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Research on the Evolution of Accounting Thought and Accounting Practice

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THE ACCOUNTING HISTORIANS JOURNAL

Semiannual Publication of
The Academy of Accounting Historians

Volume 16, Number 1 **June 1989**

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GUIDELINES ON RESEARCH

1. Manuscripts should provide a clear specification of the research issue, problem and/or hypothesis being addressed, an explanation of the derivation of the issue and a plan to address these.

2. Authors should develop a statement about the method employed in the research, including a full indication of the extent and the manner in which the methodology is used and the degree to which the research plan is achieved by means of the method. Such a statement should include a specification of the original materials or data collected or employed and a statement of the rationale employed in selecting the source material(s). A description of the evidential data used in conducting the final phases of the evaluation and which support the reported findings should be clearly stated.

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6. A conclusion/interpretation of the research must be stated so as to be understood as consistent with the objective, plan and data used in the study. The finding(s) should be clearly 'tied back' to the problem specified in the research and emphasize the relevance to contemporary practice, education and/or research and policy issues as appropriate. Implications of the study for future research should be stated.

7. Purely descriptive papers continue to be of importance but must be carefully and completely developed and be based upon original materials as principal sources.

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CANADA'S ACCOUNTING ELITE: 1880-1930

Abstract: This paper provides an analysis of "elite" accounting practitioners during the formative years of the Canadian accounting profession (1880-1930). The social characteristics of this group in comparison with the Canadian population and the links between the accounting elite and other elite groups in society are used to evaluate the extent to which the profession achieved democratic ideals of access and social mobility for all members of society. The operation of the accounting profession as a democratic institution is argued to be an important aspect of the profession's claim to serve the public interest.

The professions have earned a place of privilege in western societies. They have gained legislative recognition, and often protection, of their occupational domains from the state. They also have been given rights of self-government within a narrowly defined sphere in recognition of the difficulties experienced by laymen in evaluating the quality of professional practice. The powers exercised by the professions have lead observers such as Gilb [1966, 1981] to characterize them as "private interest governments." In the same way that public governments act to translate a society's values (or sub-set of those values) into law and an authoritative allocation of resources, the professions act to create and enforce laws (eg. licensing and ethics), to impose taxes (eg. professional dues) and to provide access to market opportunities (eg. areas of restricted practice) and positions of political power (eg. executive positions in professional associations). The privileges granted to the professions by society carry a responsibility, meeting this responsibility justifies the continuation of those privileges.

The professions' place in society is justified by claims that they serve the public interest. Within liberal democracies the

This work has been supported by grants from the D.I. McLeod Fund, the Advisory Research Committee and Principal's Development Fund, Queen's University. The research assistance of Kathy Klaas and Lynn MacDonald on this project is gratefully acknowledged. The paper has benefited from the constructive criticism of Tony Dimnik, Norm Macintosh, Dean Neu and the *Journal's* reviewers.

concept of the public interest has two implications for the professions. First, it implies that practitioners will meet the needs of *individual* clients within the norms of professional practice. This aspect of the public interest underlies confidentiality rules and the concern that all members of society should have access to professional services (eg. the Hippocratic Oath). It is also presumed that practitioners will limit themselves to areas in which they are technically competent and will ensure that the highest professional standards are followed. The public interest is thus served through the competent performance of socially valued skills equally available to all members of society.

Second, the public interest concept implies that the professions should be open to all members of society with the ability and desire to gain the necessary skills. The professions are seen as an important medium for social mobility [eg. Giddens, 1973; Parkin, 1979], they provide the career paths which allow individuals to achieve their potential in society. It is recognized, however, that in any society characterized by a complex division of labor and bureaucratic organizations all individuals will not be equal in wealth, status or power. Michel's [1958 [1911]] "Iron Law of Oligarchy" assures that the overall direction and policy will be set by an elite who occupy the "command posts" [Mills, 1956] of the profession. Most democratic theorists accept the existence of elites as a functional necessity [eg. Lipset and Bendix, 1959; but see Bachrach, 1967] but, to paraphrase Thomas Jefferson, require that elites should represent an aristocracy of achievement based on a democracy of opportunity. The public interest is thus also served through the provision of opportunities for individuals to advance their status in society through membership in a profession.

This paper focuses on the latter issue and presents an analysis of elite practitioners during the formative years of the accounting profession in Canada (1880-1930). Drawing on the theory of democratic elitism [cf. Bachrach, 1967; Prewitt and Stone, 1973], accountancy may be said to be a democratic institution, and, therefore, fulfill its responsibility to the public interest in the second sense described above, if three conditions are met. First, all members of society must have the opportunity to become an elite member of the profession. This implies that there should be no systematic biases in recruitment to the profession. The study of elites provides indirect evidence on this requirement by demonstrating the existence of ascriptive criteria affecting individual achievement in the profession. If these criteria are public knowledge, self-selection to the profession will bias recruitment patterns.

The study of elites, however, provides direct evidence on a second requirement that all social interests be represented within the elite. As Porter [1957] has noted, the study of elites "is an attempt to discover the principles on which a social system allocates certain types of individuals to . . . positions of power and, thereby, denies power to others." Under ideal conditions one would expect that individual attributes unrelated to the instrumental performance of a task would be unrelated to success in that field of endeavor. It has been argued that this should be particularly true in the early years of the development of industrial economies when entrepreneurial activity is most prevalent and highly rewarded [Kaelble, 1981]. It is clear, however, that certain criteria such as gender, religion or ethnicity have and do affect the career success of individuals. By examining the social characteristics of elite accountants, the non-instrumental bases for stratification and occupational closure [cf. MacDonald, 1985] of the profession can be identified.

Finally, a third criteria for evaluating the profession's service to the public interest is to determine the extent to which the elite of the accounting profession is independent of elites in other sectors of the economy, and thus able to exercise "checks and balances" on each other. While the concept of independence of auditors is well established in the accounting literature, this criterion extends the profession's responsibility to that of remaining independent of larger social interests which might influence the profession's institutional structure or practices.

The paper is organized as follows. The first section describes the sample selection procedures and method of analysis to be followed. This is followed by a three-way comparative analysis between (1) the Canadian accounting elite, (2) the Canadian (non-accounting) social elite and (3) the general population (where applicable). This analysis covers education and careers, ethnic and religious affiliation, and political preferences and offices, and social and service club memberships. The paper concludes with a discussion of the results.

METHOD

While the *concept* of an elite is established in the sociological literature, the *operationalization* of the concept has been problematic [cf. Giddens, 1974; Moyser and Wagstaffe, 1987]. In essence, the problem of operationalization concerns (1) establishing the boundaries of the functional or institutional sphere for which an elite is to be identified and (2) identifying specific individuals within this sphere who qualify as members of the elite. For example, in Porter's [1957] classic study of the Canadian economic elite, the economic sphere was defined as 170 "dominant" corporations identified by their control of assets and market share in their respective industries; the Canadian economic elite was then identified as those directors of the dominant corporations resident in Canada. Both of these aspects of Porter's definitions have been challenged. Ashley [1957] suggests that the dependence of economic activity on the banking industry and the dense network of interlocking directors between the banks and other sectors of the economy is such that the directors of banks alone define the economic elite. Pahl and Winkler [1974] have also suggested that the key decision-makers in corporations are the members of the executive committees and only these members should be considered part of the elite [cf. Heap, 1974, for other definitional problems in Porter's work].

The operationalization of an "accounting elite" is no less beset with difficulty. One possibility is to use an inventory of institutional positions in order to define the elite analogously to Olsen's [1980] study of *The State Elite in Canada.* It would be possible to identify directors of professional associations, senior partners in accounting firms and accounting educators as part of the elite. This approach, however, would omit accountants in industry and the public sector, and would ignore accountants in public practice who were not members of accounting associations. The latter oversight would be particularly serious in the early years of the profession prior to its consolidation.

It is also difficult to use work roles to establish basic boundaries on the sphere of influence as may be possible in professions such as medicine or law. Accounting has developed licensing and certification processes relatively recently and over the last hundred years the occupation of accountancy has referred to a shifting task domain. For example, much of the early accounting work focused on bankruptcies but has grown to include and be refocused on auditing, taxation and management advisory services [cf. Jones, 1980]. The term "accountant" thus is a linguistic category with a shifting task referent; in part any study of the evolution of accounting is a study of the semantics of occupational labels. It would bias any study of the profession to impose *a priori* constraints on the task domain into which this term was mapped at any point in history [see Stewart *et al.*, 1980, for an extended discussion of this issue].

The resolution of these issues adopted in this study is to use the methodology of Mills [1945] and Lipset and Bendix [1962] to identify the elite. Their approach is to recognize that elite status is a complex mixture of social prestige, wealth and power. The elite is not, therefore, restricted to any set of institutional positions; rather, it is recognized that allocative and authoritative dominance may also be exercised informally. They rely on the complex social judgments of the editors of biographical dictionaries as the basis for the identification of the elite. These judgments may then be validated by analysis of the elites' standing on objective but partial measures of power and privilege (eg. institutional and market positions). Subclassifications of the elite into functional areas can be accomplished based on the biographical data relying on the historical contingent terms in which individuals position themselves within society. Lipset and Bendix [1962] provide a comparison of this method with other approaches to elite identification which indicates its validity.

The subjects of this study are those individuals listed in *Canadian Who's Who* [1910 and/or 1936 editions] and/or *Who's Who in Canada* [1910 - 1930 editions]. *Canadian Who's Who* was first published in 1910 by the Times Publishing Company of London, England. In 1932, the copyright to this title was purchased by Alfred Leonard Tunnel and, in 1936, in association with Sir Charles George Douglas Roberts, produced a second edition. The 1936 edition incorporated *Canadian Men and Women of the Time* (Edited by Henry James Morgan) which had been published in 1898 and 1912. *Who's Who in Canada* was published by International Press Ltd. These data bases are widely used as a means of gathering data on the elite of Canadian society [eg. Porter, 1967; Clements, 1975; Olsen, 1980].

Both listings include the major political, industrial, academic, artistic, and religious figures of the time in addition to numerous individuals who had been nominated to them (in the case of *Canadian Who's Who*) or whose name had appeared in major newspapers or magazines (in the case of *Who's Who in Canada*). The listings are not identical, but together provide a representative cross-section of Canada's social elite. It must be noted that both sources had a policy of having individuals verify the information included under their name. While this adds to the reliability of the data, it allows for a self-selection bias; individuals failing to confirm or provide information were not included. This feature may explain the absence from this list of such prominent accountants as George Edwards (although other members of his firm were included) and John Hyde and E.R.C. Clarkson (although their sons are included and their entries note that their fathers were prominent Chartered Accountants). Other prominent names (such as Samuel Harman, president of the ICAO at the time of incorporation) are missing because they were deceased at the time of compliation of the first volume in 1898. The list produced thus provides a representative sample and not a comprehensive listing of elite accountants over the first fifty years of the profession's existence.

Two samples from these data bases are used in the analysis. The first sample uses all individuals listing accounting or auditing as part of their biography (this may be as an occupation or as part of their training). This selection criteria produced seventy-nine (79) names which are listed in Appendix A. The second sample consists of a random selection of non-accounting listings. For convenience, this sample consisted of the first non-accounting listing appearing on the same page as an accounting listing (the non-accounting sample is thus matched for year of listing). This selection criteria also produced seventy-nine (79) names. Where appropriate, comparison data on the general population has been drawn from the 1891 or 1931 Census of Canada.

THE ACCOUNTING ELITE'S POSITION IN THE PROFESSION

The method of identifying the accounting elite in this study is essentially reputational. It is a necessary starting point to validate this definition of the elite by analysis of this group's position within institutions and the market place (a further validation would require evidence of the decision-making roles taken by this group, but such information is as yet unavailable). If this method is valid, this group should include, for example, the executives of accounting associations and senior partners of the larger accounting firms.

The group identified as the accounting elite in this paper were significantly involved in organized professional activities. Among the 79 accountants, 66 were CAs (23 were FCAs), 1 was a member of the Society of Accountants and Auditors, and 1 was a member of the Corporation of Public Accountants of the Province of Quebec (CPAPQ); 11 indicated no memberships in professional bodies. Among the CAs, 3 listed additional memberships in the Canadian Society of Cost Accountants (CSCA), 3 in the Society of Accountants and Auditors, 4 in the National Association of Cost Accountants (USA), and 1 in the CPAPQ. The list includes 25 Presidents of various CA Institutes, 1 President of the CPAPQ and 1 President of the CSCA. A further 17 had served on the executive board of professional associations.

Among the accounting group, 18% were employed in industry, 3% in education, 4% in the civil service, 75% in public accounting (2 in other pursuits). By comparison, among the non-accounting groups, 21% were in industry, 15% in education, 17% in civil service and 47% in other pursuits (primarily professions). Among the public accounting group, 45% were partners in the large public accounting firms while the remainder were in small partnerships. Particularly prominent among the large firms are P.S. Ross and Company of Montreal with six partners listed and the Clarkson partnerships (names varies over this period) also with six partners listed. All of the (then) major public accounting firms are represented in the elite.

The accounting sample, based on these data, appears to include those individuals in key positions within both professional associations and accounting firms. It appears reasonable to use this group as a sample of the elite in the profession. The remainder of this paper will examine the social characteristics of this sample and their position in society compared with the general population and the elite in other sectors of Canadian society. In all cases, the implicit hypothesis is that the elite will be representative of Canadian society if recruitment to these positions reflects democratic ideals.

Birthplace and Religious Affiliation

The birthplaces of the two elite groups and the Canadian population as a whole are listed in Table 1. For comparison, census data for 1931 and 1881 are included. The 1931 census data reflect the population for the time period in which the elite were identified. The 1881 census data reflect the population at the likely period of birth of the 1931 elite (this follows the assumption of Clement, [1975], but note that this comparison assumes either low rates of immigration or the slow integration of immigrants into society). Neither the accounting nor the non-accounting groups are representative of the population as a whole regardless of the census year used for comparison. The proportion of native born among the non-accounting elite (75.9%) is roughly equal to the proportion of native born in the population (77.6%). The accounting elite has a lower proportion of native born (57.5%) and has an unusually high proportion of individuals born in Great Britain (England, Scotland or Ireland) compared with either the population as a whole or the non-accounting elite. Ontario born individuals are overrepresented in both elite groups, while Quebec born individuals are under-represented. This finding is consistent with Porter's [1957] study of the economic elite of Canada in the mid 1950s which found that in spite of the rough equality of numbers between those with English and French backgrounds (the two dominant cultures in Canada at the time of Confederation), those of Anglo-Saxon origin dominated the elite.

Cook and Brown [1974] note that the industrialization of Quebec did not advance the social status of francophones in the same way as anglophones. The background of French immigrants led them to develop small scale manufacturing based on craft skills. The social values of this group, reflecting Catholic teachings, did not favor rapid capital accumulation and thus the investment funds in the province tended to remain under anglophone control. Observers of the growing anglophone economic dominance of this province lamented the lack of economic leaders among the francophone population but inspite of these concerns, few francophones achieved positions of economic power [Cook and Brown, 1974: 131-135].

Table 1
Percentage of Distribution of Birthplace

Place of Birth	Elite Accounting	Elite Non-Accounting	1931 Census of Canada	1881 Census of Canada
British Columbia	0	1.20	2.39	0.8
Prairie Provinces	0	4.82	12.55	1.8
Ontario	36.25	34.94	26.93	34.0
Quebec	18.75	15.66	25.98	30.8
Maritime Provinces	2.50	19.28	9.73	18.8
Sub-total for Canada	57.50	75.90	77.58	86.20
England	23.75	9.64	7.19	3.9
Ireland	7.50	2.41	1.04	4.3
Scotland	10.00	4.82	2.70	2.7
Sub-total for Great Britain	41.25	16.87	10.93	10.90
Other	1.25	7.23	11.31	3.0

Chi-Square = 28.1 df = 8 $p<0.05$ accounting elite vs non-accounting elite
Chi-Square = 107.3 df = 8 $p<0.05$ accounting elite vs 1931 census
Chi-Square = 23.2 df = 8 $p<0.05$ non-accounting elite vs 1931 census
Chi-Square = 115.2 df = 8 $p<0.05$ accounting elite vs 1881 census
Chi-Square = 23.4 df = 8 $p<0.05$ non-accounting elite vs 1881 census

The skewed ethnic origins of the accounting elite becomes particularly noticeable when compared with other levels of the occupational status hierarchy within accountancy. The 1931 Census provides data on th country of origin of two groups within accountancy: the lower level bookkeepers (and cashiers) and the higher status group of accountants and auditors. The degree of detail of origins reported in Table 1 is not available on these groups in the Census data. Table 2 provides a comparison of the ethnic origins across bookkeepers, accountants and the accounting elite. As this Table shows, at increasing levels of this status hierarchy, there is an increasing proportion of the group born in Great Britain and a decreasing proportion born in Canada. Although this trend is marked, "nativism" does not appear to have been a major issue in Canada unlike Miranti's (1988) observations of New York State.

Table 2
The County of Origin of Accountants, Bookkeepers and the Elite

Country of Origin	Percentage of Accounting Elite	Accountants	Bookkeepers
Canada	57.5	59.7	73.3
Great Britain	41.3	35.1	21.1
Other	1.2	5.2	5.6

The data on birthplace and religious affiliation are not independent as different regions tend to be dominated by particular religions. The relationship between elite membership and religious affiliation does, however, provide additional information on the ascriptive criteria affecting membership in the elite. Both the accounting and non-accounting elites show significant differences in religious affiliation compared with the population as a whole, particularly the high proportion of Anglicans. The two elite groups are only marginally different with the accounting elite being more homogeneous than the non-accounting elite.

In comparing Table 1 and 3 it may be noted that there is a disparity between recruitment from Quebec (which is predominately French-Canadian, francophone and Roman Catholic) and the proportion of Roman Catholics in the accounting sample. It may be inferred from this discrepancy that accountants were selectively recruited from the anglo-saxon minority in that province.

Table 3
Percentage Distribution of Religious Affiliations

Religion	Elite Accounting	Elite Non-Accounting	1931 Census of Canada
Anglican	41.67	34.29	15.76
Baptist	4.17	10.00	4.27
Presbyterian	15.28	20.00	8.39
Protestant	8.33	4.29	0.23
United	16.67	15.71	19.44
Sub-total for Protestant Sects	86.12	84.29	48.09
Catholic	6.94	14.29	41.30
Jewish	0	1.43	1.50
Other	6.94	0	9.11

Chi-Square = 13.8 df = 7 $p<0.06$ accounting elite vs non-accounting elite
Chi-Square = 295.3 df = 7 $p<0.05$ accounting elite vs census
Chi-Square = 124.5 df = 7 $p<0.05$ non-accounting elite vs census

Political Affiliations and Political Office

The political affiliations of those members of the elite stating a preference is shown in Table 4. Although both elite groups are similar in the large proportion claiming to be independent, they differ markedly in their affiliation to the two main parties (a rough cross-cultural comparison with the USA would equate the Conservatives and Republicans and the Liberals and Democrats). The accounting elite has strong Conservative allegiances while the non-accounting elite overall favors the Liberal party. As Porter [1967] notes, the political spectrum covered by these parties in Canada is narrow and skewed to the right. Both parties are linked to the business community and political affiliations of this nature are unrelated to such things as memberships on Boards of Directors. It may be noted that

Table 4
Percentage Distribution of Political Affiliations

Affiliation	Elite Accounting	Elite Non-Accounting	1930 Federal Election Results by Ridings Held
Conservative	48.60	25.70	55.90
Liberal	20.00	51.40	35.90
Independent	31.40	20.00	1.20
Other	0	2.90	6.90

Chi-Square = 612 df = 3 $p<0.05$ accounting elite vs election results
Chi-Square = 20.5 df = 3 $p<0.05$ accounting elite vs non-accounting elite
Chi-Square = 252 df = 3 $p<0.05$ non-accounting elite vs election results

none of the accountants claimed affiliation with the "other" political parties which were represented in the legislature. These parties represented agricultural interests (eg. the United Farmers Party) which were not represented among the elite accountants.

Table 5 displays the political offices held by each group. There is no statistically significant difference between the two groups but there is evidence that the accounting group tends to be active at a lower level, i.e. focused on more narrow constituencies, than the non-accounting group. The high proportion of accountants on Boards of Trade suggests an indirect influence on, at least, municipal politics. Weaver [1975], for example, notes the strong influence of Boards of Trade on civic reform during this period.

Table 5
Political Office

	Percentage of Elite	
	Accounting	**Non-Accounting**
Board of Trade (or Commerce)	25.3	8.9
Political Party Office	3.8	3.8
Alderman	2.5	0
Reeve/Mayor	8.9	5.1
Member of the Provincial Legislature	5.1	6.3
Member of Parliament	0	1.3
Member of Senate	0	2.5

Chi-Square = 9.4 df = 6 NS

Directorships

Acheson [1973:189] argues that between 1880 and 1910, Canada shifted from an economy of small family concerns or partnerships to one in which joint stock companies were the dominant organizational form. One measure of accountants' roles in controlling these enterprises is the extent to which they had gained seats on the Boards of Directors. On average, members of the accounting elite held 1.562 directorships while the non-accounting elite on average held 1.651 directorships (NS). The types of organizations in which each group held directorships is summarized in Table 6. There is no significant difference in the rates of participation in the types of organizations for which each group served as directors. It may be noted that 42.9% of directorships held by the accounting elite and 54.4% of directorships held by the non-accounting elite were concerned with non-profit organizations. These groups were clearly involved in leading roles in all the major institutions of society.

Table 6
Directorships

Type of Organization	Percentage of Directorships Reported: Accounting Elite	Non-Accounting Elite
Charity/Religious	15.3	13.8
Finance/Banking	12.2	14.7
Manufacturing	30.6	23.3
Utility/Transportation	10.2	6.9
Natural Resource	4.1	0.9
Professional	5.1	12.1
Other*	22.5	28.5

* Primarily hospitals
Chi-Square = 8 df = 6 NS

Social and Service Clubs

Both elite groups were members of numerous social and service clubs. These clubs appear to have serve two functions [Clements, 1975]. First, they were a meeting place where deals could be struck and information exchanged. Second, and perhaps more importantly, membership in these clubs served as signals about the social characteristics and position of individuals. The accounting group, on average, belonged to 0.654 service clubs and 3.086 social clubs while the non-accounting elite, on average, belonged to 0.535 service clubs and 2.488 social clubs. In neither of these cases is there a statistically significant difference between the two groups. The three most common social and service clubs joined by each of the elite groups are listed in Table 7. Based on the complete list of memberships, there are no significant differences for membership by the elite groups in either social clubs (chi-square = 14.8 df = 13 NS) or service clubs (chi-square = 10.4 df = 8 NS).

Education

The data sources used in this study provide a listing of the educational institutions attended by each individual. These institutions were categorized in hierarchal order as public schools (1), high school and private commercial schools (2), and universities and colleges (3). The average educational attainment of the accounting elite on this scale was 1.872 while the

Table 7
Social and Service Club Memberships

Service Clubs	Percentage of Elite Reporting Membership* Accounting	Non-Accounting
Mason	35.4 (1)	31.6 (1)
Rotary	13.9 (2)	5.1 (3)
Kiwanis	5.1 (3)	1.3
IOOF (Odd Fellows)	1.3	7.6 (2)
Social Clubs		
Canadian	20.3 (1)	11.4 (1.5)
Montreal	16.5 (2)	6.3 (4.5)
St. James	11.4 (3)	7.6 (3)
University	3.8	11.4 (1.5)
Manitoba	3.8	6.3 (4.5)

see text for a statistical comparison
* the bracketed numbers give the rank of each club in terms of the percentage of the elite reporting membership.

educational attainment of the non-accounting elite was 2.566 ($F = 28.3$, $p < 0.01$). The educational level of the accounting group to 1910 was not significantly different than the group listed in the 1930's (1.875 vs 1.871 NS). The non-accounting group, however, showed some increase in the average education over this period (2.25 vs 2.642, $F = 3.6$, $p = 0.06$). Acheson [1973:200] provides similarly classified data for the industrial elite of 1885 and 1910 which yield values of 1.42 and 1.9 respectively. These data suggest that accountants' education may have initially exceeded that of clients but that they soon found themselves at a disadvantage.

Accouting education was available in universities in Canada as early as 1913 and the Chartered Accountants began a program of correspondence courses in conjunction with Queen's University in 1920. The senior members of the profession, however, were more likely to have gained their training from commercial schools and apprentice programs. The state granted accounting associations the right to certify the competence of their members but has never been involved in setting minimum qualifications. These forms of education allow selection of candidates to be based on the particular values of accounting firms or associations. Access to designations such as the state administered CPA in the United States was not an option in Canada.

Gender

Both elite groups in the sample were predominately male. The accounting elite, however, had no female members while 7% of the non-accounting elite were women ($F = 6$ $p < 0.05$). The 1931 Census provides evidence that the gender bias evident at this level of the occupational status hierarchy was not as extreme at other levels. Among the accountants and auditors category in the 1931 Census 3.5% were women, while among the bookkeepers and cashiers category 42% were women. The importance of gender to success may be indirect. The service and social clubs to which the elite belonged tended to be exclusively for men (eg. the National, York, Toronto, Montreal, etc. among social clubs and the Masons etc. among service clubs). This reflected a general bias in society at this time and created obstacles to the integration of women into the elite.

DISCUSSION

The results presented above may be summarized by distinguishing between the attributes of the elite groups (gender, education, birthplace, religion and political preferences) and their achievements (political offices, directorships, service and social club memberships). The attributes are regarded as relatively enduring qualities of individuals upon which social selection mechanisms may be based. The achievements represent the institutional positions to which individuals aspire and are selected. Grouped in this manner, the results comparing the accounting and non-accounting elites show a striking pattern; on all attributes these groups differ, but in terms of achievements they are the same (see Table 8).

Table 8
Summary of Comparisons Between the Accounting and Non-Accounting Elites

Variable	Comparison of Accounting and Non-Accounting Elite
Gender	exclusively male
Education	less educated
Birthplace	more foreign born, particularly from U.K.
Religion	more homogeneous, more Anglican
Politics	more likely to support the Conservative party
Political Office	No significant difference in number or type of offices
Directorships	No significant difference in number or type of directorships
Service Clubs	No significant difference in number or type of clubs
Social Clubs	No significant difference in number or type of clubs

This pattern suggests that accountants have successfully integrated into Canada's social elite. They participate in the social networks which allow the exchange of information and the development of trust between groups in different functional areas. They have also taken their place in the political and economic offices which allow them to influence economic development and policy. At the same time, however, it is clear that the accounting group was evolving according to social criteria statistically different from that of the social elite in general. It is to these criteria that the discussion now turns.

The differences between the accounting elite and other groups noted in the analysis above reflect the social context in which accountants sought to improve the status of their occupation. In the late 1800s, accountancy was disorganized, subject to frequent scandals and generally held in low repute. The early accounting associations sought to improve their position in the profession by differentiating themselves from the mass of practitioners. The exclusiveness of the early associations was in part based on competence but the effectiveness of this program of status enhancement also was due to the social characteristics of members.

The period examined in this article was one of great instability in Canada; a period which Cook and Brown [1974] characterize as "The Great Transformation." The formal creation of the nation in 1867 was, at the beginning of the period, still a part of living memory and could not be taken for granted. It also was not clear what form the Canadian identity would take as the nation developed. The traditional ties to England were strained by the influx of immigrants from Europe and by the growing economic influence of the United States. The relationship between French and English speaking groups was tense particularly at times when Canada was called upon to support wars (the Boer and First World Wars) which francophones regarded as British concerns. Canada was becoming an urban nation during this period. In the cities, social inequalities were magnified and the control of traditional institutions over society were weakened [cf. Bothwell *et al.,* 1987]. All of these factors created circumstances in which social characteristics were valued as signals of individuals' values and beliefs, and as indicators of how they might behave in the face of changing social conditions.

In many cases, social characteristics also signalled technical competence. Porter [1985] has noted that the Canadian educational system has been notoriously slow in adapting to changing occupational demands. As a consequence, in many technical areas (eg., architects, physical scientists, physicians and surgeons) recent immigrants form a high proportion of qualified practitioners. In accounting, given the type of qualifications required, Great Britain was the natural recruiting ground. This was supported during this period by the dominance of British foreign investment [McDougall, 1958], creating a natural flow of personnel along with assets. As well, British investors may have preferred auditors and accountants of known quality. It may be noted that when Queen's University became the focal point of Canadian accounting education in 1920, it went to England to recruit the required faculty members.

The United States usurped England's place of privilege as the main source of funds in the early 1920s. There is some evidence that this changed the focus of the profession from the UK to the USA. For example, when the CSCA adopted examination and training requirements in 1927, it followed the USA example rather than the UK in the content of its curriculum [Allend, 1982]. It would be worthwhile testing the hypothesis that the recruitment of non-native born accountants after 1930 focused increasingly on the United States.

In spite of the importation of technical experts from Great Britain, the accounting elite lagged behind the educational levels achieved by other members of Canada's elite. The evidence presented above suggests that this gap was widening over the study period. The education of accountants was clearly an issue in the profession during this period. In 1880, bookkeeping was taught at the public school level with more advanced education available privately or by experience. By 1913, largely through the efforts of the Chartered Accountants, it was possible to earn a Bachelor of Accountancy degree through the University of Saskatchewan [Editorial, *Canadian Chartered Accountant*, V.3, 1913/1914:50] and by 1920, the education program for all Chartered Accountants was administered through Queen's University [Creighton, 1984:106-108]. The rapid advancement of educational requirements in accountancy appears to be related in large part to attempts to differentiate groups of practitioners [Richardson, 1987], but may have also been related to the elite's perceived "under education" compared with their social peers. The relative lack of educational criteria on which accountants could differentiate themselves resulted in a greater emphasis on social characteristics.

Canada is an ethnically plural society in which many cultures are represented. The social elite, however, are primarily English speaking of British descent. This is particularly true of those in positions of economic power [Porter, 1957]. The dominance of immigrants from Great Britain and native-born from outside Quebec reflects this bias among the accounting elite. One piece of evidence that this bias affected more than just the elite of the profession is the formation of the Institute of Accountants and Auditors of the Province of Quebec (IAAPQ) in 1912, to represent the interests of French-speaking accountants in Quebec. This group successfully argued for incorporation on the basis of the lack of francophone accountants in existing associations [Editorial, *Canadian Chartered Accountant,* V.3, 1913/1914:119].

The differential representation of birthplaces and cultures also is reflected in the religious affiliations of the accounting elite. The dominance of Anglicans reflects in part the recruitment of men from Great Britain, but also captures the differential emphasis of protestant education systems on commercial education when compared with catholic school systems (the institutional reflection of Weber's *Protestantism and the Spirit of Capitalism*). The low percentage of Jews in the accounting elite appears to generalize to the organized profession. Creighton [1984:301-302] notes that Jewish accountants practiced exclusively with Jewish clients and experienced difficulty integrating into the organizational hierarchy of the ICAO. It was not until the mid-1960s that Jewish accounting firms began to play a significant role in the market place.

It is noteworthy that on the social characteristics where there are differences between the accounting and non-accounting elite, the accounting elite shows an exaggeration of the characteristics which differentiate the non-accounting elite from the Canadian population as a whole. Although they differ statistically, the two elite samples share the ascriptive criteria used to achieve social closure. The data presented does not indicate whether or not these criteria assured simply that the traits of the accountants would be homogeneous or also ensured the intergenerational stability of accountancy. There is evidence that the latter may also be true, for example, the larger firms [eg. Ross and Clarkson] were, by 1930, controlled by second generation accountants (sons taking over the practices of their fathers) and the requirement of apprenticeships with low or no salary restricted entry to those families with financial resources to support their sons through their period of training. These data suggest that a study of intergenerational mobility in accounting would also be worthwhile.

To return to the three issues in the introduction:

1. accountancy in its formative years in Canada does not appear to have been open to all members of society, factors such as gender [cf. Richardson and McKeen, 1988], religion and ethnicity affected the ability to enter the professional associations, gain an accounting education and achieve success (elite status) in the profession;
2. the elite of the profession does not represent the full array of social interests, the elite are homogeneous with respect to social backgrounds and contemporary experiences and, therefore, are unlikely to advance the general interests of society or potential accounting practitioners;
3. the elite of the profession is significantly linked with other sectoral elites, both functionally (eg. through directorships) and socially (eg. through clubs), members of the accounting elite are not independent in this sense.

CONCLUSION

Recent sociology of the professions and accountancy, in particular, has argued for the need to examine the emergence of professional institutions and the development of professional technologies in historical context [Larson, 1977]. This follows from the observation that ahistorical research tends to reify current social arrangements and to portray them as functional necessities. Historical research corrects this tendency by exploring the problematic development of the professions and identifying the alternatives foregone in arriving at current structural arrangements. This paper focuses on the formative years of the accounting profession in Canada (1880-1930). It attempts to enrich our understanding of the forces shaping accountancy in Canada by examining the social characteristics of key decision-makers in the profession during this period. These characteristics provide evidence about the interests shaping the structure of the profession.

The data presented in this paper demonstrate the integration of the accounting profession into Canada's social elite by the 1930s. The characteristics of this group of elite accountants suggests that success in the profession during this period was based on ascriptive criteria which ensured the homogeneity of the elite. Specific incidents in the history of the profession were cited to argue that these criteria affected the rank-and-file of the profession and not just a select group. The data thus suggested that the integration of accountancy into the overall pattern of social control by sectoral elites had significant implications for who would be allowed to practice and, by implication, the way in which accountancy was practiced.

REFERENCES

Acheson, T.W., "Changing Social Origins of the Canadian Industrial Elite, 1880-1910," *Business History Review*, V47, N2 (1973):189-217.

Allen, J.N., *History of the Society of Management Accountants of Canada*, Hamilton: SMAC (1982).

Ashley, C.A., "Concentration of Economic Power," *Canadian Journal of Economics and Political Science*, V23, N1 (1957).

Bachrach, P., *The Theory of Democratic Elitism*, Boston: Little Brown (1967).

Bothwell, R., Drummond, I., English, J., *Canada 1900-1945*, Toronto: University of Toronto Press (1987).

Boyd, M., Goyder, J., Jones, F. E., McRoberts, H. A., Pineo, P. C. and Porter, J., *Ascription and Achievement: Studies in Mobility and Status Attainment in Canada*, Ottawa: Carleton University Press (1985).

Clements, W., *The Canadian Corporate Elite: Economic Power in Canada*, Toronto: McClelland and Stewart (1975).

Cook, R. and Brown, R. C., *Canada, 1896-1921: A Nation Transformed*, Toronto: McClelland and Stewart (1974).

Creighton, P., *A Sum of Yesterdays*, Toronto: Institute of Chartered Accountants of Ontario.

Giddens, A., "Elites in the British Class Structure" in Stanworth, P. and Giddens, A. *Elites and Power in British Society*, Cambridge: Cambridge University Press (1974).

Giddens, A., *The Class Structure of Advanced Societies*, New York: Harper & Row (1984).

Gilb, C. L., *Hidden Hierarchies*, New York: Harper and Row (1966).

Gilb, C. L., "Public or Private Governments?" in Nystron, P. C. and Starbuck, W. H. (ed.) *Handbook of Organizational Design*, Oxford: Oxford University Press (1981).

