

## Accounting Historians Journal

---

Manuscript 1923

---

Accounting Historians Journal, 1979, Vol. 6, no. 2  
[whole issue]

Follow this and additional works at: [https://egrove.olemiss.edu/aah\\_journal](https://egrove.olemiss.edu/aah_journal)

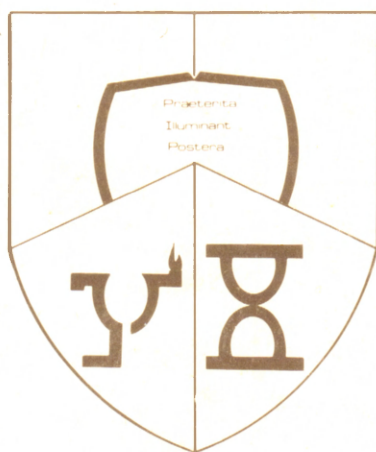


Part of the [Accounting Commons](#), and the [Taxation Commons](#)

---

# The Accounting Historians Journal

Published by *The Academy of Accounting Historians*



Fall 1979  
Volume 6, No. 2

Research on the Evolution of  
Accounting Thought and  
Accounting Practice

## THE ACCOUNTING HISTORIANS JOURNAL

### Editorial Staff

Gary John Previts, Co-Editor  
Case Western Reserve University  
Williard E. Stone, Co-Editor  
University of Florida

### Feature Editors

Kenneth O. Elvik, Book Reviews  
Iowa State University  
Maureen H. Berry, Doctoral Research  
University of Illinois

### All other matters pertaining to the Journal:

Gary John Previts  
School of Management  
Case Western Reserve University  
Cleveland, Ohio 44106

Annual Subscription: \$15.00

Manuscript submissions policy is detailed on the back inside cover

The Academy also publishes *The Accounting Historians Notebook*, a newsletter, for members. Contact Hans V. Johnson, University of Texas at San Antonio for information.

© The Academy of Accounting Historians, 1979

### Editorial Board

Kiyomitsu Arai  
Waseda University  
Richard P. Brief  
New York University  
R. J. Chambers  
University of Sydney  
Michael Chatfield  
California State University-Hayward  
Diana Flamholtz  
Loyola-Marymount University  
Paul Frishkoff  
University of Oregon  
Louis Goldberg  
University of Melbourne  
Hugh P. Hughes  
Georgia State University  
Lyle E. Jacobsen  
University of Hawaii at Manoa  
H. Thomas Johnson  
Western Washington University  
Linda Kistler  
University of Lowell  
Geoffrey Lee  
University of Nottingham  
Albro Martin  
Harvard University  
Peter L. McMickle  
Memphis State University  
Kenneth S. Most  
Florida International University  
R. H. Parker  
University of Exeter  
William K. Shenkir  
University of Virginia  
William Woodruff  
University of Florida

### Objectives

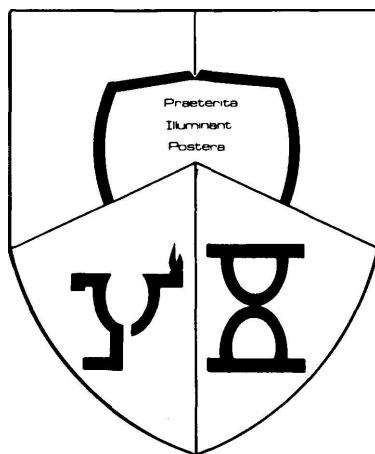
*The Accounting Historians Journal* is a refereed scholarly journal published semiannually (Spring and Fall) by The Academy of Accounting Historians. It is the successor to the quarterly publication *The Accounting Historian* and is numbered as a continuation to maintain the sequence of that series which commenced in January, 1974. *The Accounting Historians Journal* does not assume responsibility for statements of fact or opinion made by its contributors.

### STATEMENT OF COPYRIGHT POLICY

It is the policy of this journal to request that authors grant the publisher of the journal the right to reprint and/or consent to the non-profit and/or scholarly use of articles printed without prejudice to the author's other rights and royalties under the current U.S. copyright laws.

All requests for permission to reprint or quote from materials in this issue should be directed to the editors.

# The Accounting Historians Journal



**Fall 1979**

**Volume 6, Number 2**

**Printed by**

**The Birmingham Publishing Company**

**130 South 19th Street**

**Birmingham, Alabama 35203**

# THE ACCOUNTING HISTORIANS JOURNAL

Semiannual Publication of The Academy of Accounting Historians

Volume 6, Number 2

Fall 1979

## CONTENTS

<b>Feature Articles</b>	<i>Page</i>
Cost Accounting: An Institutional Yardstick For Measuring British Entrepreneurial Performance, Circa 1914— <i>Robert R. Locke</i> .....	1
Development of Corporate Accounting in Australia— <i>Robert W. Gibson</i> .....	23
Distribution Cost Analysis Methodologies, 1901 - 1941— <i>Paul F. Anderson</i> .....	39
<b>Historical Nuggets</b>	
On The Life of Luca Pacioli— <i>Akira Nakanishi</i> .....	53
An 1870 Corporate Audit Committee— <i>Thomas E. McKee</i> .....	61
<b>Book Reviews</b>	
	<i>Reviewed by Page</i>
SCHMALENBACH AND AFTER .....	<i>Kubin</i> . . . . .69
IL BILANCIO DI UNA AZIENDA LANIERA DEL TRECENTO .....	<i>Martinelli</i> . . . . .71
DIE CASA DI S. GIORGIO: GENUESER FINANZWESEN MIT BESONDERER BERUECKSICHTIGUNG DER CASA DI S. GIORGIO, II .....	<i>Rueschhoff</i> . . . . .74
TRANSPORTATION COSTS AND COSTING 1917-1973 .....	<i>Vallenga</i> . . . . .77
HISTORY OF PUBLIC ACCOUNTING IN THE UNITED STATES .....	<i>Stiner</i> . . . . .78
SOULÉ'S NEW SCIENCE AND PRACTICE OF ACCOUNTS .....	<i>Linn</i> . . . . .79
<b>Research and Publication Features</b>	
Doctoral Dissertation Abstracts— <i>Collins, Moreira, Finkel, Tam, Divecha, Kahn, Zervoudakis</i> .....	83
Announcements .....	91

