.A. (1948), "Accounting Procedures and Private Enterprise," *Journal of Accountancy*, April: Vol. 85, No, 4:278-291.
Paton, W.A and Littleton, A.C. (1940), *An Introduction to Corporate Accounting Standards* [Columbus, Ohio] (American Accounting Association), 1970, reprint.
Paton, W.A., and Paton, W.A. Jnr. (1971), *Assets: Accounting and Administration* (Warren, Michigan: Roberts and Roche Inc.).
Paton, W.A., and Stevenson, R.A. (1916), *Principles of Accounting* (New York: Arno Press), 1976, reprint.
Pixley, F.W. (1881), *Auditors: Their Duties and Responsibilities* (London: Effingham Wilson).

Pollins, H. (1956), "Aspects of Railway Accounting before 1868," in Littleton A.C. and Yamey B.S. (eds) *Studies in the History of Accounting* (London: Sweet and Maxwell Ltd.): 332-355.

Postlethwayt, M. Esq. (1751), *The Universal Dictionary of Trade and Commerce translated from the French of the Celebrated Monsieur Savary*. Reprinted in Sheldahl, T.K. (1996) *Eighteenth-Century Book-keeping: Twelve Encyclopedia Articles* (New York and London: Garland Publishing, Inc): 68-96.

Previts, G.J. and Merino, B.D. (1998), *A History of Accountancy in the United States* (Columbus, Ohio: Ohio State University Press).

Ramsay, P. (1956), "Some Tudor Merchants' Accounts," in Littleton, A. C., and Yamey, B.S. (eds) *Studies in the History of Accounting* (London: Sweet and Maxwell Ltd): 185-201.

Rolt, R. (1761), *A New Dictionary of Trade and Commerce*. Reprinted in Sheldahl, T.K. (1989) *Accounting Literature in the United States before Mitchell and Jones* (1796) (New York and London: Garland Publishing, Inc.): 100-104.

Rorem, C. R. (1928), *Accounting Method* (New York and London: Garland Publishing, Inc.), 1982, reprint.

Roth, L. (1929), "Accounting for Goodwill," *Journal of Accountancy*, Vol. 48, No.2: 102-104.

Rowland, S.W. and Magee, B. (1934), *Accounting* (London: Gee and Co. Ltd).

Ryan, J.B., Heazlewood, C.T., and Andrew, B.H. (1980), *Australian Company Financial Reporting: 1980* (Melbourne: Australian Accounting Research Foundation).

Ryan, J.B., Heazlewood, C.T., and Andrew, B.H. (1993), *Australian Company Financial Reporting: 1993* (Melbourne: Australian Accounting Research Foundation).

Saliers, E.A. (1935), *Fundamentals of Accounting* (Chicago: Business Publications Inc.).

Samuelson, R.A. (1996), "The Concept of Assets in Accounting Theory," *Accounting Horizons*, Vol. 10, No. 3: 147-157.

Sanders, T.H., Hatfield, H.R. and Moore, U. (1938), *A Statement of Accounting Principles*. Reprinted (1968) (New York: American Accounting Association).

Schuetze, W.P. (1993), "What is an Asset?," *Accounting Horizons*, Vol. 7, No.3: 66-70.

Seligman, E.R. (1907), *Principles of Economics* (New York: Longmans, Green & Co.).

Smails, R.G.H. (1927), "Some Aspects of Depreciation," *Accounting Review*, Vol. 2, No. 2: 101-110.

Smith, A. (1893), *The Wealth of Nations* (Manchester & New York: George Routledge & Sons Ltd.).

Smith, S.A. (1931), "Valuation of the Assets of Public Companies," *The Accountant*, 17 October: 517-525.

Solomons, D. (1988), *Guidelines for Financial Reporting Standards* (London: Institute of Chartered Accountants in England and Wales).

Sorter, G.H. and Ingberman, M.J. (1987), "The Implicit Criteria for the Recognition Quantification and Reporting of Accounting Events," *Journal of Accounting, Auditing and Finance*, Vol. 2, No. 2: 99-114.

Sorter, G.H, and Horngren, C.T. (1962), "Asset Recognition and Economic Attributes - The Relevant Costing Approach". Reprinted in Davidson, S., Green, D., Horngren, C.T., and Sorter, G.H. (1964), *An Income Approach to Accounting Theory: Readings and Questions* (Englewood Cliffs, New Jersey: Prentice Hall, Inc.): 193-205.

Spicer, E. and Pegler, E. (1910), *Book-keeping and Accounts* (London: H. Foulks Lynch & Co.).

Sprague, C.E. (1880), "The Algebra of Accounts". Reprinted in Brief, R.P. (ed.) (1989), *The Book-keeper and the American Counting Room* (New York: Garland Publishing, Inc.).

Sprague, C.E. (1901), *The General Principles of the Science of Accounts*. Reprinted (1984) (New York and London: Garland Publishing, Inc.).

Sprague, C.E. (1904), *The Accountancy of Investment*. Reprinted (1984) (New York and London: Garland Publishing, Inc.).

Sprague, C.E. (1907), *The Philosophy of Accounts*. Reissued (1972) (Lawrence, Kansas: Scholars Book Co.).

Sprouse, R.T. (1970), "The Balance Sheet- Embodiment of the Most Fundamental Elements of Accounting Theory," in Stone, W. (1971), *Foundations of Accounting Theory* (Gainesville: University of Florida Press): 90-104.

Sprouse, R.T. and Moonitz, M. (1962), *A Tentative Set of Broad Accounting Principles for Business Enterprises, Accounting Research Study No. 3* (New York: American Institute of Certified Public Accountants).

Standish, E.M. (1972), *Australian Financial Reporting, Accounting Research Study No. 2* (Melbourne: Accountancy Research Foundation).

Staubus, G.J. (1961), *A Theory of Accounting to Investors*. Reissued (1971) (Houston, Texas: Scholars Book Co).

Staubus, G.J. (1977), *Making Accounting Decisions* (Houston, Texas: Scholars Book Co.).

Sterling, R.R. (1979), *Toward a Science of Accounting* (Houston, Texas: Scholars Book Co.).

Stroud's Judicial Dictionary of Words and Phrases (1986) (London: Sweet and Maxwell).

Study Group at the University of Illinois (1964), *A Statement of Basic Accounting Postulates and Principles* (Urbana: Center for International Education and Research in Accounting).

Thompson, W. (1777), *The Accomptant's Oracle: or, Key to Science. Being a Complete Practical System of Bookkeeping , Volume II*. (New York: Garland), 1984, reprint.

Thornton, J. (1895), *A Manual of Book-keeping* (London and New York: MacMillan & Co.).

Tovey, P. (1946), *Balance Sheets: How to Read and Understand Them* (London: Sir Isaac Pitman & Sons, Ltd.).

Turner, E.H. (1894), "The Depreciation of Machinery and Plant". Reprinted in Brief, R. (1976), *The Late Nineteenth Century Debate over Depreciation, Capital and Income* (New York: Arno Press): 546-552.

Turner, Rev. R. (1794), *A New Introduction to Bookkeeping after the Italian Method*. Reprinted in Sheldahl, T.K. (1989), *Accounting Literature in the United States before Mitchell and Jones (1796)* (New York and London: Garland Publishing, Inc.): 461-510.

Vance, L.L. (1933) "The Authority of History in Inventory Valuation". Reprinted (1978) in Garner, S. and Hughes, M. (eds.) *Readings on Accounting Development* (New York: Arno Press): 219-227.

Vatter, W.J. (1947), "The Fund Theory of Accounting and its Implications for Financial Reports". Reprinted in Davidson, S., Green, D. Jr., Horngren, C.T. and Sorter, G.H. (1964), *An Income Approach to Accounting Theory: Readings and Questions* (Englewood Cliffs, New Jersey: Prentice Hall, Inc.): 6-20.

Weigmann, W. (1932), "Legal and Economic Concepts of the Balance Sheet in Germany," *Accounting Review*, Vol. 7, No. 2: 103-105.

Whitney, W.H. (1941), "Interpreting the Results Thereof," *Journal of Accountancy*, Vol. 72, No. 5: 426-436.

Wicks, J.H. (1797), *Book-keeping Reformed; or the Method by Double Entry so Simplified, Elucidated and Improved, as to Render the Practice Easy, Expeditious and Accurate* (London: G.Boult).

Yamey, B.S. (1940), "The Functional Development of Double Entry Bookkeeping," *The Accountant*, 2 November: 333-342.