Heap, J., *Everybody's Canada*, Toronto: Lorimer (1974).

Jones, E., *Accountancy and the British Economy 1840-1980*, London: Batsford (1981).

Kaelble, H., *Historical Research on Social Mobility*, London: Croom Helm (1981).

Larson, M. S., *The Rise of Professionalism*, Berkeley: University of California Press (1977).

Lipset, S. M. and Bendix, R., *Social Mobility in Industrial Society*, Berkeley: University of California Press (1962).

MacDonald, K. M., "Social Closure and Occupational Registration," *Sociology*, V19, N4 1984:541-556.

McDougall, D. M., "The Economic Growth of Canada and the United States, 1870-1955," unpublished Ph.D. dissertation, Johns Hopkins University (1958).

Michels, R., *Political Parties*, New York: Free Press (1968).

Mills, C. W., "The American Business Elite: A Collective Portrait," *The Tasks of Economic History* (supplementary issue of the *Journal of Economic History*, December (1945):20-44).

Mills, C. W., *The Power Elite*, New York: MacMillan (1956).

Moyser, G. and Wagstaffe, M., *Research Methods for Elite Studies*, London: Allen and Unwin (1987).

Miranti, P. J., "Nativism and Professionalism: The Competition for Public Accountancy Legislation in New York During the 1890's," *Social Science Quarterly*, V69 (June 1988):361-380.

Olsen, D., *The State Elite*, Toronto: McClelland and Stewart (1980).

Pahl, R. E. and Winkler, J. T., "The Economic Elite: Theory and Practice" in Stanworth, P. and Gidden, A. *Elites and Power in British Society*, Cambridge: Cambridge University Press (1974).

Parkin, F., *Marxism and Class Theory*, New York: Columbia University Press (1979).

Porter, J., *The Vertical Mosaic*, Toronto: University of Toronto Press (1967).

Porter, J., "The Economic Elite and the Social Structure in Canada," *The Canadian Journal of Economics and Political Science*, V23 (1957).

Porter, J., "Canada: The Societal Context of Occupational Allocation" in Boyd *et al.* op.cit.

Prewitt, K. and Stone, A., *The Ruling Elites: Elite Theory, Power and American Democracy*, New York: Harper and Row (1973).

Richardson, A. J., "Professionalization and Intraprofessional Competition in the Canadian Accounting Profession," *Work and Occupation*, V14, N4 (1987):591-615.

Richardson, A. J. and McKeen, C. A., "Women Pioneers in Accounting in Canada Before 1930," Working Paper, School of Business, Queen's University, Kingston, Canada (1988).

Stewart, A., Prandy, K. and Blackburn, R. M., *Social Stratification and Occupations*, New York: Holmes & Meier (1980).

Weaver, J. C., "Elitism and the Corporate Ideal: Businessmen and Boosters in Canadian Civic Reform, 1890-1920" in McCormack, A.R. and Macpherson, I. (eds.) *Cities in the West*, National Muesuem of Man Mercury Series, History Division, Paper No. 10 (Ottawa, 1975):48-73.

APPENDIX A
THE ACCOUNTING ELITE 1880-1930*

1 Adams, Arthur William
2 Adams, Ernest Hall
3 Adamson, William James Thompson
4 Allen, Loftus Annesley
5 Anderson, John
6 Anscomb, Herbert
7 Apedaile, Joseph Leonard
8 Barber, George
9 Belanger, Aurelien
10 Bender, Joseph M.
11 Bennett, E. James
12 Blatch, George L.
13 Bronskill, Frederick George
14 Brown, Samuel G.
15 Carmichael, W.R.
16 Chambers, Norman G.
17 Clarkson, Geoffrey T.
18 Coulter, Thomas J.
19 Crawford, J.E.
20 Crehan, Maj. M.J.
21 Crowell, Harvey E.
22 Dalglish, K.W.
23 Dowie, Col. L.A.
24 Durnford, George
25 Dykes, R.F.
26 Fisk, Arthur K.
27 Fleming, C.A.
28 Gonthier, George
29 Gordon, Ltd. Col. H.D.L.
30 Guilfoyle, H.E.
31 Henderson, W.A.
32 Higgins, Fred P.
33 Hindsley, N.
34 Howson, Ernest J.
35 Hudson, J.D.
36 Jamieson, Henry Tomkinson
37 Jephcott, W.G.H.
38 Johnson, J.W.
39 Kennedy, Robert H.
40 Kerr, G.R.
41 Laporte, J.R.
42 McCannel, Donald H.
43 Maclachan, W.M.
44 Mapp, K.A.
45 Martin, Norman L.
46 McCannel, Donald A.
47 McClelland, D.M.
48 McDonald, George Cross
49 McLennan, F.D.
50 Mitchell, Alister F.
51 Molson, H deM
52 Mulholland, G.M.
53 Nash, Major A.E.
54 Neff, Arthur C.
55 Peckham, S.B.
56 Pettit, W.H.
57 Roberts, C.P.
58 Ronald, W.S.
59 Rooke, George C.
60 Ross, Brig. Gen. J.G.
61 Ross, J.W.
62 Russell, G.A.
63 Scott, G.W.
64 Scott, Charles S.
65 Shanon, C.A.
66 Shepard, A.B.
67 Stiff, F.J.
68 Sutherland, James B.
69 Thomas, D.S.
70 Thompson, W.H.A.
71 Thompson, J.C.
72 Thompson, W.G.
73 Tindale, Arthur S.
74 Turville, Frank P.
75 Wade, Osler
76 Webb, Lt. Col. H.J.
77 Whyte, Andrew
78 Wilson, J.
79 Winter, George E.

* All accountants listed in *Canadian Who's Who* (1st and 2nd Edition), *Who's Who in Canada* (1910 - 1930), and/or *Canadian Men and Women of the Times* (1889 and 1910).

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LEGISLATIVE HISTORY OF THE ALLOWANCE OF LIFO FOR TAX PURPOSES

Abstract: The legislative history of the allowance of LIFO for tax purposes is documented. The legislative process was structured around veto points of the law and yielded an examination of the political environment out of which the LIFO tax provisions emerged. LIFO provisions were analyzed relative to alternative tax options available to firms, administrative and judicial activities, overall tax legislation including tax rates, and general economic conditions. Production processes of firms lobbying for LIFO were examined and the views of academics and practitioners were incorporated. In addition to providing the basis for a regulatory event study by identifying the critical dates in the legsilative process, insight into the timing and choice of inventory accounting methods for financial reporting as well as for tax is gained.

INTRODUCTION

LIFO, the last-in, first-out inventory accounting method, has been a topic of interest to accounting researchers in several areas, including capital market research, financial statement analysis, inventory policy, taxation, and history. In one way or another, most of these research efforts have attempted to provide evidence on the general issue of whether the use of alternative accounting policies matters. Assuming it does, the next question is whether to allow managers to choose accounting methods or to impose uniform methods.

What makes LIFO such an appealing method to study in this area of research is the direct link between book and tax reporting which results from the statutory conformity rule. That is, LIFO may be used for tax purposes only if it also is used for financial reporting purposes. LIFO produces lower accounting

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income in periods of rising prices, but higher after-tax cash flows. There has been speculation that managers may forego higher after-tax cash flows in favor of higher reported earnings. This speculation motivated a number of researchers to assess the stock price behavior associated with firms' LIFO adoptions [e.g., Sunder, 1973; Ricks, 1982; Biddle and Lindahl, 1982]. The two opposing hypothesis were (a) the market can "see through" accounting income and will reward adoptors; (b) the market will penalize such adoptors. Unfortunately, such studies suffer from two major problems: (1) when do market agents become aware of a firm's decision to voluntarily switch to LIFO? and (2) how should the researcher control for confounding factors such as changes in earnings? While progress has been made in dealing with these problems [e.g., Stevenson, 1987; Biddle and Ricks, 1988], results presented in Dopuch and Pincus [1988] suggest that the use of an event date near the end of the year in which firms first announce that they have adopted LIFO may miss a large part of the potential market response to the event.

Speculation that managers forego tax savings under LIFO for higher reported earnings (and assets) also motivated researchers to attempt to identify the determinants of accounting choice [e.g., Abdel-khalik, 1985; Hunt, 1985; Lee and Hsieh, 1985; also see Chasteen, 1971]. There is some evidence that debt constraints may explain inventory choices, but little if any support that management compensation plans do. Recently, Dopuch and Pincus [1988] provided considerable evidence that inventory choice and tax savings are related. However, some nontax explanations also were supported, and data were not available to conduct tests to distinguish between the alternative explanations.

Somewhat concurrent with the development of these trends of research is the attempt to assess stock price effects of new laws and regulations impacting on firms' operating, financing, and investment decisions [e.g., Schipper and Thompson, 1983; Binder, 1985a; Madeo and Pincus, 1985; Pownall, 1986]. Obviously, a researcher interested in the impact of LIFO adoptions could conceivably assess stock price effects of legislative changes that led to the allowance of LIFO for tax purposes. For example, firms could be selected on the basis of such things as having previously adopted LIFO for book purposes, belonging to industries actively engaged in lobbying for LIFO, and/or having operating characteristics that suggest LIFO use would be beneficial for tax or other reasons. To the extent that such firms benefit more from LIFO relative to the market as a whole, stock prices at the time of key legislative events should reflect the capitalized value of the future tax benefits derived from using LIFO for tax purposes multiplied by the probability that a sample firm will in fact adopt LIFO.

There are, of course, problems in implementing such regulatory event studies. One set of problems concerns statistical analysis. Changes in the regulatory regime impact all firms at the same points in time, and firms most affected typically are from related industries. Hence, the researcher is not able to randomize the sample selection over time or across firms. Progress, however, has been achieved by applying the econometric technique of generalized least squares and developing conservative statistical estimators [e.g., Schipper and Thompson, 1985; Binder, 1985b].

Another problem concerns the identification of the critical events in the legislative process. Prior research has used somewhat *ad hoc* approaches with mixed success [e.g., Schipper and Thompson, 1983; Binder, 1985a]. Ideally, the choice of event dates should be based on theories that model the regulatory process and its inherent critical steps. Researchers could then rely on these theories to isolate those dates that are predicted to be significant information events. However, no such general theory currently exists, although recent research by political economists provides the outlines of a framework for improving the selection of event dates [e.g., Cox *et al.*, 1987a and 1987b; Gilligan and Krehbiel, 1988; Weingast, 1988; also see Pownall and Pincus, 1988]. One approach, referred to as "gates and signals," focuses on the veto points in the legislative process. "Gates" are hurdles that any proposed bill must clear prior to enactment; and "signals" are information disclosures about the likelihood of passage through a future gate. While dating the passage through a "gate" (e.g., a vote on the Senate floor) is usually not difficult, dating the occurrence of "signals" about the likelihood of passage can be problematical. It is here that a thorough examination of the historical record is required.

The purpose of this study is to document the legislative history of the allowance of LIFO for tax purposes in order to provide a reliable basis for identifying such critical events. This research thus supplements that of Davis [1982] who provided a history of LIFO from the development of the base stock method through the allowance of dollar-value LIFO (and beyond). The legislative histories that are developed are structured around the veto points of the law. The focus of this investigation was on gathering information about LIFO-related statements and activities of interested parties at each stage of the legislative process, and on documenting the level of disclosure and understanding of the implications of proposed legislative remedies. In this way the political environment out of which LIFO legislation emerged was examined [see Merino *et al.*, 1987]. Such a review of the LIFO legislative process will highlight the potential benefits and costs of performing such detailed studies of legislative changes.

The first LIFO provision was included in the Revenue Act of 1938, and then was replaced with a new provision in the 1939 Act. I begin, however, in 1936 since the issue of taxation of inventory profits was raised (again) during Congressional committee hearings, and as a result, industry lobbyists were referred to and had discussions with Treasury Department officials on the issue over the next two years. I end with the 1942 Revenue Act since the major legislative developments were completed by then.

Special consideration was given to the analysis of the substantive economic, accounting, and tax issues related to LIFO. Legislation was analyzed relative to the menu of related tax options available to firms, the significant LIFO-related administrative and judicial activities, the overall thrust of particular tax legislation including changes in tax rates, and the general economic conditions prevailing at the time. In addition, the production processes of industries lobbying for LIFO were examined, and the views of academics and practitioners were reviewed. Hence this research also provides insight into both tax legislative processes and the choice of accounting methods for book purposes. For example, the extent to which tax bill drafting was followed in the press, even though it was conducted behind closed doors, is documented, as is how close tax substitutes to LIFO arose or disappeared as part of legislative compromises. Also, the notion of the "best" accounting method for inventory is explored, and some additional evidence about time clustering regarding LIFO adoptions is presented. And, of course, the emergence of the conformity rule is traced.

I relied principally on transcripts of Congressional committee hearings and floor debates. Various secondary sources, including books, articles, and tax services also were used. Particularly with regard to closed committee sessions, news reports in the financial press were the most timely and often the only source of information. Finally, memoirs and interviews with key participants also proved useful. Additional details about the approach are in the Appendix.

The remainder of the paper is organized around each of the four tax acts examined. A concluding section provides suggestions for future research.

REVENUE ACT OF 1936 AND BEFORE

The provision regarding inventory valuation entered the Internal Revenue Code in 1918 and read as follows:

> Whenever in the opinion of the Commissioner [of the Internal Revenue Bureau] the use of inventories is necessary in order to determine the income of any taxpayer, inventories shall be taken by such taxpayer upon such basis as the Commissioner, with the approval of the Secretary [of the Treasury], may prescribe as conforming as nearly as may be to the best accounting practice in the trade or business and as most clearly reflecting the income.

Originally referred to as Section 22(c), this provision appears in virtually identical form as Section 471 in the 1986 Code. Notice that specific inventory accounting methods were not listed; hence, a LIFO-like method was not explicitly prohibited. Nevertheless, this provision was interpreted by the Treasury Department as requiring inventories to be valued at cost or at the lower-of-cost-or-market (LCM), where cost was defined as first-in, first-out (FIFO) or in some cases as average cost [Harvey, 1937; Butters and Niland, 1949, p. 156]. In particular, the base stock method was prohibited by Treasury as early as 1919. Similar to LIFO, base (or normal) stock attempts to match current costs against current revenues.[1] While an appeals court ruled in favor of a firm using base stock in 1925, a unanimous Supreme Court decision in 1930 disallowed normal stock methods [Davis, 1982, pp. 6-7]. The year-to-year inventorying of a fixed quantity of goods at a constant price, which meant that an inventory gain of one year was offset against an inventory loss of another, was not permitted for tax purposes under a system that taxed income on a yearly basis [*Lucas vs. Kansas City Structural Steel Co.*, 281 U.S. 264].

The combination of several factors led some interested parties to lobby for a LIFO-like provision in connection with debates on the Revenue Act of 1936. First, wide fluctuations in certain commodity prices had occurred beginning in the late

[1]Hence it is consistent with the maintenance of physical operating capacity. See, e.g., Butters and Niland [1949], chp. 11, and Davis [1982] for comparisons of the base stock and LIFO methods.

1920's and gave rise in some industries to significant holding-losses followed by holding-gains — referred to as inventory profits. For instance, the wholesale price index fell from 61.9 for 1929 to 42.1 for 1932, and then rose to 52.0 by 1935.[2] Second, it was proposed in the 1936 revenue bill that the top marginal corporate tax rate would rise from 13¾ to 15%, and the existing tax on excess profits would rise from five to between six and 12% [CCH, 1935-1937]. Third, the proposed act included a provision to tax undistributed profits at rates as high as 27%. This would be done without distinguishing between inventory profits and operating profits — just like the income tax. Fourth, potentially close tax substitutes for LIFO — e.g., operating loss carryovers, income averaging, deductibility of inventory reserves, as well as the base stock method — were not available.

A representative of the Tanners' Council of America submitted two briefs asking for tax relief for inventory profits before the House of Representatives Committee on Ways and Means (W&M) on April 2 in its hearings on the Revenue Act of 1936 [Hearings, 1936, pp. 379-83]. There was no discussion of the issues raised, and the House bill that emerged, H.R. 12395, made no changes to Section 22(c).

A *Wall Street Journal* (*WSJ*) article [Cotter, May 4, 1936] noted that the Revenue Bureau did not recognize normal stock or LIFO methods, and without them it was claimed that the proposed tax bill would be ruinous to many companies. Several witnesses appeared with regard to the taxation of inventory profits at hearings on H.R. 12395 held by the Senate Committee on Finance (hereinafter Finance). Included were representatives of the tanners industry and the American Mining Congress. Specific proposals were made to amend Section 22(c) to allow the "normal or necessary stock method in those industries in which the taxpayer consistently keeps his accounts in accordance with such methods" [Finance Hearings, 1936, pp. 627 and 718]. Witnesses were referred to Treasury Department experts to discuss further the acceptance of normal stock methods even though Treasury's predisposition to insist upon the use of FIFO and judicial precedent against the use of normal stock were noted [Finance Hearings, 1936, pp. 716-9 and 1938, p. 147].

Not surprisingly the tax bill that ultimately became law in 1936 did not reflect any changes in Section 22(c) but did include the above noted increase in corporate tax rates and tax on

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[2]Wholesale Price Index = 100 for 1947-49. Source: U.S. Department of Commerce, *Business Statistics* [1959].

undistributed profits [U.S. Statutes, 1936, pp. 1648-756]. Relative to other corporations, the 1936 Act was bad news for firms for which inventory profits were substantial. Such firms were at a relative disadvantage in paying cash dividends to avoid the undistributed profits tax or in paying the undistributed profits tax itself — as well as paying the regular income tax — because inventory profits do not generate cash.[3] Interestingly, the word LIFO or phrase "last-in, first-out" were never mentioned in the Congressional hearings.[4] Rather, the issue of taxing inventory profits was raised but only the normal (or base) stock method was specifically mentioned. A chronology of events in the legislative history of the 1936 Act appears in Table 1.

Table 1
Chronology of LIFO Events, Revenue Act of 1936

Thu., 4/2	Witness raises inventory profits issue before W&M[a] (in *WSJ*).
Tue., 4/21	W&M report: no tax-relief for inventory profits (*WSJ* 4/22).
Wed., 4/29	H.R. 12395 passes House (*WSJ*).
Mon., 5/4	*WSJ* article: negative impact of proposed tax legislation in absence of LIFO-like methods.
Thu., 5/7	Witnesses/Proposals presented before Finance re: inventory profits (*WSJ* 5/8).
Mon., 6/1	Finance report: no change to Section 22(c) (*WSJ* 6/2).
Fri., 6/5	Amended H.R. 12395 passes Senate.
Fri., 6/19	Conference Committee Report approved by House: no change to Section 22(c).
Sat., 6/20	H.R. 12395 approved by Senate.
Mon., 6/22	H.R. 12395 signed by President.

[a] W&M and Finance are abbreviations for the House of Representatives Committee on Ways and Means and the Senate Committee of Finance, respectively.

REVENUE ACT OF 1938

The second "recession" of the 1930s was gripping the nation by late 1937. The average annual post-depression (1934-1936) rate of growth in real GNP of 11% would be halved in 1937 and become a negative 4.6% in 1938.[5] Business stimulation via tax revision was widely accepted as Congress met in a special

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[3]See the *WSJ* [November 10, 1937, pp. 1, 8] for an example of the tradeoffs firms were making between the undistributed profits tax and cash dividends.

[4]The phrase "last-in, first-out" was used in the *WSJ* article of May 4, 1936. Also see Finance Hearings [1938, pp. 160-1, 165-6] and footnote 8.

[5]Real GNP in 1954 dollars. Source: U.S. Department of Commerce *Business Statistics* [1959].

session.[6] A special subcommittee on tax revision, chaired by Rep. Fred Vinson (Ky.), met in executive session beginning in November, but a report to the entire W&M Committee was not issued until early in the next session.

The subject of inventory profits was raised by a witness on the last day of hearings before W&M in January 1938 [Hearings, 1938, pp. 1181-4]. The witness was Maurice E. Peloubet, a CPA who represented the Copper and Brass Mills Products Association and who had appeared at Finance's hearings in 1936 representing a mining association. He noted that the discussions he and others had had over the past two years with Treasury representatives yielded no tax relief for inventory profits for affected industries, such as brass, leather, petroleum and cordage, that carried substantial in-process inventories. Partial relief, however, had been given to the cotton textile and flour mill industries. They could apply the results of hedging transactions to their inventories. For instance, losses as well as gains from hedging were included to "eliminate risks due to fluctuations in the market price of cotton and thereby tend to assure ordinary operating profits" [G.C. Memo, 1936]. Gains and losses from such hedging could be treated as ordinary operating items rather than the result of speculative transactions subject to capital loss limitations. Effectively, the combination of FIFO and hedging resulted in inventory profits not being taxed. Peloubet claimed that several other industries faced the same problem with inventory price fluctuations during production, but that no futures markets existed for them to hedge. LIFO, he argued, would yield the same result on taxable income and therefore for reasons of equity should be permitted. Moreover, the use of LIFO was claimed to be the best accounting method for a small set of industries having certain general characteristics. For example, in the copper and brass fabricating industry, raw material prices fluctuated frequently, prices of the finished product fluctuated in direct proportion to the raw material price changes, and there was an extended production process. Pricing reflected the returns for fabrication work — the operating profits — and the cost of the metal to be fabricated. Profits were not made on the raw material, copper. Rather, the metal typically was purchased at the same time the fabricator and its customer contracted for the production and future delivery of

[6]See *WSJ* [November 3, 1937], pp. 1, 4 and *WSJ* [November 15, 1937], pp. 1, 2. When the special session was formally called by the President in mid-October, neither the recession nor tax revision were mentioned as issues Congress was likely to focus on. See *WSJ* [October 14, 1937, p. 1 and p. 2].

the finished product (e.g., copper wire). LIFO, it was argued, should be permitted for tax purposes because by purging inventory profits from the calculation of income, it yielded the most accurate reflection of the way firms in the industry operated.

A LIFO provision was not included in the W&M bill that passed the House (H.R. 9682). During Finance's hearings in March a number of witnesses, including Mr. Peloubet, appeared in support of LIFO [Hearings, 1938, pp. 143-67, 175-6, 429-30, 480, 484-7].[7] Of particular interest were the following items he brought to the Committee's attention: the identification of 26 public corporations that had adopted LIFO or base stock for financial reporting purposes, including reporting to the Securities and Exchange Commission (SEC), with most having done so in the mid-1930's; and letters from a number of CPA firms and excerpts from the monograph by Sanders *et al.* [1938], *A Statement of Accounting Principles*,[8] in support of LIFO.

Coincidentally, comments by Professor William Paton on *A Statement of Accounting Principles* appeared in the March 1938 *Journal of Accountancy*. LIFO, he said, "represents nothing more nor less than a major device for equalizing earnings, to avoid showing in the periodic reports the severe fluctutations which are inherent in certain business fields... It may be that in some situations the year is too short a period through which to attempt to determine net income . . . , but if this is the case, the solution lies not in doctoring the annual report, but in lengthening the period. . . . [I]t is not good accounting to issue reports for a copper company, for example, which make it appear that the concern has the comparative stability of earning power of the American Telephone and Telegraph Co." [pp. 199-200].

The bill reported by Finance did not include any changes in Section 22(c) [Report No. 1567, 1938]. However, the *WSJ* [April 7, 1938] reported that Finance had adopted six amendments to

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[7]Peloubet's testimony would later be included in Moonitz and Littleton [1965], pp. 450-6. He was followed at Finance's hearings by Victor Stemp, a CPA and chairman of the Committee on Federal Taxation of the American Institute of Accountants. While testifying on a number of aspects in the tax bill, the brief he filed endorsed "the 'normal stock,' and 'last-in, first-out' or replacement methods" [Finance Hearings, 1938, pp. 167, 175-6].

[8]Sanders, Hatfield and Moore [1938, pp. 15, 43, 73-4]. Moonitz [1953, p. 459] notes that Hatfield did not mention LIFO in his *Accounting*, published in 1927, nor did Finney include it in the 1934 edition of his *Principles*. Documents incorporating the phrase "last in, first out" and recommending its use were prepared by a committee of the American Petroleum Institute as early as 1934 [reprinted in Jannis *et al.*, 1980, pp. 172-175].

its tax bill that would be offered for consideration on the Senate floor. One of these amendments permitted LIFO. Debate in the Senate occurred Wednesday, April 6, through early Saturday, April 9. In the afternoon of April 8 [*CR* 1938, pp. 5042-44], Sen. Augustine Lonergan (Conn.), a member of Finance, attempted to bring up the LIFO amendment. The President pro tempore responded: "The Chair was advised that all committee amendments had" already been dealt with [*CR* 1938, p. 5042]. Finance chairman Sen. Pat Harrison (Miss.) then got the floor and had the following amendment stated:

> The cost of goods sold during any taxable year beginning after December 31, 1938, may be computed upon the last-in first-out basis if such basis conforms as nearly as may be to the best accounting practice in the trade or business and is regularly employed in keeping the books or records of the taxpayer; and the change to such basis shall be made for any year in accordance with such regulations as the Commissioner, with the approval of the Secretary, may prescribe as necessary to prevent the avoidance of tax. Any taxpayer who, for any taxable year, is permitted under the preceding sentence to change to such basis shall be considered to have made an irrevocable election with respect to such year and future taxable years and shall not be permitted to change from such basis in any subsequent taxable year.

Sen. Lonergan noted that the use of LIFO was limited "to those taxpayers who regularly keep their books or records in accordance therewith, and who are engaged in trades or businesses in which the method is recognized as conforming to the best accounting practice." He specifically mentioned the nonferrous metal smelting and fabricating and hide and leather tanning industries. Sen. Lonergan had noted the existence of a large number of brass mills in his state during Finance's hearings [1938, p. 484]. Sen. Edwin Johnson (Colo.) indicated that discussions with Treasury officials held in the previous few days had again made clear Treasury's refusal to allow LIFO under Section 22(c) as written. He argued that the requirement in the amendment that book and tax accounting conform would limit the use of LIFO to only a few industries, and he used data from the copper and brass fabricating industry to counter what he claimed was Treasury's latest argument that LIFO would result in a loss of revenue of hundreds of millions of dollars. I was not able to determine the origin of the language in the amendment, although the notion of tax/book conformity was included in amendments proposed to Finance by Peloubet and others [Hearings, 1938, p. 146 and 1936, p. 627].

Chairman Harrison stated that the amendment had been controversial when discussed in committee and that he did not support it. "[B]ut I am perfectly willing to let it [be included in the Senate bill] so that we may look into the subject further" in the House-Senate Conference Committee. The amendment was agreed to by the Senate. Sen. Harrison congratulated Sen. Lonergan (a fellow Democrat) "on his perseverance and ability to obtain consideration of the matter in a committee amendment" [*CR*, 1938, p. 5044].

An article detailing the LIFO provision appeared in the *WSJ* [April 12, 1938]. Relying on accountants said to be knowledgeable in the matter, several industries were specifically identified as ones able to use LIFO. These were smelters and refiners of nonferrous metals, tanners, copper and brass fabricators, copper wire manufacturers, the petroleum industry and paper, rope and cordage manufacturers. Few other industries were expected to benefit from LIFO since it was seen as applicable only to companies (i) with relatively large inventories, (ii) where the main component of cost was a (few) basic raw material(s), (iii) where the turnover was slow because of the length of processing, and (iv) where the spread between finished goods and raw materials prices was fairly constant. The article also noted Treasury's opposition to LIFO because of a feared loss of revenue.

When the Senate passed its tax bill it knew it would go to a House-Senate Conference Committee. It was in fact far from certain that any tax bill would emerge from the Conference since the two chambers appeared deadlocked over several issues, the most important of which were the repeal of the tax on undistributed profits and the easing of capital gains provisions. LIFO, while only in the Senate's bill, was not mentioned in the press as a possible stumbling block for agreement by the Conference.

Except for Pat Harrison, none of the Senators appointed as conferees had spoken in connection with the LIFO issue in the public hearings or on the Senate floor. Of the House conferees, only Rep. Fred Vinson had asked questions of a W&M witness regarding LIFO.[9]

As was normal, the Conference Committee met behind

[9]Rep. Vinson was a strong supporter of the undistributed profits tax [*WSJ* January 31, 1938, p. 1].

closed doors. A compromise finally was achieved. A LIFO provision was included but it was not the one passed by the Senate [Document No. 177, 1938]. Instead of amending Section 22(c), a new provision was added as Section 22(d). Several things about the provision were noteworthy. First, only industries specifically identified could use LIFO; to wit: producers and processors of certain nonferrous metals and tanners. Second, except for tanners, LIFO could be applied only to raw materials "not yet included in goods in process or finished goods." Third, inventories were required to be "taken at cost." This precluded the use of the LCM rule with LIFO, and implied that in the year of LIFO adoption beginning inventories had to be stated at cost. Increases from previous LCM writedowns would be additional taxable income for the year prior to the switch. Fourth, an election to adopt LIFO had to be filed with the Revenue Bureau, but this could be done as late as the time of filing of the tax return for the year of adoption. Fifth, a switch to LIFO was irrevocable unless the Commissioner approved. Not included was a LIFO tax/book conformity rule, although such conformity was clearly implied in the Senate's debate and provision.

Immediately after the Conference Report was presented to the Senate, Pat Harrison provided an explanatory statement regarding LIFO [*CR*, 1938, p. 6440]. He noted that a study of the Senate provision had urged that LIFO be restricted to a few industries as a first trial.[10] He also noted that the conferees had had considerable difficulty in working out the provision, and that the result was not entirely satisfactory and improvements hopefully would be made in the next session as a result of a study to be conducted by Treasury.

The Conference Report, which the Senate approved on May 9, was bad news for nonferrous metal firms. These firms were vulnerable to inventory profits because of their extended fabrication processes during which frequent price changes occurred. Yet the provision effectively precluded them from using LIFO for work-in-process or finished goods inventories.

On May 11 a concurrent resolution to H.R. 9682 was proposed and approved by the Senate. Claiming that the Conference had failed to correctly state the agreed-to LIFO amend-

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[10]The June 1938 issue of the *Journal of Accountancy* claimed that Treasury Department representatives had objected that the wording in the Senate's provision was too general, and hence neither the effect on tax revenue nor the number of taxpayers qualifying could be determined. See "Editorial: Inventories and Taxes" [1938]. Also see Alvord [1940].

ment, the resolution called for wording changes such that the same rules would apply to both the tanners and the nonferrous metal groups. That is, LIFO could be applied to all stages of production. The Senate resolution was read to the House on May 11 immediately preceding the presentation of the Conference Report in that chamber. There was no discussion of the LIFO issue. The House approved the Conference Report, but the concurrent resolution was referred to W&M, thus tabling the "corrective" changes [*CR*, 1938, pp. 6681-99, 6950].

Several industries which had been mentioned in Finance's hearings and again in the April 12 *WSJ* article as ones likely to benefit from the use of LIFO were not granted permission to adopt LIFO under Section 22(d). Of particular interest was the petroleum industry. It had been the first industry identified for which LIFO was seen as the best inventory method.[11]

Finally, there was some uncertainty that President Roosevelt would approve H.R. 9682. In fact, it became law without his signature [U.S. Statutes, 1938, pp. 447-584]. This was characterized in the press as a face saving action. The bill all but repealed the tax on undistributed profits which had passed in 1936 at Roosevelt's urging.[12] While this was viewed as being unacceptable to the President, the belief that the tax bill would stimulate business, which was seen as a necessity in light of the continuing recession, apparently made a veto of the entire bill too costly politically.

Twenty years later Maurice Peloubet [1958, p. 663] stated that "[t]he 1938 LIFO legislation was a masterpiece of awkward and inept drafting. It was not at all what the proponents of the legislation, either in or out of Congress, intended or desired." Nevertheless, LIFO was now in the tax law, and according to Carman G. Blough, the first SEC chief accountant, Peloubet deserves much of the credit. Blough, who opposed LIFO, claimed that it had been "headed for death until the Internal Revenue Service began to accept it. . . ."[13] A listing of dates related to the 1938 Act appears in Table 2.

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[11]See Special Committee on Inventories [1936], Finance Hearings [1938, pp. 154-160], and Jannis *et al* [1980, pp. 172-6].

[12]See, e.g., *WSJ* [May 19, 1938, p. 2, and May 28, 1938, pp. 1, 4]. The graduated undistributed profits surtax and the basic corporate tax rate of 15% from the 1936 Act were replaced with a 19% rate that could be reduced to 16½% with a dividends paid credit.

[13]See Ward [1980, pp. 75-7]. Ward's transcript of a taped interview with Blough refers to "Pulvey . . . a partner in the firm Paux and Pulvey and Co. . .. " [p. 76], and to "Maurice Pulvey" [p. 77]. Reference is also made to one of their clients, Anaconda Copper [p. 76]. Undoubtedly, the accounting firm is Pogson

Table 2
Chronology of LIFO Events, Revenue Act of 1938

Tue., 1/25	LIFO witness before W&M hearings.
Sat, 2/19	Several key provisions of W&M bill reported on: no mention of LIFO (*WSJ*).
Tue., 3/1	W&M approves recommended bill: no LIFO provision.
Wed., 3/2	W&M bill becomes publicly available (*WSJ* 3/3).
Fri., 3/11	H.R. 9682 passes House (*WSJ* 3/12).
Fri., 3/18	LIFO witnesses appear
Sat., 3/19	before the Senate.
Mon., 3/21	Finance Committee Hearings.
Tue., 4/5	Finance reports bill: no LIFO provision (*WSJ*).
Wed., 4/6	*WSJ* (4/7) report that Finance adopts LIFO amendment.
Fri., 4/8	LIFO amendment introduced/Adopted by Senate.
Sat., 4/9	*WSJ* brief report on LIFO/Bill passes Senate.
Mon., 4/11	Likely conferees identified in *WSJ*.
Tue., 4/12	*WSJ* detailed article on LIFO.
Wed., 4/13	Actual conferees listed/Deadlocked Conference possible (*WSJ*).
Sat., 4/23	Conference compromise reported (*WSJ*).
Wed., 4/27	Conference completes work/Senate provisions for LIFO reported to be adopted (*WSJ*).
Mon., 5/9	Conference Report published with revised LIFO wording/ Approved by Senate (*WSJ* 5/10).
Wed., 5/11	Senate passes concurrent resolution re: LIFO/Conference Report approved by House (*WSJ* 5/12).
Mon., 5/16	Senate concurrent resolution assigned to W&M.
Wed., 5/18	Uncertainty about President signing bill (*WSJ* 5/19).
Wed., 5/25	Tax bill reportedly will be approved (*WSJ*).
Sat., 5/28	Became law without President's signature (*WSJ*).

REVENUE ACT OF 1939

As Sen. Harrison had said would happen, a committee was created by Treasury and charged with considering the entire question of LIFO, including the need for new legislation. Its members were CPAs: Edward A. Kracke, a Haskins & Sells partner; Carman Blough, who became an Arthur Andersen partner on July 1, 1938; and Roy B. Kester, an accounting professor at the Columbia University School of Business. Blough's recollection, forty years later [Ward, 1980; also see

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and Peloubet & Co. and the individual is Maurice Peloubet. Anaconda Copper was listed as a client of Pogson and Peloubet & Co. from 1927 onward in Peloubet's testimony before Finance [see Finance Hearings, March 18, 1938, p. 164]. Also, in his memoirs, Peloubet notes the particular contributions of Arundel Cotter, a *WSJ* editor, and Ellsworth Alvord, an attorney for several nonferrous metal firms, in gaining the acceptance of LIFO [Peloubet, n.d., pp. 62, 66].