Robert R. Locke  
UNIVERSITY OF HAWAII

## **COST ACCOUNTING AN INSTITUTIONAL YARDSTICK FOR MEASURING BRITISH ENTREPRENEURIAL PERFORMANCE, CIRCA 1914**

*Abstract:* This article, like that published in the spring issue, again finds fault with recent attempts by economic historians to rehabilitate the reputation of the late Victorian and Edwardian entrepreneur. It argues that, since after 1880 cost accounting became a “necessary” technology for good entrepreneurial performance, the revisionist economic historians’ failure to consider institutional factors, like cost accounting, has led them to overlook elements essential to an appraisal of comparative entrepreneurial performance. The growing inferiority of British costing methods, as opposed to American and German, moreover, meant a relative British entrepreneurial failure.

In the first part of this essay, published in the spring issue, recent negative opinions about the quality of British entrepreneurial performance, circa 1914, were criticized from a cost accounting point of view.<sup>1</sup> In this article attention shifts to the institutional basis of entrepreneurial activity. Although the revisionist historians under discussion are ostensibly preoccupied with the entrepreneur they really have ignored the effect of environment upon his operations. They have done this, moreover, even when the results of their own studies indicate that the subject should be investigated. Roderick Floud, in his study of Greenwood and Batley, observed, for example, that the character of the company’s accounting system

makes it impossible to measure the capital inputs, and therefore, the cost of such inputs, making it impossible to approach directly either the extent of, or the cost of factor substitution in the form of the use of capital rather than labor.<sup>2</sup>

If Floud could not measure these inputs could Greenwood & Batley? Floud never tries to answer such a question. This is unfortunate because, again as Floud noted, quoting a contemporary source, the firm’s financial record was “simply disastrous.”<sup>3</sup> There is something incongruous about saying that a firm had, at the same

time, a disastrous financial and a good productivity record. The accounts should explain why and if they cannot then perhaps they might themselves be part of the problem.<sup>4</sup> If they did not supply management with the right information, then management might be responsible for its own financial difficulties, despite, assuming Floud's conclusions to be correct, the firm's good productivity record. In other words the firm might be an example of inept instead of good management, the proof of which is derived from the discovery, through the accounts, of its internal structural chaos.

Revisionists have not spent much time explaining their neglect of institutional factors in entrepreneurial behavior. What they have said, however, boils down to a two point justification. First, they accept the dictum that the market is the primary force in economic life. They contend that, with sufficient demand, a skilled supply of capable entrepreneurs will be forthcoming in a modern economy. Or, to quote Professor Habbakuk's well-known appeal to demand theory, "Great generals are not made in times of peace; great entrepreneurs are not made in non-expanding industries."<sup>5</sup> This dictum simply excludes the hypothesis of entrepreneurial failure causing economic decline, thus eliminating the necessity of bothering with the matter. Second, as econometricians they have not found much merit in the socio-psychological or religious-institutional explanations of economic activity, some of which, like the Weber-Tawney thesis, have in the past, gained great currency among historians. Accordingly they reject the idea that the British entrepreneur, for whatever particular reason, lost his elan. For them it has not been proved and is, with these sociological methods, probably unprovable, that Britain had a smaller pool of aggressive entrepreneurs in 1900 than in 1850.

Both points are hardly indisputable. No evidence exists that great entrepreneurs cannot be made during periods of contracting or static markets. On the contrary, favorable marketing conditions can permit less capable entrepreneurs to survive quite well. When the crunch comes, when entrepreneurs are forced to compete fiercely in a shrinking market they have to show ingenuity. More than one industrial empire has been made under these conditions. A demand supremacy theory, moreover, automatically raises questions about the relationship between supply and demand. Institutionalists probably would concede that individual talent existed in equal measure in Britain at different times. The problem is that individual talent has to be expressed effectively. If a firm, an industry, or an economy is not organized to provide the entrepreneur with information appropriate to a high level of management excellence, and if it does not



have the organizational wherewithal to act on this information, then the brightest and most capable individual will be frustrated. To argue that Britain had plenty of bright young people about misses the point since defective business organization and administration could have prevented proper utilization of individual skills. This was true, above all, when, during the second industrial revolution, industry's technological and managerial needs could no longer be satisfied in traditional ways, e.g., through in shop training. Demand theorists would probably concede that individual talent is wasted in a badly organized business but they would contend that the market creates the organizational milieu. Institutionalists would counter that, in this case, supply creates its own demand. But there is no need to counter dictum with dictum. The question can only be answered, if at all, by historical investigation, for either view, depending on the specific historical context, could be correct.

The problem, however, is that econometric methods hinder rather than abet this practical inquiry. McCloskey stated this clearly in the following exchange with Professor David S. Landes. The issue was the poor productivity of British coal mines, which McCloskey, in a paper, attributed to unfavorable geological formations, that is, to a natural instead of a human cause.

McCloskey: The purpose of the paper is to estimate the magnitude of the geological effect. The argument, then, is that once these have been properly measured there is no residual productivity difference to be examined by entrepreneurship.

Landes: He objected to precisely this residual procedure. If one started with the entrepreneurial explanation, one could exclude geological conditions just as well. . . .