Accounting Historians Journal
Vol. 30, No. 2
December 2003

INTERFACES

Margaret Lamb
UNIVERSITY OF WARWICK

QUESTIONS OF TAXATION FRAMED AS ACCOUNTING HISTORICAL RESEARCH: A SUGGESTED APPROACH

Abstract: *This review essay suggests considerations to be addressed in research design if research on a taxation subject is to succeed as rigorous accounting research, well grounded in relevant historical scholarship. Tax research must focus on substantive subjects that are recognizable as "accounting"; the methods, approach, and exposition must be "historical" to an acceptable standard; and the research must engage with relevant portions of the existing body of accounting historical scholarship. Further, scholarly engagement with the best researchers and liveliest debates that the disciplines of accounting and history have to offer will enrich the treatment of tax in accounting history.*

INTRODUCTION

Taxation is a rich research field for accounting historians to explore. There are many problems of tax measurement, reporting, and analysis that are central to the concerns of accounting historians who wish to understand the interrelationships between taxation and accounting institutions and practice. Taxation is, however, a field in which the wider context of public policy, law, and public administration presses insistently on the development of measurement and reporting principles and techniques, and their application and interpretation in practice. This review essay suggests considerations that must be addressed in

Acknowledgments: I am grateful to colleagues who have engaged in ongoing discussion of the nature of accounting research, and in particular taxation research done in an accounting context: Judith Freedman; Keith Hoskin, Simon James; Andrew Lymer; and the late Tony Steele. Responsibility for errors in or omissions from the paper remains, of course, with me. I acknowledge a Warwick Business School research grant that contributed support to this research.

Submitted September 2003
Revised September 2003
Accepted October 2003

research design if the resulting research on a taxation subject is to succeed as rigorous accounting research, well grounded in relevant historical scholarship. To use an analogy, this is an essay about where in general and how to aim the research "camera"; it does not suggest how to shoot the photo, develop, analyze, or present it to the discerning public.

I will argue that the accounting historian who wishes to tackle a taxation subject has two primary obligations when framing the particular research questions to be explored. First, the contribution to accounting history must be clear. Taxation is a broad and complex subject. It may be approached in many ways, from the political philosophy of its application to its economic and social effects. These are important frames of reference for examining tax issues, but as accounting historians we wish to know what is it about the research that extends our historical understanding of accounting theory, practices, or institutions? Second, the links to a more general, but relevant, history of taxation must be clear. How does the research draw from and/or contribute to a wider tax history? Tax research done in an accounting history context, just as much as accounting history more generally defined, represents a specialist angle of analysis within wider fields of historical scholarship. The accounting historian, just as much as any historian, has an obligation to engage with the rigorous and rich analysis of leading historians in the wider fields. This is an important part of tracing the gap in the historical literature that the specific research will fill or begin to address.

In this essay, I will consider how influential monographs of 19th and 20th century taxation history written by Anglo/American historians might assist accounting historians to frame relevant tax research questions. Three influential works of US economic, legal, and political history will be considered (Elliot Brownlee's *Federal Taxation in America* [1996]; Robert Stanley's *Dimensions of Law in the Service of Order* [1993]; and Julian E. Zelizer's *Taxing America* [1998]). Two important works on British taxation history by the Cambridge economic and social historian Martin Daunton will be reviewed: *Trusting Leviathan* [2001] and *Just Taxes* [2002]. In each case, the essay will outline the major research questions and debates that these important works address in their general historical fields. Then, it will consider the ways in which accounting historians might use these works to assist in the exercise of framing their own research questions.

OBLIGATION 1: CONTRIBUTION TO ACCOUNTING HISTORY

A tax researcher writing in an accounting history context faces a high threshold to acceptance that a piece of work makes a contribution to accounting history. Success is associated with making the fundamentals of one's working assumptions and approach to research clear. First, there is a need to make clear what the "accounting" is that the research explores. Next, there is an obligation to adopt an "historical" method of research and exposition. Finally, there is a requirement to ensure that "accounting" plus "history" contributes to "accounting history". When a new piece of research extends or complements, as well as critically interacts with, the existing body of related accounting historical research, then we can say that the tripartite threshold of acceptance to accounting history has been met.

Accounting: As a generalization, we can say that accounting involves processes of calculating, reporting, and evaluating financial transactions, performance, and events. Accounting processes involve techniques, apply principles, and attract theories of improvement and explanation. Accounting research focuses on these processes, their outputs, and the institutions created around them. Yet, it is my experience that the seemingly simple question – "What is accounting?" – elicits two sequential responses. The first is a moment of hesitation and the second is a definition tailored to a particular context. The hesitation seems to me to reflect awareness of the many ways of defining accounting, contingent on context, and the process of personal choice. The range of definitions reflects the broad and changing nature of the field. It also emphasizes the ontological and epistemological complexity that characterizes the accounting academic field.[1]

Accounting historians in general and those who write about taxation in particular make choices about how they define "accounting". Sometimes those choices are implicit and taken for granted. I argue that the accounting historical scholarship will tend to be richer when the definition in a particular piece of

[1] Much has been written on the ontological problem of accounting research [see Chua, 1986 for a start] and the epistemological issues [Oldroyd, 1999 in this journal represents a good place to begin]. Some of my own previous writing [Lamb, 1999; Lamb and Lymer, 1999] has presented an analysis of the challenges of diversity of possible approaches with reference to tax research in the accounting context.

work is explicit. Clarity of approach will support – through the researcher's self-awareness and the reader's sense-making processes – the critical interaction between new research and existing research.

History: In many ways, we approach the challenge of being historical in much the same way as we approach the challenge of researching accounting. We generally accept that history involves researching and writing about things of the past, so that is what we do. However, the concept and practice of "history" involves ontological and epistemological complexity too. To ignore this complexity altogether cannot be an acceptable approach to historical research. The researcher must make choices. If these are explicitly understood, the research can make constructive connections to appropriate advice and models for conducting historical research that already exist in the body of historical scholarship.[2] If these are explicitly communicated, then once again the reader's ability to absorb, position, and respond to the new work will be enhanced.

Accounting History: Given the ambiguities that exist around the definition and scope of accounting and the diversity of the historical discipline, it is not rocket science to deduce that the specialist field of accounting history will be characterized by a considerable degree of eclecticism. One comprehensive collection of accounting historical writings [Parker and Yamey, 1994] refers to "the great variety of accounting history literature" which encompasses "the ancient world; before double entry; double entry; corporate accounting; local government accounting; cost and management accounting; accounting theory; accounting in context" [p. 7]. This journal describes its scope as "address[ing] the development of accounting thought and practice" and "embrac[ing] all subject matter related to accounting history" [Statement of Policy]. Another specialist journal,

[2] While there are numerous excellent pieces published in accounting historical journals on historical theories and methods [e.g. Carnegie and Napier, 1996; Miller and Napier, 1993; Oldroyd, 1999; Previts, 1984; Previts et al., 1990a, 1990b], I would encourage researchers to read works within the wider historical field. Debate over theory and methods will be more vigorous where many historical specialist fields interact, rather than in one specialist field itself. The work of Carr [1990] often serves as a starting place to address questions of historical approach in general, but more contemporary debates and concerns are addressed by Appleby et al. [1994], Evans [1997], Hunt [1989], and Jordanova [2000].

Accounting History, publishes work concerned with "exploring the advent and development of accounting bodies, conventions, ideas, practices and rules".[3] In the latter case, it is explicitly stated that authors should "attempt to identify the individuals and also the local, time-specific environmental factors which affected accounting, and should endeavour to assess accounting's impact on organisational and social functioning".[4]

The obligation on the researcher who wishes to contribute to this eclectic specialist field is to make clear both the nature of the accounting that is explored, as well as the approach to historical scholarship adopted. It is in this way that links are made to the relevant parts of the existing body of literature and the nature of the research contribution can be critically and constructively understood.

Tax Research in Published Accounting History: Tax research studies have contributed to the body of published accounting history in a variety of ways. For example, several papers published in this journal have treated taxation as a distinct policy and practice area. Broden and Loeb [1983] adopted an historical approach to consider CPAs' professional ethics in a tax practice context. Cataldo [1995] explained the historical development of the earned income tax credit. In the latter, general historical sources are used to contextualize and aid interpretation of the particular research study. Further papers seek to identify the antecedents of modern US taxation [Crum, 1982; Kozub, 1983; Samson, 1985; Wells and Flesher, 1999]. As well as constructing an historical account by reference to primary sources (often legislation and legislative records), some evidence is derived from political, economic, and general histories of 19th century America. The approach adopted is, in general, descriptive with little critical reflection on the existing body of historical literature. In the case of Wells and Flesher [1999], the research objective is to derive lessons relevant to modern tax policymakers.