Cooper, 1982], was that the committee was organized by Thomas Tarleau (Treasury's legislative counsel). Kracke was already on record in support of LIFO, having advocated its use for pipeline companies.[14] Kester was said to be neutral while Blough opposed LIFO because it did not represent the movement of goods, only the movement of costs. Blough believed that "in most businesses you sold what was got first before you ever sold what just came in" [Ward, 1980, pp. 79-81]. His work at Arthur Andersen "was to . . . fix the accounting principles that were to be followed by the firm, try to hold uniformity within the firm. So [when] the San Francisco office, or the Boston office . . . had a particular problem they would clear it with me in Chicago." Given his views on LIFO, he doubted that he could certify LIFO-based statements and believed public accounting firms generally would have great difficulty accepting LIFO "as a fair statement" of a firm's income. (LIFO was not codified as a generally accepted method until the issuance of Accounting Research Bulletin No. 29, "Inventory Pricing," in 1947).

Blough did not expect many firms to adopt LIFO. He recalled arguing in the committee that the level of profits reported by firms "to their stockholders represents their success and if they have to follow a method of accounting which shows their profits less than they would otherwise, . . . I don't think they'd want to buy it." According to Blough, Tarleau responded: "Well, why, then shouldn't we write into the statute a provision that if the company uses the LIFO method . . . for all of its financial statements and does not use any other, they may use it for tax purposes." Blough felt he was not in a good position to disagree, given what he had just argued, and claimed further that both Kester and Kracke agreed with Tarleau's statement [Ward, 1980, pp. 79-80].[15] Hence, a LIFO tax/book conformity rule was written into their suggested legislative draft. The committee apparently met during the Summer of 1938 [Peloubet, 1971, p. 60].

An American Institute of Accountants (AIA) tax committee report that included an analysis of the 1938 LIFO provision was

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[14]Kracke was Chairman of the American Institute of Accountants Special Committee on Inventories [1936 and 1938].

[15]According to a *Journal of Accountancy* editorial [December 1938, p. 353], the SEC and the Revenue Bureau were studying the reconciliation of differences in accounting between the two agencies. SEC chairman William O. Douglas was reported to have said: "We are seeking points where we can make uniform various accounting rulings." By mid-1939 Blough was on record in support of this, even with regard to LIFO [see Blough, 1939, pp. 269-70].

presented to Treasury in September 1938. While recommending broader application, the report supported the idea of restricting the use of LIFO to a limited number of industries.[16] However, a conformity requirement was not mentioned. At about the same time, Treasury issued the first regulations under Section 22(d) [T.D., 1938].

The transcript of W&M's hearings on revenue revision in 1939 included a brief filed by a representative of the American Mining Congress. It claimed that Section 22(d) limited application of LIFO to the tanning industry, noted that Treasury had studied the subject in response to instructions from the 1938 House-Senate Conference with a view toward introducing corrective legislation, and favored the extension of LIFO to other industries [W&M Hearings, 1939, pp. 133, 139].

The report filed by W&M [Report No. 855, 1939] made no mention of a possible LIFO extension, nor were any changes to Sections 22(c) or (d) included in the House bill (H.R. 6851) that passed overwhelmingly on June 19, 1939.

Finance's report on H.R. 6851 was filed June 21 [Report No. 644, 1939] and included as Section 219 an amendment[17] to Section 22(d). Specifically, LIFO could be used for any and all inventories so long as it was used " . . . to ascertain income, profit, or loss, for credit purposes, or for the purposes of reports to shareholders, partners or other proprietors, or to beneficiaries. . . . " Hence, the LIFO conformity rule, which was undeniably the Senate's intent in its 1938 amendment, became explicit. Further, LIFO was "extended to all taxpayers . . . regardless of the business in which the taxpayer is engaged" [Senate Report, 1939, p. 6]. Another change was that beginning inventory for the year of LIFO adoption was to be treated as if it had all been acquired at the same time prior to the switch and was to be valued at the average acquisition cost. Subsequent increases in inventories were to be priced separately for each year; i.e., there were to be LIFO layers. Also included was wording to the effect that LIFO could be used whether or not it had been prescribed under Section 22(c). The implication was

[16]Committee on Federal Taxation [1938]. The report included a description of operating characteristics for which LIFO was seen as being most applicable. Virtually the identical characteristics had been included in the *WSJ* article of April 12, 1938.

[17]In February 1939 Congress passed a codification of the tax law, referred to as the Internal Revenue Code of 1939. Subsequent revisions (until the recodification of 1954) were treated as amendments.

that LIFO had not been created but statute, but rather was a method that the Commissioner had had the authority to allow.[18]

The inclusion of LIFO was headline news on page 1 of the *WSJ* on June 21.[19] Reference was made to a statement by a Treasury official that the LIFO extension would not result in any revenue loss. The LIFO amendment was agreed to without discussion by the Senate shortly before it passed its entire tax bill.

House discussion of the amended Senate version of H.R. 6851 was brief. The Senate changes were viewed as minor and technical and were readily agreed to. The House debate, however, did include discussion of the LIFO amendment [*CR*, 1939, p. 7802]. It was claimed to have been worked out by Treasury, but was not brought to the attention of the House during its initial debate of H.R. 6851 because final wording had not been completed at that time. The issue apparently was discussed in an executive session of the W&M subcommittee on Internal Revenue Taxation.

President Roosevelt signed the bill into law on June 29 [U.S. Statutes, 1939, pp. 862-85]. Of note is that net operating loss carryforwards, which were eliminated in 1933, were reinstated. Also, the top corporate rate was reduced from 19 to 18%. However, the new rate never took effect. It would be superseded by higher rates enacted in 1940.

The new LIFO provision was applicable for taxable years beginning after December 31, 1938. It is still in force in virtually identical form as Section 472 of the 1986 Code. LIFO-related events in the 1939 Act are detailed in Table 3.

Noting that the 1939 Act placed few restrictions on the use of LIFO beyond the conformity rule, Carman Blough offered the following comments: " . . . Congress and the Treasury . . . apparently believe that businessmen and their accounting advisors may be trusted not to adopt an unreasonable or inappropriate method of accounting for general corporate accounting purposes, even tough they might find some tax advantages in so doing" [quoted in Cooper, 1982, p. 128]. Blough believed that accounting principles should not be prostituted for the sake of tax savings, and he advocated criteria to limit the application of LIFO [Cooper, 1982, p. 129].

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[18]See Alvord [1940] who raised the possibility that this might lead to recognition of LIFO under Section 22(c) for taxable years prior to 1939, the first year the amendment took effect.

[19]At that time part of the front page of *WSJ* resembled other newspapers as regards headlines.

Table 3
Chronology of LIFO Events, Revenue Act of 1939

Summer 1938	Treasury organized committee to review LIFO issues meets/ LIFO Tax/Book Conformity Rule explicitly included in new legislative proposal.
Thu., 9/1/38	American Institute of Accountants report to Treasury argues for broader application of LIFO.
Thu., 5/25	W&M Chairman announces unexpected early start to hearings on corporate tax revision (*WSJ* 5/26).
Fri., 6/2	Brief filed with W&M to extend LIFO.
Fri., 6/16	W&M Committee report filed: no LIFO changes (*WSJ* 6/17).
Mon., 6/19	H.R. 6851 passed House: no LIFO changes (*WSJ* 6/20).
Wed., 6/21	Finance report filed: LIFO extension included (*WSJ*).
Thu., 6/22	Senate passes H.R. 6851 (*WSJ* 6/23).
Fri., 6/23	House accepts Senate amendments.
Thu., 6/29	President signs bill (10 p.m.).
Mon., 7/3	*WSJ* article ambiguously notes LIFO effective date.

In a May 1940 article, William Paton reiterated and expanded on his opposition to LIFO [pp. 357-60]. He disputed the argument that unrealized profits are recognized under FIFO. While acknowledging that profits can be "tied up" in inventory when prices rise and thus not be available immediately for cash dividends, he said that the same was true of any absorption of profits in non-cash assets. "There is a no lack of realization. . . . The literal fact is that specific goods which cost" a certain amount were sold and goods costing a higher amount were purchased and made available for sale. He believed that LIFO "in the physical sense . . . would seldom if ever be desirable as a . . . policy, and seldom if ever in practice is such an order of use actually followed for any considerable period. . . . Here seems to be a serious objection to the general use of [LIFO] as an accounting procedure." He rejected the view that LIFO was appropriate because "inventory is essentially a fixed asset, at least to the amount of a normal stock, and should be priced accordingly." To Paton: "The requirement that the records shall show the cost of the existing layout of facilities, rather than the cost of an earlier generation of assets, is almost axiomatic." And concerning income taxes he said: " . . . restricting reported profts in years of good business and advancing prices and improving the showing in years of shrinking volume and falling prices [by using LIFO] will not affect the total amount of tax substantially over a period of years where there are no net losses in particular periods. Moreover, to the extent that net losses may be forwarded and treated as allowable deductions in succeeding years, the importance of [LIFO] as a means of modifying tax liability is minimized."

A response to Paton from Maurice Peloubet appeared the following month [1940, pp. 446-50]. He claimed that Paton had consistently assumed that the results of FIFO were "actual," "true," or "real," while those of LIFO were "artificial" or "stabilized." "In industries to which [LIFO] properly applies no better case can be made for assuming that [FIFO] reflects physical movement than that [LIFO] reflects such movement. In either case this is unimportant. What we are concerned with is a constantly and necessarily maintained investment in goods of an identical character. That would seem to be almost as 'true' or 'actual' as whether we happen to take a bar of metal from the top or bottom of a pile. . . . " And, "the inclusion of any inventory as a current asset which cannot be disposed of except on liquidation of the enterprise [no matter how its cost is computed,] must necessarily confuse the picture of the current asset position, as the other composites are based on the possibility of quick cash realization." He said that Paton's examples had made clear the limitations of LIFO by applying it to inappropriate situations. "The answer to all of Professor Paton's examples is that where the method does not apply, it is inapplicable. . . . " The relatively limited application of LIFO, he said, had long been recognized, and he (again) identified characteristics of production processes and industries for which it was best suited. And he said: "In what might be called the dark days after the [Supreme Court decision outlawing base stock type methods,] when it seemed hopeless to expect any recognition of last-in, first-out related methods for tax purposes, businessmen and economists [advocating LIFO] did not change their views. . . . They felt it their duty to stockholders and the public to present their accounts on what they thought to be a proper basis." Further, "[t]here is no adequate substitute . . . for a method embodying the principles of [LIFO] in determining taxable income. . . . A taxpayer could be quite effectively ruined by [a run of] three or four years of rising prices where tax was levied on profits based on an identical inventory carried at successively higher prices. . . . The fact that later on he would have losses to apply against profits that he might make still later on would probably be somewhat lightly regarded by the bank from whom he had to borrow to pay his taxes. . . . " (Recall that operating loss carrybacks were not then permitted).

As of late 1941 no section within the Internal Revenue Bureau had been set-up to study LIFO and give authoritative opinions in advance of firms' applications to adopt LIFO [Barker, 1942]. Apparently, there had been few LIFO adopotions up to that point. Butters and Niland [1949, Tables 18 and 29] provide data on the year of LIFO adoption, for book purposes, for a sample of 176 manufacturing firms that switched by 1947. Only 18% switched by 1940, the majority doing so for 1939 or 1940. Of the earliest adopters, 53% were from the nonferrous metal or petroleum industries. Generally declining prices in the 1938-40 period provided little incentive for most firms to adopt LIFO.[20]

A review of leading tax services prior to the Revenue Act of 1942 reveals that relatively few regulations were issued for Section 22(d) under the 1938 and 1939 Acts. LIFO was referred to in the regulations as the "elective" or "optional"method. One particular regulation, issued under the 1939 Act and referred to as the specific-goods concept, should be noted. In spite of the extension of LIFO to all taxpayers, it was Treasury's interpretation that LIFO was applicable to a few basic commodities which could be easily measured in terms of physical units — for example, yards, pounds, and barrels [BNA, 1980, p. A-34]. This rule would prove to be a serious impediment to qualifying for LIFO for a number of firms, especially retailers.[21]

REVENUE ACT OF 1942

This tax act, World War II's first, proved to be the largest revision of the Code up to that time. Raising revenues for the war was its major thrust. Corporate tax rates (including a surtax) would more than double to 40% for 1942, relative to 1939, and the excess profits tax would jump to 90%. Two LIFO provisions were included: Section 118 regarding interim reporting; and Section 119 regarding involuntary inventory liquidations.

W&M Hearings ran from March 3 to April 17, 1942 and filled three volumes. The first witness was Treasury Secretary Henry Morgenthau who stated that the overall task was "to frame the new revenue act so . . . that it will facilitate the maximum production of war materials. . . " Additionally, controlling inflation was to be critical. Morgenthau presented data

[20]The wholesale price index fell from 56.1 for 1938 to 50.1 for 1940. See also "Editorial: Inventories in a Declining Market" [1938] and Barker [1942].

[21]Another regulation dealt with the conformity rule. See Commerce Clearing House [1938-1942], Prentice-Hall [1942], and Treasury Decision 4959 [December 28, 1939].

showing a doubling of commodity prices during World War I and current data suggesting that a similar pattern of price increases had already emerged [Hearings, 1942, pp. 1, 2, 11].

The next witness was Randolph Paul, the tax adviser to the Secretary. Paul provided details on some of the proposals Morgenthau had discussed, and presented additional proposals of a more technical nature — one of which concerned LIFO [Hearings, 1942, pp. 93-4]. Specifically, Treasury wanted Congress to relax the conformity rule to allow firms to switch to LIFO even if earlier in the year of switch they had issued FIFO-based interim financial reports to shareholders or others. Further, the rule relaxation was to be retroactive to 1941. Treasury believed the interim conformity rule served no useful purpose and unfairly discriminated against firms which followed the practice of publishing financial reports on an interim basis.

The change in the interim conformity rule certainly was welcome news for firms that would have liked to adopt LIFO for fiscal 1941 because of price increases but had earlier in 1941 issued interim reports. The number of such firms may well have been large. *Ex post*, Butters and Niland [1949, Table 18] shows that 35% of their sample of firms which adopted LIFO by 1947 did so for 1941. *Ex ante*, wholesale prices had risen 11.2% in 1941 and were expected to continue to rise because of WWII. The tax benefits from using LIFO in such an environment were well understood [e.g., Kracke, 1939; Barker, 1942]. It seems highly likely, therefore, that the clustering of LIFO adoptions for 1941 was due to the surge in realized and expected prices in the presence of the highest corporate tax rate (31%) faced to that point. And the retroactive elimination of the interim conformity rule clearly facilitated such switches for the subset of firms which reported on an interim basis.

Several lobbyists appeared before W&M over the next few weeks in support of Treasury's LIFO proposal, and W&M's bill included a provision that was actually less restrictive. Not only would there be no interim conformity rule in the year of switch to LIFO, but in all subsequent years as well. "The bill permits the last-in first-out method to be used so long as all annual reports to shareholders, partners, or other proprietors, or for credit purposes are made on that basis" [Report, 1942 No. 2333, pp. 45-6, 71]. The bill that passed the House (H.R. 7378 on July 20) included the W&M recommended interim report relaxation as Section 116.

The interim conformity rule was not discussed during

Finance's hearings on H.R. 7378. When Finance issued its report the interim rule elimination was labeled Section 118 [Senate Report, 1942, pp. 81-2]. The only change from the House bill was that the provision was retroactive to taxable years beginning after December 31, 1938, the effective date for the initial allowance of LIFO. This change was agreed to by the House conferees and was the provision in the final statute.

Several June 1942 *WSJ* articles about the course of W&M's closed door deliberations reported that a provision establishing inventory reserves had received considerable support.[22] To prevent the taxing of inventory profits, Treasury proposed that firms not using LIFO could deduct increases in inventory caused by price increases and set-up a reserve account to accumulate such deductions. In years when prices fell, which were expected to occur after WWII ended, the reserve would be reduced and taxable income correspondingly increased. Further, price indices could be used to determine the maximum amount of a reserve increase rather than requiring the specific identification of the price changes of individual inventory items.

Pressure to expedite the tax bill after more than four months of hearings and difficulty in drafting the inventory reserve provision resulted in its omission from W&M's bill. A summary of the bill, prepared by Treasury, indicated that W&M had accepted in principle the inventory reserve provision [*WSJ*, July 13, 1942].

A witness appeared at Finance's hearings to lobby on behalf of retailers for the inventory reserve plan [Hearings, 1942, pp. 1089-94].[23] Some retail firms had adopted LIFO for book purposes as early as 1941, spurred at least in part by the development of dollar-value LIFO and its adaptation to the retail inventory method [BNA, 1980, A-35; Butters and Niland, 1949, pp. 298-9]. However, retailers had been unsuccessful in obtaining approval to allow use of price indices with LIFO because of Treasury's insistence of the specific-goods concept — retailers' inventories consisted of a large number of different products, rather than a few homogenous items. While preferring a relaxation of the LIFO regulations, which retailers argued was only fair since the 1939 Act had made LIFO available to all taxpayers,

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[22]See, e.g., *WSJ* [June 15, 1942, p. 3, and June 16, 1942, p. 2], and see Finance Hearings [1942, pp. 1092, 1094-7, 2088-9]. Also, see Butters and Niland [1949, chp. 11].

[23]Also see McNair and Hersum [1952, pp. 183-5] and Butters and Niland [1949, p. 299].

they hoped at least that Treasury's inventory reserve proposal would be accepted.

Note that inventory reserves were a way to provide non-LIFO users relief from the taxation of inventory profits which were caused by the sharp price increases that accompanied WWII. Use of inventory reserves would expire after the war, once the economy — and prices — returned to a peacetime norm. Treasury's support of inventory reserves, therefore, may have been a way for it to grant some short-term tax relief while retaining the specific-goods concept, which effectively limited the use of LIFO, for the future.

Other witnesses appeared before Finance to seek relief for involuntary liquidations of LIFO inventories [Hearings, 1942, pp. 2108-11]. Wartime restrictions and shortages had made it impossible for many firms to maintain base stock inventory quantities. For a firm using LIFO, depletion of low cost layers meant increases in taxable income.

In spite of the support for deductible inventory reserves, they did not become part of Finance's bill. A fear that setting-up an inventory reserve would inevitably lead to demands for other kinds of deductible reserves apparently was a concern [McNair and Hersum, 1952, p. 184; *WSJ*, August 26, 1942]. An entirely new approach emerged as part of a compromise. A proposed increase in the excess profits tax rate to 90% was to be "cushioned" by several items. One cushion was a provision for a two-year carryback of net operating losses — both for the regular tax and for the excess profits tax [Senate Report, 1942, pp. 51-2, 122-4, 180-4].[24] This provision was to help corporations that faced "periods of declining profits, especially at the close of a war economy in which their deductible expenses have been held down to a bare minimum by priorities, rationing, labor shortages, and other factors. . . . " The full Senate approved the carryback provision and it was subsequently agreed to by the House.

Another cushion included in the legislative compromise was the granting of relief for involuntary LIFO liquidations [Senate Report, 1942, pp. 43-44, 82-3]. Firms could replace wartime-induced liquidated LIFO inventories for up to three years after the end of WWII. Taxable income for the year of liquidation would be adjusted for the difference between the cost of the replacement inventory and the cost of the liquidated inventory.

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[24]Also see *CR* [1942, p. 7795], where it was noted that a provision allowing a carryback from 1920 to 1918 had been included in the Revenue Act of 1918.

Firms would file an amended return when the inventory was replaced to claim a refund. The burden of establishing the involuntary nature of the LIFO liquidation fell to the taxpayer, who was also required to elect this provision when the tax return for the year of liquidation was filed. Taxable years beginning after December 31, 1941 were covered. This provision, titled "Last-In, First-Out Inventory," became Section 119 in the Senate bill that passed on October 10 and was accepted by the House [U.S. Statutes, 1942, pp. 798-985]. Key dates for the 1942 Act appear in Table 4.

Table 4
Chronology of LIFO Events, Revenue Act of 1942

Tue., 3/3	Treasury tax advisor recommends conformity rule relaxation in year of change to LIFO before W&M (*WSJ* 3/5).
Mon., 3/9 Thu., 3/12 Thu., 3/19 Mon., 4/13 Tue., 4/14 Thu., 4/16	Witnesses in support of Treasury's LIFO recommendation appear before W&M.
Mon., 6/15	*WSJ* article: interim rule to be eliminated/Inventory reserves recommended by Treasury (also *WSJ* 6/16).
Wed., 6/17	*WSJ*: inventory reserves may be omitted in order to expedite W&M report (also *WSJ* 7/8).
Mon., 7/13	Tax bill summary in *WSJ*: interim LIFO rule elimination included/Inventory reserves accepted in principle but not drafted in time.
Tue., 7/14	W&M Committee report filed: included more liberalized interim reporting relaxation.
Mon., 7/20	H.R. 7378 passes House (*WSJ* 7/21).
Thu., 8/6	Witness for retailers urges adoption of inventory reserve plan before Finance.
Mon., 8/10	*WSJ*: inventory reserve almost foregone conclusion.
Thu., 8/13	Witnesses before Finance seek inventory reserves (*WSJ* 8/14)/Others seek relief for involuntary LIFO liquidations.
Thu., 8/27	Two-year carryback proposed (*WSJ* 8/28).
Fri., 8/28	Treasury supports carryback/Also relief for LIFO liquidations (*WSJ* 8/29).
Fri., 10/2	Senate Finance Committee files report: same LIFO interim rule as House except earlier effective date (*WSJ* 10/3)/ Inventory LIFO liquidation provision included.
Sat., 10/10	H.R. 7378 as amended unanimously passes Senate (*WSJ* 10/12).
Mon., 10/19	Conference report filed late in day: Senate's LIFO rules adopted.
Tue., 10/20	House and Senate agree to Conference report.
Thu., 10/29	President signs bill.

The liquidation provision (which subsequently would be extended and then reinstituted for the Korean War) provided an additional incentive to adopt LIFO. Further, the failure to allow for deductible inventory reserves meant that non-LIFO firms facing wartime-inflation-induced inventory profits had few tax options available beyond LIFO.[25] While operating losses could now be carried back for two years, for 1942, the first year covered by the Act, they could be carried back only one year. Further, most firms were not expected to generate operating losses until after the war. Finally, tax rates were higher in 1942 than in 1941 (31 versus 40% plus a higher excess profits tax rate), and inflation was up to 13%. It is not surprising, therefore, that second to 1941, the year with the largest number of manufacturing firms adopting LIFO in the Butters and Niland [1949, Table 18] sample was 1942 (22%).

With regard to Treasury's insistence on the identification of the cost of specific products under LIFO, rather than allowing the use of price indices for groups of products, it would take court action to gring about a change [e.g., McNair and Hersum, 1952, pp. 187-96]. The most important case was *Hutzler Brothers Co.* [8 T.C. 14, 1947]. The Tax Court ruled that Hutzler, a department store, could use LIFO and could approximate the increase or decrease in inventory of an entire department through the use of a suitable price index. Treasury acquiesced in the Hutzler case in March of 1948.[26]

FUTURE RESEARCH

Several avenues for future research are suggested in this section. First, the legislative histories documented in this paper provide the basis to identify the dates on which critical legislative activities occurred regarding the allowance of LIFO and a set of firms likely to have been most affected. A colleague and I currently have a project underway in which we use the legislative histories to conduct an event study to assess the impact of the LIFO legislative provisions on the stock prices of a sample of affected firms.

A second research project might explore the timing of LIFO adoptions. The historical record strongly suggests the impor-

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[25]Of course LIFO was effectively not a tax option for some firms, including retailers, because of the specific-goods concept.

[26]The third largest number of LIFO adoptions (12%) in the Butters and Niland [1949, Table 18] sample occurred in 1947. Wholesale prices rose 14.6% and 22.5%, respectively, in 1946 and 1947. The corporate tax rate was 38%.

tance of taxes in the choice of LIFO for book purposes — and in the timing of its adoption. In particular, it is unlikely that the clustering of LIFO book adoptions in 1941, 1942, and 1947 [Butters and Niland, 1949] is unrelated to the presence in those years of high (increasing) rates of inflation and corporate taxes. A similar scenario occurred in 1974 [Ricks, 1982; Biddle and Lindahl, 1982]. It would be interesting to more fully document the association between the timing of LIFO adoptions — for book and tax — and the rates of inflation and corporate taxes.

A final suggestion for future research concerns petroleum companies. The Committee on Uniform Methods of Oil Accounting of the American Petroleum Institute (API) was on record as early as 1934 recommending the use of LIFO by petroleum firms. Yet not a single representative of any petroleum firm or industry association appeared as a witness before the Congressional committees in support of LIFO, and LIFO use was not extended to petroleum firms in the 1938 Act. Why did petroleum firms, individually or as a group, choose not to lobby in 1936, 1938, and 1939? An examination of the minutes and other documents of the Uniform Methods Committee of the API would seem to be a fruitful way to begin to address this question. Another possibility would be to examine correspondence (and other memoranda) between oil firms and their auditors. Letters from CPAs in support of LIFO, which were solicited by Peloubet and included in his submission to the Finance Committee hearings in 1938 on behalf of a copper and brass mills association, also made reference to petroleum firms. In any event, a careful study of the lobbying behavior of the petroleum industry with respect to LIFO has the potential to be an instructive example of a point made by Amershi *et al.* [1982] that in a multiperiod game, it can be optimal for an agent not to lobby (vote) in support of a particular regulatory action even when its passage would be beneficial to the agent.

These suggestions for future research illustrate the importance of historical studies in a variety of research areas. Further investigations are necessary to explore the interrelationships between tax and development of financial accounting practices.

CITED REFERENCES

1. *Government Documents*

Committee on Ways and Means, House of Representatives. "Hearings, Revenue Act, 1936." (March 30, 31, and April 1, 2, 3, 4, 6, 7, 1936). 890 pgs.

Committee on Finance, United States Senate. "Hearings on H.R. 12395." (April 30 to May 12, 1936). 973 pgs.

Congressional Record, v. 80 (January 3 to June 20, 1936). See Part 11 for H.R. 12395 (p. 554).

United States Statutes at Large, v. 49, pt. 1, chp. 690. "Public Law No. 740: Revenue Act of 1936." (June 22, 1936), pp. 1648-1756.

General Counsel Memorandum No. 17322. "Revenue Act of 1934," by H. Oliphant. *Internal Revenue Cumulative Bulletin* XV-2 (July-December 1936), pp. 151-155.

Committee on Ways and Means, House of Representatives. "Hearings, Revision of Revenue Laws 1938." (January 14, 15, 17, 18, 19, 20, 21, 22, 24, and 25, 1938). 1217 pgs.

Committee on Finance, United States Senate. "Hearings on H.R. 9682." (March 17, 18, 19, 21, and 22, 1938). 747 pgs.

Senate Report No. 1567. "Revenue Bill of 1938: Report." (January 5 (Calendar day, April 5), 1938), 52 pgs. In *Senate Reports: Public,* v. 1; 10229.

Senate Document No. 177. "Revenue Bill of 1938: Conference Report." (April 20 (Calendar day, May 9), 1938). 31 pgs. In *Senate Documents: Miscellaneous,* v. 2; 10248.

Congressional Record, v. 83. (January 3 to June 16, 1938). See Part 12 for H.R. 9682 (p. 491).

United States Statutes at Large, v. 52, chp. 289. "Public Law No. 554: Revenue Act of 1938." (May 28, 1938), pp. 447-584.

Treasury Decision 4865. Articles 22(d)-1 to 22(d)-4. (September 29, 1938).

Committee on Ways and Means, House of Representatives. "Hearings, Revenue Revision — 1939." (May 27, 29, June 2, 3, and 5, 1939). 284 pgs.

House Report No. 855. "The Revenue Bill of 1939: Report." (June 16, 1939). 56 pgs. In *House Reports: Miscellaneous,* v. 4; 10299.

Senate Report No. 644. "Revenue Act of 1939: Report." (June 21 (legislative day, June 15), 1939). 11 pgs. In *Senate Reports: Miscellaneous,* v. 3; 10294.

Congressional Record, v. 84 (January 3 to August 5, 1939). See Part 15 for H.R. 6851 (p. 855).

United States Statutes at Large, v. 53, part 2, chp. 247. "Public Law No. 155: Revenue Act of 1939." (June 29, 1939), pp. 862-885.

Treasury Decision 4959. Regulations Section 19.22(d)-1 to 19.22(d)-6. (December 28, 1939).

Committee on Ways and Means, House of Representatives. "Hearings, Revenue Revision of 1942." v. 1 (March 3, 5, 9, 10, 11, 12, 13, 16, 17, 18, 19, 20, 23, and 24, 1942); v. 2 (March 25, 26, 27, 30, 31, April 1, 2, 3, 7, 8, and 9, 1942); v. 3 (April 10, 13, 14, 15, 16, and 17, 1942). 3,640 pgs.

House Report No. 2333. "The Revenue Bill of 1942: Report." (July 14, 1942). 187 pgs. In *House Reports: Miscellaneous,* v. 4; 10664.

Committee on Finance, United States Senate. "Hearings on H.R. 7378." v. 1 (July 23, 24, 27, 28, 29, 30, 31, August 2, 3, 4, 5, 6, and 7, 1942); v. 2 (August 10, 11, 12, 13, and 14, 1942). 2,376 pgs.

Senate Report No. 1631. "The Revenue Bill of 1942: Report." (October 2, 1942). part 1 (275 pgs.); part 2 (14 pgs.) In *Senate Reports: Miscellaneous,* v. 4; 10658.

Congressional Record, v. 88 (January 5 to December 16, 1942). See Part 11 for H.R. 7378 (p. 633).

United States Statutes at Large, v. 56, part 1, chp. 619. "Public Law No. 753: Revenue Act of 1942." (October 21, 1942), pp. 798-985.

2. *Wall Street Journal Articles*

"Taxing Fictitious Profits." (April 2, 1936), p. 2.
"House Committee's Tax Bill Changes in Summary Form." (April 22, 1936), pp. 1, 2.
"What's News." (April 29, 1936), p. 1.
Cotter, A. "Revenue Bureau Does Not Recognize Two Accounting Methods of Easing Earnings Swings." (May 4, 1936), p. 2.
"White House Lash Necessary to Stop Tax Bill Revisions." (May 8, 1936), pp. 1-2.
"Tax Bill Reported; Tightens Provision to Force Dividends." (June 2, 1936), pp. 1, 2.
"What's News." (October 14, 1937), p. 1.
"Special Session Task Begins Where Previous Legislation Left Off." (October 14, 1937), p. 2.
"Glass Urges Federal Tax Law Changes to Aid Business." (November 3, 1937), pp. 1, 4.
"Many Companies Will Pay Surtax to Conserve Cash." (November 10, 1937), pp. 1, 8.
"Taxation Becomes Outstanding Issue as Congress Meets." (November 15, 1937), pp. 1, 2.
"Profits Tax No Burden, Says Vinson in Debate." (January 31, 1938), p. 1.
"Substitute for Surtax, Capital Gains Revision Approved by Committee." (February 19, 1938), pp. 1, 4.
"What's News." (March 3, 1938), p. 1.
"Summary of Changes in Corporate Sections of Revenue Laws by Proposed Tax Revision Discloses Many Shifts Vital to Business." (March 3, 1938), p. 3.
"What's News." (March 12, 1938), p. 1.
"What's News." (April 7, 1938), p. 1.
"Senate Group Adopts Several Amendments to Tax Revision Bill," (April 7, 1938), p. 4.
"Harrison Hopes New Tax Bill Will Be Passed Today." (April 9, 1938), p. 3.
"Roosevelt May Ask Retention of Surtax in Revenue Measure." (April 11, 1938), pp. 1-2.
" 'Last-in-First-Out' Inventory Valuation Would Aid Few Lines." (April 12, 1938), p. 2.
"Roosevelt Faces New Congress Test Over Profits Tax." '(April 13, 1938), pp. 1, 3.
"Business Tax Aids Retained in New Compromise Bill." (April 23, 1938), pp. 1, 6.
"Tax Revision Bill Conferees Finish Work on Measure." (April 27, 1938), p. 1.
"What's News." (May 10, 1938), p. 1.
"What's News." (May 12, 1938), p. 1.
"Official Reticent on Outlook for Tax Bill Signing." (May 19, 1938), p. 2.
"Roosevelt Will Sign Tax Bill, Maybe Today; Expected To Criticize It." (May 25, 1938), p. 1.
"Roosevelt Plans to Revive Tax Reforms in 1939." (May 28, 1938), pp. 1, 4.
"Two Main Features of Revenue Act of 1938 Concern Corporation Income Taxation and Levy on Capital Gains Changed by Congress." (May 28, 1938), p. 4.
"House Group to Hear Treasury Tax Revision Proposals Tomorrow." (May 26, 1939), pp. 1, 2.
"Two New Concessions to Business Included in House Tax Bill." (June 17, 1939), pp. 1, 3.
"What's News." (June 20, 1939), p. 1.

" 'Last In - First Out' Computing Theory Added to Tax Bill." (June 21, 1939), pp. 1-2.

"Tax Bill Approved by Senate; House to Expedite Passage." (June 23, 1939), p. 2.

"Many Sections of New Tax Law Apply to '39 Corporate Income." (July 3, 1939), p. 6.

"Text of Randolph Paul's Statement to Ways and Means Committee." (March 5, 1942), pp. 6, 16.

"Independent Experts Urge Further Administrative Revisions in Tax Laws to Equalize Operation." (June 15, 1942), p. 3.

"Treasury, Tax Experts Ask Reserve Fund As Protection Against Inventory Losses." (June 16, 1942), p. 2.

"Tax Report." (June 17, 1942), p. 1.

"Tax Report." (July 8, 1942), p. 1.

"Summary of Tax Bill Prepared for House Ways and Means Group." (July 13, 1942), pp. 5, 12.

"What's News." (July 21, 1942), p. 1.

"Hearings on Tax Bill May End Thursday; Changes Indicate Easier Burden on Firms." (August 10, 1942), p. 3.

" 'Shock-Absorbers' May be Put in Tax Bill To Ease Excess Profits Levy on Corporations." (August 14, 1942), p. 3.

"Corporation Tax Compromise Is Discussed; Liberal Treatment for Railroads Approved." (August 28, 1942), p. 3.

"Senate Group Approves Provisions Easing Excess Profits Tax Impact on Corporations." (August 29, 1942), p. 3.

"What's News." (October 3, 1942), p. 1.

"What's News." (October 12, 1942), p. 1.

3. *Secondary Sources and Rulings*

Alvord, E. "Analysis of the Revenue Act of 1939." *Taxes: The Tax Magazine* (July 1940), pp. 432-443.

Barker, R. "Last-in, First-out Method of Inventory Accounting." *Taxes: The Tax Magazine* (January 1942), pp. 23-26, 54.

Blough, C. "Accounting Principles Interpreted in the Light of Recent Developments." *Journal of Business* (July 1939), pp. 265-277.

Bureau of National Affairs. "LIFO: Fundamentals, Pooling and Computations." *Tax Management*. 69-4th (1980), pp. A-34-35.