McCloskey: . . . If one does start with the entrepreneurial hypothesis, there are no guides as to how to put the argument in quantitative form.<sup>6</sup>

Mathematical historians are quantifiers. As quantifiers they have concentrated on productivity indices, profits, and costs. Since the creation of managerial structures cannot be examined quantitatively within the framework of neoclassical economic theory, the subject has had to be dropped. To ignore a subject because it is insignificant is not the same thing as to claim it is insignificant because it does not fit into an explanatory model, even if the model is deemed "sufficient."

This does not mean the revisionist distrust of sociological-institutional explanations of history is unfounded. Tough minded thinkers have preferred to shy away from the cause and effect quagmire characteristic of most psychological and sociological explanations of economic activity. Economics has, in this respect, been a much more compelling auxiliary. This is why the New Economic History has made such headway. There is nothing, however, that is soft minded about managerial accounting. It deals with the institutionalization of modern management practices and it provides the method through which this institutionalization process can be studied. It permits the historian to measure the importance of the institutional factor in entrepreneurial performance in a manner that mathematical history, as practiced by the revisionists, does not. Indeed, because these revisionists have restricted their work to quantifiable costs, profit, and productivity factors, they have been able only to look at (some) of the results of entrepreneurial activity, not at entrepreneurial activity itself.

Cost accounting theory and practice, then, is quite germane to the debate about British entrepreneurship because accounting became an element essential to successful management after 1880. Superiority or inferiority in cost accounting meant superior or inferior entrepreneurial performance. The question is, therefore, how did British accounting fare? Unfortunately an answer to this question is not immediately forthcoming because the subject has been handled with confusion in most histories of British accounting. Although accounting historians generally agree that the British trailed behind the Americans after World War I, they also invariably claim that the British led the world in cost accounting before 1900. This lead has always been explained indirectly, usually by stressing the facts that accounting acquired professional status early in Britain and that British writers dominated in cost accounting theory. Neither contention, however, really proves that British industry ever led in cost accounting. Although accounting undoubtedly acquired a solid professional standing much earlier in Britain than elsewhere, cost accounting did not benefit therefrom. In fact the opposite was probably true. An analysis of materials published in *The Incorporated Accountants' Journal* in the year 1875 revealed for example that

nearly all the leading articles are on points raised in bankruptcy law and practice, and the other pages are devoted to reports of law cases on bankruptcy. . . . Hardly a word in the old papers about taxation, costing, statistical records; relatively little about utility companies or even

about ordinary joint-stock companies: practically nothing about that very important subject of recent years, the Holding Company, and nothing at all about mechanical accounting.<sup>7</sup>

The British accounting profession engaged almost exclusively at that time in financial not cost accounting. It was, in fact, a liberal profession made up of independent wealthy businessmen who did not work directly for industry but acted as consultants, working out of their own offices, much as lawyers do. The chartered or incorporated accountants, moreover, were not even exposed to cost accounting during their training, for as young “articled” clerks they were apprenticed to accounting offices instead of formally educated in colleges or universities. They could only learn what happened in the offices and, since the accountants seldom dealt with costing matters neither did the apprentices. The clerks who kept cost records in British industry were not chartered or incorporated accountants. They were poor, badly educated men who received what training they got on the job in a factory bookkeeping office. They hardly ever came into professional contact with public accountants who, in any case, despised them because of their lower class origins. Indeed public accountants did not consider these industrial cost accountants to be engaged in accounting. J. M. Fells remarked in 1910,

It is now some 23 years or so ago that my friend Mr. Emile Garcke and I, in the flush of our youth, wrote the first pioneering book on this subject. Then it seemed to be thought by some that we had written a book on economics, and not one on accountancy. *The Accountant*, which performs a most useful service in always representing the average mind of the profession, pointed out that the work was rather concerned with the wages and time books, stock books, and matters of a similar nature, which, as a rule did not come within the scope of an accountant’s duties.<sup>8</sup>

Because of this isolation the public accounting profession probably ignored cost accounting long after its practice should have attracted notice. This neglect, moreover, had serious repercussions throughout British business because the professional accounting societies decided what subjects would be covered in the accounting examinations that the “articled” clerks had to pass. Businessmen, engineers, or progressive minded politicians could ask for

greater emphasis on cost accounting in the training of young accountants but unless the accountants agreed nothing could be done. And the accountants were set in their ways.

The literature which affirms Britain's early lead in cost accounting treats the subject exclusively in terms of theoretical development. The assumption is made, therefore, that superiority in theory meant superiority in practice. Nobody, however, has thoroughly studied cost accounting practice in British business. Nonetheless the available evidence, which consists of contemporary observations made by accountants on both sides of the Atlantic, clearly indicates that no correlation existed. On the contrary, J. M. Fells, Britain's leading cost accountant around 1900, commented about the backwardness of English practice.