Other tax research papers published in the *Accounting Historians Journal* emphasize the ways in which the policies and practices of taxation interact and overlap with those we readily

[3] Its website commentary makes clear *Accounting History*'s willingness to accept diverse approaches. It cites "biography, prosopography, business history through accounting records, institutional theory, public sector accounting history, comparative international accounting history and oral history", as well as case study "based on an individual, a firm or a book"; see http://www.deakin.edu.au/fac_buslaw/sch_accfin /publications/abstracts.htm.

[4] Referenced at footnote 3 supra.

recognize as accounting. Jose and Moore [1998] published a study of taxation in the Biblical Age in which clear aspects of accounting (counting, measurement, and computation) are considered. However, studies by Ezzamel [2002] of ancient Egyptian tax assessment and collection and Oldroyd [1995] of Roman governmental accounting are better examples of how historical work by specialist historians of the period may be used to critically ground the accounting historical study. Richard Macve's [1994] essay on Roman and Greek accounting and taxation is another example of critical engagement with the work of a specialist historian of the period, in his case with the work of Geoffrey de Ste. Croix the eminent Oxford historian of the Classical Age. Kern's [2000] study of interactions between US tax and accounting depreciation rules and conventions illuminates important features of 20th century accounting history, as does Edwards' [1976] study for similar issues in 19th century Britain. My own research extends Edwards' work [Lamb, 2002] and makes use of British economic and legal historical work to underpin an analysis of the accounting content of tax legal cases. Schultz and Johnson's [1998] study of deferred taxation theory and practice is well integrated in US financial reporting history; research by Arnold and Webb [1989] covers some of the same ground for the UK.

Some tax historical research published elsewhere in an academic accounting context satisfies the threshold demands of accounting history with a more theoretical and critical engagement with existing literature. Work published in *Accounting, Organizations and Society* falls under this heading. Peter Miller's study [1990] of interrelations between accounting and the state in 17th century France gives a high profile to taxation policies and practices. It is a highly theorized study that engages with both accounting theorizing and general historical research. Eden et al.'s [2001] research on the diffusion of the arm's length principle for tax purposes in North America represents a more contemporary accounting history, well-positioned in an interdisciplinary theoretical literature. My own research [Lamb, 2001] on how control of accounting calculation (of expenses, income, and profit) was used to reinforce tax authorities' powers to enforce taxpayer compliance extends prior accounting theorization and addresses a gap in the general historical literature. Tax research studies with an accounting historical approach in *Critical Perspectives on Accounting* also achieved a critical engagement with relevant accounting and historical literature. Boden's [1999] research on the financial reporting expected from the self-employed explores the tax accounting impositions in a broad social and historical context. Boden et al.'s [1995] study of tax, women, and citizenship is similarly rich in its historical approach and critical engagement with existing literature.

OBLIGATION 2: MAPPING CONNECTIONS TO THE WIDER SCHOLARSHIP ON TAXATION

I have argued so far that the tax researcher wishing to publish in the accounting history domain has a tripartite threshold to achieve: the research must focus on substantive subjects that are recognizable as "accounting"; the methods, approach, and exposition must be "historical" to an acceptable standard; and the research must engage with relevant portions of the existing body of accounting historical scholarship. However, my argument does not stop there. If accounting history is to thrive as a specialist field of both accounting and history, its researchers must engage with the best researchers and liveliest debates that the broader disciplines have to offer. The majority of researchers who publish accounting history teach accounting in accounting departments and business schools. Many research contemporary, as well as historical, accounting subjects. Published authors of this journal also publish in mainstream accounting academic journals. All of these are reasons to suggest that accounting historians have reasonable access to and familiarity with seminal research and academic debates in the wider accounting field. Fewer reasons exist to support a presumption that accounting historians have similar institutionalized access to and familiarity with the work and debates that are the shared knowledge and current talk of university history departments. Keeping up with and engaging with history, therefore, takes even more conscious effort than does keeping up and engaging with accounting scholarship.

My second argument, then, follows: To be of the highest quality, tax research in accounting history must engage with leading scholarship in the related fields of history. The rest of this essay will consider some of that leading scholarship and address the question of how the researcher draws from and/or contribute to a wider tax history.

Taxation as a Central Focus of Historical Research: To a great extent, taxation has been a subject notable for its near absence in many fields of modern American and British history [e.g. Davie, 1997; Lowe, 2003]. Five relatively recently published monographs have done a great deal to redress this imbalance and demonstrate convincingly that taxation as a historical focus can serve as the analytical basis to unpick and then knit together more general histories of a period, a country, or a set of institutions.

Taxation in US Historical Research: The economic historian Elliot Brownlee's *Federal Taxation in America: A Short History* [1996] is the current starting place for a consideration of US taxation. In this sense, it displaces earlier studies by Blakey and Blakey [1940], Paul [1954], Ratner [1942], Seligman [1914], Stein [1969], Taussig [1931], and Witte [1985]. The book considers the period 1789 to 1996. The author's objective is to explain how and why the federal government has crafted new tax regimes in each of five great national emergencies: the Civil War, World War I, the Great Depression, the New Deal, and World War II. He argues that:

> . . . [T]he introduction of new tax regimes has never stood alone. Every new regime has always been an integral part of a larger transformation of government that, in turn, was bound up in the resolution of a national emergency. As such, each of the new regimes had a reciprocal relationship with the larger transformation of government. On the one hand, the tax regimes enhanced trust in the larger transformation of government. . . . On the other hand, the new tax regimes received support and legitimacy as a consequence of the larger institutional transformation [p. 150].

Brownlee also reflects on the 1980s attempts at comprehensive tax reform. It is his assessment that the 1980s tax reforms did not amount to a break with the past as had been true of earlier changes. Further, he holds out little prospect at the time of his writing (during the 1996 presidential campaign) that advocates of radical reform of US federal taxation (e.g. the introduction of a national sales tax or a flat tax) would get very far. In the 1980s and the 1990s it was the absence of a great national emergency that was a significant element of his explanation in each case.[5] One aspect of his extended argument is that during the earlier US national emergencies, there had been an increase

[5] It is an interesting and topical question, perhaps, if the wars of the early 21st century (against terrorism, in Afghanistan, and in Iraq) will prove another "great national emergency" that engenders the necessary elements of a plan of radical tax reform, strong presidential leadership of that reform, and enough

in public trust and, thereby, an enhancement of the incumbent president's ability to lead radical tax reform:

> . . . [A]ll earlier, transforming episodes of fiscal reform have taken place in the context of public trust of the federal government and augmented that trust. . . . Until [public] trust returns and tax policy contributes to building that trust, special-interest politics will continue to have great force in the shaping of taxation [pp. 150-151].

Brownlee's book represents an excellent resource for historians of every stripe with an interest in the history of US federal taxation.[6] Although short (190 pages), it distils a vast amount of the US historical scholarship that provides context and connection to, as well as episodes in, the long history of tax. It also documents well the detail of that bibliographic review in its copious footnotes.

Brownlee's work is complemented by two other recent monographs on US tax history. The first is Robert Stanley's *Dimensions of Law in the Service of Order* [1993]. It is described by Brownlee [1996: 26 fn] as "the most informative scholarship detailing the development of the income tax legislation between the Civil War and World War I". Its central consideration is "whether the early history of federal income taxation might illuminate the developing structure of wealth and opportunity, and so our polity, as successfully as the law of race or gender, crime or labor" [p. vii]. Stanley demonstrates in his book that taxation does indeed provide such a powerful lens. His study proceeds chronologically. He starts with study of the first federal income tax laws (1861-1872). He argues that an understanding of the tax, even its first imposition, has to go beyond the circumstances of its birth as a "war tax". The choice of an income tax, rather than something else, reflects that "the function of the nation's first federal income tax laws was the deflation of class-tinged dissent from the centrist program, through the determined and skillful use of the powerful rhetorical and sym-

---

public trust in government to accept the changes. To date, it is possible to interpret President George W. Bush's large federal tax cuts in one of two ways: business as usual in the special interest politics of US federal taxation, or the first play in a radical reduction in the level of federal taxation and thereby the size of the federal state.

[6] One omission (noted by Davie [1997: 370]), however, is a complementary statistical history of US federal taxation. One would need to piece together this chronology from other sources, some of which are suggested by Davie.

bolic appeal of the law itself" [p. 17]. Then he considers the period that he refers to as "The Income Tax, Incorporated" (1873-1881). This was, he argues, a period in which the usefulness of the income tax to politicians and special interest groups on the right was developed in pragmatic and intellectual terms; in contrast, it was a time of relative neglect of income tax by elements on the left. Subsequent chapters of his book consider the ways in which the income tax came to be associated with a discourse of social and political reform (1881-1894); the attempts to implement income tax in the 1890s and the constitutional challenges that culminated in the *Pollock* decision (1894-1900); and the route to the eventual "restoration" of the income tax and agreement of the sixteenth amendment to the Constitution (1895-1913).