Butters, J.K. and P. Niland. *Effects of Taxation: Inventory Accounting and Policies*. Cambridge, Mass.: Riverside Press (1949).

Commerce Clearing House, Inc. *Standard Federal Tax Service*. v. 1. NY (1935-55, 1974).

Committee on Federal Taxation, American Institute of Accountants. "The Last-in, First-out Inventory Method." *Journal of Accountancy* (November 1938), pp. 310-314.

Cooper, W. *Carman G. Blough: Selected Contributions in Accounting*. Atlanta, GA: Business Publications Division, Georgia State University (1982).

Davis, A. "Some Problems of Last-In-First-Out Accounting." *Accounting Review* (October 1942), pp. 384-403.

"Editorial: Inventories in a Declining Market." *Journal of Accountancy* (January 1938), pp. 3-5.

"Editorial: Inventories and Taxes." *Journal of Accountancy* (June 1938), pp. 457-460.

"Editorial: Tax Accounting and Business Accounting." *Journal of Accountancy* (December 1938), p. 353.

Kracke, E. "Inventories and Taxes." *Journal of Accountancy* (December 1939), pp. 369-376.

Harvey, J. "Some Observations on Accounting Practice With Special References to Inventory Valuation." *Journal of Accountancy* (December 1937), pp. 440-451.

Hutzler Brothers Company v. Commissioner of Internal Revenue, 8 Tax Court 14 (January 1947).

Jannis, C.P., C. Poedtke, Jr. and D. Ziegler. *Managing and Accounting for Inventories,* NY: Ronald Press (1980).

Lucas v. Kansas City Structural Steel Co., 281 U.S. 264 (April 1930).

McNair, M. and A. Hersum. *The Retail Inventory Method and LIFO.* NY: McGraw-Hill (1952).

Moonitz, M. "The Case Against LIFO as an Inventory - Pricing Formula." *Journal of Accountancy* (June 1953). Reprinted in Moonitz and Littleton (1965), pp. 457-469.

Moonitz, M. and A.C. Littleton, editors. *Significant Accounting Essays.* Englewood Cliffs, NJ: Prentice-Hall (1965).

Paton, W. "Comments on 'A Statement of Accounting Principles'." *Journal of Accountancy* (March 1938), pp. 196-207.

Paton, W. "Last-in, First-out." *Journal of Accountancy* (May 1940), pp. 354-360.

Peloubet, M. "Last-in, First-out Once More: A Discussion of Certain Points Raised by Professor Paton." *Journal of Accountancy* (June 1940), pp. 446-450.

Peloubet, M. "LIFO Inventories." *Taxes: The Tax Magazine* (September 1958), pp. 663-666.

Peloubet, M. "The Memoirs of Maurice E. Peloubet." Unpublished Manuscript (no date). Materials on file at the Accounting History Research Center, Georgia State University, which expects to publish the memoirs under the title: *The Story of a Fortunate Man: The Memoirs of Maurice E. Peloubet.*

Peloubet, M. "The Struggle for LIFO." *Price Waterhouse Review* (Spring 1971), pp. 54-61.

Prentice-Hall Inc. *1942 Federal Tax Service*. v. 1. N.Y.

Sanders, T.H., H.R. Hatfield and U. Moore. *A Statement of Accounting Principles.* NY: American Institute of Accountants (1938).

Special Committee on Inventories, American Institute of Accountants. "Valuation of Inventories." *Journal of Accountancy* (August 1936), pp. 122-132.

Special Committee on Inventories, American Institute of Accountants. "The Valuation of Inventory." *Journal of Accountancy* (January 1938), pp. 29-32.

Ward, E. "Intertwining Movements: Carman Blough and Progress of the Accounting Profession." Unpublished Master Thesis, University of Virginia (August 1980).

4. *Other References*

Abdel-khalik, R. "The Effect of LIFO-Switching and Firm Ownership on Executives' Pay." *Journal of Accounting Research* (Autumn 1985), pp. 427-447.

Amershi, A., J. Demski and M. Wolfson. "Strategic Behavior and Regulation Research in Accounting." *Journal of Accounting and Public Policy* (Fall 1982), pp. 19-52.

Biddle, G. and F. Lindahl. "Stock Prices Reactions to LIFO Adoptions: The Association Between Excess Returns and LIFO Tax Savings." *Journal of Accounting Research* (Autumn 1982, Part II), p. 551-588.

Biddle, G. and W. Ricks. "Analyst Forecast Errors and Stock Price Behavior Near the Earnings Announcement Dates of LIFO Adopters." *Journal of Accounting Research* (Autumn 1988), pp. 169-194.

Binder, J. "Measuring the Effects of Regulation with Stock Price Data." *Rand Journal of Economics* (Summer 1985a), pp. 167-183.

Binder, J. "On The Use of the Multivariate Regression Model in Event Studies." *Journal of Accounting Research* (Spring 1985b), pp. 370-383.

Chasteen, L. "An Empirical Study of Differences in Economic Circumstances as a Justification for Alternative Inventory Pricing Methods." *Accounting Review* (July 1971), pp. 504-508.

Cox, G., M. McCubbins and B. Weingast. "An Outline of Congressional Procedure." Unpublished Case (April 1987a).

Cox, G., M. McCubbins and B. Weingast. "Congressional Procedure and the Committee System." Unpublished Case (April 1987b).

Davis, H. "History of LIFO." *Accounting Historians Journal* (Spring 1982), pp. 1-23.

Dopuch, N. and M. Pincus. "Evidence on the Choice of Inventory Accounting Methods: LIFO Verus FIFO." *Journal of Accounting Research* (Spring 1988), pp. 28-59.

Gilligan, T. and K. Krehbiel. "Measuring the Effects of Regulation with Stock Price Data: A Congressional Procedure Approach." Unpublished Manuscript (May 1988).

Hunt, H., III. "Potential Determinants of Corporate Inventory Accounting Decisions." *Journal of Accounting Research* (Autumn 1985), pp. 448-467.

Lee, C.J. and D. Hsieh. "Choice of Inventory Accounting Methods: Comparative Analysis of Alternative Hypotheses." *Journal of Accounting Research* (Autumn 1985), pp. 468-485.

Madeo, S. and M. Pincus. "Stock Market Behavior and Tax Rule Changes: The Case of the Disallowance of Certain Interest Deductions Claimed by Banks." *Accounting Review* (July 1985), pp. 407-429.

Matsunaga, S. and P. Chen. *Rulemakers of the House.* Urbana, IL: University of Illinois Press (1976).

Merino, B., B. Koch and K. MacRitchie. "Historical Analysis — A Diagnostic Tool for 'Events' Studies: The Impact of the Securities Act of 1933." *The Accounting Review* (October 1987), pp. 748-762.

Pownall, G. "An Empirical Analysis of the Regulation of the Defense Contracting Industry: The Cost Accounting Standards Board." *Journal of Accounting Research* (Autumn 1986), pp. 291-315.

Pownall, G. and M. Pincus. "The Gates and Signals Event-Dating Method for Regulatory Event Studies: Reassessing the Impact of Merger-Related Regulations." Unpublished Manuscript (September 1988).

Ricks, W. "The Market's Response to the 1974 LIFO Adoptions." *Journal of Accounting Review* (Autumn 1982, Part I), pp. 367-387.

Schipper, K. and R. Thompson. "The Impact of Merger Related Regulations on the Shareholders of Acquiring Firms." *Journal of Accounting Research* (Spring 1983), pp. 184-221.

Schipper, K. and R. Thompson. "The Impact of Merger Related Regulations Using Exact Distributions of Test Statistics." *Journal of Accounting Research* (Spring 1985), pp. 408-415.

Stevenson, F. "New Evidence on LIFO Adoptions: The Effects of More Precise Event Dates." *Journal of Accounting Research* (Autumn 1987), pp. 306-316.
Sunder, S. "Relationships Between Accounting Changes and Stock Prices: Problems of Measurement and Some Empirical Evidence." *Journal of Accounting Research, Empirical Research in Accounting: Selected Studies* (1973), pp. 1-45.
Weingast, B. "Notes on the Gates and Signals Approach to Legislative Events." Unpublished Manuscript (January 1988).

APPENDIX

Approach to Examining the Historical Record

The general framework of analysis was structured around veto points in the legislative process. In the House of Representatives (i) the Committee on Ways and Means had jurisdiction over tax bills and held public hearings which were published, (ii) met in private to draft a bill, and (iii) brought the bill to the House as part of a published House Report. On the House floor, (iv) debate ensued under the rule that no amendments were permitted,[27] and (v) the final bill was voted on and approved. In the Senate, the House bill was (vi) assigned to the Committee on Finance which typically held public hearings, (vii) met in executive session to write its bill, and (viii) issued a Senate Report containing the bill's provisions. The bill (ix) was debated and could be amended on the Senate floor, (x) and when approved was sent back to the House. Typically, (xi) the House did not agree to the Senate's bill and a Conference Committee was formed. (xii) Meetings of the Conference Committee were held as executive sessions. (xiii) Once agreement was achieved, Conference Reports were filed by the House and Senate conferees with their respective chamber. (xiv) The recommended bill was briefly debated and approved by each house, and (xv) the measure was sent to the President for his action.

Since I was interested primarily in the documents and articles that dealt with LIFO or related issues, I initially familiarized myself with the major LIFO legislative and administrative outcomes (i.e., key provisions and regulatory rules) as well as with the substantive inventory and tax issues and the industries most likely affected. The main source for this was Butters and Niland [1949]. I also used Jannis *et al.* [1980]. A careful reading of the Statutes was conducted next, followed by an overview of the legislative history of the Statutes presented in the Index to the applicable volumes of the *Congressional Record (CR).*

Transcripts of all debates on the floor of each house were in the *CR*. The published committee hearings were voluminous, running well over 10,000 pages for the four acts. Sometimes a topical index was included, but usually only a list of individuals who were witnesses and/or who filed briefs was presented along with their affiliations. Sometimes there was a notation as to the main issue they were addressing. The prior identification of issues and interested industry groups meant that affiliations could be used to identify individuals who potentially might be addressing LIFO or related issues. Once an individual appearing in connection with LIFO was identified, his name was searched for in other hearings. It is possible that I missed some witnesses by not having read the transcripts of all of the hearings on all parts of the tax bills. I believe, however,

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[27]Except for W&M Committee amendments. See Matsunaga and Chen [1976, p. 21], and Gilligan and Krehbiel [1988, p. 15].

that no LIFO-related witnesses were missed. In no case did I find a reference to a witness in other testimony, in discussions or debates, or in any news or magazine articles that I had not already discovered.

As far as W&M, Finance and Conference Committee Reports were concerned, I read all LIFO proposals and associated commentaries as well as many other parts. As regards floor debates reported in the *CR*, I read a good deal of these and skimmed the parts obviously dealing with the non-LIFO aspects of the bills.

I read every article that I could identify as being tax-related that appeared in the *Wall Street Journal* over a period that began well before W&M Hearings commenced and ended after the Presidential action had been taken on the final bill. This was done for all the tax bills. I also examined the several indices in *Taxes: The Tax Magazine* and read all articles and rulings in any way related to LIFO. LIFO-related articles in the *Journal of Accountancy* and *The Accounting Review* also were reviewed as were numerous years of the CCH tax service.

Finally, I attempted to independently verify all of the claims made in the memoirs and oral histories available to me.

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THE STANDARDIZATION OF MINE ACCOUNTING

Abstract: This paper presents the history of the international efforts to standardize mine accounting between 1895 and 1915. Extractive industries, such as mining and oil and gas, posed especially difficult problems for the accounting profession. In 1895 there was almost no literature to help in the resolution of these problems. During this following interval the issues of mine accounting were thoroughly discussed and limited standardization was achieved in some regions. Near the end of this period the Institution of Mining and Metallurgy unanimously adopted a set of accounting standards for the mining industry.

INTRODUCTION

From 1895 to 1915 there was a vigorous international effort to establish standardized methods of accounting for the mineral industry. The prime objective of this movement was to achieve comparability of financial statements throughout the industry. If greater accounting uniformity could be achieved, it was hoped that the public would have more faith in the financial reports of mining companies and therefore be more willing to invest in such ventures.

At the beginning of this period there was essentially no literature to guide in the design of an accounting system for a mine and as a result there was little, if any, uniformity. The only accounts that were likely to be comparable were cash and current liabilities. During the period from 1895 to 1915 the leaders of the mining industry discussed a wide range of topics, such as accounting for exploration, property acquisition, development and the related issues of depletion. As is often the case in accounting theory, these pioneers were unable to agree on several important questions. However, they succeeded in defining and clarifying many issues; promulgating a set of mine accounting standards and achieving some regional standardization within the industry.

Even a cursory review of the accounting literature will show that the mine standardization movement extended from approximately 1895 to 1930. However, the movement can be divided into two distinct phases, which were separated by the disruption of World War I. The first period from 1895 to 1915 was international in scope; was not heavily influenced by income tax laws; and saw a significant level of participation by accountants, consulting engineers, and mine managers. The second phase lasted from 1915 to 1930 and was primarily an American movement; was heavily influenced by the federal income tax laws; and was dominated by accountants. Not only is the second phase quite interesting, it is very complex. Because of the differences between the two periods, the second phase of the standardization movement (1915-1930) will be left for a future study.

This study presents the history of the international mine accounting standardization movement (1895-1915). Its purpose is to determine how the complex accounting issues of the mineral industry were handled in an earlier age and to trace the path that led to modern practice. While this paper surveys accounting practices throughout the English speaking mining world, it focuses on two significant developments. The first is The standardization of mine accounts at the Bewick, Moreing & Co. mines in Western Australia. This is the best documented and earliest example so far identified of a large group of independently owned mines adopting uniform accounting standards. The second topic is the effort of the Institution of Mining and Metallurgy to establish accounting standards for the mineral industry.

JUSTIFICATION

There are a number of reasons why this is an important issue in accounting history. One reason is that efforts to standardize practice have dominated the development of financial reporting during this century. The movement to standardize mine accounting was one of the first such movements. This is also of interest because it is an example of the standard setting process in a generally unregulated environment. Another important reason is that the mining industry faces very difficult fundamental questions of when is a cost an asset and when is it an expense. These issues are among the most important and interesting in accounting history.

METHODOLOGY

This paper is based on a comprehensive review of the accounting and mining literature of the period. Since a discussion of every article on mine standardization would quickly become tedious and possibly confusing, only the more important are included. Among the factors considered in the selection of articles were the following: the author's professional standing; how often the article was cited by others; did the article reflect the actions or views of professional societies; and how well did the author present his ideas. In addition to the literature review, several individuals provided very valuable research assistance. P.J.D. Ellery, Chief Executive Officer of the Chamber of Mines of Western Australia, was very helpful in providing information regarding the Chamber's efforts to standardize mine accounting. Dr. George Nash of the Hoover Presidential Library furnished a copy of an unpublished Herbert Hoover manuscript which proved to be extremely valuable. That manuscript describes many useful details of the uniform system of accounts that Hoover installed at eighteen leading mines in Australia. Don Reid, an executive of the Western Mining Corporation (Australia), provided us with a complete set of annual reports of the Lake View Consols Mining Company from 1896 through 1910. Certain questions could only be resolved by analyzing these financial statements. Leslie Exton, librarian at the Institution of Mining and Metallurgy (London), searched the records of that professional society for the files of the Mine Accounts and Cost Sheets Committee. The Institution of Mining and Metallurgy is a British society of engineers that was founded in the early 1890s. It is roughly comparable to the American Institute of Mining and Metallurgical Engineers. Although those files no longer exist, the work of that committee was widely discussed in the accounting and mining literature (between 1905 and 1915).

MINING INDUSTRY

The mining industry changed dramatically during the period from 1880 to 1920. The structure of the industry changed from organizations devoted to single properties to firms that controlled many properties [Mikesell, p. 28; Watermeyer and Hoffenberg, pp. 827-28]. It was a time of great advances in the technology of the mineral industry [Charleton, p. 329]. Practical miners were increasingly replaced by college trained engineers in the industry's positions of authority [Lindgren, p. 702]. This new and growing class of well educated managers displayed a greater appreciation of the importance of accounting. For the first time in history, considerable attention was directed to mine accounting issues by accountants, engineers and managers. The mining industry of that day was very cosmopolitan. It was not unusual to find European mining experts in North America or American experts working at mines in the British empire. As a result, the history of this topic reflects a worldwide exchange of ideas. Australia, Great Britain, South Africa, and the United States figure prominently.

A TYPICAL VIEW OF MINE ACCOUNTING

Although J. H. Curle, a journalist and mining expert, was not the first to address this issue, the following quotation [Curle, 1905, pp. 29-30] states an attitude toward standardizing mine accounts that was typical of the times:

> I hope the time is approaching when the system of standardization will be extended to mining costs and to mining accounts. At the present the methods for each of these are legion, and seem designed to conceal rather than reveal the financial position; but there must be some one method, in accounts especially, which is best of all, and with the assistance of skilled accountants and an actuary or two the Institute should be able to draft here a great reform.

The belief that there is "some one method" that is "best of all" has been held by many accountants and has had an important influence on the history of the accounting theory.

The following sections will describe the contributions from various mining centers to the standardization movement.

SOUTH AFRICA

One of the earliest and best discussions of nonstandard accounting practices in the mining industry is found in *The Gold Mines of the Rand* by Hatch and Chalmers [1895]. The Rand is the principal gold mining district in South Africa. Chalmers and Hatch were mining engineers who wanted to compare the working costs of the leading mines of South Africa. However, they discovered this was not a simple task because of the significant differences in the accounting methods of those mines.

At the mines of the Rand, a wide variety of accounting practices were used to account for the cost of excavating mine shafts. For example, the Robinson Gold Mine wrote off the total cost expended on shafts at the end of each month. The Crown Reef Mine capitalized the cost of shafts and amortized these costs on a level by level basis. Most Rand mines capitalized these costs and amortized them, but the amount amortized was often a function of the firm's profits.

There was greater uniformity in accounting for the cost of drives and winzes (secondary shafts) than there was for main shafts. Most Rand mines capitalized and depleted these costs on a level by level basis. At some mines (e.g., the Crown Reef, Robinson, and Jubilee) the total expended on drives and winzes during each month was charged to development expense. Depreciation charges tended to be unpredictable and somewhat arbitrary. The size and regularity of depreciation charges was related to the prosperity of the mines. Rates varied from 5 to 25 percent of cost.

In 1897 the Institute of Accountants and Auditors in the South African Republic met for the purpose of promoting the adoption of a uniform system of mine accounting. Since its founding three years earlier, the Institute had fostered this objective. At the request of the Institute, W. H. Dawe, an expert mine accountant, presented a paper on the issue. According to Dawe [1897a and 1897b], in the late 1800s there existed a "chaotic want of system" in the mine accounts of the Rand. Despite significant improvement in the region's accounting systems, a lack of uniform accounting practices was a serious and unresolved problem of this South African industry at the end of the 19th century. With regard to methods in other regions of the world, Dawe criticized Australian mine accounting, but had high praise for American practices.

The issue of whether or not to capitalize a cost was the central question of mine accounting in Dawe's opinion. He asserts [1897b] that the "question of the treatment of capital expenditure is the obstacle which must be disposed of before a uniform standard of mining accounts can be adopted: that settled, the rest will be simple." His own recommendation was that all development costs incurred during the production stage should be expensed. Prior to adjourning the meeting [1897b, p. 8] the following resolution was passed unanimously:

> That the Council of the Institute of Accountants and Auditors approach the Chamber of Mines and the Association of Mines with a view to the appointment of a joint committee of those bodies and of this institute to consider the recommendation to companies of a uniform system of submitting their accounts to shareholders.

A careful review of the literature uncovered no evidence that such a joint committee was ever formed.

J. Howard Pim presented a paper before the Cartered Accountants Students' Society of London on April 27, 1898, concerning the accounting implications of the wasting nature of South African gold mines. He advocated the capitalization of property acquisition costs and preproduction stage development costs. He was against amortizing these costs. The reason is that a mine is a single asset and production is equivalent to selling the asset by installments. The actual total sales price is not known until the mine is exhausted. Therefore the accountant should defer the property costs until the transaction is completed.

In 1902 G. A. Denny [pp. 91-92] recommended that all preproduction costs be capitalized and never amortized, which was also Pim's suggestion. All ordinary development expenditures and maintenance costs should be charged to income once production began. All new extraordinary outlays should be paid by issuing new shares of stock (and presumably capitalized permanently). Property acquisition costs should not be depleted, because one cannot accurately estimate the life of the mine. However, equipment costs should be depreciated. He also favored the use of secret revenue reserves for the purpose of smoothing income.

Mine Accounts and Mine Book-keeping by James G. Lawn, professor of mining at the South African School of Mines, was the best and probably most influential book on this topic written before 1910. This is a very well researched and scholarly book. Lawn briefly discusses some variation in accounting methods, but he was not concerned with this issue. His purpose was to state how mine accounting should be handled. He cites the Alaska Treadwell gold mine as having a model accounting system. Lawn maintained [p. 110] that both depreciation and depletion should be charged to income, whether or not a loss would result, so that income could be properly determined. Lawn was the first authority on mine accounting to argue that depletion charges were needed for the proper measurement of income.

NORTH AMERICA

The financial reports of the Alaska Treadwell Gold Mining Company were praised by the editor of *The Engineering and Mining Journal* [1896, p. 170-1]. The details of the Alaska Treadwell's accounts are not entirely clear, but the development stage expenditures appear to have been capitalized. All production stage development and construction expenditures were charged to operations. *The Engineering and Mining Journal* suggests that this firm's reports illustrate an axiom of mine accounting [p. 170]: "What is not dividend is cost." This accounting system was designed by Hamilton Smith, an American consulting engineer who was closely associated with the Rothschild mining interests. The article goes on to say that the reports of many mines were uninformative and often concealed extravagance or dishonesty.

A. J. Yungbluth [1898a, b, and c], at a meeting of the Lake Superior Mining Institute, repeated the call of others for the establishment of a "uniform system of mine accounts." However, J. Parke Channing [1897], one of America's leading mining engineers, felt that one single system of accounts was not appropriate for all mines because of the great differences among mines.

Charles V. Jenkins was the accountant of the War Eagle Consolidated Mining and Development Co., Ltd. and the Centre Star Mining Co., Ltd., both of Rossland, B.C. His mines [Jenkins, 1901] capitalized plant and depreciated the cost over several years. He expensed the development costs as incurred. Jenkins [1903, p. 105] stated that there was a "noticeable lack of uniformity in the system of keeping mine-accounts." He felt that this was due to a scarcity of practical literature on the subject. The problem was worse in mining than in other industries. He called on mining engineers to establish the needed standards.

In 1903 Herbert Hoover, a leader of the London mining community, was asked by the editor of *The Engineering and Mining Journal* to prepare a paper on mine accounting. Hoover [1903, p. 44] stated that "there is a crying need for greater uniformity in the formulation of mine accounts." He acknowledged that this was not a new idea, but its importance was becoming increasingly evident. According to Hoover, most English firms capitalized construction and development costs while they charged mining costs to income. The methods of allocating costs to these categories differed most "harassingly." Some firms charged the cost of winzes and raises (secondary shafts) to mining while others charged it to capital. Firms might or might not capitalize a portion of pumping, repairs and general charges. Capitalized costs were usually amortized over a number of periods.

Hoover called on the American Institute of Mining Engineers and the English Institution of Mining and Metallurgy to appoint a commission to formulate a system of uniform accounting standards. Hoover appears to have been the first to call on these organizations to take such action. Charles V. Jenkins [1903], an accountant, seconded Hoover's call for the establishment of a commission on accounting standards. He believed that uniform methods of determining working costs could and should be developed. Yet, he doubted that uniformity would ever be achieved in accounting for development costs. Theodore Comstock, founder and former dean of the University of Arizona School of Mines, said [1903] that mine accounting was in a state of "woeful chaos." He felt that American mine accounting was even more chaotic than English practice. He credited Hoover with being the first person to propose action by the American Institute of Mining Engineers and the Institution of Mining and Metallugry. He supported Hoover's proposal. R. Gilman Brown [1903] endorsed Hoover's call for a commission on accounts. However, he felt that the most that could be achieved were broad statements of accounting principles and a requirement for full disclosure of accounting methods on financial reports.

AUSTRALIA

A. G. Charleton [1903, p. 476], a former president of the Institution of Mining and Metallurgy, stated that a uniform system for subdividing mining costs would be highly desirable for the gold mines of Western Australia. He recommended that the Chamber of Mines of Western Australia establish accounting standards and he suggested that the accounts of the Lake View Consols Mine represented an example of "admirable" practice. The editor of *The Accountant* [November 7, 1903, p. 1355] also commented on the excellence of the Lake View Consols accounting reports. Charleton [1903, p. 198] believed that the question of how much cost to capitalize and how much to expense was so difficult that it would always be argued. However, he recommended that all post production stage development expenditures be expensed, even though revenue and costs might not be properly matched.

Perhaps as a result of Charleton's encouragement, an important effort to establish accounting uniformity occurred in Western Australia, one of the world's leading centers of gold mining. In 1903 the Chamber of Mines of Western Australia [*Monthly Report,* July, 1903] passed a resolution "affirming the desirableness of adopting a uniform system of keeping mine accounts." It was stated that such a system would be a benefit to both the investors and the management of the mines. The managers of the large mines were quite interested in this subject. To stimulate the consideration of this topic. J. W. Sutherland, general manager of the Golden Horseshoe Estates Co., Ltd., presented a paper that compared the costs of several of the leading mines of Western Australia. W. A. Prichard [1903a, 226-7] objected to the method used by Sutherland and he offered an alternative system of account classification based on the system used at the Lake View Consols gold mine.

The Lake View Consols was a great mine that was located on the Golden Mile of Kalgoorlie in Western Australia. It had been one of the few good properties in the financial empire of Whittaker Wright, an infamous mine promoter. Whittaker Wright's downfall occurred in 1900-01 and resulted in a sensational scandal as evidence was uncovered of insider trading, secret ore reserves, falsified balance sheets, borrowing money to pay dividends and the overcapitalization of companies [Nash, p. 229]. In 1901 Francis Algernon Govett, a British financier, led a stockholder revolt that succeeded in seizing control of the mine from Wright. Govett inspected the mine in December of 1901 and on that trip he met Herbert Hoover. A month later he engaged Bewick, Moreing & Co., Hoover's firm, to manage the Lake View Consols.

Hoover appointed W. A. Prichard, a young American mining engineer, to manage the mine. About a year later Prichard became a joint manager (with W. J. Loring) of the Western Australian operations of Bewick, Moreing & Co. During 1903 plans were made to standardize the accounts of the rapidly increasing number of mines that were managed by Bewick, Moreing & Co. Prichard stated [1903b] that he had designed a standardized system of cost classification for his firm. However, the records of the Lake View Consols indicate that Prichard did very little designing and had essentially adopted with slight modifications the accounting system of that mine. The Lake View Consols' accounting system had been installed in 1901 when T. F. Hartman was the mine's general manager and before Bewick, Moreing & Co. had taken over. While Prichard may have chosen this system because of its merits, it was also the system with which he was most recently familiar.

In 1903, as a test, Prichard ran this system in parallel with the original accounting systems at four leading mines. The mines were the Lake View Consols, Great Boulder Main Reef, Oroya-Brownhill, and the Great Fingall. The mines differed significantly from each other in their ores and treatment processes. Prichard wished to demonstrate that one system would fit all mines. This system classified all expenses as either working (operating) expenses or nonworking expenses. Working expenses included ore extraction, ore treatment (reduction), and general expenses. General expenses combined three categories that had been listed separately on the profit and loss account of the Lake View Consols. These were maintenance expenses, realization expenses (marketing expenses) and management expenses. The management expenses included both Australian and London administrative expenses. Current expenditures on development, plant, buildings and equipment were all expensed, but were not considered to be working costs. At the Lake View Consols there was no depletion of the original property account which remained fixed at over 213,000 pounds sterling until 1910. Most of the preproduction stage costs of buildings, plant, equipment and development were written off to retained earnings in 1901. Prior to 1901 the mine's practice had been to capitalize and amortize thse costs. After 1901 there are no accounts for depletion or redemption.

In 1904 this system of accounts was adopted by 18 mines managed by Bewick, Moreing & Co. in Western Australia [Hoover, 1905]. It had been changed slightly since 1903. Realization charges were listed as a separate item of working costs and London office expenses were no longer considered to be a working cost. However in 1906 the form of the Profit and Loss Account was modified again so that no distinction was made between working and nonworking expenses on this statement. Working costs continued to be calculated on a separate schedule, but they now included exploration, development and mine equipment costs. This reveals a change in Hoover's views on mine accounting issues.

Hoover's article in the *Engineering and Mining Journal* [1903] appears to have been an explanation or justification for his plans to standardize the accounts of the mines in Western Australia. Bewick, Moreing & Co. did not own these mines in Australia. Instead it was a firm of professional mining experts which was engaged to manage the mines of others because of its reputation for managerial skill and honesty. Thus the mines were associated through their management team but not through ownership. This was a fairly new and increasingly important form of business organization in the mining industry. While Hoover's firm dominated Western Australia, other similar firms figured prominently in India and South Africa. Hoover stated that the South African groups had standardized their accounts just as Bewick, Moreing & Co. did in Australia.

Hoover's theories of mine accounting evolved over time. Originally he favored immediately expensing all development costs because of the difficulty of matching these costs to the revenues generated. In 1909 Hoover [p. 171] elaborated on his theories of mine accounting by stating that only regularly recurring items should be included in working costs. Thus he excluded plant and equipment costs. He argued that working costs would be distorted if development was expensed as incurred which had been his firm's accounting practice in Australia. Therefore, Hoover recommended that development costs should be capitalized and amortized. He stated that the depletion rate should be calcuated annually and that the redemption of development is a working cost. Development stage expenditures ought to be capitalized, but Hoover believed that it is a matter of company policy only whether these costs are to be amortized. In Australia it was Hoover's policy to charge off development stage expenditures very rapidly.

The Chamber of Mines disclosed in its August, 1903 *Monthly Report* that a Special Committee was appointed to investigate the standardization of accounts. P. J. D. Ellery, Chief Executive Officer of the Chamber of Mines of Western Australia [Nov. 25, 1987] stated that the committee had not completed its deliberations by 1905 and it appears to have died without issuing any pronouncement. There are several reasonable explanations for this. Bewick, Moreing & Co., which managed over half of the gold production of Western Australia, standardized the accounts of the mines it controlled in 1904. Thus, the committee may have felt that sufficient standardization had been achieved. In addition the Institution of Mining and Metallurgy established a committee to consider this question for the entire British mining world, so the Chamber of Mines may have felt that its committee was no longer needed. Finally, P. J. D. Ellery stated that it would not have been unusual for such a committee to have disbanded without taking any action.

INSTITUTION OF MINING AND METALLURGY

The most influential organization that worked for the standardization of mine accounting during this period was the Institution for Mining and Metallurgy. A. G. Charleton, a prominent member of the Institution, led this effort. In 1897 he wrote an article which was one of the most complete discussions on mine accounting of the last century. The paper reflects a management accounting and accounting system orientation. At that time Charleton did not display any noticeable concern with the problem of non-uniform accounting practices. He relied heavily on the work of Chalmers and Hatch. Commenting on Charleton's paper James MacTear, president of the Institution, felt that the issue of mine accounting was of great importance which was increased by the "utter ignorance" [1897, p. 314] of the importance of accounts displayed by London businessmen. Although Charleton's paper [1897] tended to be descriptive there are a few prescriptive sections. Charleton [p. 279] proposed to capitalize primary development and then amortize these costs once production commenced. He also argued [p. 285] that depreciation of plant and equipment must be provided for "if a company desires a fair statement of accounts."

The presidential address of S. Herbert Cox [1899] contains the first evidence that the Institution of Mining and Metallurgy was interested in the standardization of mine accounting. Cox called on the members of the Institution of Mining and Metallurgy to work toward the standardization of mine accounts. Cox [p. 218] recommended that mine acquisition costs should be capitalized and not amortized. Once milling began, he suggested, development costs should be capitalized and amortized over the ore developed by those specific expenditures. On the other hand the cost of main shafts should be amortized over the entire life of the mine.

In 1901 Charleton for the first time clearly expressed a concern for accounting uniformity. According to Charleton [1901, p. 687] accounting "uniformity could do no possible harm to the proprietors and would be of the greatest possible advantage to mining-men generally." He recommended that the mine managers' associations or the chambers of mines in important districts should endeavor to establish uniform accounting standards. Because of his prominence (Charleton was elected as president of the Institution of Mining and Metallurgy), the Chamber of Mines of Western Australia may have been prompted to address this issue. With regard to accounting princples, Charleton proposed that production stage development expenditures should be expensed as incurred.

During the first decade of the twentieth century, the Institution of Mining and Metallurgy engaged in a number of projects aimed at standardizing the mining industry. By 1908 mine accounting had been added to this agenda. A. G. Charleton was appoined to chair the Mine Accounts and Cost Sheets Sectional Committee. Alfred James, president of the Institution of Mining and Metallurgy [James, p. 376] called on the mining men of Africa, Australia and America to assist the Institution in its efforts to standardize mine accounting.

One of the best discussions of mine accounting was a submission by John Dennison in 1908 to the Mine Accounts and Cost Sheets Committee of the Institution of Mining and Metallurgy. By focusing separately on development stage and production stage capital expenditure, he displayed a clear understanding of the issues. In South Africa of 1908 the normal treatment of development stage capital expenditures was as follows: the property acquisition costs were not amortized; plant and equipment costs were depreciated only at some of the mines; even when depreciation was charged it usually was excluded from the calculation of profits and losses; shafts were not amortized; and initial development was not amortized at most mines. During the production stage many mines expensed all development costs as they were incurred. An important segment of the industry capitalized production stage development and amortized these costs on a unit of production basis. Dennison recommended the simpler alternative of expensing these costs at once. His attitudes on depreciation were less consistent with modern views. He suggested accruing the costs of additions to plants and equipment. If this was done, he felt there would be no need for depreciation. He said that mines registered in London were forced by their auditors to charge depreciation but that South African mines seldom made this charge.

Several members of the Institution engaged in a lively discussion of Dennison's paper. Dennison commenting [p. 119] on his own paper stated that mine accounting practices were in a state of chaos and that everyone could not be correct. Additionally the lack of standards permitted the manipulation of financial reports. Hugh Marriott thought that depreciation was not necessary if the plant was properly maintained. He felt [p. 122] that suspense accounts were the "invention of the devil," but he thought that manipulating revenues by means of secret reserves was a good idea. S. J. Truscott argued that the property account should be depleted because the mine was a wasting asset. W. Fischer Wilkinson thought [p. 127] that the property account should not be amortized and he opposed the use of secret gold reserves. E. R. Field said [p. 127] that he "was not very sanguine that they could standardise the accounts of mines which differed on almost every point on which difference was possible."

REPORT OF THE MINE ACCOUNTS AND COST SHEETS COMMITTEE

The Council of the Institution of Mining and Metallurgy on December 21, 1910 unanimously adopted the report of the Mine Accounts and Cost Sheets Committee. The recommendations were based on a careful consideration of the opinions of a "large number of engineers and other authorities in various parts of the World." The report tended to be overly cautious and ambiguous. A memorandum (that accompanied the report and was supposed to clarify some of the issues) actually contradicts the report several times and contradicts itself occasionally. People could easily become confused as to which practice was endorsed by the Institution. The memorandum also added to the confusion by questioning the practicality of many of the report's recommendations.