There is no branch of accountancy that calls for higher qualifications or a more mature experience than cost accounting; yet it would be no exaggeration to state that so far as the United Kingdom is concerned, proper systems of costing are the exception rather than the rule, and where they exist they are seldom supervised by professional accountants. We have at last almost outgrown the amateur auditor—at all events, so far as important business undertakings are concerned—but the impression still prevails that professional accountants would be unable to offer any practical assistance in connection with cost accounts, the most intricate branch of business accounting.<sup>9</sup>

Fells, a consultant who had a special interest in promoting cost accounting, could be accused perhaps of beating his own tub. But rather patriotic Englishmen who were not ready to admit any inferiority to Americans said the same thing. Thus when American accountants in 1907 claimed they excelled in accounting technology, the editor of *The Incorporated Accountants' Journal* politely but firmly denied the charge. Nonetheless, although strongly defending British accounting practice, he reluctantly admitted: "As regards costing, the Americans, with some degree of justification, claim to have led the way—that is to say, they have succeeded in getting it more generally adopted."<sup>10</sup>

British accountants equally stressed the harmful effects that poor cost accounting had on British industry. One accountant, a Mr. Rider, wrote shortly after the turn of the century that he had been able to analyze various competitive bids submitted by English firms (the figures were taken from a series of articles on "estimating" in *The Engineer*). The result, he concluded,

is rather humiliating reading for commercial men, particularly when we remember how English manufacturers have recently been thrust to one side again and again on this particular class of work by foreign competition. They prove one thing most conclusively, namely, that in most, if not all, of the establishments submitting the tenders reviewed in the articles, there can either have been no intelligent consecutive system of Cost Accounts, or the estimating staff, being (as is usually the case) highly technical, had considered any information compiled by clerks as not worth taking into account.<sup>11</sup>

Negative comment was not reserved for older industries which could be suspected of using antiquated bookkeeping. Fells observed, for instance, that the electrical firm *Edison and Swan Ltd.* had failed to integrate its financial and cost accounting.

There £56,000 had been carried forward in the balance-sheet as representing the value of certain work supposed to be in progress, which had in reality been finished for a number of years. . . . I contend that had the ordinary books of account not merely been supplemented by, but absolutely considered in conjunction with the manufacturing books of the concern, such a mistake could not possibly have happened.<sup>12</sup>

Similar quotations can be given, moreover, to illustrate how American superiority in cost accounting permitted American industry to operate more efficiently than British. Fells, who had studied American and British railroad accounting closely, commented that “the accountant,” the “goods manager,” the “general manager and everybody else” in the British Northeastern Railway Company

agreed on one thing, viz., that they could no more “spot” where the increase had arisen in the passenger traffic than they could “spot” the decrease in the goods traffic. This is not at all a desirable state of things. It is very different from the manner in which the American railway companies’ accounts are kept. Everybody knows that Mr. Pierpont Morgan, when he first took the railway companies of the United States in hand, gathered together and studied very exhaustively all the statistics he could get at, and, as a result he pointed out that by increase in rates or decrease in cost of one-tenth of a penny per ton per mile

the companies would receive some £60,000 or £70,000 a year more. And if one looks at the elaborate accounts of these companies one can see what a great advantage these administrators have over administrators in this country.<sup>13</sup>

Some years later another English accountant remarked about American steel companies:

A study of the great American iron businesses of the past, culminating in the formation of the well-known Steel Trust, is interesting, as disclosing how close costing was, and is, employed by the steel kings in watching the management of their concerns, and the position of a departmental manager, whose production and costs were falling below standard, seems to have been no bed of roses. 'Make good or go' is a hard precept to work to.<sup>14</sup>

Rawlinson went on to say that "many great works" in England had their own cost accounting departments, with separate sets of offices, that prepared periodic reports on the costs of production by department. Their weekly and monthly reports enabled management to eliminate many cost inefficiencies in a firm's operations.<sup>15</sup> But he concluded that Americans applied cost accounting technology more intensively within the firm and more extensively throughout industry than did the British and they used the information provided in order to cut costs.<sup>16</sup>

Accountants drew this picture just before World War I, when accounting technology was almost exclusively preoccupied with actual costs. British performance did not improve relative to the United States after standard costs and budgeting assumed importance in the new technology (beginning during World War I). Indeed it got worse, for the British even lost their claim to theoretical superiority. One leading accountant, Lord Stamp, described the theoretical laggardness in 1925:

English accounting practice has been developing for many years, but it has not made any substantive contribution to economic science over its own field of analysis of the results of industry, although it has practically a monopoly grip of the required data. Accountants have the figures; other people cannot use them and if accountants will not, then we get nothing; economics continues its abstract declarations and business blunders on by individual instinct.<sup>17</sup>

The most imaginative work in standard costing, budgeting, and uniform costing was done elsewhere. The point, however, need not be pursued since it is not disputed.

Because British cost accounting technology remained relatively backward, the historian cannot, by studying Britain alone, determine what factors were responsible for the retardation. That would be like searching for the causes of something that did not happen. Work can be done, however, comparatively, by looking for and at similar institutions in Britain, after they have been identified as causal factors in a country where cost accounting theory and practice has flourished. Both America and Germany qualify in this respect. American cost accountants have studied their own experience the most; indeed they, with rare exceptions, seem to think that cost accounting is an Anglo-American institution.<sup>18</sup>

Inasmuch as accounting historians usually confine their analysis to the English speaking world and its literature, relatively little has been said in America about the impressive theoretical and practical work done in Germany on cost accounting.<sup>19</sup> Although theoretical contributions were made by many intelligent men, a look at the work of a giant among them, Professor Eugen Schmalenbach, suffices to illustrate the theoretical development. Schmalenbach, an accountant by training, realized in the late 19th century that accounting was an applied science and he devoted a lifetime, as a professor in Cologne, to perfecting this business technology. He was among the first to recognize the digressive, progressive, and proportional nature of costs, and that technological factors, e.g., plant size, equipment, speed of output, unit and lot size, as well as production factors, e.g., variations in volume of output, determined costs. He even constructed a management decision model which, based on marginal cost theory, set minimal production costs (or optimal profit levels) in a firm.<sup>20</sup> Schmalenbach emphasized the uselessness of historical costs, thereby anticipating standard cost accounting and forecasting.<sup>21</sup> He, in the 1920s, worked up the charts of accounts and flow charts which became the basis of uniform accounting, not only in Germany but throughout continental Europe. This German professor, then, "took cost theory beyond its descriptive stage."<sup>22</sup> For him accounting was a tool which, as he explained when developing the concept of a "dynamic balance sheet," enabled management in private or public enterprises to achieve maximum efficiency.<sup>23</sup>