Stanley's work is significant in large part because of the way in which he enriches his study with theory and broadens his approach by drawing on an interdisciplinary literature. He is also unusually explicit in describing the adjustment of his approach during the process of research:

> I began my historical research by focusing on statutes and court decisions relating to income taxation, intending to look for factors which determined their form and timing. . . . I expected to find the traditional panoply of interest groups, party alignments, and ideologies, the tax fitting congenially within these categories that our society finds familiar.
>
> Preliminary research led instead to a far murkier view. . . . I began to realize that my difficulty lay less in the data itself than in the attitude with which I was interpreting the data. The pluralism of our traditional historiography and political theory was hindering, rather than helping my effort. . . . [T]he meaning of the early tax remained hidden from view . . . because of the spectacles I had learned to use. . . .
>
> [T]he lenses which finally revealed the meaning of early income taxation – composed of assumptions about society, the state, law, and history which depart from the dominant progressive and pluralist view – generated [an] untraditional interpretation of the meaning of law in society . . . [p. viii].

The essence of Stanley's argument is that the features and early introductions and withdrawals of federal income tax were directly related to the distribution and characteristics of wealth and opportunity of the age. When levied at low rates on a very small tax base, the early income tax strengthened the status quo and preserved existing imbalances of wealth and opportunity. In this sense, it was a bulwark against pressure for social and political change. Income taxation did not emerge from a grassroots movement, but from within the state itself. It was, he argues, more a product of "centrism", meaning "political officials acting as relatively autonomous trustees on behalf of the most powerful segments of society through the use of multiple dimensions of law" [p. ix]. He concludes that income tax was supported by the state "because of its historically stabilizing rhetorical role" [p. 230]:

> To the centrist lawmakers whose creation it was, income taxation represented not an expression of real economic democracy through a reduced burden on the poor and middle classes, but a rejection of the far more fundamental institutional change advocated by intellectuals and street dissidents of both left and right [pp. 230-231].

Stanley's argument about the early US federal income tax challenges more conventional interpretations. In part, it is because it draws its strength from and is located in a wider political, social, and legal history. It is for this reason especially that it deserves careful study by accounting historians.

The second complement to Brownlee's short history of US federal taxation is political historian Julian Zelizer's monograph *Taxing America: Wilbur D. Mills, Congress, and the State, 1945-1975* [1998]. This work is concerned with the way in which a community of experts – legislators, tax policy analysts, tax professionals – influenced how the modern US state "increased in size and scope on an unprecedented scale in American life" [p. 3]. Zelizer's research question is: "How did the American state achieve what it did between 1945 and 1975, despite the nation's anti-statist culture and despite its fragmented political institutions?" [p. 6]. He uses a focus on Wilbur Mills, Democratic senator from Arkansas (1938-1976) and Chairman of the House Ways and Means Committee (1958-1974), to provide an historical narrative in which he answers his question.

There are four elements to Zelizer's argument about the development of the post-World War II, US state. First, the way in which Congress wielded its taxing powers was an important part of the explanation of achievement. "Taxation was central to state-building" and Congress clung to its constitutional jurisdiction to tax, even in times of crisis [p. 7]. Thus, understanding the interplay between congressional history and the development of tax policy is crucial to a history of US state-building. In Mills, the powerful chairman of the congressional tax-writing committee, these threads of history come together. Second, the formation of community of tax experts, in which Mills and congressional leaders were prominent and authoritative, facilitated the tax policy and tax setting roles Congress wished to protect. The tax policy community "offered an arena where congressional leaders would interact with other members of the state on a regular basis", thus helping to "facilitate policymaking despite the fragmented nature of the state" [p. 8]. It was in this context that a "culture of tax policy" emerged with "a distinct discourse with its own vocabulary and conceptions of the political economy, certain types of social interactions between members of government, and established ways of learning the political process" [p. 10]. Third, taxation policy was understood and used as much more than revenue raising. "Through taxation, Mills and the community were able to sell various economic and social programs [including Social Security and Medicare] within the national anti-statist culture" [pp. 11-12]. Further, in economic policy "Mills discerned that the manipulation of tax rates and the creation of tax breaks enabled the government to help manage the economy indirectly without infringing on the prerogatives of economic institutions" [p. 14]. Fourth, some fiscal conservatives – Mills among them – "entered into a fragile alliance" with the state and liberal state-builders [p. 16]. For their part, the fiscal conservatives imposed their views about "strict adherence to balanced budgets" [ibid.]. They shaped tax policy and the terms of fiscal discourse by expressing "ongoing concern about the detrimental effect of deficits on consumer prices, national savings, and the international stability of the dollar"; thus they "tended to define policy debates in terms of budgetary cost, tax burdens, and potential effect on the deficit" [p. 17].

Zelizer's book helps explain the paradox of the growth of the liberal state in post-World War II USA at the same time as political institutions remain fragmented, the executive wing of US government becomes more powerful, anti-statist sentiment grows, and the tenets of fiscal conservatism are developed. This knitting together of political, legislative, and economic analysis is an important resource for accounting historians who wish to understand the context in which particular tax policy, legislation, and practices emerged. The prominence of discourse and technical policy communities in the story may well suggest to accounting historians some of the ways in which this general history might lead to the more particular histories of tax accounting, measuring, reporting, and analysis.

Taxation in British Historical Research: In a British historical context, the economic and social historian Martin Daunton's two monographs – *Trusting Leviathan: The Politics of Taxation in Britain, 1799-1914* [2001] and *Just Taxes* [2002] – have refashioned the history of British income tax. What Daunton has done that his predecessors have not is to use taxation as the focus for a critical study of the power, practices, and structures of the state and the economic and social forces with which it interacted. Earlier comprehensive histories of British income tax – notably Dowell [1965] and Sabine [1966] – adopted a comparatively uncritical approach to taxation as part of political history and the administrative history of the state. One of the earlier, most influential histories of taxation policy and practice – Kay and King [1990] – was written by economists and focused in detail on the post-World War II period. There is other research by historians that is detailed and rich in its treatment of taxation, but none extends the treatment to the 20th century: Braddick [1996] examines financing the state in the 17th century; Brewer [1989] looks at creation of the "fiscal-military state" in the 18th century; and O'Brien [1988] focuses on 19th century tax policy and fiscal economics. Daunton's two books combine to form a unique study of British income tax over two centuries.

Trusting Leviathan is a study of taxation in the "long" 19th century, from Pitt's introduction of income taxation in 1799 during the Napoleonic Wars to the outbreak of World War I. It is, in broad terms, a study of the creation of the Gladstonian fiscal state. Daunton refers to this as "a story of fiscal containment" because taxation was reduced from 20% of national income during the early 19th century wars with France to approximately 10% in 1914 [p. x]. In a first statement which hints at the rich comparative analysis[7] that runs through the whole of the two

[7] Any comparative history of taxation would need to consider Webber and Wildavsky's [1986] comprehensive history of taxation and expenditure. This work focuses on the western world, but does not exclude excursions to the taxation history of parts of the rest of the world. A narrower, but influential, comparison is addressed in Steinmo [1996]. Picciotto's [1992] legal history of business taxation is a fine comparative study of the US and UK, with attention paid as well to France and Germany. To the extent that a comparative history considers theories and influential ideas and models of taxation, Groves [1974] remains an excellent starting point.

books, Daunton notes that in Britain "the level of taxation was reduced and held down to a greater extent and for a longer period of time than in most other European countries" [ibid.]. The story that the author tells is also a history of trust in that during this same period "the fiscal system widely came to be seen as 'fair' and equitable between interests, so helping to create the high level of legitimacy which characterized the British state in the second half of the nineteenth century and into the twentieth century" [ibid.]. His research question is "what factors affected the changing willingness of taxpayers to trust each other and to trust the state, and for the state to trust taxpayers?" [p. 12].

Daunton argues that the answer to his question about trust can be articulated by reference to shifting balances between four distinct variables. The first is the institutional and administrative processes for revenue collection. His work (especially Chapter 7 "The minimum of irritation': fiscal administration and civil society, 1842-1914") offers a brilliant analysis of how seemingly technical administrative matters derived from the higher drama of matters of state "had much wider significance in exacerbating or mitigating social and political tensions" [p. 12]. It is here that he has much to say directly to accounting historians about matters of tax calculation, reporting, and collection.[8] The second variable in Daunton's analysis is the relationship between revenue and economic change. He refers to this as the way that "handles" were attached by the tax system to particular elements of the tax base:

> Any tax system attaches a "handle" to different forms of income or types of economic activity, such as rent from agricultural land, profits from trade or the consumption of goods and services which provide some external indication of wealth. The way "handles" were attached to the tax base affected the buoyancy of revenue, and so influenced the ease with which government expenditure could be increased [p. 13].