The practices which the committee recommended as theoretically correct are quite similar to modern American practice. For example, development stage expenditures should be capitalized under the following categories: property, main shafts, machinery, buildings, surface works (e.g. roads and reservoirs), and underground equipment. The committee stated that it is theoretically correct to amortize all of these costs once production begins. In addition it asserted that a proper program of repairing and maintaining buildings and equipment did not reduce the necessity for depreciating these asests. Unfortunately the memorandum contradicts the report by stating that in practice depreciation is not necessary if the equipment is properly maintained. The report also recommends that amortization should begin as soon as there are some accumulated profits. This seems to imply that depreciation is a discretionary item that may be adjusted as profits change. Charles Hewitt [1914b] strongly condemned this concept.

Once the production stage is reached only a few types of costs should be capitalized which include the following special items: the purchase of a new property, a major development that opens a new ore body, the acquisition of new equipment, and the construction of additional buildings. The committee recommended that expenses be listed under the following categories: development, mining, sorting, ore treatment, administration, marketing costs, taxes and head office charges. It proposed two methods of accounting for development costs incurred during the production stage of a mine. These costs could either be expensed immediately (Charleton's position in 1897) or capitalized and amortized as the developed ore was mined (a common practice in South Africa). Hoover employed the first method in Western Australia, but had apparently changed his position by 1909 when he endorsed the second practice. The report also recommends that unfinished products should be valued at the lower of cost or market. Finished goods such as bullion awaiting shipment should be valued at net realizable value.

The committee called for periodic independent audits of the mine accounts. It also called for the establishment at the Institution's library of a file of mine accounts and cost sheets of leading mines from around the world which could be referenced and studied by the rest of the industry. Unfortunately this file no longer exists at the library of the Institution of Mining and Metallurgy. The committee appears to have been strongly influenced by Herbert Hoover who was by then America's leading mining engineer. The only quotation in the committee's official report is from Hoover and many sections show a striking similarity to passages in his book *The Principles of Mining.*

The committee's recommendations were reported by the following accounting and mining journals: *The Accountant, The Incorporated Accountants' Journal, The Australian Mining Standard,* and *The Engineering and Mining Journal.* For several years the report was also published as an appendix at the back of the *Transactions of the Institution of Mining and Metallurgy.* Lawrence R. Dicksee strongly endorsed the report's recommendations in his book *Mine Accounting and Management.* This book was used as a textbook to train mining engineering students. The complete text of the Institution's report and accompanying memorandum were printed in the back of Dicksee's book.

In May of 1911 *The Accountant* printed the report of the Mine Accounts and Cost Sheets Committee. In addition the editor printed a series of four articles evaluating the proposals of the Institution. The editor endorsed the report stating "that these recommendations should be adhered to, as far as possible, in all cases" [May 6, 1911, p. 692]. The editor of *The Accountant* made several suggestions on how to improve or clarify various sections of the report. For example, the editor wanted the Institution to define more clearly when the production stage begins. The practice of expensing production stage development costs as incurred was favored over the alternative of amortizing these costs. The principle of valuing bullion inventories at their net realizable value and unfinished product inventories at the lower of cost or market was endorsed. The amortization of the property account was opposed by *The Accountant* on the grounds that a mine is not a going concern. The editors also pointed out that the Institution's report displayed some confusion and ambiguity concerning depreciation. The editors declared the absolute need for a depreciation charge. Dicksee adopted the suggestions of *The Accountant* in his textbook. The editor of *The Accountant* expressed very strong support for the report's classification of working cost accounts and the call for the integration of the financial and cost accounting records.

In 1911 *The Incorporated Accountants' Journal* printed the report and an extract of the accompanying memorandum issued by the Institution of Mining and Metallurgy. While the editor of this journal generally supported the report of the Institution of Mining and Metallurgy, he severely criticized the coverage of the topic of depreciation. The *Australian Mining Standard* and the *Engineering and Mining Journal* printed summaries of the report in 1911, but did not provide editorial analysis.

Such widespread influential support for the Institution's report must have magnified the influence of these recommendations. Yet considering the cost of changing an accounting system, one would not expect many mines to adopt these voluntary standards immediately. It seems more likely that when a new mining company was established the report could have served as a guide. The two main weaknesses in the report of the Mine Accounts and Cost Sheets Committee were that it lacked clarity and it was voluntary. Evidence [*The South African Mining Journal*, 1912; Hewitt, 1914a and 1914b; and McGrath, 1918] from around the world indicates that a lack of uniformity in mine accounting continued to be viewed as a major problem in the years that followed the release of this report. In the 1920's America's mining industry renewed the effort to standardize mine accounting. However, by the 1930's the few articles [Peloubet, 1937; and Fernald, Peloubet, and Norton, 1939] dealing with this subject, seem to accept non-uniform accounting practices as an inevitable result of the complexity of the industry.

CONCLUSION

During the period from 1895 to 1915 there was an international movement to standardize accounting in the mining industry. Despite the best efforts of many leaders in the mining industry, this movement was not totally successful, but much progress was made in that direction. Among the accomplishments of this period were the development of an extensive literature on the theory of mine accounting, the standardization of the accounts of certain groups of mines (such as the Bewick, Moreing & Co. mines), and the promulgation of a set of accounting standards by the Institution of Mining and Metallurgy.

REFERENCES

R. Gilman Brown, "Gold Mine Accounts," *The Engineering and Mining Journal,* (Oct. 10, 1903), pp. 536-7.

J. Parke Channing, "Mine Accounts," *Engineering Magazine,* (1897), pp. 926-33.

A. G. Charleton, "Mine Accounts and Cost Sheets," *Transactions of the Institution of Mining and Metallurgy,* (1897), pp. 243-315.

A. G. Charleton, "Presidential Address," *Transactions of the Institution of Mining and Metallurgy,* (1902), pp. 310-40.

A. G. Charleton, "Principles and Methods of Profitably Working a Mine," *Engineering Magazine,* (Jan., 1901), pp. 685-702.

A. G. Charleton, *Gold Mining and Milling in Western Australia,* London, E. & F. N. Spon, Ltd., 1903.

Theodore B. Comstock, "Mine Accounts," *The Engineering and Mining Journal,* (Aug. 29, 1903), pp. 304-5.

S. Herbert Cox, "Presidential Address," *Transactions of the Institution of Mining and Metallurgy,* (1899), pp. 208-22.

J. H. Curle, *The Gold Mines of the Word,* 3rd ed., London, George Routledge & Sons, Limited, 1905.

W. H. Dawe, "Mining Accounts: The Desirability of the Adoption of a Uniform System in Publishing Accounts and Balance Sheets by the Gold Mining Companies of the Witwatersrand," *The Accountant,* (Sept. 4, 1897a), pp. 840-846.

W. H. Dawe, *The Incorporated Accountants' Journal,* (Oct. 1897b), pp. 3-8.

John A. Dennison, "Working Costs on Mines, as Practiced on the Rand," *Transactions of the Institution of Mining and Metallurgy,* (1908), pp. 108-32.

G. A. Denny, *The Deep-Level Mines of the Rand,* London, Crosby Lockwood and Son, 1902.

P. J. D. Ellery, Chief Executive Officer of the Chamber of Mines of Western Australia, correspondence, Nov. 25, 1987.

Henry B. Fernald, M. E. Peloubet, and L. M. Norton, "Accounting for Nonferrous Metal Mining Properties and Their Depletion," *Journal of Accountancy,* (Aug., 1939), pp. 105-16.

"The Form of Mining Companies' Accounts," *The Accountant,* (Nov. 7, 1903), pp. 1353-1355.

Frederick H. Hatch and J. A. Chalmers, *The Gold Mines of the Rand,* London, MacMillan and Co., 1895.

Charles Hewitt, "Mine Accounts," *The Accountant,* (May 16, 1914a), pp. 744-747.

Charles Hewitt, "The Standardization of Mining Accounts," *The South African Mining Journal,* (June 27, 1914b), p. 476.

Herbert C. Hoover, "Gold Mine Accounts," *The Engineering and Mining Journal,* (July 11, 1903), p. 44.

Herbert C. Hoover, "Mining Accounts," unpublished manuscript, Herbert Hoover Presidential Library, circa 1905.

Herbert C. Hoover, *Principles of Mining,* New York, McGraw-Hill, 1909.

Alfred James, "Presidential Address," *Transactions of the Institution of Mining and Metallurgy,* (1908), pp. 370-6.

Charles V. Jenkins, "Gold Mining Accounts," *The Engineering and Mining Journal,* (Aug. 15, 1903), p. 229.

Lake View Consols Gold Mining Company, annual reports, 1896-1910.

James G. Lawn, *Mine Accounts and Mine Book-keeping,* 2nd ed., London, Charles Griffin & Company, Limited, 1901.

W. Lindgren, "The Geologist in Practical Mining," *Engineering and Mining Journal,* (May 9, 1903), p. 702.

T. O. McGrath, "The Standardization of Directors' Reports for Mining Companies," *The Engineering and Mining Journal,* (May 4, 1918), pp. 825-827.

R. F. Mikesell, *The World Copper Industry,* Baltimore, The Johns Hopkins University Press, 1979.

"Mine Accounts and Cost Sheets," *The Accountant,* (May 27, 1911), pp. 834-841.

"Mine Accounts and Cost Sheets," *The Incorporated Accountants' Journal,* (July, 1911), pp. 261-263.

"Mining Costs," *Monthly Report* (Chamber of Mines of Western Australia), (July, 1903), p. 190.

"The Model Report of the Alaska Treadwell Gold Mining Company," *The Engineering and Mining Journal,* (Aug. 22, 1896), pp. 170-171.

George H. Nash, *The Life of Herbert Hoover: the Engineer,* New York, W. W. Norton & Company, 1983.

Maurice E. Peloubet, "Natural Resource Assets — Their Treatment in Accounts and Valuation," *Harvard Business Review,* (Autumn, 1937), pp. 74-92.

J. Howard Pim, "Witwatersrand Gold Mines Considered as Companies Formed to Work Properties of a Wasting Nature," *The Accountant,* (July 2, 1898), pp. 676-681.

W. A. Prichard, "Uniform Cost Returns," *Monthly Report* (Chamber of Mines of Western Australia), (Aug. 1903a), p. 236.

W. A. Prichard, "Uniform Cost Returns," *The Engineering and Mining Journal,* (Oct. 31, 1903b), p. 655.

"Report of the Mine Accounts and Cost Sheets Committee," *Transactions of the Institution of Mining and Metallurgy,* (1913-14), pp. 540-556.

"Sinking Funds for Mining Companies," *The Engineering and Mining Journal,* (May 7, 1898), p. 546.

"Some Mine Accountancy Problems," *The South African Mining Journal,* (Sept. 21, 1912), pp. 77-78.

"The Standardisation of Mining Accounts — I," *The Accountant,* (May 6, 1911), pp. 692-694.

"The Standardisation of Mining Accounts — II," *The Accountant,* (May 13, 1911), pp. 743-746.

"The Standardisation of Mining Accounts — III," *The Accountant,* (May 20, 1911), pp. 775-777.

"The Standardisation of Mining Accounts — IV," *The Accountant,* (May 27, 1911), pp. 808-809.

"The Standardisation of Mining Accounts," *The Incorporated Accountants Journal,* (July, 1911), pp. 247-248.

"Standardisation of Mine Accounts and Cost Sheets," *The Australian Mining Standard,* (1911), pp. 613-614.

"Standardizing Mine Accounts," *The Engineering and Mining Journal,* (Apr. 15, 1911), p. 756.

"Uniform Mining Costs," *Monthly Report* (Chamber of Mines of Western Australia), (Aug., 1903), p. 225.

G. A. Watermeyer and S. N. Hoffenberg, *Witwatersrand Mining Practice,* Johannesburg, The Transvaal Chamber of Mines, 1932.

A. J. Yungbluth, "Mine Accounts," *Proceedings of the Lake Superior Mining Institute,* (1898a), pp. 21-39.

A. J. Yungbluth, "Keeping Mine Accounts," *The Iron Trade Review,* (Sept. 8, 1898b), pp. 17-18.

[A. J. Yungbluth], "Keeping Mine Accounts," *The Iron and Coal Trades Review,* (Sept. 23, 1898c), pp. 512-13.

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ACCOUNTING "REVOLUTIONS" IN JAPAN

Abstract: Japan's rise from a feudalistic economy to a position as a leading industrial power is a result, in part, of two revolutionary changes in its accounting structure. The first change came during the latter part of the nineteenth century as part of the Meiji Government's program of modernization. Various political, economic, and cultural institutions were adopted from the West, among them the double-entry method of bookkeeping; this method gradually replaced very unsatisfactory traditional methods. The second change came after World War II, when the Allied Command set as its objective the destruction of the Zaibatsu-dominated industrial structure and its replacement with a democratic economy, in which industrial capital is accumulated through the participation of investors in a free stock exchange. Such a change demanded a shift in emphasis from stewardship-oriented financial reporting to investor-oriented financial reporting.

Accounting history is the study of the evolutionary process in accounting thought, practices, and institutions. The focal point of such study is the dynamic interaction between accounting and its environment. This consideration of the accounting history of Japan, focuses on two significant events in the modern history of Japan that had revolutionary impacts on its accounting system.

The first of the two events, which took place in the latter half of the 1800s, involved the change from traditional diary-style bookkeeping methods to a modern system of accounting within a double-entry framework. The second revolutionary event, which occurred shortly after World War II, involved a virtually overnight change from Japan's traditional stewardship orientation to the investor orientation of financial reporting common in many parts of the world today. These two events are excellent examples of the fact that accounting cannot be understood in isolation, but that an analysis of accounting must include the economic, political, and diplomatic environments in which it is practiced.

The function of accounting is, obviously, to provide information relevant to the decisions of managers, shareholders, creditors, and other parties interested in the process an enterprise uses to manage the capital of individuals or organizations. These parties cannot make relevant decisions without relevant information. Lack of relevant information on which decisions are based affects the development of the economy, which eventually causes the society to become incoherent. Economic development and accounting development go hand in hand, one stimulating and reinforcing the other. Such interaction was particularly strong with respect to the two revolutionary events discussed here.

Generally speaking, revolutions are discontinuities that have continuities in their undercurrent. Wells [1976] adopts the idea of revolution from Kuhn [1970] and identifies five steps in the process of moving from an old set of ideas to a new set: (1) the recognition of anomalies, (2) a period of insecurity, (3) the development of alternative sets of ideas, (4) the identification of schools of thought, and (5) the domination of the new practices or ideas. Wells elaborates on these points:

> The first step is a precursor to the whole process; it initiates the period of crisis which follows. During that period, scientists become increasingly dissatisfied with the existing theoretical framework, and a search for alternatives begins. Therefore, the second and third steps are mutually interactive. As dissatisfaction grows, the search for alternatives gains impetus; as alternatives are discerned and discussed, the dissatisfaction is heightened. Schools of thought emerge, and one set of ideas gradually gains ascendency over the alternatives [pp. 471-472].

This description may well hold true in describing accounting innovations as they took place in Europe and the U.S., but in the case of modern Japan, changes in accounting thought and practice have not always occurred as evolutionary changes in response to changes in the internal environment. Since the latter half of the nineteenth century, Japan's economy, as well as its accounting methods, has been strongly influenced by powerful external forces, particularly from the U.S. and Europe. In this sense, Japan's two important accounting revolutions may best be characterized as imported innovations.

INTRODUCTION OF DOUBLE-ENTRY BOOKKEEPING

In any society and at any period in time, as wealth is obtained and economic activities are conducted, people need some accounting system to record what one has and how it is used. According to Nishikawa [1956], the earliest recorded mention of merchants' books dates to 1520. Ledgers dating from the early 1600s are among writings preserved today. Ogura [1973] reports that the comprehensive record of accounts kept by the Nakai family in 1745, the so-called "Ledger of Good Fortune," although not explicitly employing a two-sided reckoning of debits and credits, did use a double-entry type of bookkeeping approach. Such an approach developed directly from the practices of merchants in Japan and shows no evidence of having been influenced by Western-style bookkeeping methods. This system existed until the middle of the 1800s, when the U.S. and the economic powers of Europe arrived at Japan's door in their search for raw material sources and markets for their products. At that time, Japan came under sudden and tremendous pressure to enter into trade agreements, and, as a result, found itself scurrying to borrow new industrial technology and economic institutions from the West. Western-style double-entry bookkeeping made its entry along with these other importations. Shimme [1937, p. 291] writes that the first use of the new Western-style bookkeeping was by the newly established Yokosuka Steel Plant at the very end of the Edo period in 1865.

Coming into power in 1868, the Meiji government put its entire energy into setting up political, economic, and social institutions based on U.S. and European models. In the midst of such change, the transition from older bookkeeping methods to the Western-style approach was finally accomplished. Two important publications also helped to stimulate its eventual adoption.

In 1872, the year in which the National Bank Act was passed (with Japan's first stock-owned enterprise, the First National Bank, established the next year), the Ministry of Finance published *Bank Bookkeeping Methods,* which became the first work dealing with double-entry bookkeeping to appear in Japan. This work was a five-volume translation compiled from proposals by Alexander Allen Shand (1844-1930), a Scotsman who came to Japan at the invitation of the Ministry of Finance to teach the Japanese bookkeeping methods for banks. In his introduction to *Bank Bookkeeping Methods* [1873], Yoshikawa, the compiler of this work, describes how this came about:

> From times of old there has existed no fixed method for keeping accounts in our country, each merchant keeping his own records as he saw fit. Because such books were haphazard and followed no established procedures, problems often arose and it was impossi-

> ble to know what items were important and what items were not. The former Minister of Finance, Kaoru Inoue, was constantly concerned over this state of affairs while in office, and afterwards at the time the National Bank was established he said to me, "This is the first bank to be established in our country. No one has any idea what methods to employ. If accounts are kept in such a haphazard fashion, then mistakes will be unavoidable and things will get out of control. I heard about an Englishman by the name of Shand, who is knowledgeable in the operation of banks. If this is true, then the best thing to do is have the Ministry invite him to help us set up our banks." Thereupon I accepted his directive and requested Mr. Shand to draw up a draft regarding bank account books and the formats to be used. Adding our own comments to places that were dealt with too simply and shaving down passages that were excessively overworded, we put them together, added an introduction and succeeded in completing a statement regarding bookkeeping procedures and formats to be employed [pp. 1-2].

The first time such bookkeeping methods were actually put to use was in December 1873 when the First National Bank closed its books for the first time and issued financial statements.

In most instances when established structures are replaced with something new, the new item is met with a certain amount of resistance, and the new process takes time to implement. In the case of double-entry accounting, however, it immediately received wholesale acceptance as part and parcel of the new banking system. It spread rapidly after its introduction.

The second important publication affecting the acceptance of the double-entry system was Fukuzawa's *Methods of Bookkeeping.* Part One appeared as two volumes in 1873. This work was, in fact, a translation of the American bookkeeping textbook by Bryant and Stratton, *Common School Bookkeeping* [1871]. Part One of Fukuzawa's work contained the sections on single-entry methods. Part Two, dealing with double-entry bookkeeping methods, came out in 1874, again in two volumes. The publication of Part One of *Methods of Bookkeeping* predated *Bank Bookkeeping Methods* by six months, and for this reason *Methods of Bookkeeping* is often referred to as the first work in Japan dealing with the double-entry bookkeeping framework. Used as a textbook in elementary and junior high schools, this book played a vital role in the eventual acceptance of double-entry bookkeeping methods in Japan.

In his preface to *Methods of Bookkeeping* [1873], in which he talks about his reasons for translating the original, Fukuzawa makes the following comment:

> In the bookkeeping methods of merchants I have seen or heard about, everything is in a state of confusion. An inventory of a single merchant's stores might take two months, and still not every item could be accounted for. This stands as proof that existing methods are no good, and yet I have yet to hear of anyone correcting the situation. Not only does this create inconveniences for the merchant himself, but for society as a whole. The present translation is only an introduction to Western bookkeeping methods, and although it will not change present methods and eliminate all inconveniences completely, still, familiarization with the bookkeeping fundamentals presented in Part One, followed by a deeper understanding to be obtained from Part Two, will surely eliminate some of the difficulties in public and private accounting throughout the land, to which this book, insignificant as it is, is better than nothing at all [p. 2].

Bank Bookkeeping Methods and *Methods of Bookkeeping* were destined to remedy the deficiencies inherent in the bookkeeping practices followed in Japan at the time. After their publication, a rather long period of time passed before traditional bookkeeping methods were displaced altogether, but eventually merchants and businessmen gave up the old methods and adopted the Western double-entry approach. Truly, the introduction of double-entry bookkeeping stands as a major milestone in Japan's emergence as a modern capitalist nation.

INTRODUCTION OF INVESTOR-ORIENTED FINANCIAL REPORTING

Stock exchanges were opened in Tokyo and Osaka as early as 1878. In spite of this, however, the disclosure of investor-oriented financial information did not appear as a matter of concern in Japan until the middle of the twentieth century. The reasons underlying this delay are described as follows.

The Japanese Commercial Code was enacted in 1890, and the section dealing with companies went into effect in 1893. Undergoing a first amendment in 1899 and several subsequent revisions, this code remains in effect today. Even in its original form we can discover the primitive shape of those statutes pertaining to business accounting and other accounting matters currently in effect. The Commercial Code introduced into Japan a continental style of financial reporting, whereby an "inventory of assets" was prepared and submitted along with the balance sheet and income statement. The inventory of assets included liabilities as negative assets and itemized all movable and immovable properties, securities, and so on, with their assigned monetary values. The inventory's aim was to represent all assets belonging to the business, including liabilities, in a comprehensive manner. The function of the inventory of assets was not always clear because of its substantial overlap in content with the balance sheet. A commonly held view was that it was a prelude to the preparation of the balance sheet. There was also a view that regarded the inventory of assets as complementing the balance sheet by offering quantitative or interpretive details concerning assets and liabilities. Whatever the case, Japanese accounting thought at that time placed this inventory of assets at the central position among the various financial statements and placed greater emphasis on the balance sheet than on the income statement.

During the 1930s and early 1940s, standardization of the financial statements used to disseminate business financial information was urged. Such standardization was part of a government sponsored program of industrial rationalization aimed first at easing the depression, and later at unifying the military state in preparation for war. The Registered Public Accountant Act was passed in 1927, creating the job title of registered public accountant and signifying an attempt to improve the business accounting system. Nevertheless, the idea of the audit of financial statements performed by an independent, publicly certified professional was not fully developed because Japan's vital industries were the exclusive property of large, family-owned industrial conglomerates known as the Zaibatsu. Hence, ideas such as the stock market being a place for industrial capital accumulation, or the function of accounting being to present financial information to investors, were totally irrelevant in Japan.

Littleton and Zimmerman comment in *Accounting Theory: Continuity and Change* [1962]:

> Accounting actions for several generations gave evidence of a belief in the superior importance of the balance sheet. Interest was centered there because of a belief that this statement was at once a report on management's stewardship and a report on company solvency. American opinion in the last thirty years

> has tended to reverse this earlier emphasis, thus expressing the belief that the facts about company net earnings and the supporting detailed data of revenue and expense are of outstanding significance. Earning reports are considered to provide the key to the proper evaluation of management's effectiveness as well as a reliable clue (persistent earning power) to security values [p. 258].

It would not be inaccurate to say that this evolutionary trend in America noted by Littleton and Zimmerman was all but absent from accounting thought, practices, and institutions in Japan until the mid 1940s. Not until 1945 and the close of the second world war did the second great revolutionary change occur in Japanese accounting. This change was imposed at the direction of the Allied Command, which sought to build a democratic economy on the ruins of the dismembered Zaibatsu. In order to take away the controlling power of the Zaibatsu parent company over its various subsidiaries, all shares owned by the parent company and controlling families were forcibly turned over to the Holding Company Liquidating Committee, which sold the subsidiaries at current value to investors in the public sector. The purpose of dismembering Zaibatsu parent companies and turning over exclusively owned business shares to the public was to destroy, once and for all, the entire Zaibatsu empire, as well as to recruit investors from the public for the purpose of raising industrial capital.

The Securities and Exchange Act patterned after the American system was passed in 1947, was amended the following year, and was put into effect. In 1949 the stock exchange, which had been closed for many years, was reopened. Amendments to the Commercial Code in 1948 and 1950 prohibited the installment payment system for stocks and adopted instead a system of authorized shares that could be issued as the need arose. Likewise, non-par value shares were recognized. The results of such measures greatly affected the organizational and operational aspects of businesses.

Besides institutionalizing the disclosure of financial information directed toward the investor, the Securities and Exchange Act also stipulated that all business financial statements be audited as the primary tool for disseminating financial information. Thus, in one fell swoop, the idea of presenting accurate and useful information regarding current period earning power to the investor came to the foreground in Japanese accounting thought. In 1948 the Registered Public Accountants Act was replaced by the Certified Public Accountants Act. The first CPA examination was given in 1949. Also in that year, the Economic Stabilization Board's Investigation Committee on Business Accounting Systems published as its interim report, "Financial Accounting Standards for Business Enterprises," intended to serve as a standard in the preparation of financial statements. The preface to "Accounting Standards" [ESB, 1949] stated that "[such standards] represent a condensation of practices that are considered to be generally accepted as being fair and proper from among those developed in the practice of business accounting" (para. 2). Its content, however, reflected the newly imposed idea of depicting the earning power of a business by means of income in the current period, as well as the disclosure of such financial information as is useful to the investor in making investment decisions. "Accounting Standards" thus assured that the new accounting revolution would find immediate and universal acceptance.

"Accounting Standards" continues to the present day with slight amendment. At the time of its drafting, Kurosawa, one of the members of the drafting committee, explained its nature as follows:

> As for the financial statement standards presented here, content-wise they conform to the regulations of the Securities and Exchange Commission, and hence apply to financial statements intended primarily as financial reports to that commission. The concern of this investigatory committee did not end there however. From a wider point of view, we recognized a need to consider those businesses not coming under the Securities and Exchange Act. Although the concrete features of such financial statements themselves will be prepared in accordance with these accounting standards, it is probable and necessary that different formats be prepared for different objectives in mind other than the Securities and Exchange Commission. In which event, it has been proposed as feasible for this committee in the future to also suggest revisions to, say, the Commercial Code or the tax laws. Be that as it may, it was necessary to distinguish between the ideals and realities of this question, or else these standards would never have assumed concrete shape. For this reason then our target was tentatively limited to matters coming under the Securities and Exchange Act [1949, p. 32].

After four years of silence due to the war, the Japan Accounting Association held its Seventh Convention in May

1948. The roundtable discussion on the theme "Improvement and Unification of Financial Reports" addressed the problem of whether the goals and objectives of the balance sheet are in fact "single" or "multiple." On this subject, the master of ceremonies, Iwata, expressed the following opinion:

> . . . but what has to be considered here is *Who* is actually going to utilize the financial statements in question. The addressed parties may include long-term or short-term creditors, or shareholders, or the Government. Among these groups of creditors, banks are naturally by far the most important and most affected group. Banks, however, are not satisfied with financial statements and usually dig deeper than that. The Government, e.g., tax authorities, has the right to ransack account books, if it is not satisfied; general investors had the same rights but in actuality they could not or do not normally exercise their powers. For various reasons, such as being geographically remote or normally out of touch with the company in question, they are insufficiently influential or not given the opportunity to enter the premises to check the books. The weakest class of creditors and shareholders, i.e., general public investors should, I think, be given the first priority in receiving protection. . . . In this light, I believe, corporate financial statements are now prepared and issued at each accounting period for the benefit of the public investors including shareholders and corporate debenture holders [1949, p. 65].

FACTORS THAT CONTRIBUTED TO JAPAN'S ACCOUNTING REVOLUTIONS

As we have seen, Japan experienced two revolutions in accounting, one in the latter part of the 1800s, and the second after World War II. The revolution in the latter part of the 1800s was a change in bookkeeping methods (i.e., the introduction of Western-style double-entry notation). Such methods, as clearly set forward in the first manuscript published by Pacioli in 1494, finally arrived in Japan after nearly 400 years. Double-entry bookkeeping subsequently served as the foundation upon which the modern capitalist economy of Japan could develop. The postwar accounting revolution changed the style of financial reporting and involved a shift in emphasis in all facets of accounting thought, practices, and institutions from stewardship-oriented accounting to accounting directed toward public investors. Through the implementation of this change, Japan was fully outfitted with the various structures making possible the disclosure of financial information, and the idea of making the so-called absentee investor the central figure among recipients of financial information became firmly implanted in Japanese accounting thought. In addition to contributing to the development of the stock market as a place for generating industrial capital, this shift in emphasis in financial reporting also served to greatly stimulate the then-exhausted Japanese economy.

Among the factors that contributed to these two accounting revolutions in Japan, the author recognizes two that were common to both: (1) the fact that Japan's level of economic development lagged behind that of the West, and (2) the creation of new political, economic, and cultural entities by an external force. The first of these was the major cause of the revolutions; the second served as their trigger.

Because accounting develops in response to the needs of the environment or society, accounting revolutions come about as part of changes in the social economic structure. In 1873, at the time double-entry bookkeeping was adopted by the newly established First National Bank, Japan was just awakening from a long period of political, economic, and cultural isolation. Capitalist industrialization had not yet matured, and merchants and businessmen were using accounting methods that were largely unsatisfactory. In 1945, at the end of the war, when Japan began its economic recovery, the stock market did not function as a place for generating industrial capital, and thus the entire structure of business accounting was severely handicapped.

When nations of different levels of economic development come into contact, it is only natural that the nation lagging behind will begin an effort to reduce the difference between itself and the more advanced nations. The two accounting revolutions in Japan were the result of just such a catching-up process. At the same time, however, movements to revolutionize existing practices and institutions encounter a certain amount of resistance or a movement to preserve the status quo. Thus, most changes and improvements that occur do not do so overnight but occur, in fact, gradually.

For this reason, it was necessary that some sort of external force trigger a revolutionary change in accounting practices so that institutions could keep pace with the change in accounting thought. In the latter part of the 1800s, this force appeared in the form of advanced capitalist nations that, having experienced the industrial revolution and possessing tremendous productive capabilities, came banging on Japan's door demanding free trade agreements. In order to remain an independent nation on an equal footing with these other capitalist giants, Japan was forced to undergo rather rapid political, economic, and cultural modernization. After World War II the Allied Command occupying Japan served as a force to trigger change. Without this outside force, it seems unlikely that Japan could have broken up the Zaibatsu conglomerates or adopted a policy of economic democracy in which industrial capital is widely dispersed throughout the public sector.

THE FUTURE OF ACCOUNTING IN JAPAN

Since the end of World War II, the Japanese economy has undergone tremendous development, but it is the author's opinion that the accounting structure in Japan has not kept pace with its own economic growth. For example, the practice of publishing interim financial statements as part of the financial reporting of a business was adopted only ten years ago, and consolidated financial statements have only recently been required. As of yet, cash flow statements and value-added statements are not included among published financial statements. Although Japan ranks economically among the leading nations of the world, its financial reporting is inadequate. Will a third accounting revolution be required to close the gap? The author does not think so, although an analysis of modern Japanese accounting history might tempt one to reach such a conclusion. The difference between Japan's two earlier revolutions and the present situation is that both revolutions were preceded by periods of Japanese isolation from the rest of the world. Today, such isolation is no longer possible. That is to say, advances in transportation and communication technology, together with an increasing tendency toward international cooperation, make it increasingly unlikely that individual nations will conduct economic activities independently and completely apart from worldwide economic activities. Differences in the level of economic development will eventually even out, and adjustments to new economic conditions will be gradual and more evolutionary.

Should any future revolution take place, it would doubtless be international in nature, occurring in response to specific technological innovations. Since the end of the 1960s, an international revolution in financial reporting with economic income measurement giving ground to an informational approach, has been in progress. In Japan, there also has been much interest in this informational approach, but as yet there is little evidence that this approach soon will replace economic income measurement. A more likely scenario is one in which ever-increasing foreign investment in Japan and Japanese investment abroad will force a gradual but definite evolutionary change or adaptation upon the accounting structure in Japan. Future development of Japanese accounting will be of special interest to accounting historians as international investment patterns involving Japan become more complex.

REFERENCES

Economic Stabilization Board, Investigation Committee on Business Accounting Systems, *Kigyo Kaikeigensoku (Financial Accounting Standards for Business Enterprise)*, ESB, 1949.

Fukuzawa, Y., *Choainoho (Book-keeping)*, Vol. 1 & 2, Keiogijuku Shuppankyoku, 1873 and 1874.

Iwata, I., "Zaimushohyo no Kaizentoitu" ("Symposium on Improvement and Unification of Financial Statements"), *Kaikei*, July 1949, pp. 65-96.

Kuhn, Thomas S., *The Structure of Scientific Revolutions, International Encyclopedia of Unified Science*, 2nd enlarged edition, University of Chicago Press, 1970.

Kurosawa, K., "Kigyo Kaikeigensoku to Zaimushohyo tono Kankei ni tuite" ("Symposium on Relationship between Financial Accounting Standards for Business Enterprises and Financial Statements"), *Kaikei*, August 1949, pp. 21-44.

Littleton, A. C., and Zimmerman, V. K., *Accounting Theory: Continuity and Change*, Prentice-Hall, New York, 1962.

Nishikawa, K., "The Early History of Double-entry Book-keeping in Japan," A. C. Littleton and B. S. Yamey, Eds., *Studies in the History of Accounting*, Sweet and Maxwell, London, 1956, 380-87.

Ogura, E., "Wagakuni no Kaikeiho no Hattatsu to Seiyoshiki Bokiho" ("Development of Japanese Book-keeping and Western Book-keeping"), *Kindaikaikei 100 nen (Modern Accounting 100 Years)*, Moriyama Shoten, 1973, pp. 40-53.

Shimme, S., "Introduction to Double-entry Bookkeeping in Japan," *The Accounting Review*, September 1937, pp. 290-95.

Wells, M. C., "A Revolution in Accounting Thought," *The Accounting Review*, July 1976, pp. 471-82.

Yoshikawa, K., *Ginko Boki Seiho (Bank Bookkeeping)*, MOF, 1873.

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THE LIFE OF BARTOLOMÉ SALVADOR DE SOLÓRZANO: SOME FURTHER EVIDENCE

Abstract: Until very recently almost nothing was known about the life of Bartolomé Salvador de Solórzano, the author of the first Spanish treatise on double-entry bookkeeping. This paper presents the results of further research on this subject and complements the findings presented in a previous paper by Hernández Esteve. A more complete picture of the life of Bartolomé Salvador de Solórzano can now be drawn. On the whole there is now evidence regarding aspects such as birth, baptism, parents, godparents, relatives, profession, business, residence, condition, travels, partners, death, etc. Some details on the publication and distribution of his book also are known.