Many of Schmalenbach's ideas sparked intense debate among professional accountants, accounting professors, and accounting

students in Germany. His concept of progressive, regressive, and proportional costs was subjected to detailed analysis and found wanting; his decision model was rejected as impractical. The point is not, however, that Schmalenbach was wrong but that the academic and accounting community, under his influence, debated the essential features of management accounting. This debate began a decade before the First World War and continued through the conflict unabated. Then in the 1920s there began

research on a portentous scale; dozens of scholars occupied only with scientific work, textbooks, and monographs; a half-dozen or more periodicals and a well-trained staff of considerable size busied with the theoretical and practical problems of the newly-created '*Betriebswirtschaftslehre*.'<sup>24</sup>

German business economics became the most theoretically oriented in the world, and cost accounting theory was an important part of German business economics. Indeed before World War I it was business economics in Germany. As a result German academic accountants made significant contributions to the science of cost accounting. Their work in value theory was unparalleled in its analytical sophistication and their contributions to uniform cost accounting theory were equally unrivaled.

From the beginning Germans never forgot that theory had little meaning unless it affected industrial practice. Schmalenbach certainly conceived of accounting as an applied science. Between 1906 and 1914 his periodical, the *Zeitschrift für handelswissenschaftliche Forschung*, regularly published articles, written by working cost accountants and engineers, that described current industrial accounting procedures. The war and the defeat, moreover, triggered a fundamental reevaluation of German industry that culminated in the "rationalization" movement of the postwar era. Most descriptions of the movement concentrate on the 1920s, but, as far as cost accounting is concerned, it really began with the cost accounting renaissance in German industry shortly after 1900 and ended with the Nazi efforts to implement a uniform system of modern cost accounting in German industry in the late 1930s.<sup>25</sup>

German achievements in cost accounting technology, therefore, cannot be denied. But what about the institutions which succeeded this development? First there were business factors. German industry tended quite early to be integrated into large-scale organizations. The big German banks, with state encouragement, fostered



this integration. These banks, which were “. . . a combination of commercial bank, investment bank and investment trust. . . ,” functioned as middlemen between the investing public and industry because they took “. . . the stocks and bonds [of a company] and tried to place them with the public.”<sup>26</sup> Improved cost accounting developed out of this relationship. In effect, the banks, as middlemen, assumed a great responsibility towards the investor. They needed, therefore, to have reliable information about the financial status and business performance (both actual and potential) of the firms in which they took an interest. The banks, therefore, recruited and trained their own staffs of auditors, men, who, because they were interested in the industrial as well as the financial performance of their clients, had to be trained cost accountants. Through their work banks became cost accounting catalysts. Auditors pressed customers into adopting improved accounting systems. Indeed, when a bank held a company’s stock in its investment portfolio, its auditors insisted that the client firm implement management control oriented cost accounting.<sup>27</sup> Thus institutionalized interaction between banks and industry fostered cost accounting.

This interaction, moreover, was characteristic of German business structure. Such bodies as the German Machine Manufacturers or the Rheinisch-Westphalian Coal Selling Syndicate needed good cost accounting technology in order to operate their cartels efficiently. All of the cartels had “their standing committees on accounting and costing problems and laid down uniform systems for their members.”<sup>28</sup> The German trade associations for heavy and light industry (*Zentralverband Deutscher Industrieller*, founded in 1875, and the *Bund der Industriellen*, founded in 1895) also

acted as originators as well as clearinghouses for ideas in the field of industrial accounting. The original purpose of this collaboration was mutual assistance and better understanding between members of the same industry. [But] it . . . gradually developed into a comprehensive technical advice system, whereby each accountant working in a particular trade or industry [could] call upon the combined experience of his fellow.<sup>29</sup>

There is no doubt that “[t]he more rigid and comprehensive organization of industries in Germany,” as an English cost accounting expert remarked, “in cartels, syndicates, combines and similar organizations has been instrumental in evolving unified methods of control.”<sup>30</sup>

State supported educational institutions also promoted cost accounting. Although noneconomic in the sense that they were state created, these educational institutions had direct—e.g., professors worked as industrial consultants—contacts with private business as well as indirect ones through the quasi-economic professional associations formed to promote the interests of their graduates. Two sets of institutions, with associated professional societies, existed. There were the *Technische Hochschulen* which had grown up during the nineteenth century.<sup>31</sup> By 1900 they numbered an impressive eleven within the German Empire. Although education in these schools had been exclusively technical, the professors, some of whom were industrialists themselves, had grown conscious during the last two decades of the 19th century of the need for engineers to acquire management skills. Perspicacious engineers realized that the new American challenge arose less from a technical than a managerial superiority.<sup>32</sup> This led them to scientific management and cost accounting. Indeed the Association of German Engineers (*Verein Deutscher Ingenieure, VDI*), to which many of these professors belonged, devoted an entire meeting in 1912 to the scientific management movement in America.<sup>33</sup> Professors in the *Technische Hochschulen*, representatives from the *VDI* and from industry, many of whom were graduates from *Technische Hochschulen*, and civil servants, reviewing technical education, specifically urged that greater emphasis be placed on cost accounting and business administration in the *Technische Hochschulen*.<sup>34</sup> The first cost accounting courses were introduced there before the war. During the first decade of the 20th century, moreover, numerous cost accounting studies written by professors in and graduates from the *Technische Hochschulen*, were published.<sup>35</sup> Thereafter *Betriebswirtschaftslehre* (theory of business economics) became a standard preoccupation of professors and students.