---

[8] In my research [Lamb, 2002] about how the administrative power of the 19th century Inland Revenue was enhanced through judicial support for calculative principles and techniques devised by tax administrators, I have considered some of the ways in which Daunton's work supports an analysis of taxation practice approached from another direction. I have also considered some of the ways in which his top-down perspective glosses over some aspects of practice that were significant for particular accounting and tax practice purposes.

Just as Brownlee [1996] argues, the nature of "handles" that were available or feasible was linked to levels and patterns of economic development. Daunton's third variable is the manner in which new taxes were developed and fiscal reform undertaken [p. 15]. He contrasts a "usual 'churning' of taxes" with the "radical or 'constitutional' reform" of taxation that is "extremely rare" [p. 16]. A factor behind this feature of British tax politics was "the ability of permanent officials to shape the tax system by limiting the room for manoeuvre of politicians" [p. 17]. Daunton's fourth major variable in his shifting pattern of the politics of taxation was the nature and manner of state spending:

> Whether the tax system was considered to be equitable or inequitable depended on whether the various interests and groups providing the revenue felt that the state was spending 'their' money in a reasonable and appropriate way. . . . A high degree of trust in public or collective action therefore depended upon the creation of a widely shared belief that the tax system was balanced between interests, both in the way revenue was raised and how it was spent [pp. 18-19].

In *Just Taxes* the stories of fiscal containment and trust shift direction. We move from a story of an effective tax system in which "balance and fairness" operated to one in which they do not. From 1914, levels of taxation rose, reaching some 40% of national income in World War II. Daunton argues that both public trust in and the administrative competence of the state both took a nosedive in the same period. Among the factors explored to explain these changes is a substitution of "pragmatic equality" for "principled equality". Long evident needs for fundamental reform of aspects of the tax system were ignored in the second half of the 20th century due to politicians' lack of courage in risking short-term political reaction for longer-term economic and political gains. The result wa s a fiscal system that was no longer a stable base for the state. Instead, taxation became a focus of political and social tension.

Given that Daunton's focus in his two monographs is the politics of taxation, much scope exists for other historians, including accounting historians, to build on his work to study other aspects of taxation. His is a top-down view and the roles and activities of taxpayers and practitioners remain to be considered in detail.

Alternative Approaches and Interpretations: The four historians whose work has been introduced in the preceding sections together represent a fresh approach to the study of taxation as central to a broader history and the range of considerations – political, social, economic, legal, and technical – that must be brought to bear in researching tax policy and practice. Part of their careful scholarship is to distinguish their work from that of previous and contemporary scholars of taxation. Brownlee's [1996] study is especially useful to accounting historians for its appendix on historiography and bibliography. It analyzes and categorizes all the substantial and significant histories of US taxation then available. His analysis extends to the relatively small historical literature that is internationally comparative in focus.

Brownlee recognizes five approaches adopted by tax historians. The "progressives" present the long history of US federal income taxation as a triumph of social justice and democratic forces. Blakey and Blakey [1940], Paul [1954], Ratner [1942], Seligman [1914], and Taussig [1931] represent this approach. "That view regarded the reform movements that culminated in the New Deal as an expression of social democracy and as a stream of victories for working people – farmers and factory laborers" [p. 160]. There are three types of "post-progressive" historians according to Brownlee, all of whom focus on the prominent role of special interests and social power relations in explanations of how tax policy has developed. "Neoconservatives" tell a story of "democracy . . . subverted by narrowly selfish tax-eaters" and "agents of the state who gain control of the instruments of national communication, manipulate federal power to discourage or suppress grassroots challenges to the state, and cultivate a class of experts capable of designing taxes whose effects are difficult to detect" [pp. 168-169]. "Capitalist-state theorists" see democratic institutions as "captured by capitalists or their agents" [p. 168] and regard tax policy to advance rationally the interests of capitalists. Brownlee places Stanley [1993] in this category.[9] "Pluralists" emphasize how "the multiplicity of contending groups shap[es] tax policy, and … detail the ways in which the American political system encourages

[9] Stanley, too, distinguishes his approach from the "progressives" and "pluralists" and offers a careful study of earlier studies. This involves review of underlying evidence and scrutiny of the assumptions and interpretations of earlier scholars. The resulting analysis is theoretically very rich.

fragmentation of the polity into local and special interests" [p. 165-166]. Witte [1985] is representative of this approach.[10]

Brownlee's own approach is characterized as "democratic-institutionalist".[11] By "democratic" he means that he "recognizes the power of democratic forces outside the federal government [and] stresses the potency of ideas as independent creative forces" [p. 173]. In that, there is some link to the older "progressive" tradition. However, he makes clear that the "institutional" element of his approach marks a clear distinction from the progressives: governmental institutions are regarded as having influence in and of themselves in shaping taxation policy; historical contingency [e.g. great national emergencies] plays an important role in enabling and sometimes forcing change; and economic development has shaped the organizational options available to tax policymakers [pp. 173-175]. Zelizer [1998][12] and, in the British context, Daunton [2001, 2002] adopt approaches that place emphasis on the social and institutional elements of an historical explanation for the development of taxation.

Daunton's work represents another important source on approaches to historical scholarship. The first and final chapters in *Trusting Leviathan* [2001] add to an understanding of the different approaches to theory and methodology adopted by influential historians. It complements Brownlee's work by a thorough discussion of the influence of social theorists (e.g. the Virginia School, Gramsci, Foucault) and approaches to history. Like other historians discussed above (especially Stanley and Zelizer), Daunton develops an historical analysis in which the

---

[10] King's [1993] fine study of US investment tax subsidies is another example. Webber and Wildavsky's [1986] comparative history of taxation and expenditure in the Western World also adopts a pluralist approach. Political scientist Steinmo's [1993] study of the role of the state in Swedish, British, and US tax policy is regarded by Brownlee [1996, p. 172] as one of the most influential developments of the pluralist approach.

[11] Brownlee's [2003] approach to the history of taxation is developed by him and his collaborators in an edited collection of historical work, first published in 1996, focused on the funding of the US state during and after World War II.

[12] A new book of which Zelizer is an editor and contributing author [Novak et al., 2003] considers taxation among other topics as part of "new directions" in American political history. This focuses on "the relationship of citizens to the government in a context where suspicion of a powerful state has been the overriding theme of American political culture" and "addresses the continually evolving mechanisms of democratic participation" [Jacobs and Zelizer, 2003, p. 1]. The methodological concerns of "the new institutionalism" and "sociocultural political history" are explored by contributors to the volume.

political discourse of taxation becomes an important element of the story of change and stasis in taxation.

CONCLUSIONS

I have argued that for research on a taxation subject to succeed as rigorous accounting research, well grounded in relevant historical scholarship, research design must consciously address several matters in framing the research problem. Tax research must focus on substantive subjects that are recognizable as "accounting"; the methods, approach, and exposition must be "historical" to an acceptable standard; and the research must engage with relevant portions of the existing body of accounting historical scholarship. I have argued, further, that the treatment of tax in accounting history will be more influential inside and outside the specialist field of accounting history if there is scholarly engagement with the best researchers and liveliest debates that the disciplines of accounting and history have to offer will enrich.

This essay has drawn researchers' attention to some works of historical scholarship in which taxation is the central focus and that is recognized by historians as being of the highest quality that their discipline produces. Accounting historians of taxation can use the insights of historians such as Brownlee, Stanley, Zelizer, and Daunton to frame their own concerns with the policies, problems, and institutions of tax measurement, reporting, and analysis. There is much for us to research from an accounting perspective that can help us tell historians, tax policymakers, and practitioners of tax and accounting about how taxation policy is implemented and works in practice; about the behavioral effects that stem from interactions between tax, accounting, and economic activity; and about how taxation can be understood not just at the levels of discourse, politics, or law, but in financial measures and the decisions of economic actors. What is important is for accounting historians to develop effective routines for staying abreast of how other historians are thinking about the historical problems, including taxation, in which we all have a common interest.[13] Then, those accounting

[13] It always helps to have practical means for doing quick surveys and keeping up to date. Among the means that I would suggest for taxation research follow. (1) Make regular reference to the US Tax History project supported by Tax Analysts; see http://www.taxhistory.org/default.htm. (2) Seek guides to tax history research prepared by law school libraries. The University of Connecticut Law Library has produced one such summary recently; see http://www.law.

historians will be in a position to supplement this historical work and engage with it amidst the rich narratives, arguments, and evidence that make up scholarship.