Despite his important contribution to Spanish culture and business, until recently very little was known about the life of Bartolomé Salvador de Solórzano, the first Spaniard to write a treatise on double-entry bookkeeping. The treatise appeared well after — 96 years after — the publication of Pacioli's *Summa de arithmetica, geometria, proportioni e proportionalità*. Nevertheless, in terms of the depth, coherence and exactitude with which he treated his subject, the work of Bartolomé Salvador is one of the most important contributions to the field in the whole of the sixteenth century. Indeed, it was Henry Lapeyre's opinion [1955, p. 345] that the treatise, *Libro de caxa y Manual de cuentas de Mercaderes y otras personas con la declaración dellos*, compared favorably with the best Eurpoean works on the subject published during the period 1494 to 1590, the year of the treatise's own publication.

EARLY EVIDENCE

It is known for certain that Bartolomé Salvador was born in Medina de Rioseco, an old Castilian town that was the site of one

This paper is dedicated to Francisco Javier Luna Luque, one of the first to study the work of Bartolomé Salvador de Solórzano and to his distinguished wife who shares his enthusiasm for research into accounting history.

of the three famous fairs of Castile, and that he was living in Seville when his book was published. Both facts appear in his own work: the first, in the title of the treatise itself; and the second, in the authorization to print the book given by Juan Vázquez on behalf of the king of San Lorenzo de El Escorial on July 28, 1590.

According to the encyclopedia *Espasa*, Bartolomé Salvador de Solórzano was a Spanish mathematician of the sixteenth century. He began his career as a trade assistant, then studied with the Benedictines and later went to Italy to study with Angelo Pietra. When he returned to Spain, he wrote his book, *Libro de caxa*. Stevelinck and Haulotte also report this information [*Galerie des grands auteurs comptables, no. 192, p. 29*]. They add that Bartolomé Salvador de Solórzano belonged to a renowned family of sculptors and architects, and that it is thought the family came from the village of Solórzano in the province of Santander.

In fact there is no evidence that Bartolomé Salvador de Solórzano belonged to this family, among whose most renowned members at the end of the fifteenth century were Bartolomé de Solórzano, architect of Palencia Cathedral; Martín de Solórzano, architect of the famous star-shaped vault of Santoyo, near Frómista, of the Royal Monastery of St. Thomas in Avila, and of the Cardinal's Chapel in Avila Cathedral; and Gaspar de Solórzano, who lived in Palencia and was the architect of the town's cathedral. According to García Chico [1979, pp. 46, 58, 161 and 164], he was also entrusted with the construction of St. Mary's Church in Medina de Rioseco and undertook the building of St. Clare's monastery and church, outside that town.

In his superb catalogue, *La comptabilité à travers les ages* [1970, p. 42], Stevelinck reproduces the information presented in his joint work with Haulotte. However, in neither of these works is the source of the information regarding Bartolomé Salvador specified. The same is true of *Espasa*. There is, therefore, no possibility of verifying these data. Moreover, Stevelinck and Haulotte claim that on his return from Italy, Bartolomé Salvador de Solórzano took up residence in Seville, where he worked as a schoolmaster teaching accounting. The origin of this statement is also unknown although, as already mentioned, it is certain that he lived in Seville.

On the whole, information regarding Bartolomé Salvador is in short supply and in some cases, not very convincing. For example, his book does not appear to be the work of a theoretician — an accounting teacher — but rather of an actual trader.

This impression is created by the large amount of lively and accurate detail used to describe — in the extensive practical examples that illustrate the theoretical issues — the formalities, taxes, customs and strategies that merchants had to consider in scheduling and carrying out their transactions. Accordingly, further research is needed to reconstruct the life of Bartolomé Salvador de Solórzano, the author of the first Spanish treatise on double-entry bookkeeping.

RECENT FINDINGS ON THE FAMILY AND EARLY LIFE OF BARTOLOMÉ SALVADOR

My previous research on Bartolomé Salvador [January-June 1983] serves as a starting point. By means of his baptismal certificate, the date of Bartolomé Salvador's christening and the names of his parents and godparents have been ascertained. It also has been discovered that when he wrote his book, he was indeed a merchant established in Seville, he was unmarried and had travelled to the provinces of Tierra Firme and Peru in 1578. He went again in 1592, but on this occasion there is no indication of his return. A few details on the publication of his book also have been found.

Unpublished research has yielded a few additional insights on the life of Bartolomé Salvador de Solórzano. Given all of this new information, a more complete picture of his life now can be drawn.

Bartolomé Salvador de Solórzano was born in Medina de Rioseco. He was christened there in St. Mary's Church on June 26, 1544. His baptismal certificate is preserved in the records of St. Mary's parish, in the second volume of the baptismal register dated 1539-1553. The certificate reads as follows: "On the XXVI June of 1544, I, bachelor Bey Zama, baptized Bartolomé, son of Andrés Salvador and Francisca Izquierdo, his wife; the godfather was Pedro de Medina and the godmother, the woman from Collantes, midwife."

There is no trace of the surname "Solórzano" in this baptismal certificate, perhaps indicating that the main surname of Bartolomé was Salvador. It is impossible to determine the origin of the surname "Solórzano" that Bartolomé took great care to include in all of his signatures. It is also the only surname used by his sisters, Catalina and María de Solórzano, who appear in the legacies left to their daughters in his will. In contrast, the surname "Salvador" appears again in his nephew's name, Pedro Agunde Salvador. This same surname was used by his uncle, bachelor Pedro Salvador, canon of Palencia Cathedral.

At any rate, it does not appear that the surname "Salvador" was very common in Medina de Rioseco at that time. On the other hand, the Christian name "Bartolomé" was more usual as was the mother's surname, "Izquierdo." Traces remain of various persons with this surname in the period under study. Among them, there is a certain Bartolomé Izquierdo — who could well be the grandfather of Bartolomé Salvador de Solórzano — known for having participated in a lending operation in the town. Carried out by several inhabitants on behalf of the Town Council of Medina de Rioseco, this arrangement helped finance purchases of grain during a food shortage [Hernández Esteve, June 1987, p. 73]. This same Bartolomé Izquierdo had the revenue from the *renta del peso* of the village, with Andrés Salvador, the father of Bartolomé Salvador, acting as guarantor. Andrés Salvador may have been Izquierdo's son-in-law, or at the least, some kind of political relationship may have existed between the two men. The father of Bartolomé Salvador de Solórzano also participated in the aforementioned lending operation, which shows the prominent place he occupied among the citizens of the town.

Bartolomé's godfather, Pedro de Medina, belonged to the famous family of Medina de Rioseco, who were related to the Palacios, Fernández de Espinosa[1] and Benavente families, among others. The latter were the founders of the magnificent Benavente Chapel at St. Mary's Church in Medina de Rioseco. All of them were important merchants and businessmen. As was customary at the time, Bartolomé's godmother, "the woman from Collantes," was the midwife who assisted his mother at his birth.

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[1]According to Modesto Ulloa, Juan Fernández de Espinosa belonged to a banking family from Medina de Rioseco who later lived in Seville. He was designated General Treasurer of Royal Finance in 1575, shortly before the resounding suspension of crown payments that caused, among other things, the bankruptcy of the banking system in Seville and elsewhere in Castile [Ulloa, 1977, p. 789]. Felipe Ruiz Martín provides further details on this family of bankers. They originally came from Espinosa de los Monteros (Burgos) and then moved to Medina de Rioseco where they prospered. Some of their members, who were private money changers, ended up in Seville where they became public bankers [Ruiz, 1970, p. 25]. Guillermo Lohmann Villena has studied this family specifically [1968]. Hernández Esteve [1986, pp. 49-50] mentions that around 1581 Beatriz, daughter of Pedro Luis de Torregrosa, married Pedro de la Torre Espinosa, descendant of the Fernández de Espinosa and banker as well. Pedro Luis de Torregrossa had revised Bartolomé Salvador de Solórzano's book and introduced double-entry bookkeeping in the central accounts of the Royal Treasury in 1592. In this curious way, the two most significant figures of the history of Spanish accounting in the sixteenth century were almost relatives.

There is no information on the childhood of Bartolomé Salvador de Solórzano although it seems likely that his family moved at that time to the town of Amusco, in Palencia. This move would explain why Bartolomé Salvador is recorded as coming "from Amusco" in the list of passengers authorized to embark to the Indies, both in 1578 and in 1592.[2] His link with that town is also suggested by his relationship with some of its inhabitants, as well as by the fact that his sisters Catalina and María, married to Pedro Agunde and Andrés de Santana, respectively, lived there. It is evidenced, too, by the legacy included in his will, which created a chaplaincy in that town to recite masses and to pray for his soul and that of his deceased parents.[3]

At any rate, the baptism of Santiago Salvador, son of a certain Andrés Salvador and his wife Ana Ordóñez, is registered on July 29, 1548, in the records of St. Peter's parish in Amusco, baptismal register number one, folio 166r. It has not yet been possible to ascertain if this Andrés Salvador was Bartolomé's father, remarried to the aforementioned Ana Ordóñez after the death of his first wife, Bartolomé's mother. If it were the case, it would explain why the family moved to Amusco. On the other hand, in the first volume of the register of marriages, initiated in 1574, there is the name of Pedro Salvador, son of Andrés Salvador, who could well be a brother of Bartolomé, christened with the same name as his uncle, the canon of Palencia.

HIS LATER LIFE AND WORK

It is also known that Bartolomé Salvador de Solórzano was a merchant, and that he had practiced this profession since at least 1578, when he was 34 years old. In fact, the 1578 list of passengers to the Indies includes the following record: "Bartolomé Salvador, from Amusco, son of Andrés Salvador and Francisca Izquierdo, his parents, was authorized to leave for Tierra Firme and Peru as a merchant, unmarried, as ordered by his majesty."[4] This information is confirmed by the witnesses presented as part of the inquiry undertaken in 1592 following his request for fresh authorization to travel to the Indies. Thus, Nicolás Antonio, one of the witnesses, said that he had known Bartolomé for more than fourteen years and that he knew he was a merchant because he "had seen him making deals, buying

[2]General Archives of the Indies, Contratación, bundle 5538, book I, fols. 73r and 143v.

[3]General Archives of the Indies, Contratación, bundle 247B, fols. 23v and 24r.

[4]General Archives of the Indies, Contratación, bundle 5538, book I, fol. 143v.

and selling all kinds of merchandise and sending cargoes to the Indies." Another witness, Francisco Corbalán, stated that he had known him for more than six years and knew that he was a merchant "because this witness has seen him making deals, buying and selling merchandise."[5]

Thanks to three other witnesses in a similar inquiry, also conducted in 1592, certain details of his physical appearance are revealed. Pedro de la Rúa, inhabitant of Palencia, who lived at that time with the Corzo family as did Bartolomé, stated that he had known the latter for about 20 years. He and the other two witnesses, Pedro Muñoz, servant of mistress Brígida Corzo, and Agustín de Valmaseda, agreed that he looked about 40 — actually he was 48 — that he was of medium height, strong and had a fair beard. Moreover, they said that they regarded him as single; that he was no priest, friar or monk, nor did he belong to any order; that his parents and grandparents were honorable, their generation being pure, without any stain of Moorish or Jewish blood; and that neither he nor any of them had been imposed any penance by the Inquisition. They specified that, because of their relationship with him, they would inevitably have been aware of any circumstance in conflict with their testimony.[6]

By the time of his first voyage to the Indies in 1578, Bartolomé Salvador de Solórzano was probably already living in Seville. In a document written by Antonio Cuadrado, rector of the Society of Jesus College in Palencia and executor of Bartolomé's will, it is said that Bartolomé had been living "for a few years in the house of Juan Antonio Corzo Vicentelo."[7]

Juan Antonio Corzo Vicentelo de Leca was a wealth Italian merchant established in Seville.[8] He was, reportedly, Bar-

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[5]General Archives of the Indies, Contratación, bundle 5237, No. I, section 60.

[6]*Ibidem.*

[7]General Archives of the Indies, Contratación, bundle 247B, fol. 18r.

[8]According to Eufemio Lorenzo Sanz, Juan Antonio Corzo (or Corso) Vicentelo de Leca was one of the five most important merchants engaged in trade with the Indies during the reign of Philip II. He carried out this trade in his own ships, dealing chiefly with wine, oil and saffron. He was also engaged in the slave trade [Lorenzo, 1979, pp. 65-66]. This fact is confirmed by Modesto Ulloa [1977, p. 416]. Ruth Pike mentions him as one of the wealthiest and most powerful merchants of Seville, reporting that when he died he left a fortune of 1,600,000 ducats. The dowry of 240,000 ducats he gave his daughter when she married the earl of Gelves became legendary [1978, p. 118]. Miguel de Mañara, well-known patron of the famous Charity Hospital, who may have inspired the stories about don Juan Tenorio, was a descendant of the Corzo Vicentelo de Leca family [Domínguez, 1984, pp. 245-46].

tolomé's master, and Bartolomé lived in his house, as employees and shop assistants usually did at that time. The master's affection for Bartolomé was evidenced by the legacy of 150,000 maravedis that he left him at his death in 1587.[9] Further proof of the esteem and trust shown to him by the family is the fact that the master's widow, mistress Brígida Corzo — "my lady" as Bartolomé called her[10] — sent him to the Indies in 1592 as plenipotentiary "factor." According to the deed of covenant signed by them in Seville on January 31, 1592, in the presence of the public notary Juan de Velasco,[11] he was to collect and settle all the amounts owed to her by her *"factores"* and agents. The sum amounted actually to 41,839,064 maravedis, which Bartolomé received "under the power conferred to him to collect the proceeds of the property of said Juan Antonio and mistress Brígida Corzo and master Juan Vicentelo, his son and heir, from their factors and merchants."[12] This considerable amount is a telling sign of the great trust placed in the author of the *Libro de caxa* by his principals and of the important role he played in their business.

When he left for the Indies, Bartolomé Salvador decided to make a sealed will, which he delivered to Jerónimo Jaina de Valenzuela, public notary of Cadiz on February 18, 1592. This will is the source of much of the information regarding the author's life. It is also known from the same source that Bartolomé was still unmarried when he embarked for America but that he had an illegitimate son, also named Bartolomé Salvador de Solórzano. This son had been born approximately three years before to Ana Romera, inhabitant of Cantillana, one of the three Sevillian towns under the lordship of Juan Antonio and Brígida Corzo. Ana's father was called Bartolomé Romera and worked as a procurator. When Ana Romera had her son, she was single. "Later" — says Bartolomé — "I married her to Francisco Bernal, inhabitant of that town."[13] Accordingly, the child must have been born around 1588 or 1589, when the author was writing his *Libro de caxa.*

Apart from this son, Bartolomé Salvador de Solórzano may have fathered another child. As he himself says in his will: "I declare that I suspect that a certain unmarried woman, with whom I have been on friendly terms for about ten months, is

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[9]General Archives of the Indies, Contratación, bundle 247B, fol. 59r.
[10]General Archives of the Indies, Contratación, bundle 247B, fol. 24v.
[11]General Archives of the Indies, Contratación, bundle 247B, fol. 3r.
[12]General Archives of the Indies, Contratación, bundle 247B, fol. 58v.
[13]General Archives of the Indies, Contratación, bundle 247B, fol. 24r.

pregnant with a child of mine. If this is so and is ascertained, I order that the child to be born inherit one thousand and five hundred ducats, under the same terms and conditions as has been provided for my son Bartolomé Salvador de Solórzano. To save the honor of the person I understand to the pregnant, I shall not declare who she is."

According to the deed drawn up in the presence of the king's notary Juan Moreno in Madrid on August 3, 1590, 1,500 copies of Bartolomé Salvador's *Libro de caxa* were originally produced by the print works of Pedro de Madrigal [Hernández Esteve, January-June 1983, pp. 152-53]. The author's will reveals that at the time of his departure to Tierra Firme, only 780 copies remained to be settled. Of those, 200 had been sent on consignment to Antonio de San Román, inhabitant of Medina del Campo; and 180 had been sent to New Spain in 1591 in the care of Diego Felipe de Andino and of Bartolomé Porras, who transported the books in his ship. They were to sell the books there and remit the proceeds. The remaining 400 copies were unbound and kept in Seville by Juan Malón de Echaide — later property administrator to the heirs of Juan Antonio and Brígida Corzo — so that he could sell them and remit the proceeds to the author. Printing the book had cost Bartolomé Salvador 87,210 maravedis.[14]

BUSINESS IN THE INDIES

The contract concluded between Brígida Corzo and Bartolomé, which sent him to the Indies for three years, specified that Bartolomé was to go there "to recover the monies and property belonging to my husband and me for which you will check the accounts of all my husband's factors and collect the amounts owed by them."[15] For this purpose, Brígida conferred extensive powers on him, at the same time giving Bartolomé detailed instructions. If he was unable to complete the task entrusted to him within the initial three-year period, the possibility of extending the mission for one or two years more was envisaged, provided that Brígida agreed.

The salary to be paid for this assignment was 1,400 Castilian ducats per year: "each ducat, three hundred and seventy-five maravedis, making five hundred and twenty-five thousand maravedis." The salary began the moment the fleet that "is now

[14]Historical Archives of Protocols, Madrid, Book of Protocols of the notary Rodrigo de Vera, volume 1590-91, catalogue number 505, fol. 151.

[15]General Archives of the Indies, Contratación, bundle 247B, fol. 3r.

going to Tierra Firme, with general Francisco Martínez de Leiva" sailed from the port of Sanlúcar de Barrameda. Bartolomé Salvador de Solórzano received 4,000 ducats of his salary in advance when he signed the deed of covenant.

In addition to this salary, and to cover the expenses of his assignment, Bartolomé was to receive "two assayed silver pesos every day and no more," starting on the day he disembarked in the town of Nombre de Dios and continuing for the duration of his stay. The cost of Bartolomé's fare and cabin and that of the two people who accompanied him — 214 ducats or 80,250 maravedis — was also covered by Brígida as was "the maintenance and the ship's stores on the way out from Sanlúcar to Nombre de Dios, both for me and the two persons who come with me to fulfill this mission."

The salary and expense allowance granted to Bartolomé Salvador de Solórzano were a considerable amount indeed. Each assayed silver pesos was worth 450 maravedis. Consequently, to the 525,000 maravedis received as salary each year were added 328,500 maravedis as an allowance for expenses, thus raising the total remuneration to 853,000 maravedis. In comparison, when Pedro Luis de Torregrosa was appointed *"Contador del Libro de Caja"* in 1592, with the assignment of introducing double-entry bookkeeping into the accounts of the Castilian royal treasury, he was awarded a salary of 750,000 maravedis per year, out of which he had to pay the officers and assistants he would employ in this *"Contraduría"* [Hernández Esteve, Spring-Summer, 1985, p. 237]. Of course, Pedro Luis ran hardly any risk in performing this task, whereas Bartolomé Salvador lost his life in the job, as will be shown.

The deed of covenant also provided that Bartolomé Salvador could not "deal with or sell any merchandise, nor do any business" on his own account during his stay in the Indies, with the exception of a cargo worth 780,000 maravedis he was taking with him [Hernández Esteve, January-June 1983, p. 160] and two cargoes he had sent in 1589, one in the care of Francisco de Gibraleón and the other in that of Juan Malón. He was allowed to sell these three cargoes and to use the proceeds in the purchase and sale of other merchandise.

All of the above confirms that Bartolomé Salvador de Solórzano was a prosperous merchant actively engaged in his own business, apart from attending to that of his master. The fact that two employees were placed at his disposal to help him in his work is indicative of the position he occupied in the Corzo business.

Ominously, the deed of covenant also provided that in case Bartolomé Salvador fell ill, "the cost of the physician and drugs must and will be at the expense of said mistress Brígida Corzo, over and above the said two assayed pesos every day."

As was shown in a previous paper [Hernández Esteve, January-June 1983, pp. 157 and 162-63], Bartolomé Salvador de Solórzano also took with him to the Indies a twelve-year-old boy, Pedro de Sant Román de la Rúa, son of Pedro de la Rúa of Palencia. As indicated earlier this Pedro de la Rúa was one of the witnesses presented by Bartolomé before the *Casa de la Contratación* [the chamber through which trade with the Indies was channelled]. The commitment undertaken by Bartolomé Salvador regarding the boy's travel was signed in the presence of the public notary Juan Bernal de Heredia of Seville on January 31, 1592. In the deed, Bartolomé recognized that he had received for this purpose from Francisco Villanueva Salazar, in whose house the boy was living at the time, the amount of 22,400 maravedis to cover "the maintenance and ship's stores and other food required, and I shall also pay the sea fare as well as the expenses of travel by land to the Ciudad de los Reyes," that is to say Lima, where he had to leave the boy.[16]

THE DEATH OF BARTOLOMÉ SALVADOR DE SOLÓRZANO

In 1596, a year later than anticipated, Bartolomé Salvador de Solórzano went from Panama to Nombre de Dios to conclude his mission and return to Spain. Unfortunately, he died before reaching Nombre de Dios. Testimony concerning his death is found in the proceedings initiated in Seville to distribute his property. The file of the proceedings contains a copy of his will as well as most of the other documents mentioned thus far. The most explicit testimony is that of the person in whose arms Bartolomé expired:

> In Seville on this day, month and year [July 9, 1597], Hernando de Cieza presented as a witness for this inquiry a boy from Cuzco, called Diego de Navas, presently living in Seville in the house of Pedro Orozco in the district of the Magdalena. He took the oath promising to tell the truth and declared in the inquiry that he did not know Hernando de Cieza but did known Bartolomé Salvador de Solórzano, object of the inquiry, about a year before. After sailing from

[16]Historical Archives of Protocols, Seville, No. 21, notary's office held by Juan Bernal de Heredia, 1592, book II, fols. 38r-38v.

> Lima to Nombre de Dios and Panama, he embarked in Panama at a port called Cruces, on a ship on which Bartolomé Solórzano embarked, too. They travelled together up to Tabernieca, on the river Chagre, where said Bartolomé Salvador de Solórzano passed away. The witness saw him dead because he died in his arms and he saw him being buried. And this is the truth, as he took the oath to tell, and he signed this testimony at the age of about sixteen and was not subject to the general questions of the inquiry. Diego de Nava.[17]

More details on the death are supplied by Francisco de Corbalán, who was also a witness in the proceedings initiated by Bartolomé before the *Casa de la Contratación.* On the same date as the previous witness — Diego de Navas or de Nava — Francisco Corbalán states that "he knew Bartolomé Salvador de Solórzano, object of the inquiry, about ten years before in this town and in the Indies and that, when he was in the town of Nombre de Dios about fourteen months before, he heard that

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[17]General Archives of the Indies, Contratación, bundle 247B, fol. 21r. Trade between Peru and other points on the Pacific coast of America, and Spain was almost exclusively carried out across the isthmus of Panama. Ships coming from Peru unloaded their merchandise in the port of Panama, where two routes led to Nombre de Dios, the final port for this trade on the Atlantic coast. One of these routes went entirely by land — the so-called Royal Way — and crossed the mountains directly to reach Nombre de Dios. This route, where travellers could stop at the Chagres and Capirilla Inns, could be covered in three or four days. The other route went by land, river and sea. The first part of this route went overland from Panama to the Cruces Inn on the Chagres River, where the river left the mountains and became navigable. The merchandise was loaded at the Cruces Inn and taken downstream to the river's mouth on the Atlantic Ocean, where it was coasted to Nombre de Dios. This route took 14 days, including the 30 kilometers overland from Panama to the Cruces Inn. This route was cheaper, transport costing about two or three times less than the more direct route, which was so toilsome that a large number of mules commonly died on the way crossing the mountains and marshes. Thus, the mixed route was preferred by merchants, and the Royal Way was used to transport precious metals and other objects. The port of Nombre de Dios stood in an open bay full of reefs, on account of which vessels had to remain far from the coast where it was difficult to protect them from pirates and enemy ships. After Francis Drake's attack in 1596, the decision was made to build a new port, called Portobello, near the previous one but in a deep and well-protected bay where there was room for 300 galleons and 1000 smaller ships. In 1597, Portobello became the terminus of the Atlantic trade [Castillero, 1980, pp. 13-14, 21-22; 1984, pp. 9-10]. In addition to other information, María del Carmen Mena García provides an interesting map of the two routes [1984, p. 162]. From the testimony of Diego de Navas, it is clear that Bartolomé Salvador de Solórzano chose the mixed route. Therefore, Tabernieca, the place where he died, must have been located at some point on the lower course of the river Chagres.

said Bartolomé Salvador de Solórzano had passed away on the river Chagre on his way from Panama to Nombre de Dios. When the death was ascertained in Nombre de Dios, he saw that the justice responsible for the property of deceased persons took possession of all his property." According to Corbalán's statement, Bartolomé Salvador de Solórzano must have died in April or May 1596.

The documents in the file do not reveal anything further on the subject, but they do contain much information on the activities Bartolomé carried out in the Indies on behalf of Brígida Corzo, who passed away before him at the end of July 1592.[18] Although interesting, these activities, which involve the liquidation of property in the Indies belonging to Juan Antonio Corzo Vicentelo de Leca, are another story. Thus, an outline of the life of Bartolomé Salvador de Solórzano, active merchant, faithful assistant of one of the most prominent and powerful businessmen of Seville, and author of one of the most important treatises on double-entry bookkeeping of the sixteenth century.

REFERENCES

Castillero Calvo, Alfredo, *Economía terciaria y sociedad*, Panama, 1980.

__________, *La Ruta Transístmica y las Comunicaciones Marítimas Hispanas Siglos XVI a XIX*, Panama, 1984.

Domínguez Ortiz, Antonio, *Historia de Sevilla. La Sevilla del Siglo XVII*, Seville, 1984.

García Chico, Esteban, *Medina de Rioseco. Catálogo Monumental de la Provincia de Valladolid*, volume I, 3rd edition, 1979.

Hernández Esteve, Esteban, "Tras las huellas de Bartolomé Salvador de Solórzano, autor del primer tratado español de contabilidad por partida doble (Madrid, 1590)," *Revista de Derecho Mercantil* (January-June 1983).

__________, "Pedro Luis de Torregrosa, primer Contador del Libro de Caxa de Felipe II. Introducción de la contabilidad por partida doble en la Real Hacienda de Castilla (1592)," *Revista de Historia Económica* (Spring-Summer, 1985).

__________, *Pedro Luis de Torregrosa, primer contador del libro de caja*, Volume I of *Establecimiento de la partida doble en las cuentas centrales de la Real Hacienda de Castilla (1552)*, Madrid, 1986.

__________, "Una operación municipal de compra de cereales; libros de caja y manual de compra del pan del Ayuntamiento de Medina de Rioseco (1540)," *Moneda y Crédito* (June 1987).

Lapeyre, Henry, *Une famille de marchands: les Ruiz*, Paris, 1955.

Lohmann Villena, Guillermo, *Les Espinosa: une famille d'hommes d'affaires en Espagne et aux Indes à l'époque de la colonisation*, Paris, 1968.

Lorenzo Sanz, Eufemio, *Comercio de España con América en la época de Felipe II*, volume I, Valladolid, 1979.

[18]General Archives of the Indies, Contratación, bundle 247B, fol. 9r.

Mena García, María del Carmen, *La sociedad de Panamá en el siglo XVI*, Seville,1984.
Pike, Ruth, *Aristócratas y comerciantes. La sociedad sevillana en el siglo XVI*, Esplugues de Llobregat, 1978.
Ruiz Martín, Felipe, "La Banca en España hasta 1782," in Research Department of The Bank of Spain, *El Banco de España, una historia económica*, Madrid, 1970.
Salvador de Solórzano, Bartolomé, *Libro de caxa y Manual de cuentas de Mercaderes y otras personas con la declaración dellos*, Madrid, 1590.
Stevelinck, Ernest, *La comptabilité à travers les Ages*, Brussels, 1970.
Stevelinck, Ernest and Haulotte, Robert, *Galerie des grands auteurs comptables*, no. 192.
Ulloa, Modesto, *La Hacienda Real de Castilla en el reinado de Felipe II*, Madrid, 1977.

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A NOTE: GRAVES, SWEENEY AND *GOLDMARKBILANZ* — WHITHER SWEENEY AND SCHMIDT'S *TAGESWERTBILANZ?*

Abstract: Graves' [1987] very competent and well-documented descriptions of Mahlberg's and Schmalenbach's *Goldmarkbilanz* techniques should raise no objections on technical grounds. He ably captures and amplifies the mechanical aspects of these major *Betriebswirtschaftslehre* proposals. However, the linking of Sweeney with these *Goldmarkbilanz* proposals in the title and in the first few and then in the final pages of the article, is cause for concern. By only considering links with the *Goldmarkbilanz* techniques, Graves does less than reasonable justice to Sweeney's development of the case for Stabilized Accounting. By not considering the other major stabilization proponent, Fritz Schmidt, albeit a proponent of replacement cost based stabilization, Graves provides only a partial explanation of the myriad of factors influencing the development of Sweeney's inflation accounting proposals.

Graves' [1987] very competent descriptions of Mahlberg's and Schmalenbach's *Goldmarkbilanz* (Gold mark balance sheet accounting) techniques should raise no objections on technical grounds. He ably captures and amplifies the mechanical aspects of these major *Betriebswirtschaftslehre* (academic discipline relating to theory of the firm) stabilization proposals. But, in telling only part of the story, he may do less than reasonable justice to Henry Sweeney's development of the case for *Stabilized Accounting*. Graves acknowledges that Schmidt [1921] contains the first comprehensive statement in the accounting literature of *current value (cost) accounting*. But then, (in footnote 2) explains "[as Schmidt's organic stabilization theory was] distinct from the gold-mark model . . . [it] is not discussed in this study." This exclusion results in a partial presentation of the links between Henry Sweeney's ideas on *inflation accounting* and those already well developed by European business economists, resulting, *inter alia*, in the *German gold mark model.*

Importantly, telling only part of the story when coupled with the tendency for "earlier accounting knowledge to become lost to future accounting scholars" [Bricker, 1988], creates the potential for readers to misinterpret the relative impacts of the ideas of Mahlberg, Schmalenbach and those of Schmidt, on Sweeney. Even worse, younger academics may perceive Sweeney to have been an indexed or constant purchasing power advocate, a proposition that Clarke [1976 and 1982] and Tweedie and Whittington [1984], *inter alia,* have refuted.

It is reasonable also to argue that Graves' account of the Mahlberg and Schmalenbach proposals sheds little further light on either the connections between German *Betriebswirtschaftslehre* theories and Sweeney on the one hand; and the *substantial thrust and essence* of Sweeney's proposals, on the other. The examinations, of the latter by Clarke [1976 and 1982] and the former by Clarke and Dean [1986 and 1988],[1] provide the basis of this note.

From a historiographical perspective these facets of Graves' contribution arise form the manner in which he draws on "Sweeney 1927" and "Sweeney 1928" and then moves directly to "Sweeney 1936." Sweeney's articles, of which there were thirteen between 1928 and 1936, are not canvassed; an omission aggravated by Graves not attributing any significance to the pause in Sweeney's writings from February 1928 to December 1930. Yet both the pause and the developments underlying those other articles were essential elements of Sweeney's process of sorting-out his ideas between the completion of the first draft of his Ph.D. thesis in May 1927 and the 1936 publication of his stabilization techniques — an edited version of his completed Ph.D. manuscript. We argue, however, that a different and broader perception of the circumstances affecting Sweeney's proposal, can be entertained. This note develops that broader perception. In particular, it draws upon the strong evidence of Fritz Schmidt's ideas underlying the development of Sweeney's stabilization thesis.

Accordingly, consider first Schmidt's prominence in the *Betriebswirtschaftslehre* movement in general, and in the development of *Tageswertbilanz* proposals in particular. Then, consider the unequivocal links between Sweeney's preference for stabilization based on replacement prices or reproductive

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[1]Clarke and Dean [1986] provide details of the works of Fritz Schmidt, leading German *Tageswertbilanz* (current value accounting) theorist of the 1920s.

costs and the impact of Schmidt's *Tageswertbilanz* on the development of Sweeney's stabilization ideas.

SCHMIDT, *BETRIEBSWIRTSCHAFTSLEHRE* AND *TAGESWERTE*

Elsewhere, Schmidt's "organic" *Betriebswirtschaft* theory (theory of the firm) has been described in detail [Clarke and Dean, 1986]. Schmidt argued for *Tageswertbilanz*, i.e., a system of accounting using replacement cost valuations at the sales date (for factor inputs of items sold) and replacement costs as at balance sheet date for unsold items. His method aimed to ensure a relative maintenance of value — *Das Prinzip der relativen Werterhaltung* — ensuring thereby that the firm's capital was retained in the same proportion to the total capital in the economy, as it bore at the date of the transaction giving rise to the original transaction data.[2] He perceived accounting as an integral part of the process of efficiently allocating resources in the economy. In our 1986 article we noted that he "proposed his *organic current value* accounting in a deliberate attempt to place the theory of the firm, and accounting for the firm, in the context of a dynamic economy" (p. 69). Schmidt's concept of the *maintained* firm entailed the retention of:

(i) its relative physical capacity to *satisfy* consumers' needs,
(ii) its relative share of the market for its production, and
(iii) its relative overall share in the production fabric of the economy.

The inappropriateness of this relativist organic concept in a dynamic market oriented system was discussed in detail in Clarke and Dean [1986].[3]

Notwithstanding this criticism, it is reasonable to think of Schmidt as a *pathbreaker.* Seicht [1982] and Schneider [1981] suggest that Schmidt extended the earlier European works of Ciompa [1910], Kovero [1912] and Faes [1913] whilst translations we have commissioned of his work suggest he drew upon the ideas of the economist, Ricardo [1817] in formulating his system of *Tageswertbilanz*. In the Anglo-American literature Mattessich [1982] suggests Schmidt [1921] provided the first comprehensive current cost accounting system — Graves con-

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[2]Discussion of Schmidt's relative maintenance of value principle appears in Clarke and Dean [1986, pp. 69-70 and 98-99].

[3]It is ironic that Schmidt's concern with an economy's dynamics should result in a theory of accounting premised on firm continuity.

curs [1987, p. 35]. Another feature is that Schmidt's influence spread beyond the domain of purely accounting matters. Schwantag [1951] explained that noted business cycles economist Gottfried Haberler was aware, and approved, of Schmidt's 1927 monograph highlighting the connection between faulty accounting and the exacerbation of trade cycles. A similar line of argument was pursued by Mitchell [1923], Lacey [1952], Baxter [1955] and by many others (see Ray [1960] for details).

Schmidt, however, was not alone in 1920s Germany in pursuing a "dynamic" theory of business economics, in particular advocating a move from the "static" (balance sheet oriented) perspective to a more "dynamic" (income account oriented) perspective.[4] Others to pursue the same theory included Schmalenbach [1919], Geldmacher [1920], Mahlberg [1920], Prion [1921], Walb [1921], and Kalveram [1923; for more details see Clarke and Dean 1986, pp. 83-88]. But, despite the prestige of those others, Schmidt was acknowledged as the intellectual leader of the "organic relativist" perspective, just described [Schranz, 1930, p. 166].