The *Handelshochschulen* (Business Schools) belonged to the second set of institutions, the creation of which was even more important in the development of cost accounting than the first. The first *Handelshochschule* started in Leipzig in 1898, a second in Cologne (1901), a third in Frankfurt am Main (1901), a fourth in Berlin (1906), a fifth in Mannheim (1908), a sixth in Munich (1910), a seventh in Königsberg (1915), an eighth in Nürnberg (1920). Two of them, Cologne and Frankfurt, formed the nucleus of universities which grew up in these significant commercial centers.<sup>36</sup> The professors in these new schools, not those in the older universities and *Technische Hochschulen*, made business economics into a respected applied science. Men like Schmalenbach and Schmidt

“. . .wrote all the literature of scientific value and directed all the scientific groups of scholars.”<sup>37</sup> The graduates from these schools, who entered commercial, banking, and industrial pursuits not only carried the idea of the professors with them but kept abreast of technical matters on their own. The *Verband Deutscher Diplomkaufleute* (Association of German Business School Graduates), which was organized to defend the group’s professional interests, published a series of technical books and a periodical (*Der praktische Betriebswirt, The Practical Business Economist*) which kept members posted on cost accounting and related business technologies.

Thus three streams—the *Technische Hochschulen* and the engineering fraternities, the *Handelshochschulen* and their graduates, and the banks, industrial cartels, and trade associations—carried cost accounting into the German economy. These three streams, moreover, flowed together through the medium of the state bureaucracy. The interaction among these institutions manifested itself even before the First World War, when industrialists, city officials, and business school professors formed the *Gesellschaft für wirtschaftliche Ausbildung, e. V. zu Frankfurt am Main* (Society for Education in Efficiency, Frankfurt am Main) which propagated the latest business administrative and accounting techniques in a series of lecture courses especially intended for working engineers and plant managers.<sup>38</sup> Professors and lecturers from various *Handelshochschulen* and *Technische Hochschulen* were active in this program which, despite the Frankfurt designation in the organization’s title, operated nationally. The institutional interaction was even greater after World War I. The *Reichskuratorium für Wirtschaftlichkeit, RKW* (*Reich Development Trust*), with state money, drew industrial leaders, professors, and state officials together in its various committees in order to promote efficiency.<sup>39</sup> Indeed in the 1920s the RKW began, under Schmalenbach’s guidance, to publish model charts for various German industries.<sup>40</sup> In 1927, in its annual report, the RKW noted that

systems of uniform bookkeeping had been completed and their adoption recommended in the following branches of industry: engineering; lignite production; breweries; textiles; tile manufacture, rubber industry; coal trade; wholesale paper trade; and freight shipping on the Rhine.<sup>41</sup>

Finally the Nazi dictatorship profited from the same institutions when it carried through a general reform in uniform accounting during the 1930s. It is true that Eugen Schmalenbach, who had chaired the *Reichsausschuss für Betriebswirtschaft* (Central Man-

agement Committee) of the RKW refused to serve the Nazis, but his influence, through his writings, his students, and his earlier work in the Rf.B was great. In fact, without the theoretical work of the professors, the full cooperation of thousands of trained accountant graduates from the business schools, and three decades of cooperative work among business leaders, engineers, and accountants on various committees, the Nazis could not have begun the formidable task of implementing uniform accounting in Germany.

The complex institutional supports that sustained the growth of cost accounting in Germany did not exist in Britain. Since big British banks did not finance industrialization they never developed a similar institutional relationship with British industry.<sup>42</sup> London accounting firms, like Price Waterhouse, which became internationally famous, did serve the needs of the financial and commercial community but, since the milieu was cut off from British manufacturing industries, the bookkeeping technology involved financial instead of industrial costing. British industry, moreover, never organized on the German scale. It was not compelled to implement the cost accounting control mechanisms that were unavoidable in larger, more rigid organizations.

Nor did English educational institutions consciously promote cost accounting as part of a new management technology. Although an *Institute of Works and Cost Accountants* was founded (1919), it functioned along familiar lines—apprenticeship combined with *Institute* administered examinations, for which apprentices prepared after work through self-study. The close connections between higher education and accounting that developed in Germany (and America) never took hold. Only in 1947 did “eleven of the larger universities, by agreement with the main accountancy bodies,” begin a degree program in accountancy.<sup>43</sup> But, since an accounting degree had a “vocational” bias, neither Oxford nor Cambridge accepted the scheme.<sup>44</sup> Moreover, the accounting societies only agreed because the program perpetuated the apprenticeship system (after 2½ years in the university a period of apprenticeship was required in order to receive a degree). This belated and halfhearted recognition of university work illustrates the reluctance of professional accountants, embedded in their institutes, to recognize the importance of academic research and training. A few of the professionals saw the need, but, as a group, English accountants continued to mouth the old clichés about the superiority of apprenticeship over formal education. This attitude deprived British accounting of the research as well as the educational benefits which came from the German institutions. “This insistent practical urge. . . .” one apologist ad-

mitted, "provoked a critic to declare that accountants were insensitive to the need for sustained academic study and research. It is probable that a certain want of contact with the universities had something to do with this apparent neglect. . . ."45

What the English education system failed to do specifically for accountants and cost accountants it also failed to do generally for English management. The tendency to bring Oxbridge men into management resulted in general ignorance of cost accounting at the top where old school ties counted for more than managerial skills. Even graduates with degrees in economics or business administration (from the few British universities that eventually started such programs) did not possess the requisite knowledge because cost accounting was not part of the university curricula. Theoretical marcoeconomics, the glory of Britain, was the mainstay of education in economics and business. Nor were British engineers much better prepared in cost accounting. The long tradition of apprenticeship training, which marked British engineering, once again discouraged innovation. Engineering schools developed late and when they came engineering education was almost exclusively technical in nature. The men who organized the institutions did not seem to realize that modern industry needed industrial and management as well as academically trained electrical, chemical, and mechanical engineers. The engineering curricula in the colleges and higher technical schools were obsolescent, in comparison with the American and German, from the beginning.