This review essay has sought to suggest how questions of taxation might be effectively framed as accounting historical research. To return to the analogy with which I started this piece, my hope is that this essay may encourage tax researchers to think anew about the technical specifications for the research "camera" that they should seek to apply as well as about how and where to aim the camera. It is now up to those individual researchers to choose their subject, shoot the photos, develop them, mount them, interpret them, and present them to an interested accounting history audience.

REFERENCES

Appleby, J., Hunt, L., and Jacob, M. (1994), *Telling the Truth about History* (London and NY: Norton).

Arnold, A. J. and Webb, B. J. (1989), *The Financial Reporting and Policy Effects of Partial Deferred Tax Accounting* (London: The Institute of Chartered Accountants in England and Wales Research Board).

Blakey, R.G. and Blakey, G.C. (1940), *The Federal Income Tax* (London: Longmans, Green).

Boden, R., Childs, M., and Wild, W. (1995), "Pride and Prejudice: Women, Tax and Citizenship," *Critical Perspectives on Accounting*, Vol. 6: 125-148.

Boden, R. (1999), "Figure It Out Yourself: Financial Reporting, Accountability and the Self-Employed," *Critical Perspectives on Accounting*, Vol. 10: 37-62.

Braddick, M. J. (1996), *The Nerves of State: Taxation and the Financing of the English State, 1558-1714* (Manchester and New York: Manchester University Press).

Brewer, J. (1989), *The Sinews of Power: War, Money and the English State, 1688-1783* (London: Unwin Hyman).

Broden, B., and Loeb, S. (1983), "Professional Ethics of CPAs in Tax Practice: An Historical Perspective," *Accounting Historians Journal*, Vol. 10, No. 2: 81-97.

uconn.edu/library/clipper/guides/taxhist.pdf. (3) Keep track of new, substantial books on taxation via the website of the Association of American University Presses. One category of regular reporting is "the history of taxation". See http://aaupnet.org/news/bfu/taxes/list.html. (4) Read book reviews in leading historical and taxation journals. Two sources that between them are comprehensive, not just for US tax history, are the *American Historical Review* [http://www.historycooperative.org/ahr/] and the *National Tax Journal* [http://ntj.tax.org/]. (5) Keep a watch on influential citations to see how others build on them. Certainly citation indices (like the Social Science Citation Index and the Arts and Humanities Citation Index available via the Web of Science; see http://www.isinet.com/isi/products/citation/wos/ for description) are excellent ways to do this systematically. However, my personal suggestion is to not undervalue the quick and limited update that skilled use of http://www.google.com, Boolean operators, and creative word/name choice can yield.

Brownlee, W. E. (1996), *Federal Taxation in America: A Short History* (Cambridge and New York: Cambridge University Press and Woodrow Wilson Center Press).

Brownlee, W. E. (ed.) (2003), *Funding the Modern American State, 1941-1995: The Rise and Fall of the Era of Easy Finance* (Washington, DC: Woodrow Wilson Center Press; and Cambridge: Cambridge University Press, first published 1996).

Carnegie, G. D., and Napier, C. J. (1996), "Critical and Interpretive Histories: Insights into Accounting's Present and Future through its Past," *Accounting, Auditing & Accountability Journal*, Vol. 9, No. 3: 7-39.

Carr, E. H. (1990), *What Is History?* (London: Penguin, 2nd ed., R.W. Davies, ed.; University of Cambridge Trevelyan Lectures, delivered 1961).

Cataldo, A.J. II (1995), "The Earned Income Credit: Historical Predecessors and Contemporary Evolution," *Accounting Historians Journal*, Vol. 22, No. 1: 57-79.

Chua, W. F. (1986), "Radical Developments in Accounting Thought," *Accounting Review*, Vol. 61, No. 4: 601-632.

Crum, R.P. (1982), "Value-Added Taxation: The Roots Run Deep into Colonial and Early America," *Accounting Historians Journal*, Vol. 9, No. 2: 25-42.

Daunton, M. (2001), *Trusting Leviathan: The Politics of Taxation in Britain, 1799-1914* (Cambridge and New York: Cambridge University Press).

Daunton, M. (2002), *Just Taxes: The Politics of Taxation in Britain, 1914-1979* (Cambridge and New York: Cambridge University Press).

Davie, B. F. (1997), "Book Review. [Brownlee, *Ops. Cit*.]," *National Tax Journa*l, Vol. 50, No. 2: 369-373.

Dowell, S. (1965) *A History of Taxation and Taxes in England* (3rd Ed., 4 vols.) (London: Frank Cass & Co. Ltd., first published 1884).

Eden, L., Dacin, M.T. and Wan, W.P. (2001), "Standards across Borders: Crossborder Diffusion of the Arm's Length Standard in North America," *Accounting Organizations and Society*, Vol. 26, No. 1: 1-23.

Edwards, J. R. (1976), "Tax Treatment of Capital Expenditure and the Measurement of Accounting Profit," *British Tax Review*, Vol. 1976: 300-319.

Evans, R. J. (1997), *In Defence of History* (London: Granta).

Ezzamel, M. (2002), "Accounting Working for the State: Tax Assessment and Collection During the New Kingdom, Ancient Egypt," *Accounting and Business Research*, Vol. 32, No. 1: 17-39.

Groves, H. M. (Curran, D. J. ed.) (1974), *Tax Philosophers: Two Hundred Years of Thought in Great Britain and the United States* (Madison: University of Wisconsin Press).

Hunt, L. (ed.) (1989), *The New Cultural History*. Berkeley, Los Angeles and London: University of California Press.

Jacobs, M. and Zelizer, J. (2003), "The Democratic Experiment: New Directions in American Political History," in Novak et al., *Op. cit*. [seen pre-print publication at http://pup.princeton.edu/chapters/s7644.pdf.

Jordanova, L. (2000), *History in Practice* (London and New York: Arnold and Oxford University Press).

Jose, M. and Moore, C. (1998), 'The Development of Taxation in the Bible: Improvements in Counting, Measurement, and Computation in the Ancient Middle East," *Accounting Historians Journal*, Vol. 25, No. 2: 63-80.

Kay, J. and King, M. (1990), *The British Tax System*, 5th ed. (Oxford: Oxford University Press, first published 1978).

Kern, B.B. (2000), "The Role of Depreciation and the Investment Tax Credit in Tax Policy and Their Influence on Financial Reporting during the 20th Century", *Accounting Historians Journal*, Vol. 27, No. 2: 145-164.

King, R. F. (1993), *Money, Time, & Politics: Investment Tax Subsidies & American Democracy* (New Haven and London: Yale University Press).

Kozub, R. (1983), "Antecedents of the Income Tax in Colonial America," *Accounting Historians Journal*, Vol. 10, No. 2: 99-116.

Lamb, M. (1999), "Taxation Research as Accounting Research", in Lamb, M. and Lymer, A. (eds.), *Interdisciplinary Research in Taxation: Research Approaches and Bibliographical Survey* (London: ICAEW Centre for Business Performance): 33-45.

Lamb, M. (2001), "'Horrid Appealing': Accounting for Taxable Profits in Mid-Nineteenth Century England," *Accounting Organizations and Society*, Vol. 26, No. 3: 271-298.

Lamb, M. (2002), "Defining 'Profits' for British Income Tax Purposes: A Contextual Study of the Depreciation Cases, 1875-1897," *Accounting Historians Journal*, Vol. 29, No. 1: 105-172.

Lamb, M. and Lymer, A. (1999), "Taxation Research in an Accounting Context: Future Prospects and Interdisciplinary Perspectives," *European Accounting Review*, Vol. 8, No. 4: 749-776.

Lowe, R. (2003), "Review of *Just Taxes: The Politics of Taxation in Britain, 1994-1979*. By Martin Daunton," *Twentieth Century British History*, Vol. 14, No. 3: 305-307.

Macve, R. H. (1994), "Some Glosses on 'Greek and Roman Accounting'", in Parker, R.H. and Yamey, B.S. (eds) *Accounting History: Some British Contributions* (Oxford: Clarendon Press): 57-87.

Miller, P. B. (1990), "On the Interrelations between Accounting and the State," *Accounting, Organizations and Society*, Vol. 15: 315-338.

Miller, P. B. and Napier, C. J. (1993), "Genealogies of Calculation," *Accounting, Organizations and Society*, Vol. 18: No. 7/8: 631-647.