SWEENEY — PREFERENCE FOR *"TAGESWERTE* OR *WIEDERBESCHAFFUNGSWERTE"*

It is difficult to deduce from Graves' account Sweeney's overwhelming preference for asset valuations based on current/replacement or reproductive costs — *Tageswerte* or *Wiederbeschaffungswerte* respectively. In this respect the account of "Inflation Accounting and Henry Sweeney. . . " is curiously skewed. For whereas Sweeney's 1927 and 1928 articles might well be traced to the *Goldmarkbilanz* ideas of Mahlberg and Schmalenbach, over eighty percent of *Stabilized Accounting* [1936] uses the *Tageswerte* (current/replacement values) valuation of nonmonetary assets. We agree with Graves' assessment that Schmalenbach [1921], and to a greater extent Mahlberg [1923], undoubtedly influenced Sweeney's 1927 and 1928 works. But the extent of Sweeney's recourse to Schmidt is unequivocal. In particular, the evidence presented in Clarke and Dean [1986 and 1988] suggests that Schmidt had at least as great an impact on Sweeney's post 1928 works as did Mahlberg.[5]

[4]"The 'statists' objective [is to produce a] realistic snapshot of the entity's current assets, liabilities and net worth . . . [whilst] the 'dynamists' objective [aims at] measuring accurately the performance of an entity resulting from the transactions for the period" [Tweedie and Whittington, 1984, p. 21].

[5]For a discussion of Mahlberg's impact on Sweeney see Graves [1989].

From January 1928 to December 1930 nothing was published in the accounting literature under Sweeney's name. Possibly this was a period in which he reflected on criticism of his earlier works. In several of his post 1928 works reference is made to one such critic, Fritz Schmidt [1930, pp. 280 and 284; 1931, pp. 166 and 176-77; 1933, p. 190; 1935, p. 199 and 1936, pp. 40-42, 47 and 193]. In the 1936 preface of *Stabilized Accounting* (p. xiv) he declared he became fully aware of Schmidt and his ideas in 1929, through Schmidt's criticism of his "concepts of the fundamentals of stabilized accounting." Later in the text (p. 40) Sweeney refers to Schmidt as "the German authority on stabilized accounting." Although not specifically stated in any of Sweeney's works it appears likely these deliberations occurred after Schmidt delivered a paper on *Valuation* at the 1929 International Accounting Congress held in New York in September. Indirect support for this emerges in Sweeney [1935, p. 191]. In the preface of *Stabilized Accounting* Sweeney suggests the pause in his writings was to take account of "the French literature . . . which had benefited from the earlier experiments in neighbouring Germany . . . [which were based on replacement cost ideas of the Germans] and [thus] tended to be more mature, concrete and practical" (p. xxii). These points link Sweeney's ideas, and certainly his preferred mode of stabilized accounting, more with Schmidt than with any of the other *Betriebswirtschaftslehre* theorists.

As noted Sweeney's preference for replacement or reproductive cost has been identified elsewhere [Clarke, 1976 and 1982, Mattessich, 1982, Tweedie and Whittington, 1984 and Clarke and Dean 1986 and 1988]. But it might be useful to reflect on the significance of that preference for every analysis of Sweeney's adoption of the German indexation methods as part of *Stabilized Accounting.*

It seems that in many parts of the accounting literature Sweeney's use of indexation or scaling techniques has been taken to be evidence of his affinity with scaling accounts data *per se*, rather than as a means of his primary end — achieving homogeneity in accounting data. Pursuit of this was stated in his 1935 article "to make accounting data more accurate by removing much of the effect of the fluctuations in the value of money" [1935, p. 185]. In the professional literature promoting various forms of indexed (general price level or constant dollar) methods, attributing unwarranted importance to the scaling might be expected. The emphasis there, rightly or unequivocally, is on the techniques. But, drawing such inferences from part of the historical analysis of the development of ideas is less than conducive to the production of a penetrating history.

Evidence that Sweeney opted for the convenience of indexation of historical cost data, rather than a "pure" replacement method *per se,* is to be found in several sources. First, with respect to its arithmetical simplicity, his approbation is reasonably evidenced in the 1927 and 1928 articles (to which Graves refers). It continues through both "Income" [1933] and "Capital" [1933] as well as "How Inflation Affects Balance Sheets" [1934]. It is explicit in "Stabilized Appreciation" [1932, p. 115]; in "The Technique of Stabilizing Accounting" [1935, p. 197]; and reiterated in *Stabilized Accounting* [1936, pp. 7, 42, 51, 159, et al.]. "The Technique of Stabilized Accounting" [1935], for example, alludes to his ranking of priorities — homogeneity first and replacement or reproduction costs second — explaining:

> . . . valuation at cost of reproduction . . . conduces towards more homogeneous measurement of all assets than does valuation at original cost. (p. 197).

And in *Stabilized Accounting* [1936] he reinforces that thrust with the observation:

> . . . stabilized accounting, although primarily interested in homogeneous measurement, *cannot refrain* from giving *more* approval to replacement cost as a valuation base than to ordinary original cost [emphasis added, p. 51].[6]

Second, with respect to the arithmetical propriety of a scaling mechanism using index numbers, the thrust in 1927 and 1928 was toward arithmetical comparability [1927, p. 183 and 1928, p. 104]. Then in *Stabilized Accounting,* the contextual relations of Sweeney's complaint of the mathematical impropriety of conventional accounting (p. 7) and the illustration of the basic indexation method (without any reference to inferences to be drawn from the resulting data), are to be found. Unquestionably the emphasis was on the indexing method, more than on the substance of the data produced. And, thirdly, in the 1934 *Harvard Business Review* article on "Approximation of Appraisal Values by Index Numbers," the linking of the scaling mechanism with approximation of replacement (or

[6]Sweeney suggests replacement cost valuation is to be preferred as it "seems capable of giving more useful information to all concerned" and it also yields "values that in the long run approximate more closely the values derived from the ideal method of determining value" [1936, p. 53].

reproductive cost) data, clearly emphasizes the trade-off between simplicity of method and the substance of the resulting data.

POSTSCRIPT

Considering only the links with the *Goldmarkbilanz* proposals precludes identification of the extent of the influence the work of the leading replacement cost based stabilization theorist, Fritz Schmidt, had on the development of Sweeney's *Stabilized Accounting.* Thus, it was argued that Graves [1987] provides only a partial explanation of the complex of the interacting factors influencing the development of Sweeney's inflation accounting proposals.

Unravelling the myriad of influences on Sweeney's work is a daunting task. Graves' contribution has lightened the load for those who have been tracing through the European inflation accounting literature trying to identify the course of the development of ideas on how to make accounts incorporate the financial effects of price and price level changes. At this stage in that task it appears premature to interpret Sweeney's resort to scaling methods as his entertaining a *particulary strong* affinity with the aims of either Mahlberg or Schmalenbach.

REFERENCES

Baxter, W., "The Accountant's Contribution to the Trade Cycle." *Economica* (May 1955), pp. 99-112.

Bricker, R., "Knowledge Preservation in Accounting Research." *Abacus* (September 1988), pp. 120-131.

Ciompa, P., *Grundriss einer Oekonometrie und die auf der Nationaloekonomie aufgebaute natuerliche Theorie der Buchhaltung – Ein auf Grund neuer oekonometrischer Gleichungen erbrachter Beweis, das alle heutigen Bilanzen falsch dargestellt werden.* [Outline of econometrics and the development of a natural theory of accounting based on economics. A proof that all present day balance sheets are stated incorrectly based on a new sketch of econometric equations.] Lemperg: C. E. Poeschel, 1910.

Clarke, F. L., "A Closer Look at Sweeney's Stabilized Accounting Proposals." *Accounting and Business Research* (Autumn 1976), pp. 264-275.

__________, *The Tangled Web of Price Variation Accounting.* New York: Garland, 1982.

Clark, F. L. and G. W. Dean, "Schmidt's *Betriebswirtschaft* Theory." *Abacus* (September 1986), pp. 65-102.

__________, "European Influences in the Seduction of Henry Sweeney." Paper presented at the 11th Congress of the European Accounting Association, Nice 1988.

Faes, E., *Die Beruecksichtigung der Wertverminderung des stehenden Kapitals in den Jahresbilanzen der Erwerbswirtschaften.* [Consideration of declining capital values in annual balance sheets of companies.] Tuebingen: Privately published, 1913.

Geldmacher, E., "Bilanzsorgen." [Balance sheet worries.] *Industrie und Handelszeitung* (1920), pp. 364, 378, 385, 392, 398 & 406.

Graves, O. F., "Accounting for Inflation: Henry Sweeney and the German Gold-Mark Model." *The Accounting Historians Journal,* (Spring 1987), pp. 33-55.

__________, "Mahlberg's Valuation Theory." *Abacus* (March 1989), pp. 22-30.

Kalveram, W., *Die kaufmaennische Rechnungsfuehrung unter dem Einfluss der Geldentwertung.* [Commercial accounting under the influence of changes in the value of money.] Berlin: Spaeth und Linde, 1923.

Kovero, I., *Die Bewertung der Vermoegensgegenstaende in den Jahresbilanzen der privaten Unternehmungen mit besonderer Beruecksichtigung der nicht realisierten Verluste und Gewinne.* [Revaluation of fixed assets in annual balance sheets of private companies with special regard to unrealized profits and losses.] Berlin: Privately published, 1912.

Lacey, K., *Profit Measurement and Price Changes.* Bath: Pitman, 1952.

Mahlberg, W., "Wirtschaftsrelativitaet." [Economic relativities.] *Zeitschrift fuer Handelswissenschaft und Handelspraxis* (1920: Heft 6, 8 & 9) pp. 133-136, 182-6 & 195-7.

__________, *Bilanztechnik und Bewertung bei schwankender Waehrung.* [Balance sheet technique and valuation during periods of currency fluctuation.] Leipzig: G. A. Gloeckner, 1921; 2d ed. 1922; 3d ed. 1923.

Mattessich, R., "On the Evolution of Inflation Accounting." *Economia Aziendale* (Vol. 1, No. 3 1982), pp. 349-381.

Mitchell, W. C., "Accountants and Economics with Reference to the Business Cycle." *The Journal of Accountancy* (March 1923), pp. 161-171.

Prion, W., *Die Finanzierung und Bilanz wirtschaftlicher Betriebe unter dem Einfluss der Geldentwertung.* [Financing and balance sheet presentation of business operations under the influence of inflation.]Berlin: Julius Springer, 1921.

Ray, D. D., *Accounting and Business Fluctuations.* Gainesville: University of Florida Press, 1960.

Ricardo, D., *The Principles of Political Economy and Taxation.* New York: Macmillan, 1817.

Schmalenbach, E., "Grundlagen dynamischer Bilanzlehre." [Dynamic accounting.] *Zeitschrift fuer handelswissenschaftliche Forschung* (1919), pp. 1-60 & 65-101.

__________, "Geldwertausgleich in der bilanzmaessigen Erfolgsrechnung." [Currency stabilization in the balance sheet approach to income determination.] *Zeitschrift fuer handelswissenschaftliche Forschung* (October 1921), pp. 401-17.

Schmidt, F., *Die organische Bilanz in Rahmen der Wirtschaft.* [The organic balance sheet in the framework of the economy.] Leipzig: G. A. Gloeckner, 1921; 2d ed., *Die organische Tageswertbilanz.* [Organic current value balance sheet.] 1922; & 3d ed., 1929.

__________, "Die Industriekonjunktur — Ein Rechenfehler!." [Business cycles — an accounting error!] *Zeitschrift fuer Betriebswirtschaft,* (Vol. 4 1927), pp. 1-29; 87-114 & 164-199.

Schneider, von D., *Geschichte Betriebswirtschaftlicher Theorie.* [History of the theory of business economics.] Muenchen/Wien: R. Oldenbourg, 1981.

Schranz, A., "Modern German Accountancy." *The Accounting Review,* (June 1930), pp. 162-67.

Schwantag, K., "F. Schmidt's wissenschaftliches Werk." [F. Schmidt's academic work.] *Zeitschrift fuer Betriebswirtschaft,* (January 1951), pp. 1-14.

Siecht, G., *Bilanztheorien.* [Accounting theories.] Wien: Physica, 1982.

Sweeney, H. W., "Effects of Inflation on German Accounting." *The Journal of Accountancy*, (March 1927), pp. 178-191.

__________, "German Inflation Accounting." *The Journal of Accountancy*, (February 1928), pp. 104-116.

__________, "The Maintenance of Capital." *The Accounting Review*, (December 1930), pp. 277-287.

__________, "Stabilized Depreciation." *The Accounting Review*, (September 1931), pp. 165-178.

__________, "Capital." *The Accounting Review*, (September 1933), pp. 185-199.

__________, "Income." *The Accounting Review*, (December 1933), pp. 323-335.

__________, "The Technique of Stabilized Accounting." *The Accounting Review*, (June 1935), pp. 185-205.

__________, *Stabilized Accounting*. New York: Harper and Brothers 1936; reproduced by Arno Press 1976; reprint, Holt, Rinehart and Winston 1964.

Tweedie, D. and G. Whittington, *The Debate on Inflation Accounting.* Cambridge: Cambridge University Press, 1984.

Walb, E., *Das Problem der Scheingewinne.* [The problem of fictitious profits.] Freiburg in Brisgau: Walter Momber, 1921.

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H. K. HATHAWAY ON PRODUCT COSTING: RELEVANT ISSUES OF CONTEMPORARY CONCERN

Abstract: This article examines the importance of the treatment H. K. Hathaway gave to product costing issues in his depression-era writings. The paper compares Hathaway's approach to product costing with the contributions of Alexander Hamilton Church, H. Thomas Johnson, and Robert S. Kaplan. Some of Hathaway's product costing methods are improvements over those advanced by Church. Furthermore, Hathaway's proposals are relevant to contemporary management accounting thought and practice.

The accounting and management literature contains abundant references to the contributions of Frederick Taylor and his "inner circle."Gantt's development of time-activity charts, Barth's slide rule invention and Cooke's application of scientific management in public utilities are examples of individual distinctions. Unfortunatley, the recognition earned by Taylor, Gantt, Barth, and Cooke overshadows the accomplishments of a relatively unknown member of the Taylor group, a member Taylor describes as "the best all-around man" in the scientific management movement [Drury, 1918].

Horace King Hathaway learned the Taylor system of scientific management while employed at Midvale Steel between 1896 and 1902. In 1905 Hathaway was hired by James Mapes Dodge to implement the Taylor system at the Link-Belt Company. Later that same year Taylor recommended that Hathaway help Barth install the Taylor system at Tabor Manufacturing. Although Hathaway became the youngest member of the "inner

We wish to thank Professor Robert D. Hay at the University of Arkansas for his inspiration to initiate this research. In addition, we also thank the Committee on Institutional Studies and Research at Murray State University for providing research funds. Finally, we express our appreciation to the following persons for providing helpful comments on various drafts of this paper: Gary Previts, Paula Thomas, Tommy Stambaugh, and several anonymous reviewers.

circle," he was recognized as the most successful implementor of Taylor's system of scientific management [Drury, 1918; Urwick, 1956; Cooke, 1912].

Hathaway also established himself as an author in the scientific management discipline. According to Hathaway's contemporaries, his papers on the Taylor approach to planning and time study were classics [Urwick, 1956; Thompson, 1917]. Unfortunately, current writers do not fully acknowledge Hathaway's contributions to management thought.

Hathaway's expertise extended beyond the engineering aspects of scientific management. His articles on the functions of major executives [1933a], the organization of research, development and sales departments [1937d, 1938], and the responsibilities of the works manager [1939] demonstrate a comprehension of management fundamentals and the interrelationships of various organizational units.

Hathaway's work also illustrates an appreciation for and an understanding of the accounting function. In 1912 Hathaway flowcharted the accounting procedures of the Newton Machine Tool Company [Urwick and Wolf, 1984]. During the early 1920s he wrote on inventory control [Hathaway, 1920a, b; Marshall, 1921]. Then in 1924 he contributed a chapter on the inadequacies of public utility accounting in *Public Utility Regulation* [Hathaway, 1924]. Finally, inspired by the depression, Hathaway wrote a series of articles during the 1930s that addressed the need to improve industrial management in the United States. Ten of these papers focus on accounting.[1]

Hathaway's depression-era accounting articles are intricate and complete. His topics include financial statement preparation and use [1933c, 1934a-c], budgetary control [1935b, 1937a], and the comptroller's function [1937b]. Hathaway also emphasizes internal control and devotes one article to the role of internal auditing [1937c].[2]

The purpose of this paper is to discuss the importance of the treatment Hathaway gave to product costing issues in his

[1]Nelson [1980] claims Hathaway's interest in accounting declined by 1910. To the contrary, Hathaway's work indicates a strong interest in accounting through the 1930s. This corroborates Vangermeersch's [1984] assertion that engineering literature continued to address the accounting function into the 1930s.

[2]Hathaway was an early advocate of independent internal auditors [1937c], independent boards of directors [1932b], the statement of changes in financial position [1933b], and the distribution of selling and administrative expenses to product lines [1935a]. This paper deals exclusively with the allocation of costs to product classes and the implications for judging product profitability.

depression-era writings. The paper focuses on Hathaway's approach to product costing in comparison with earlier contributions of Alexander Hamilton Church, and recent works of H. Thomas Johnson and Robert S. Kaplan. The common link between these individuals is their belief that each product class must absorb an equitable portion of production, selling, and administrative expenses. The distinguishing characteristic, however, is found in the methods of distributing selling and administrative charges. This paper explains how Hathaway's distribution system was an improvement over an earlier system proposed by Church. The paper also demonstrates the relevance of Hathaway's method with contemporary management accounting thought.

OVERVIEW OF PRODUCT COSTING

Prior to the late 1800s the generally accepted definition of product cost was the sum of direct materials and direct labor (prime costs). Producers focused on single products, simple processes, and limited distribution channels. Factory overhead, selling expenses, and administrative charges were either insignificant or nonexistent [Garner, 1954].

As production and distribution became more sophisticated, the incidence and magnitude of nonprime costs increased. This development coupled with the production of multiple products led to the practice of allocating all costs (i.e. prime costs, factory overhead, selling expenses, and administrative charges) to product lines [Johnson and Kaplan, 1987; Garner, 1954]. This practice is hereafter referred to as full costing.

Full costing required the determination of a net profit for each product class. This challenged management accountants to develop equitable distribution methods for costs that had previously escaped allocation. Full costing benefited managers by providing better information with which to judge product profitability.

After 1910 the practice of distributing full costs was modified. Opponents of full costing charged that manufacturing costs varied directly with production but selling and administrative expenses were essentially fixed. Therefore, a low output level translated into high unit product costs and a high level of output resulted in low unit product costs [Garner, 1954]. The modified full cost approach terminated the allocation of selling and administrative costs but retained the distribution of factory overhead.

This practice continues today and is the object of criticism from some management accountants. For instance, Johnson and Kaplan [1987] cite that management's preoccupation with factory costs is a major contributor to dysfunctional management decisions concerning competing product lines. A reliable measure of product profitability depends on the reasonable allocation of costs inside and outside the factory.

THE INFLUENCE OF SCIENTIFIC MANAGEMENT

Participants in the scientific management movement, including Hathaway and Church, were strong proponents of full costing. Both believed that the profitability of products could be measured with reasonable accuracy only if products absorbed an equitable portion of all costs. Church [1908] considered the measurement of product net profit an essential means of "restoring personal control over the details of a large business." Hathaway [1935a] expressed a similar view: "The importance of knowing accurately the net profit on each class of product cannot be overestimated. Without such knowledge unsound policies and practices are almost certain to develop."

Even though the works of Hathaway and Church illustrate agreement on the need for better product profitability measures, there are significant differences between the two. The source of these differences lies within their distribution systems for selling and administrative expenses. Hathaway's method is similar to yet more comprehensive than Church's earlier work. Furthermore, Hathaway's system addresses many of the concerns of contemporary management accountants and could serve as a framework for current distribution systems. The following discussion of these two approaches highlights the differences.

CHURCH'S DISTRIBUTION PLAN

Alexander Hamilton Church is credited with offering the first comprehensive analysis of expense distribution [Garner, 1954]. Even though Church supported full costing, he focused a large percentage of his attention on factory costs. In particular, he is noted for introducing the "machine-hour rate" method of overhead allocation [Vangermeersch, 1986].

Despite Church's emphasis on factory costs, he supports full costing in several papers [1900, 1908, 1915]. In "The Proper Distribution of Establishment Charges," Church [1908] offers guidance in the development of a full costing distribution system. A critical evaluation of Church's system will help to demonstrate the significance of Hathaway's ideas relative to current management accounting thought.

Church's distribution plan consists of three steps. The first step requires that all selling and administrative expenses be traced to classes of work for a representative time period. This procedure is a valuable element in Church's distribution plan and surfaces several years later in the work of both Hathaway and Kaplan. Hathaway [1935a] states: "[C]ertain Sales and Business expenses should be allocated to a certain class of product on a basis of actual expenditures for the benefit of that class of product." Kaplan's [1987] directions are to "trace costs using actual effort and transactions."

Table 1 shows how Church allocates selling and administrative costs to classes of work. Church traces $7,000 and $3,000 of advertising expenses to lathes and cranes based on the advertising requirements for the output of each product. Similarly, catalog expense and office expense are prorated by "carefully considering the items with reference to the output" [Church, 1908].

Table 1
Table Showing Method Apportioning Different Items of General Establishment Charges on Different Classes of Work

Class	Output	Adv. Expense	Catalog Expense	Office Expense	Total Expense	%
Lathes	$100,000	$ 7,000	$4,800	$1,660	$13,460	13.50
Cranes	20,000	3,000	200	1,340	4,540	22.75
Repairs	20,000	—	—	2,000	2,000	10.00
Totals	$140,000	$10,000	$5,000	$5,000	$20,000	*

*Average percentage of incidence would be 14.25 percent.

Source: Church, A. H., *The Proper Distribution of Expense Burden* (New York: The Engineering Magazine, 1908), p. 108.

Since the repair function is an internal service, no advertising and catalog expense is traceable. However, the repair department does receive a $2,000 allocation of office expense due to the services provided by the office department. Presumably, repair costs would then be allocated (as a component of factory overhead) to lathes and cranes.

The second step in Church's plan is to select a common denominator for selling and administrative costs and compute a "percentage of incidence" for each class of work. This step is the source of two conceptual deficiencies.

The first deficiency relates to the selection of a common denominator. According to Church [1908],

> . . . the connection of general charges with work is not real, but entirely arbitrary and conventional, from the very nature of the elements concerned. If, therefore, we base the incidence of general charges as a mere percentage on wages, or on works cost, we are doing something which is very easy and simple but which is almost sure to be very misleading in cases where there are more than one or two different classes of articles concerned. At the same time, it is evident that some basis of value must be taken before we can distribute at all.

Church argues that selling and administrative expenses should not be allocated on the basis of production. However, in describing his distribution method, he suggests the use of wages cost, works cost, and production hours as common denominators [Church, 1908]. Church's inability to define allocation bases outside the production area is a serious weakness of his method.

Another deficiency in Church's plan is his assumption that all selling and administrative costs for a product class have the same relationship to a single common denominator. Church [1908] warns "the essential falsity of averaging general charges all round should be clearly recognized . . . . " However, his distribution method requires the use of an average allocation rate for each product class. This contradiction is a weakness in his approach to expense distribution.

The use of a single allocation rate for each product class averages many types of costs over one common denominator. Different costs have different drivers (common denominators) and these drivers may vary among products. As noted by both Hathaway [1935a] and Kaplan [1987], a better plan allows the use of many common denominators and a "percentage of incidence" for each type of cost within each product class.

Church's final step allocates actual selling and administrative costs to product classes based on the "percentages of incidence:"

> In distributing general charges each month, effect is given to these percentages. The total expenditure being found, it is not averaged indiscriminately over the whole output for the month, but in such a manner that when all is distributed the proportion between the various classes is maintained [Church, 1908].

Church explained that if the value of output for lathes was $80,000 in a month, the allocation of selling and administrative expenses would not be the product of $80,000 and 13.5 percent (from Table 1). Rather, the actual charge would be distributed in a manner that "maintained the proportion of expenses between product classes" [Church, 1908]. Unfortunately, Church did not elaborate on the mechanics of this process. Hathaway, to the contrary, provided ample details of his own distribution method.

HATHAWAY'S DISTRIBUTION PLAN

During the 1930s, Hathaway [1935a] expressed dissatisfaction with the practice of not allocating selling and administrative expenses to product lines. He believed that improper expense distribution lowered the standards of U.S. industrial management, particularly in the area of measuring product profitability.

> I have in mind a case in which the net profit on the business as a whole was satisfactory but which, with a reasonably accurate allocation of expenses, revealed the amazing fact that sales of a single class of product amounting to one fifth of the total accounted for seventy per cent of the net profit. Many things might happen which would result in losing such a dangerously profitable part of a business as the class of product cited. In this same company analysis of the numerous classes comprising the remaining four fifths of its sales brought to light the facts that certain products showing high gross margins provided little or no net profit and that on the other hand certain items with lower gross margins showed, contrary to popular beliefs, satisfactory net profits [Hathaway, 1935a].

Hathaway attributed the accounting treatment of selling and administrative expenses to the lack of a practical and equitable distribution system. The inability to accurately measure product profitability led to Hathaway's framework for distributing selling and administrative expenses.

> Because of the seeming difficulties encountered in an effort to allocate Sales and General Business expenses on an equitable basis many companies have satisfied themselves with a knowledge of gross profits on their various lines of product and have charged these classes to expense in toto against the total gross

> profit - showing only the net profit on the business as a whole. There seemed to be no right way for the distribution of selling and administrative expenses . . . no such definite technique has been evolved for the distribution of this class of expense [Hathaway, 1935a].

Hathaway's distribution system is similar to Church's method. Both systems support the tracking of specific costs to specific products and both promote the allocation of actual rather than standard costs. However, Hathaway's distribution framework offers a more complete and equitable allocation and addresses some concerns in current management accounting.

Hathaway's procedure consists of four steps: 1) computation of proportional rates, 2) calculation of unadjusted allocations, 3) determination of corrected allocations, and 4) allocation of nontraceable expenses. An example with two product classes and three types of expenses illustrates the process.

Step 1: Computation of proportional (P) rates.

Hathaway's "proporational rates" are similar to Church's "percentages of incidence." Both result from tracking costs to products and then dividing by a common denominator. However, Church computes a single "percentage of incidence" for each product class while Hathaway calculates a "proportional rate" for each type of cost within each product class. Table 2 illustrates the computation of proportional rates for a representative year.

A principal distinction between Church and Hathaway is in the number of allocation rates. With two products and three types of expenses, Church's method calcuates two rates as opposed to Hathaway's six. This is important because the Hathaway system is based on the concept that each type of cost has its own cost driver and thus requires a unique allocation rate. The indiscriminate allocation of cost resulting from the use of an overall common denominator for each product, as Church recommends, may not yield an equitable distribution of selling and administrative expenses.

The use of multiple cost drivers also establishes a more justifiable relationship between a cost and its driver. Church's denominators were production related even though he admitted that no definite relationship between production and nonproduction costs existed [Church, 1908]. Hathaway's system does not limit the choice of a common denominator to produc-

Table 2
Hathaway's Distribution Method
Computation of Proporational (P) Rates

Product Class I

Common Denominator	Amount	Sales Commissions	Traced Expenses Order Handling	Material Procurement	P Rate
Total Sales	$1,000,000	$100,000			10% of sales
Number of Sales	10,000		$50,000		$5 per sale
Material Value sold	$ 400,000			$100,000	25% of value

Product Class II

Common Denominator	Amount	Sales Commissions	Traced Expenses Order Handling	Material Procurement	P Rate
Total Sales	$500,000	$25,000			5% of sales
Number of Sales	3,000		$9,000		$3 per sale
Material Value sold	$100,000			$40,000	40% of value

tion but allows the use of any reliable factor. This is consistent with the work of Johnson and Kaplan [1987].

Step 2: Calculation of unadjusted allocations.

Unlike Church, Hathaway's instructions are explicit regarding the allocation of selling and administrative expenses in periods beyond the representative year. The unadjusted allocation is found by multiplying the proportional rate by the actual denominator levels. Table 3 illustrates the computation.

Table 3
Hathaway's Distribution Method
Computation of Unadjusted Allocation

	Proportional Rate (from Table 2)	×	Actual Denominator Level	=	Unadjusted Allocation
Class I Expenses					
Sales Commissions	10%	×	$1,100,000	=	$110,000
Order Handling	$5	×	11,000 orders	=	55,000
Procurement	25%	×	$400,000	=	100,000
Class I Total					$265,000
Class II Expenses					
Sales Commissions	5%	×	$450,000	=	$ 22,500
Order Handling	$3	×	2,800 orders	=	8,400
Procurement	40%	×	$80,000	=	32,000
Class II Total					$ 62,900
Total Unadjusted Allocation					$327,900

Step 3: Calculation of corrected allocations.

Invariably the total unadjusted allocation will not agree with total actual expense in a given period. Therefore, the unadjusted allocation must be adjusted so that total actual costs are allocated. Hathaway recommends the use of a correction rate by dividing total actual expenses by total unadjusted allocation. Assume actual sales commissions of $150,000, order handling of $50,000, and procurement of $140,000. The correction rate is $340,000 divided by $327,900 or 1.0369014. The correction rate is then applied to the unadjusted allocations. Table 4 shows the corrected allocations.

Obviously some type of correction must be administered in order to allocate actual costs. However, the principal limitation of Hathaway's distribution method is in the correction procedure. Step three is valid only if actual costs for each type of expense are all under- or over-allocated. In the example the unadjusted allocation of order handling (See Table 4) was $63,400 ($55,000 + $8,400) but the actual order handling costs were only $50,000. Hathaway's correction procedure will not reduce the allocation of order handling which would be the proper treatment. Instead the allocation is corrected upward to $65,740 ($57,030 + $8,710). The use of individual correction rates for each type of expense would solve this problem.

Improvement could also be made by performing allocations for quarters or months rather than at year end. This would assure management of more timely information when making judgements concerning product profitability. The preparation of timely accounting reports was important to Hathaway [1933b].

Table 4
Hathaway's Distribution Method
Corrected Allocations

Expense	*Unadjusted Allocation*	*Corrected Allocation*
Class I		
Sales Commissions	$110,000	$114,059
Order Handling	55,000	57,030
Procurement	100,000	103,690
Class I totals	$265,000	$274,779
Class II		
Sales Commissions	$ 22,500	$ 23,330
Order Handling	8,400	8,710
Procurement	32,000	33,181
Class II totals	$ 62,900	$ 65,221
Grand Totals	$327,900	$340,000

Step 4: Allocation of nontraceable expense.

Hathaway believed that most but not all selling and administrative expenses could be traced to product classes. His prime example of nontraceable costs was executive salaries. Hathaway suggested these types of expenses be allocated according to the relative proportions of corrected allocations. Based on Table 4, Class I would receive 81% and Class II would share 19% of the nontraceable costs.

The allocation of nontraceable expenses further distinguishes Hathaway from Church. Both supported full costing. However, Church did not discuss a procedure for allocating nontraceable expenses.

SUMMARY AND CONCLUSION

Hathaway's desire to improve product profitability measurement was relevant not only during the scientific management era but is of concern today. Increases in domestic and global competition require a continuous evaluation of resource allocations. Case studies demonstrate the need for improvements in judging product line performance [Johnson and Kaplan, 1987]. The inability to reliably measure product profitability can lead to dysfunctional decisions.

Prior to the late 1800s the measurement of product profitability was quite simple. Firms produced few products and costs were easily traceable to output. However, since the late 1800s the importance of costs beyond direct material and direct labor has increased substantially. For a brief period of time in the early 1900s, management accountants allocated all costs to products. However, the full costing approach evolved to exclude the distribution of selling and administrative expenses to product lines. This practice continues today.

Hathaway, like Church, recognized the limitations of using only production costs for product line profitability measurements. Both Hathaway and Church offered distribution plans for selling and administrative expenses. However, Hathaway's method is more comprehensive than Church's and is consistent with current management accounting thought and practice. Support for specific cost allocation rates and the use of production and nonproduction common denominators is found in the distribution system advocated by Johnson and Kaplan [1987].

Horace King Hathaway's loyalty to Frederick Taylor is evident throughout his writings. However, his reluctance to take credit for his own ideas and accomplishments may help explain his lack of recognition by historians. Barth, Cooke, and Gantt, the other members of the famous "inner circle" of scientific management, all achieved individual distinction and have been widely recognized for years. This discussion begins to place Hathaway in perspective with the development of management accounting and more clearly defines his position within Taylor's "inner circle."

REFERENCES

Church, Alexander H., "The Meaning of Commercial Organization," *The Engineering Magazine* (December, 1900), pp. 391-398.

———, *The Proper Distribution of Expense Burden* (New York: The Engineering Magazine, 1908), pp. 99-116.

———, "What The Executive Wants to Know About Costs," *American Machinist* (28 October, 1915), pp. 763-766.

Cooke, Morris L., "Phases of Scientific Management: A Symposium," *Addresses and Discussions at the Conference on Scientific Management,* The Amos Tuck School of Administration and Finance (Hanover, NH: Dartmouth College, 1912), pp. 339-343.

Drury, Horace B., *Scientific Management: A History and Criticism* (2d ed., New York: Columbia University, 1918), p. 109.

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

Hathaway, Horace K., "Logical Steps in Installing the Taylor System of Management," *Industrial Management* (August, 1920), pp. 93, 95.

__________, "The Mnemonic System of Classification," *Industrial Management* (September, 1920), p. 173.

__________, "Cost Finding As An Aid To Effective Regulation," *Public Utility Regulation,* ed. Morris L. Cooke (New York: The Ronald Press, 1924), pp. 167-189.

__________, "Applied Scientific Management: II. Organization and Classification," *Bulletin of the Taylor Society* (December, 1932), pp. 229-234.

__________, "Applied Scientific Management: III. Organization: Functions of Major Executives, Especially the General Manager," *Bulletin of the Taylor Society* (February, 1933), pp. 6-8.

__________, "Applied Scientific Management: IV. Periodic Reports and Their Uses," *Bulletin of the Taylor Society* (April, 1933), pp. 37-40.

__________, "Applied Scientific Management: V. Accounting as a Tool of Management," *Bulletin of the Taylor Society* (June, 1933), pp. 57-60.

__________, "Applied Scientific Management: VI. Accounting as a Tool of Management (continued)," *Bulletin of the Taylor Society* (February, 1934), pp. 4-7.

__________, "Applied Scientific Management: VII. Accounting as a Tool of Management (continued)," *Bulletin of the Taylor Society* (April, 1934), pp. 41-44.

__________, "Applied Scientific Management: VIII. Accounting as a Tool of Management (continued)," *Bulletin of the Taylor Society* (November, 1934), pp. 38-42.

__________, "Applied Scientific Management: IX. Accounting as a Tool of Management (continued)," *Bulletin of the Taylor Society* (March, 1935), pp. 109-112.

__________, "Applied Scientific Management: X. Notes on Budgetary Control," *Bulletin of the Taylor Society* (November, 1935), pp. 233-237.

__________, "Applied Scientific Management: XI. Notes on Budgetary Control (continued)," *The Society for the Advancement of Management Journal* (March, 1937), pp. 56-61.

__________, "Applied Scientific Management: XII. Organization-Functions of the Comptroller's Department," *The Society for the Advancement of Management Journal* (May, 1937), pp. 85-90.

__________, "Applied Scientific Management: XIII. Organization-The Auditor's Department," *The Society for the Advancement of Mangement Journal* (September, 1937), pp. 149-153.

__________, "Applied Scientific Management: XIV. Organization-The Product Research and Development Department," *The Society for the Advancement of Mangement Journal* (November, 1937), pp. 173-178.