Nor did British government administrative and financial policies effectively improve cost accounting technology. British authorities, awaking to the backwardness of governmental cost accounting during the First World War, introduced better cost accounting procedures into the defense ministries.<sup>46</sup> Moreover, they encouraged private industry to adopt better cost accounting. State action, however, never meant much. Company laws, which required annual audits in limited liability firms, encouraged better financial accounting. But cost accounting was not significantly affected thereby. Nor did the taxation laws indirectly improve costing, as they did in Germany. Whereas German law required corporations to pay taxes according to volume of sales and turnover, thereby demanding more accurate and complete accounts, English law only taxed profits. The British government's failure to promote effective uniform accounting methods was to prove especially significant. As the country retreated from competition to protectionism in the 20th century, British industry did not arm itself with the control mechanisms with which industrial efficiency could be assured after the spur of com-

petition disappeared. The neglect had serious repercussions during the Second World War, for the British government, because of the diversity of accounting procedures within particular industries, had difficulty awarding and paying contracts. Without uniform cost accounting nobody was in fact quite sure what the costs were.

This essay on cost accounting development has ranged temporally over a broad span. The revisionist econometricians out to refurbish the image of the Victorian and Edwardian entrepreneur might be tempted to say, therefore, that the critique has missed its mark. So what, for the sake of argument, if the Germans developed a better system of cost accounting than the British between 1900 and 1940? So what if the German entrepreneur outstripped the British during the same period of time? They have been studying the performance of the late *Victorian* and *Edwardian* entrepreneur. I believe, however, that the revisionists, by restricting their analysis to the pre-1914 period have not understood the nature of the debate. McCloskey and Sandberg listed four specific charges which the pessimists have leveled against British industrialists:

- (1) They were bad salesmen, especially abroad.
- (2) They overinvested in old staple export industries, such as cotton and iron, and were slow to move into industries of the future, such as chemicals, automobiles, and electrical engineering.
- (3) They underinvested in the laboratories and technical personnel required for the development and exploitation of applied science.
- (4) Most important, they failed to adopt in many industries the best available techniques of production, such as ring spinning in cotton textiles, the Solvay process in chemical, mechanical cutting in coal, and a host of new techniques in iron and steel.<sup>47</sup>

All four charges, except the first perhaps, highlight an economy undergoing a basic transformation. All imply that it is not the country's past achievements but its ability to adapt to future requirements that is the yardstick by which "economic" accomplishments have to be measured. Moreover all, except the first, are really statements about the structure of an economy. Even the first can be so considered if salesmanship is viewed in terms of training and management systems. These are, by McCloskey and Sandberg's own admission, the charges that they, revisionists, have to refute.

The problem is that, with their methods, the revisionists have been unable, especially when restricting the analytical time frame to the Victorian-Edwardian era, to deal with, much less refute, the four

propositions. In order to chart trends in costs, profits, and productivity the econometrician needs long runs of commercial and industrial statistics. He is forced, therefore, to study industries that have not only been around for some time but which have been considered important enough to warrant statistical compilation. The period was one of the most technologically innovative in history. The new industries, which were destined to replace the older staple industries, and which, therefore, were the most technologically advanced, economically dynamic, financially profitable, and structurally creative during the second industrial revolution, were only on the threshold of their greatness at the turn of the century. Obviously the farther the econometricians push statistical runs from 1900 or from 1914 into the past the more they have been forced to deal with older industries. And the more they have been occupied with the older industries the less they have been able to study the British entrepreneur during a period of transformation. S. B. Saul, when reviewing the work of the new economic historians at the Harvard Conference in 1970, noticed this limitation. "The Conference papers were restricted to discussions of the older industries," he remarked "even Floud's machine tool firm was definitely not of the new generation. What of the newer industries?"<sup>48</sup>

The statistical method, however, limits the revisionists treatment of the old industries too. Economic historians tend to believe that the old industries (iron, textiles, shipbuilding) suffered from a first start handicap by the end of the nineteenth century. That may be true, but there is no inexorable law of economic development which makes it so. If an early start means that an industry is later automatically saddled with obsolescent plant and equipment then the German chemical and electrical industries would have, in the 20th century, to have been, because of their earlier start, inferior to those of the British. The question is not so much which industry started first as which was capable of constant adaptation and innovation. The question is about industrial potential, c. 1914, not industrial accomplishments. To examine "potential" the institutional infrastructure of industry has to be taken into account; for, if it is inadequate during a period of industrial transformation, that industry's ability to modernize its managerial and productive structure will be adversely affected.<sup>49</sup> British entrepreneurs operated quite well in the financial and managerial milieu of the first industrial revolution. They had serious difficulties, however, adapting to the technological and organizational demands of the second. The revisionists, with their backward looking statistical runs on costs, profits, and productivity, have really ignored this essential point. That is why cost

accounting is so useful. It is both method and object of research; method because it provides the historian with analytical tools which deal with structure during a period of structural change; object because it is an essential part of the subject under investigation. A study of its development shows that the econometric revisionist optimistic evaluation of the British entrepreneur, circa 1914, is misplaced.

## FOOTNOTES

<sup>1</sup>Vol. 6, No. 1, pp. 17-28.

<sup>2</sup>Floud, p. 329.

<sup>3</sup>Floud, p. 318.