Novak, W. J., Zelizer, J. E., and Jacobs, M. (2003), *The Democratic Experiment-New Directions in American Political History* (Princeton, NJ: Princeton University Press).

O'Brien, P. K. (1988), "The Political Economy of British Taxation, 1660-1815", *Economic History Review*, Vol. XLI, No. I: 1-32.

Oldroyd, D.A. (1995), "The Role of Accounting in Public Expenditure and Monetary Policy in the First Century AD Roman Empire," *Accounting Historians Journal*, Vol. 22, No. 2: 117-129.

Oldroyd, D.A. (1999), "Historiography, Causality and Positioning: An Unsystematic View of Accounting History," *Accounting Historians Journal*, Vol. 26, No. 1: 83-102.

Parker, R. H., and Yamey, B. S. (eds) (1994), *Accounting History: Some British Contributions* (Oxford: Clarendon Press).

Paul, R. E. (1954), *Taxation in the United States* (Boston: Little Brown).

Picciotto, S. (1992), *International Business Taxation* (London: Weidenfeld & Nicolson).

Previts, G. J. (1984), "Methods and Meanings of Historical Interpretation for Accountancy," *Accounting Historians Notebook*, Fall.

Previts, G. J., Parker, L. D., and Coffman, E. N. (1990a), "Accounting History: Definition and Relevance," *Abacus*, Vol. 26, No. 1: 1-16.

Previts, G. J., Parker, L. D., and Coffman, E. N. (1990b) "An Accounting Historiography: Subject Matter and Methodology," *Abacus*, Vol. 26, No. 2: 136-58.

Ratner, S. (1942), *American Taxation: Its History as a Social Force in Democracy* (New York: Norton).
Sabine, B. E. V. (1966), *A History of Income Tax* (London: George Allen & Unwin).
Samson, W. (1985), "The Nineteenth Century Income Tax in the South," *Accounting Historians Journal*, Vol. 12, No. 1: 37-52.
Schultz, S. M. and Johnson, R. T. (1998), "Income Tax Allocation: The Continuing Controversy in Historical Perspective," *Accounting Historians Journal*, Vol. 25, No. 2: 81-111.
Seligman, E. R. A. (1914), *The Income Tax: A Study of the History, Theory and Practice of Income Taxation at Home and Abroad* (New York: Macmillan).
Stanley, R. (1993), *Dimensions of Law in the Service of Order: Origins of the Federal Income Tax, 1861-1913* (New York and Oxford: Oxford University Press).
Stein, H. (1969), *The Fiscal Revolution in America* (Chicago: University of Chicago Press).
Steinmo, S. (1996), *Taxation and Democracy* (New Haven: Yale University Press).
Taussig, F.W. (1931), *The Tariff History of the United States: The Eighth Revised Edition* (New York: Putnam).
Webber, C. and Wildavsky, A. (1986), *A History of Taxation and Expenditure in the Western World* (New York: Simon & Schuster).
Wells, S. C. and Flesher, T. K. (1999), "Lessons for Policy Makers from the History of Consumption Taxes," *Accounting Historians Journal*, Vol. 26, No. 1: 103-26.
Witte, J. F. (1985), *The Politics and Development of the Federal Income Tax* (Madison WI: University of Wisconsin Press).
Zelizer, J. E. (1998), *Taxing America: Wilbur D. Mills, Congress, and the State, 1945-1975* (Cambridge and New York : Cambridge University Press).

Accounting Historians Journal
Vol. 30, No. 2
December 2003

NOTICEBOARD

10th WORLD CONGRESS OF ACCOUNTING HISTORIANS

ST. LOUIS/OXFORD, AUGUST 1-5, 2004

CALL FOR PAPERS

ONE — TWO — THREE

ONE CONFERENCE—TWO LOCATIONS—THREE THEMES

The 10th World Congress of Accounting Historians will meet in the USA with a dual venue of St. Louis, MO and Oxford, MS, from August 1-5, 2004. The Congress will commence in St. Louis on August 1 to celebrate the centenary of the first International Congress of Accountants that was held in St. Louis in 1904 as a part of the World's Fair commemorating the Louisiana Purchase and Lewis & Clark Expedition. Sessions will be held at the St. Louis Mercantile Library, which was founded in 1846. The headquarters hotel will be the Renaissance Airport Hotel. The Congress will then move by air-conditioned motor coaches to Oxford, MS, on August 3 to give delegates an opportunity to visit the National Library of the Accounting Profession at the University of Mississippi. The Ole Miss Library is the largest accountancy library in the world. The Alumni House Hotel will be the Congress headquarters. There will be activities during the motor coach trip devoted to accounting history topics, such as featured speakers and videotapes. After the Congress, delegates may proceed to Orlando, FL, for the American Accounting Association meetings. It may be the most convenient to continue your post-Congress air travel from nearby Memphis International Airport.

Papers are invited on **any** accounting history topic. Papers are address any of the three Congress themes are particularly desired. The three Congress themes are:

1. International Congresses of Accountants
2. Accounting for Transportation and Financial Industries
3. Archival-Based Accounting Research

INTERNATIONAL CONGRESSES OF ACCOUNTANTS:

Since 2004 marks the centenary of the first International Congress of Accountants in St. Louis, a major theme of the 10th World Congress of Accounting Historians is scholarship on the sixteen International Congresses of Accountants, the nine International Congresses of Accounting Educators, and the nine preceding World Congresses of Accounting Historians. There is a need to increase the relatively limited scholarship about each of these congresses. The dates and sites of these previous congresses are:

International Congresses of Accountants			
1904	St. Louis	1972	Sydney
1926	Amsterdam	1977	Munich
1929	New York	1982	Mexico City
1933	London	1987	Tokyo
1938	Berlin	1992	Washington
1952	London	1997	Paris
1957	Amsterdam	2002	Hong Kong
1962	New York		
1967	Paris		

World Congresses of Accounting Historians	
1970	Brussels
1976	Atlanta
1980	London
1984	Pisa
1988	Sydney
1992	Kyoto
1996	Kingston
2000	Madrid
2002	Melbourne

The International Congress of Accounting Educators started in 1962 and were conducted just before or after the International Congresses of Accountants, either in the same city or nearby. Leadership of the IAAER [International Association for Accounting Education and Research] will assist in reviewing papers for this theme. Some examples of possible paper topics include (1) Examination of a Specific Congress; (2) Continuity and Discontinuity of the Congresses; (3) Concept of International Congresses; (4) Key Players at Each Congress (Biographies); (5) Seminal Papers; (6) Splitting the Congresses in 1962; (7) Continuing Themes and Topics Across the Years; and (8) International Accounting Standards Movement.

ACCOUNTING FOR TRANSPORTATION AND FINANCIAL INDUSTRIES:

As the Gateway to the West, St. Louis is an appropriate venue for research on accounting for railroads, canals, riverboats, stagecoaches, airlines, and automobiles. The Mercantile Library is also a repository of several transportation collections. Thus, the Congress will highlight papers dealing with transportation-related industries throughout the world. Papers can include analyses of financial statements, accounting innovations, and the people who played a role in the development of transportation accounting. Similarly, St. Louis has historically been a financial center for Western development, so histories related to accounting for all types of financial institutions will be a focus of the Congress.

ARCHIVAL-BASED ACCOUNTING RESEARCH

Because the library at the University of Mississippi is a treasure trove of accounting archival records, one of the Congress themes will be to emphasize archival-based research. Such research can be based on any type of organization. Examples include analyses of accounting innovations, diffusion of accounting innovations, impact of environment (such as war, depression, or competition) on accounting, impact of accounting on the environment, and examples of company histories based on accounting records.

In addition to papers on the three Congress themes, papers on other topics of accounting history are also welcome.

The 10th World Congress is sponsored by the **Academy of Accounting Historians.** The co-conveners of the Congress of Richard Vangermeersch of the University of Rhode Island, and Dale L. Flesher of the University of Mississippi. Manuscripts for review should be sent to the following address:

Dr. Dale L. Flesher
Patterson School of Accountancy
University of Mississippi
University, MS 38677
E-mail: acdlf@olemiss.edu

Papers may be submitted in either hard copy or electronic format (electronic submissions should be in either WORD or WordPerfect format). All papers should be submitted in English. Special consideration will be accorded those papers prepared by scholars who use English as a second language so as to facilitate the broadest acceptance and presentation of materials. The Congress program will focus around the best papers received. All papers will be double-blind refereed and, subject to consent, the accepted papers will be published as refereed Congress Proceedings on the Congress website. A hard-copy volume of abstracts will also be distributed. The deadline for submissions is **February 28, 2004.** Earlier submissions are encouraged.