__________, "Applied Scientific Management: XV. Organization-The Sales Department," *The Society for the Advancement of Management Journal* (November, 1938), pp. 172-178.

__________, "Applied Scientific Management: XVI. Organization-The Functions of the Works Manager and the Activities Falling Within His Jurisdiction," *The Society for the Advancement of Management Journal* (May, 1979), pp. 74-79.

Johnson, H. Thomas and Kaplan, Robert S., *Relevance Lost* (Boston: Harvard Business School Press, 1987), pp. 52-59, 128-147, 253-262.

Kaplan, Robert S., "Yesterday's accounting and today's economy," Statements in Quotes, *Journal of Accountancy* (November 1984), pp. 141-152.

__________, Speaker at "Cost Accounting, Robotics and the New Manufacturing Environment," A symposium co-sponsored by the National Association of Accountants and the American Accounting Association, Nashville, Tennessee, February 27-28, 1987.

Marshall, Leon Carroll, *Business Administration* (Chicago: University of Chicago Press, 1921), p. 628.

Nelson, Daniel, *Frederick W. Taylor and the Rise of Scientific Management* (Madison: University of Wisconsin Press, 1980), p. 147.

Thompson, C. Bertrand, *The Theory and Practice of Scientific Management* (New York: Houghton Mifflin Company, 1917), pp. 234-235.

Urwick, Lyndall F. ed., *The Golden Book of Management* (London: Newman Neame Limited, 1956), pp. 201-204.

Urwick, Lyndall F. and Wolf, William B., eds., *The Golden Book of Management: New Expanded Edition* (New York: AMACOM Book Division, American Management Association, 1984), pp. 191-193.

Vangermeersch, Richard, "A Comment on Some Remarks by Historians of Cost Accounting on Engineering Contributions to the Subject," *The Accounting Historians Journal* (Spring, 1984), pp. 135-140.

__________, *The Contributions of Alexander Hamilton Church to Accounting and Management*, (New York: Garland Publishing, 1986).

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REVIEWS

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REVIEWS OF BOOKS AND OTHER PUBLICATIONS

Craswell, Allen. *Audit Qualifications in Australia 1950 to 1979* (New York and London: Garland Publishing, Inc., 1986, pp. 169, $22.00).

Reviewed by Roland L. Madison
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The author has provided an interesting description of the nature and frequency of change in audit qualifications that have occurred in Australia over a period of thirty years. In the study, Craswell examined over 33,500 annual reports, of which 2,740 were identified as being "qualified." The study was based upon the following hypothesis:

> Auditors respond to changes in their legal and professional obligations and to the extent that those changes impinge upon reporting obligtaions, changes in the frequency of qualifications can be expected to result [p. 16].

In order to investigate this hypothesis, the author developed an extensive taxonomy for audit qualificationis. Craswell classified the changes in audit qualifications as a reaction to changes in three distinct areas. These changes were: reactions to changes in the Companies Act (statutory qualifications), to changes in the auditor's legal obligations (judicial case influence), and to changes in professional standards (technical pronouncements from the accounting profession). The author analyzed the frequency and type of qualifications separately for industrial and mining companies. As previously noted, the study covered a period of 30 years, during which time a number of significant changes occurred in technical accounting standards, the Companies Act, and legal decisions rendered. This gave the author an opportunity to measure the frequency of changes in audit qualifications and evaluate the perceived responsiveness of auditors to changes in their obligations.

A major premise used to develop the hypothesis is that the "auditor's prime motivation for qualifying their opinions is assumed to be the avoidance of sanctions and not to the provision of information" [p. 16]. In a similar fashion, Craswell implies that managers also view the acceptability of audit qualification from a position of economic impact upon the entity as well as upon themselves. He says "If managers are assumed to adopt least-cost alternatives, avoidable qualifications may be expected to arise where managers assess the expected cost of publishing financial statements containing a qualified opinion to be less than the expected costs of complying with the auditors' request for change to the accounts" [p. 9]. Cost of compliance would include, but would not be limited to, loss in share market value, or adverse effects upon manager compensation.

Given the above premise, the author proposes that the increase in the number of audit qualifications is a surrogate measure of the auditors' responsiveness to changes in their professional and statutory reporting obligations, with the auditors' responsiveness being tempered by an economic evaluation of sanctions that might be endured if audit qualifications were not rendered.

Several potential problems should be considered before an evaluation is made of this research to the accounting literature.

One potentially significant problem is that the term "qualification" did not even exist in the professional literature throughout the major portion of the research period (1950-1966) until *ICA Statement C2* was issued in 1967. Furthermore, this *Statement* did not define what constituted an audit qualification and the profession had no established format or language to identify qualifying terminology in an audit report [p. 18]. The author acknowledges this limitation. He says: "Ultimately it is for the users of the financial statement to interpret auditors' reports" [p. 28]. That is exactly what the author has done in the book. He has subjectively determined which audit reports are qualified and which are not qualified. In the text, audit qualifications are defined in the "broad view" as:

> Statements in audit reports referring to non-compliance with accounting standards (whether or not auditors express agreement with the non-compliance), to problems in the valuation or measurement of financial statement items (whether or not the effect of the qualification is quantified), and to non-compliance with provisions of the *Companies Act* [p. 28].

The preceding discussion and quotation raises questions concerning potential omissions and commissions of audit qualifications from the study and the impact this may have upon any conclusions developed in the study.

The second major problem relates to the research process and the results of the study relative to the author's hypothesis. The author did not find a significant change in the frequency in audit qualifications during twenty years covered by the study (circa 1950-1970) even though events occurred that should have affected the frequency of qualifications. During the discussion of this time period, explanations are frequently given for the inconsistency of the results that should occur if the stated hypothesis is accurate. One should note, however, that a number of the explanations given do seem quite plausible. Unfortunately, the *Hedley Byrne* case [1964] and the changes to the *Companies Act* [1961] produced results that were quite contrary to expectations consistent with the hypothesis of the study. These results do significant harm to many of the otherwise plausible explanations offered elsewhere by the author (see Chapter 5; specifically pp. 59, 67; and pp. 71, 80).

The author did not find a significant increase in the frequency of audit qualifications until 1971 and subsequent years. One problem with these findings is that, within a very short period of time, three events occurred that affected auditors' obligations. These events were: the *Pacific Acceptance Corporation* case decision [1970], the *Companies Act Amendment* of 1971, and the ICA issuance of the first version of *Statement K1* [1971]. Although the latter professional pronouncement seems to be credited as the most influential stimulus for the change in frequency of audit qualifications, the author does not provide statistical analysis (tests) of significance to help identify the specific casual factors to the exclusion of other possible explanatory factors. In defense of the author, it would be quite difficult to construct tests to differentiate among the three events given the brief time span in which they occurred. However, this shortcoming makes the research methodology and the results of the study very difficult to evaluate in a positive manner.

The above problems may have been avoided if the author had used the methodology he identified early in the text [p. 2]. This would be to interview numerous audit partners and corporate managers to determine the reasons why audit qualifications did or did not occur in the financial reports. While this would theoretically seem to develop the most accurate results, it would obviously involve a great deal of time and cost for the researcher and also involve a potential risk for the various participants to disclose sensitive information.

In conclusion, the text is a very interesting and well-written piece of historical accounting literature. However, due to the critical points and potential problems discussed herein, the reviewer cannot suggest that a replication of this research project, using the NAARS data bank, would have value to the accounting profession in the United States. Audit partners from two national firms agreed with this assessment of the study.

J. R. Edwards, Editor, *Reporting Fixed Assets in Nineteenth-Century Company Accounts* (New York: Garland Publishing, Inc., 1986, 579 pp., $60)

Reviewed by Hans V. Johnson
University of North Dakota

It is generally conceded that most of the vexing problems associated with fixed asset accounting were first confronted by British railroad executives and their accountants. Having raised the necessary capital from investors, made the investment in plant and equipment, commenced operations, the need then arose to measure profits and determine the dividend payment. Among the difficult questions raised were the following: What constitutes a fair return on investment? Does prudent management require that a charge for depreciation be recorded in order to compute periodic profit? How could this charge be explained to investors who would receive a smaller dividend because of it? What rationale and what data could be used to accurately compute the amount of the charge? Assuming cash accumulates due to reduced dividend payments, should it be set aside to provide for the future replacement of existing trains and track? What will be the reaction of managers in competing firms to this method of accounting? Not surprisingly, most nineteenth century railroad executives chose not to account for depreciation in measuring periodic profit.

This book from the Garland Publishing series is a collection of twenty-six items which generally pertain to the origin of fixed asset accounting in the nineteenth century British railroad industry. About one-half of the items included come from easily obtainable journals. Only about one-fourth of the items were actually written in the nineteenth century. Categorization is by general methods and procedures, railroad accounting, legislative influences, and general economic overview.

To lead off, the editor adeptly chose to reproduce the chapter on "fixed capital" from Garcke and Fells' 1893 classic *Factory Accounts*. Primary source documents include two reports written by Mark Huish who was general manager for the London and North Western Railway in the mid-nineteenth century. The two reports are enlightening, but reading is made difficult due to the poor quality of reproduction. The main contribution of the book is the compilation of related subject material from accounting and business history books and journals.

In the preface, the editor suggests that the book is relevant to "students following courses in accounting history," and to researchers of "the history of accounting and business because it contains much material not otherwise easily accessible." In the reviewer's opinion, the cost of the book exceeds the research benefits for most of these individuals.

The subject matter of the book is, of course, of significant interest to accounting historians. Today, unfortunately, much of the challenge of fixed asset accounting has seemingly disappeared. Accounting educators, faced with the abysmal coverage of fixed assets in intermediate accounting textbooks, encounter a difficult task in exciting the interest of bright students. Fixed asset accounting has, for the most part, become a clerical activity. A plausible explanation of how we have arrived at current conditions may be inferred from a paper included in the book which was written by historian Harold Pollins. As to British railway accounting prior to 1868, he concludes:

> The fact that many items appearing (or not appearing) in the revenue accounts involved personal judgments, and that there was not yet a generally accepted body of accounting doctrine, made it easy for the preparation of the final accounts of even the most conscientiously conducted company to be influenced by considerations of management policy [p. 334].

Over the years, legislators and accountants have attempted to reduce some of the risks to investors by narrowing management's choice of accounting alternatives. As a result, many of the fundamental problems of fixed asset accounting which confronted our predecessors, remain unsolved.

Despite my earlier comments, the book is a worthwhile library addition for those universities having graduate accounting programs. Accounting historians with a keen interest in the area, and considerable loose change and bills in their pocket, may find the book to contain new sources of information.

Louis Goldberg, *Dynamics of an Entity: The History of the Accounting Association of Australia and New Zealand* (St. Lucia, Australia: Accounting Association of Australia and New Zealand, 1987, pp. 301, price unavailable).

Reviewed by Michael J. R. Gaffikin
University of Wollongong, Australia

It is a peculiar characteristic of our times, or perhaps our discipline, that we feel the need to have histories of many of our recently created institutions. One interesting possible implication of this is that we are not convinced of the ability of historians to unearth the truth of our past. Rather than leave it to some later historical researcher to educe the past from a variety of documents, we prefer to place our faith in the story presented by "someone who was there." This approach, as any oral historian would admit, is fraught with difficulties.

Perhaps it is pointless to speculate on *why* a doyen of accounting history, Louis Goldberg, was charged to write the history of the Accounting Association of Australia and New Zealand (AAANZ) and no reason is given in the book. What is of greater interest is *how* he went about it and what did he achieve? The history of AAANZ starts in 1954 and Goldberg played a major role in its formation and its early development. In addition, he is an accomplished historian with a proven track record. Therefore, not only would it be highly likely that there would be substantial extant documentatoin with which he would be familiar but Goldberg would be able to recall significant events in the history of AAANZ and be an eminently appropriate person to select those documents most suitable for the historical reconstruction.

Reading the work would seem to confirm these views. Not only is it interesting and seemingly complete but its structure clearly indicates Goldberg's professionalism as a historian. He does state that he had difficulty obtaining some of the documentation, which he presumes was "dispersed or destroyed," but he has managed to produce sufficient documents which, he hopes, "speak for themselves in telling the story" [p. v]. The history is presented in three parts, the first dealing with the problems in the creation of the Association, the second, its development according to various themes, and, the third, philosophical reflection on the existence of the body.

A substantial portion of the first part comprises source documents connected by loose narrative. Goldberg's role is clearly indicated and herein lies some of the methodological difficulties, alluded to above, of this sort of history. The author has referred to his contributions to the formation of the Association in the third person yet clearly the inclusion of the material owes much to his personal recollection. Despite the protests of the would-be positivists, history need not pretend to be objective. The efforts by the author to give the appearance of an objectivity seem forced. True to Collingwood's precepts he has attempted to recreate something of the attitudes and circumstances of the early days of the Association. Having been a major actor in the early developments it is hard to see how he can remain "objective": he has to select those events that seem to him to describe the atmosphere and attitudes of that time. As an aside, it is worth noting that almost all the authors of the source material are still alive. It would be interesting to know how *they* view the reproduction of what in many instances is personal correspondence.

The analysis in the second part is very clearly presented and interesting. Goldberg's technique of analyzing the development of the different functional aspects of the Association again demonstrates his capacity for effective historical writing. The only criticism here also relates to his own involvement. The early developments, in which he was personally involved, receive fuller treatment than later aspects (they were probably more interesting any way!).

In the third part Goldberg has examined the Association in terms of how it can be viewed as an entity, the definition for which he has turned mainly to Gilman. In some respects it is difficult to see why he has done this. It would be disappointing if he only felt this was necessary to satisfy those who believe in the need for "contemporary relevance" of all historical research. However, viewed in the context of his other work, that is doubtful because he has always signalled a predilection for philosophical reflection. What is surprising is his dependence on non-philosopher Gilman for his notion of entity.

Goldberg's examination of the idea of an entity is a little similar to a sociologist's attempt to define a society. It seems that he feels it is important to know whether the Association fulfills the requirement of an entity in order to determine whether it is possible to talk of its development. It is doubtful that Gilman would have been concerned with the notion of entity for other than pragmatic purposes — in order to be able to know what data to include in the accounting system. But, in the conclusion Goldber turns to C. T. Devine.

It is only disappointing that the last section and the concluding chapter are so brief. Goldberg's capacity for original and penetrating thought are exemplified in the last paragraph in which he comments on history, research and accounting theory. This in itself would justify commending this book to fellow historians but there is even more of interest contained in it. Not only does it detail the efforts of a group of accounting academics searching for common goals, it reflects on some of the problems that such activity involves. It is a worthwhile addition to the accounting history literature.

A History of Cooper Brothers & Co.: 1854 To 1954 (London: B. T. Batsford, 1954. Reprint edition, New York: Garland Publishing, Inc., 1986, pp. v, 116, $31.00).

Reviewed by Jan R. Heier
Auburn University at Montgomery, Montgomery, Alabama

In 1854, William Cooper left the London firm Quilter Ball and Company where he had apprenticed as an accounting clerk. He rented two rooms at 13 George Street in a building called Mansion House and opened his own practice which he simply called "William Cooper." This seemingly insignificant moment of history marked the beginnings of the international accounting firm of Coopers and Lybrand. This volume, *A History of Cooper Brothers & Co.: 1854 to 1954*, represents a chronicle of events of the English accounting firm of Cooper Brothers and Co. before its merger with the American accounting firm of Lybrand Ross Brothers and Montgomery. The history of the American side of the firm was presented in a book entitled *The Early History of Coopers and Lybrand* published by Garland Press in 1984.

From the beginning, Cooper Brothers was a family operation with William as the managing partner, and brothers Arthur, Francis, and Ernest acting in a partnership capacity during the first fifty years of the firm's existence. William's six other brothers and sisters also worked for the firm but were never made partners. It was not until 1872 that a nonfamily member, Edward Fletcher, was admitted to partnership in the firm.

The firm's accounting activities during these early years were concentrated in the area of bankruptcy and the liquidation of joint-stock companies. The experience gained and contacts made by the firm proved to be invaluable when the British Parliament passed laws that mandated annual audits of joint-stock companies. Two of England's most prominent companies, Unilever and the British South African Company (DeBeers), became clients of the firm at this time.

The firm grew rapidly to meet the demand for their services by merging with local firms in virtually every part of the British Commonwealth. The book's short histories of the firms that Cooper Brothers had merged with provide some very interesting insights into the development of the accounting profession throughout the world. Of particular interest are the histories of accounting firms on the African continent. The development of the accounting profession in Africa is a subject which had not been researched to any extent and about which this book provides an excellent base of information. Finally, Cooper Brothers opened its first office in the United States in 1926, and became affiliated with the firm of Scovil, Wellington and Co. in 1948, or about nine years before it merged with Lybrand, Ross Brothers and Montgomery in January 1957.

The book pointed with great pride to the firm's involvement in the development of the accounting profession in England through its chartered membership and leadership in the British Institute of Chartered Accountants. In addition, it pointed with even greater pride to the leadership that the firm took to help the British war effort in both world wars. Again, very little research has been focused on the effect of the world wars on the accounting profession.

This short history also furnished the reader a unique view of an accounting firm at the turn of the 20th century. The biblical writer of the Book of Ecclesiastes was correct when he wrote that "there is nothing new under the sun," especially when it pertained to the staffing problems of an accounting firm. For example, the book noted that many young accountants came to Cooper Brothers to clerk, learn the profession, and gain experience toward their certification before they moved on; very few became partners. The problem of turnover still plagues the modern accounting firm.

It was noted that long hours and high standards were required of the staff; however, for those who worked overtime, a lunch of bread and tea was provided. According to the book, it was customary for the accounting staff to wear high stiff collars, black coats, and striped trousers; no doubt the forerunner of the grey pinstriped suit that is so common among modern accountants. The division between staff and partners was quite apparent, with the book presenting a short discussion about the younger staff members enjoying "smoke concerts" at local taverns after work with the entertainment centered on the singing of comic songs about work and the partners. As a final note on staffing, it was not until the manpower shortages caused by the First World War that women began to work as staff accountants and auditors with any regularity.

At first glance, this history of Cooper Brothers and Company was a very traditional review of the development of an international accounting firm, which discusses the firm's early clientele, its growth through mergers and the lists of partners, both in England and abroad, that made up the firm. However, a further reading provides a fascinating tale of how the accounting houses of England evolved from the practice of overseeing bankruptcies into a very respectable profession during the late 19th and early 20th centuries. In addition, the book provided interesting anecdotes about the life in a "turn of the century" accounting firm. Finally, the book provided excellent base information in areas of accounting development and history that have not been researched extensively, such as the development of the profession in Africa and the effect of the two world wars on the accounting profession.

T. A. Lee, *Towards a Theory and Practice of Cash Flow Accounting* (New York: Garland Publishing Inc., 1986, Reprint edition, pp. xiii, 223, $31.00).

Reviewed by Robert Bloom
John Carroll University

This book is an anthology of previously published articles by T. A. Lee on cash flow accounting. As such, the book traces the metamorphosis of Lee's cash flow model. Lee describes his model this way [p. 63]:

> . . . [It is] a system of financial reporting which describes the financial performance of an entity in cash terms. It is based on a matching of periodic cash inflows and outflows, free of credit transactions and arbitrary accounting allocations. Inflows include cash from trading operations and providers of long-term finance; and outflows include payments for replacement and . . . investment, taxation, interest, and distributions. As such, it is a measurement and reporting system which avoids time lags and distortions. . . .

A prolific writer, Lee has been influenced by the works of many other theorists including Fisher, Canning, and especially

Chambers and Sterling. The author is concerned with the reflection of economic reality to the extent possible in financial reports. He stresses the relevance of past and future cash flows to a broad range of users, arguing that cash flows reflect the liquidity and ability of the firm to survive, and thus management stewardship. Critical of the income concept for its irrelevance and subjectivity, Lee accentuates the relevance and objectivity of past cash flows.

Lee's model did not emerge in full-blown form. In his later writings, he combines cash flows with net realizable values into a comprehensive reporting model. In the reports he has developed, Lee is concerned with both the realized (past) and unrealized (net realizable value) items. That cash flows and net realizable values are essently allocation-free is a point he makes.

Lee is not especially concerned with very long-run forecasts of cash flows in view of their uncertainty, so only limited attention is given in the book to the problems of discounting future cash flows. He does call for full disclosure of all assumptions underlying the forecasts.

The author is not just an armchair theorist, but also an empiricist of sorts. He has applied his model to a number of business firms, both successful and unsuccessful, and has used cash flows in particular to detect business failure. As he asserts [p. 36]:

> . . . [I]t is an act of some irresponsibility to criticize dogmatically or to defend the preparation and use of one type of accounting information [e.g., cash flows] to the complete exclusion of another, until such time as the relevance and utility of each has been adequately tested, analysed and proved.

This model has never caught fire. Thus, Lee is not yet advocating the use of his reporting model in lieu of conventional financial statements.

This book does have its shortcomings. Since this is a collection of one author's work on one subject, there are bound to be redundancies among the selections. That is the case in this book, which could have been considerably leaner without any loss in informational content. Additionally, a number of articles are hard to read because they are poor photocopies, and in some cases the original type is too small. Despite its shortcomings, the book is interesting to read and should be an addition to your bookshelves.

Thomas K. McGraw, Editor, *The Essential Alfred Chandler: Essays Toward a Historical Theory of Big Business* (Boston, Massachusetts: Harvard Business School Press, 1988, pp. 538, $35.00).

Reviewed by George Slater
Case Western Reserve University

This book is a must for anyone interested in accounting history and not already familiar with the work of Alfred Chandler. This collection of nineteen essays was selected from previously published journal articles, books, conference papers, and lectures to reveal the essence of his lifelong research in business history.

Chandler portrays a world that came to be dominated by the visible hand of big business, which displaced the invisible hand of market forces. He is so convincing that one can agree with his editor's comment in the introduction that "models of oligopolistic behavior need to be thoroughly reconsidered in view of what Chandler and his students have produced" [p. 19]. Not only economic history but also accounting history is likey to be directly affected by his argument that the needs of newly emerging American big business spawned revolutions in all areas of business management.

The first essay illustrates the tremendous economic impact the great railroad expansion of the 1850s had on farmer, manufacturer, and merchant. Chandler's interest in railroads dates back to his doctoral thesis, the subject of which was his great grandfather, Henry Varnum Poor, of Standard & Poor fame. Poor, who spent his life analyzing the railroad industry, vividly described the new challenges brought to accounting by the railroads' vast acquisitions of fixed assets. Depreciation, renewals, obsolescence, and overhead costs had heretofore not been considered on this large a scale [p. 32].

The second essay explores the major dynamic forces evident in the American economy since 1815. They are, in chronological order, the western expansion of the population, the construction and operation of the national railroad network, the development of a national and increasingly urban market, the development of electricity and the internal combustion engine, and finally the institutionalization of the research and development function [p. 47]. The reader has the satisfying feeling that the author is competently tracking multiple industries and generalizing where possible so that history is not seen as the museum of the unique.

The next few essays inquire into an area that Chandler is best known for — the relationship between a business strategy and its resulting structure. His focus is always on change, maintaining that any successful change in strategy must always be accompanied by an appropriate change in structure. For example, the dominant big business strategy of the late 1800s was one of vertical integration which led to a highly centralized operating structure with functional departments. The subsequent arrival, in the early 1900s, of a new strategy of product diversification led to a more decentralized operating structure in certain industries.

The next two essays return us to the railroad scene but this time with an emphasis on how the railroads devised "rational ways to supervise, coordinate, and plan for the use of far more men, money, and equipment than any other private enterprise had hitherto had to administer" [p. 183]. The accounting historian will be interested in the references to the accountant's role in these early organization plans [p. 195]. For example, he states that the top management of the Baltimore and Ohio Railroad were "first to separate the management of financial and accounting activities from those of moving trains and traffic" [p. 209]. The railroads also had to "meet brand new problems of modern cost accounting, to make the distinctions between variable, constant, and joint costs, to differentiate between working and fixed capital, and to account for depreciation and even obsolescence" [p. 228]. The student of history again realizes that the modern problems accountants face are not really so new.

Thirty years ago Chandler suggested that THE major innovation in the American economy in the late 1800s was the creation of the great corporation [p. 73]. Ten years later he stated that his central research interest was "trying to understand why, when, and how large corporations came to have, and continue to have, such a significant, if not dominating role, in the operation of the modern American economy" [p. 296]. He has labeled modern big business leaders as "organization builders" as compared with the empire builders who preceded them. The eleventh essay, "Business History as Institutional History," underscores his point of view that business history IS institutional history. However, he only barely mentions the problems associated with "vast concentration of power in a society committed to democratic values" or the "difficulty, if not the impossibility, of the corporation's allocating resources to meet socially desirable needs which bring only a low rate of return on investment" [p. 246]. He has been criticized for an excessive rationalism in describing corporate behavior as well as a "relative de-emphasis on the human impact of industrialization, his neglect of the role of labor, and his implicit (and sometimes explicit) argument that the political state has played only a minor role in the rise of industrial capitalism" [p. 20]. His response to the criticism is that these factors were "less significant" [p. 451] and that his choice of focus has been deliberately "narrow but deep" [p. 2].

The last essays include the introductory chapter to his book, *The Visible Hand* [1977], and an entertaining, but instructive skirmish between Chandler and Charles Perrow. Perrow tends to take a "Robber Baron" approach to business history emphasizing its inclination toward control of markets and labor, while Chandler usually avoids any such characterization. The book concludes with an introduction to Chandler's latest work, *Scale and Scope*, which is said to be "the closest approach to a historical theory of big business that any scholar has yet achieved" [p. 465].

Chandler went to school with John Kennedy. He edited the personal papers of Dwight Eisenhower and has personally known many top business leaders. His view is from the winner's circle and while one can't help but wonder about the history of the losers in the big corporate battles, the reader is more than compensated by what is revealed about the changing strategy and structure of the survivors.

The Essential Alfred Chandler is an important book and I, for one, will be ordering *Scale and Scope* and his upcoming biography of Pierre S. du Pont.

VIDEOTAPE OF INTERVIEWS WITH EMERITUS PROFESSOR LOUIS GOLDBERG, 1986. Conducted by Professor Lee D. Parker. Stored at the Accounting Research Center, Georgia State University. (Video Format VHS).

Reviewed by R. H. Parker
Visiting Professor, University of New South Wales

English-speaking historians of twentieth century accounting, including those resident in Australia, have concentrated, with some justification, on developments in the UK and the USA. A few Australians in recent years have turned their attention to their own country. Although much of their work is mainly of local interest, some of it deserves a wider audience, for whilst Australians have learned accounting from the British and the Americans they also have made their own innovations. In any case American and British accountants may be able to discover, by observing a superficially similar environment and culture, which of their practices are exportable overseas and which are peculiar to their own countries.

Australian accounting is, as might be expected, similar to that in the UK and the USA but it is also recognizably different. From early British and later American influence has emerged a body of thought and practice which is neither British nor American.

To outside observers Australian accounting is most interesting for its lively academics, who have had an international influence out of all proportion to their numbers.

One of the leaders of Australian academic accounting for many years and the first full-time teacher at an Australian university is Louis Goldberg. As part of a research project supported by Coopers & Lybrand, he was interviewed by Lee Parker in Melbourne in 1986. The results are available on the video cassette under review. The first impression of the reviewer, who has known the interviewee since 1960 and the interviewer since 1973, was how little both have changed over the years.

Parker is to be congratulated on this application of oral history techniques. Potential viewers should be aware, however, that what is provided is the audiovisual equivalent of research data rather than of a research paper. Some of the data is familiar from Goldberg's 1982 book on accountancy education in Australia from 1945 to 1955 and his 1988 history of the Accounting Association of Australia and New Zealand, but there is much new material, especially on the period before 1945.

Goldberg has been associated with accounting teaching at the University of Melbourne since the 1920s and most of what he tells us is about Melbourne but, especially as concerns academic accounting, this is gain rather than loss as Melbourne University dominated accounting higher education in Australia until the 1960s. Although this is not mentioned in the interview, many of Goldberg's former students have been responsible for the development of accounting teaching at other Australian universities.

From Goldberg's account it is clear that accounting teachers in Melbourne followed neither UK nor US models very closely. British academic accounting (although not British professional accounting) was often more underdeveloped than its counterpart in Australia and the tyranny of distance meant that, in the early days at least, Australian accountants were simply ignorant of what was going on in the United States. In any case they found both UK and US textbooks not to their liking and started to write their own. Goldberg played a full part in contributing to this literature, although he is generous in his praise of the books that preceded it.

Relationships with the professional accountancy bodies were always important, especially as most of the early staff were practitioners teaching at the University part-time. Most notable of them was Alexander Fitzgerald, the man with the best claim to be the founding father of Australian academic accounting.

Accounting, as Goldberg himself once wrote, has (rather like Australia itself) both a long history and a short one. Many makers of the short history are happily still with us. Perhaps the most important role of this video cassette will be to serve as a good example to other researchers.

Terry K. Sheldahl, *Beta Alpha Psi, From Omega to Zeta Omega: The Making of a Comprehensive Fraternity, 1946-1984* (New York: Garland Publishing, Inc., 1986, 944 pp., $85.00).

Reviewed by Louella Moore
Indiana State University

This is the second of two volumes on the history of Beta Alpha Psi. This volume discusses four eras: (1) Postwar Expansionist 1946-60, Chapters 1-8; (2) Moderate Reformist, 1961-70, Chapters 9-12; (3) Activist Participation, 1971-79, Chapters 13-14; and (4) Decentralized Consolidation: The First Five Years, 1980-84, Chapters 15-16. End materials include indices for Volumes 1 and 2.

Chapter 1 details events in the expansion of membership opportunities to women, steps in the integration of racial minorities, and cases of early religious discrimination. Other major themes of Part I include reactivation of chapters after WWII, debates over the need to include only accredited programs, scholastic requirements for membership, honorary versus professional aspects of membership, and the origination of the activity program. Chapter 7 includes an inspiring story of the role of the A. J. Penz family in the tradition of chapter banners while Chapter 8 relates a number of shorter fraternal anecdotes.

Part II discusses moderate reforms caused by pressures of increasing size. Changes in the activity program, modifications of the initiation ceremony, greater commitment to chapter visitation, and problems of graduate and branch university chapters are highlighted. The creation of a separate director of activities, election of two women councilors, the creation of a National Advisory Council, and the beginnings of regional and annual meetings were the major events of the Activist Participation program of the seventies.

The Decentralized Consolidation period is named for the creation of a permanent home in Sarasota, Florida, coupled with the creation of Area Councilorships. Part IV also details the evolution of the Associates program for supplemental funding, case study competitions, and the creation of Alumni groups.

The work is based on interviews of twenty-two former national presidents of the organization, documents supplied by other past presidents, newsletters, and surveys of local chapters. Photographs were obtained from national files, individuals, and several university archives. The variety of sources, especially the individual interviews, capture an important aspect of accounting history that otherwise would have been lost in only a few more years. The depth and detail of the two volume set makes them a potentially valuable resource for academic researchers of the history of accounting education.

The work was produced with only minimal direction from the national headquarters as is evidenced by the fact that some unpleasant events in the history of Beta Alpha Psi were not excluded from the work. In the cases of religious, racial, and gender bias within the organization, the author presents not only the evidence but also makes an effort to place the incidents within their proper context. Consequently, the historical record within Beta Alpha Psi also speaks to broader issues within the accounting profession as a whole. In other cases, such as reports of rumored petty jealousies among Council members, the redeeming value of such reports is less clear. The inclusion of such information seems more a matter of source bias than of a need to know. Those leaders who submitted to personal interviews were more negatively portrayed than those who supplied only written documents for the author's use.

This is not the first time Beta Alpha Psi has asked an author to produce a history of the fraternity. As early as 1966 A. J. Penz was nominated to produce a 10-12 page document for distribution at an anniversary celebration and for use in educating new initiates about the fraternity. Penz's effort actually produced a 57 page document, but too late for the celebration. The fraternity also sponsored the production of a videotape in 1981 of a conversation between two past Grand Councilor's Fred Mueller and Herb Miller.

Sheldahl's total length of 1689 pages gives it the status of being the most comprehensive and authoritative historical record of Beta Alpha Psi to date. Yet the length and tedious detail severely limit its usefulness to student members and local faculty advisors. Judicious use of graphic analyses would have been more succinct and enlightening than the pages of description devoted to initiation trends and details of rising secretarial costs within the organization. The length factor is compounded by the fact that the indices are categorized primarily by names of persons, schools, chapters, and organizations. Classification by major issues is omitted. Furthermore, the preponderance of typographical errors seems inexcusable with the availability of word processors with spelling checkers. This unfortunate flaw may give an undesired message to those few student readers courageous enough to attempt the volumes.

Richard Vangermeersch, Editor, *Financial Accounting Milestones in the Annual Reports of United States Steel Corporation (The First Seven Decades)* (New York: Garland Publishing, Inc., 1986, 288 pp., $36.00).

Reviewed by R. A. Bryer
University of Warwick

This is a book of extracts from the annual reports of the United States Steel Corporation from its formation to 1968, which are claimed by the editor to represent " . . . milestones in the history of financial reporting in the United States" [Introduction, unpaginated]. While historians will find the extracts "of interest" — any access to the early reports of major companies is better than none — many may be frustrated by the selections and the editor's failure to explain their rationale.

Although we are given 32 pages of the 1902 report, eight other years are given only between 8 and 14 pages each, and the modal year is allotted just 5 pages. The book includes extracts from only 39 years of the "first seven decades." Thus, this is clearly not intended as a simply source-book for accounting historians.

However, without a clear reason for selecting some parts of the reports and rejecting others, any selections are arbitrary. The book is not a test or exploration of any explanations of U.S.

Steel's reports. Its presupposition is that " . . . a study of U.S. Steel's annual reports is, in effect, a study of the best of financial reporting in the United States" [ibid]. This may explain the selections and the headline comments introducing each extract which focus exclusively on what the editor believes were "innovations" in accounting and presentational policies. The book appears to invite us to just sit back and watch the leaders at work.

The 1902 report is "commended for the very informative data it presented to the stockholders" [ibid]. For the remaining years we are given a brief selected chronology of major innovations: comparative figures, conservatism, production related depreciation, pension fund appropriations, base-stock and lifo accounting, asset and liability reclassifications, extraordinary appropriations of income, the inclusion of public relations materials, replacement cost depreciation, straight-line and accelerated depreciation, etc.

Few explanations are offered. The clearest is the reclassification in 1910 of accumulated depreciation as a contra asset for tax reasons. For some innovations (for example, its introduction of replacement cost depreciation in 1947) the only explanation offered is U.S. Steel's "trailblazing." For the majority of innovations we are simply reminded of the obvious effect — sometimes U.S. Steel used its accounting policies to lower its reported income, sometimes it used them to raise it — but the reasons, and their effects (real and imagined), are not discussed.

Accounting historians seek to explain accounting as the product of, and as a force within, the changing historical contexts in which it is practiced. The most important historical contexts of accounting are economic and political. Thus, to explain innovations in the annual reports of U.S. Steel requires that we attempt to understand to what extent they resulted from the economic and political contexts in which it operated. In this sense, not only is *Milestones* not a comprehensive source-book, it is also not an accounting history of U.S. Steel. Thus, in my opinion, while we have here a book which will be of some interest to accounting historians, its weaknesses will make this rather limited.

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