EMERGING SCHOLAR'S COLLOQUIUM
APIRA 2004 SINGAPORE
2-3 July 2004

In association with:
The 4th Asia Pacific Interdisciplinary Research in Accounting Conference
and
Accounting Auditing & Accountability Journal

This forum is designed for doctoral degree students, new faculty and emerging researchers. It will run immediately before the main APIRA 2004 conference scheduled for 4-6 July 2004 and will be held at Singapore Management University.

It will provide participants with the opportunity to:
- discuss their research with peers and senior research faculty who will lead the colloquium
- present their current research in small group settings
- network with scholars in their fields
- benefit from presentations and advice of leading scholars in subject areas and methodological traditions supported by the APIRA 2004 conference and Accounting, Auditing & Accountability Journal.

Senior faculty who will lead the colloquium will include
Professor Niamh Brennan, University College Dublin
Professor Trevor Hopper, University Manchester
Professor Kenneth Merchant, University of Southern California
Professor James Guthrie, Macquaire University, Sydney
Professor Lee Parker, The University of Adelaide
Further international professorial faculty will be announced in the coming months.

The previous emerging scholars' colloquium held before the APIRA Adelaide 2001 conference attracted 40 emerging scholars who were supported by 13 professors as colloquium faculty. The feedback on that colloquium's success was outstanding. We expect the Singapore colloquium to follow on this successful path.

Formal electronic application is required, and interested persons are advised to apply early, to ensure admission. For further information, application forms and instructions, please go to the Emerging Scholars' Colloquium page on the APIRA 2004 conference website:
http://www.accountancy.smu.edu.sg/Apira/colloquium.html

This is the premier emerging scholar forum in the Asia-Pacific region, drawing together the strongest international cohort of scholars and faculty seen at any one time in the region. It only occurs once every three years. If you are an emerging scholar or the supervisor or head of school for eligible scholars, then act on this opportunity without delay.

Further enquiries regarding the colloquium can be made through:
- Professor Lee Parker, the University of Adelaide,
  Email: lee.parker@adelaide.edu.au
- Ms. Adelene Ang, Singapore Management University
  Email: amlow@smu.edu.sg

CONFERENCE ANNOUNCEMENT & CALL FOR PAPERS

FOURTH ASIAN PACIFIC INTERDISCIPLINARY RESEARCH IN ACCOUNTING CONFERENCE

Singapore 4-6 July 2004
&
APIRA 2004 Emerging Scholars' Colloquium
(2-3 July 2004)

Organised by Singapore Management University
(Supporting Organisation: Nanyang Business School,
Nanyang Technological University)

In association with Accounting, Auditing & Accountability Journal

The triennial APIRA conference now moves to the "Lion City" Singapore, following on from its predecessors in Sydney (1995), Osaka (198) and Adelaide (2001). APIRA is the premier interdisciplinary accounting research conference in the Asia-Pacific region, rotating in a three-year cycle with the European IPA and the New York CPA conferences.

With a reputation for academic rigor, and the participation of accountancy's foremost thinks, APIRA 2004 promises to attract strong representation from accounting researches the world over. Some of the most prolific researchers from the United Kingdom, Europe, North America, the Asia-Pacific region, and many other countries are represented in APIRA's International Editorial Committee. A strong interdisciplinary program of research papers and forums addressing the relationships between accounting, auditing and accountability and their social, institutional, economic and political environments will be included in the program.

This interdisciplinary accounting conference is dedicated to the advancement of accounting knowledge and practice. It provides a platform to discuss the interaction between accounting/auditing and their social, economic, institutional and political environments.

Conference sessions and papers will critique contemporary theory and practice, examine historical and interdisciplinary dimensions of accounting, debate policy alternatives, and explore new perspectives for understanding and change in the accounting discipline.

Papers may explore policy alternatives and provide new perspectives for understanding the accounting discipline, covering the following themes:

- Accounting Communication
- Intellectual Capital
- Knowledge Management
- Risk Management
- Corporate Governance
- Social and Environmental Accounting
- Critical Financial Analysis
- Accounting and Gender and/or Feminist Theories
- Accounting and Accountability in the Public Sector
- Non-profit Organizations' Accountability
- Accounting Policy and Standard Setting

- Corporate Regulation and Accountability
- Accounting Professions
- New Forms of Accounting and Auditing
- Auditing and Accountability: Professional and Business Ethics
- Accounting in the Third World
- Accounting and the Public Interest
- Critical, Explanatory, Oral and Visual Approaches to Accounting History
- Critical and Ethnographic Case Studies of Accounting in Action
- Accounting and Management Planning and Control
- International Accounting and Globalisation
- Accounting and Technology
- Accounting and Culture
- Accounting and the Home
- Methodological and Theoretical Issues

APIRA 2004 will be held at the Grand Hyatt Singapore, and its associated Emerging Scholars' Colloquium (2-3 July) will be held at the beautiful Bukit Timah campus of Singapore Management University. The conference's plenary speakers on the subjects of corporate governance and management control will include Professors Niamh Brennan (University College Dublin), Trevor Hopper (University of Manchester), and Ken Merchant (University of Southern California).

For full conference and colloquium details, access the SINGAPORE APIRA website now!

http://www.accountancy.smu.edu.sg/Apira/index.htm
or
using www.Google.com, type in "APIRA 2004"

Key Dates:

• Deadline for electronic submission of papers (only full papers considered for refereeing)	:	30 January 2004
• Submission of Revised Paper	:	30 April 2004
• Early Bird Conference Registration	:	30 April 2004

Fees:

Early Bird Registration by 30 April 2004	:	Full Registration (S$595) Full-time Postgraduate Student (S$365) Emerging Scholar's Colloquium (S$50)
Regular Registration after 30 April 2004	:	Full Registration (S$695) Full-time Postgraduate Student (S$415) Emerging Scholar's Colloquium (S$60)

For further enquiries, please contact:

Ms Adelene Ang
Singapore Management University
Email: aang@smu.edu.sg

or

Professor Lee D Parker
The University of Adelaide
Email: aaaj@commerce.adelaide.edu.au

Conference co-chairs:

Professor Lee D Parker
The University of Adelaide
Email: aaaj@commerce.adelaide.edu.au

Associate Professor Low Aik Meng
Singapore Management University
Email: amlow@smu.edu.sg

CALL FOR PAPERS

The Academy of Accounting Historians and the Public Interest Section of the American Accounting Association are jointly sponsoring a one-day conference immediately preceding the Orlando National Convention of the AAA.

CONFERENCE PARTICULARS

Date: Saturday, August 7, 2004
Venue: Orlando Marriott (AAA conference headquarters)
Time: 9:00AM-4:00PM
Cost: approximately $35 (breakeven)
CPE: Yes

CONFERENCE PAPERS

Papers may be submitted on any subject appropriate for the two sponsoring organizations. They should conform to the style requirements of either of the two journals mentioned below. Special consideration will be given to history papers that relate to issues of public interest and to public-interest papers that reference history. Typical topics might relate to accounting's role in increasing accountability and transparency in democratic societies and how the public interest has been served or impaired historically by the actions of accounting practitioners. Authors of accepted papers will be urged to submit their work to the journals of the two sponsoring organizations – the *Accounting Historians Journal* and *Accounting and the Public Interest*.

Papers should be submitted by June 1, 2004 in electronic form only, prepared using Microsoft Word. Papers should be e-mailed to:

History

Professor Richard Fleischman
c/o Department of Accountancy
John Carroll University
University Heights, OH 44118
(fleischman@jcu.edu)

Public Interest

Professor C. Richard Baker
c/o Department of Accounting & Finance
University of Massachusetts – Dartmouth
North Dartmouth, MA 02747
(rbaker@umassd.edu)

For further information, contact either Dick Fleischman at 216-397-4443 or Richard Baker at 508-999-9243.

THE ACADEMY OF ACCOUNTING HISTORIANS

APPLICATION FOR 2003 MEMBERSHIP

Individual Membership: $45.00
Student Membership: $10.00

Name: (please print) ______________________

Mailing Address: ______________________

City: ______________ State: ______________

Zip Code: ______________ Country: ______________

Accounting History Area of Interest: ______________________

____

Phone: ______________ Fax: ______________

E-mail: ______________________

Method of Payment: /___/ check enclosed

/___/ Mastercard /___/ VISA

Card Number: ______________________

Expiration Date: ______________________

Signature: ______________________

Mail to: Mrs. Kathy H. Rice
The Academy of Accounting Historians
The University of Alabama
Box 870220
Tuscaloosa, AL 35487
USA