<sup>4</sup>Floud maintains that "although the financial administration of the firm was severely criticized after 1890, no similar criticisms were made of the quality of work." Floud, p. 318. Good workmanship does not, of course, mean good productivity, low costs, or acceptable profits.

<sup>5</sup>Habakkuk, p. 212.

<sup>6</sup>McCloskey, *Essays*, p. 309.

<sup>7</sup>Jones, p. 182.

<sup>8</sup>Fells, *The Accountancy*, p. 69. Also see, Emile Garcke and J. M. Fells, *Factory*.

<sup>9</sup>Fells, *The Accountancy*, p. 70.

<sup>10</sup>*English*, p. 193.

<sup>11</sup>Rider, p. 178.

<sup>12</sup>Showell, p. 63. Fells' remarks follow a speech made by A. E. Showell.

<sup>13</sup>Showell, p. 63. Fells is quoting a man named Joseph Pease, who was head of the *Northeastern Railway Company*.

<sup>14</sup>Rawlinson, p. 265.

<sup>15</sup>Rawlinson, p. 265.

<sup>16</sup>Rawlinson, p. 265.

<sup>17</sup>Murphy, p. 43.

<sup>18</sup>Thus Gardner and Littleton stay almost exclusively in the Anglo-American world. A. A. Garrett, in an article "Accounting Research, An International Function," only deals with the Commonwealth, the United States, and the United Kingdom. David Solomons in "The Historical Development of Costing," mentions Germany in a short footnote.

<sup>19</sup>Hanns-Martin W. Schoenfeld, who has written one of the few studies in English on German cost accounting states that ". . . relatively little work has been done to make known and to utilize in the United States scholarly ideas which have been generated in Europe—which in industrialization and business research is second only to the United States. Since central European ideas have had some—and occasionally considerable—influence on the field of business administration in Japan, in certain countries in Eastern Europe, in South America, and in the rest of the industrialized world, scholars in accounting and related fields should have an opportunity to become familiar with this approach." Schoenfeld, p. v.

<sup>20</sup>Schoenfeld, p. 52.

<sup>21</sup>Schoenfeld, p. 52.

<sup>22</sup>Schoenfeld, p. 52.

<sup>23</sup>The best way to get familiar with Schmalenbach is through his periodical, *Zeitschrift für handelswissenschaftliche Forschung*. He started it in 1906 and wrote



many of the articles, and, during the first fifteen years, all the book reviews himself. The ideas in his books appeared first in articles in this periodical and often quite early. Also see the recent biography in English, Forrester, *Schmalenbach and After*.

<sup>24</sup>Schranz, p. 279.

<sup>25</sup>Brady (*The Rationalization*) is still the authoritative work. For the extension into the Nazi period see Singer and Abel.

<sup>26</sup>Abel, p. 32.

<sup>27</sup>Abel, p. 33.

<sup>28</sup>Abel, p. 35.

<sup>29</sup>Abel, p. 35.

<sup>30</sup>Singer, p. 13.

<sup>31</sup>See Manegold and Lexis. For a comparison between French and German technical universities see Locke.

<sup>32</sup>Two works by the influential Professor Alois Riedler of the technical *Hochschule* in Charlottenburg are important (*Ein Rückblick* and *Emil Rathenau*). Also see his *Zur Frage* and *Unsere Hochschulen*. Other professors of note are Otto Kammerer (see his *Verhandlungen*) and Georg Schlesinger (see *Selbstkostenberechnung*).

<sup>33</sup>Fifty-fourth general meeting of the VDI held in Leipzig. American advocates of the "Taylor-System" were in attendance. See, James M. Dodge, *Industrielle* and Georg Schlesinger, *Betriebführung*—two speeches given at the meeting. Taylor's work was also translated into German, often by these professors. See, Frederick Winslow Taylor, *Die Grundsätze*, which was translated by Professor Rudolf Roesler of the technical *Hochschule* in Aachen.

<sup>34</sup>*Abhandlungen*. Of articles in this report see especially, Dr. von Wiese, *Die wirtschafts- und staatswissenschaftlichen Studien*.

<sup>35</sup>Two important works, at the beginning of this flood of books, were J. Lilienthal, *Fabrikorganisation*, and Albert Ballewski, *Der Fabrikbetrieb*.

<sup>36</sup>See works by Redlich, Eckert, Devinat, Schmidt, Isaac, and Mantsuranis.

<sup>37</sup>See works by Schranz, Matz and Schmaltz, *The Business*.

<sup>38</sup>Founded in 1903.

<sup>39</sup>Beginning as a private organization (1921), it did not get very far until reorganized and financed by the state (1926).

<sup>40</sup>Abel, p. 36.

<sup>41</sup>Two accountants, G. W. Murphy and E. S. Most, who translated one of Schmalenbach's books, said of him: "It is no exaggeration to state that he transformed the German accountancy profession by operating a revolution in the attitude of businessmen to accountancy, as much as by inducing accountants themselves to extend their vision and their range of activities." (Schmalenbach, *Dynamic Accounting*, p. 5)

<sup>42</sup>British industrialization was financed by individuals, by local banks, and by reinvestment of profits. Although London was a great financial center, it was involved more in commercial loans and portfolio investments (e.g., state bonds, railroad and mining securities). Whether or not British industry lacked capital because of London's failure to invest in home industries is a controversial subject. Some feel that sufficient money was available from other sources, but the fact that the big British financial institutions generally ignored home industries is not questioned.

<sup>43</sup>Byrd, p. 37.

<sup>44</sup>Byrd, p. 37.

<sup>45</sup>Bray, *Recent*, p. 199. Also see Bray, *The English*. In 1911 a Mr. James Pater-son of Glasgow told an Assembly of Incorporated Accountants: "I find, and I think it is the experience of all who have carefully examined the cases that came under their notice, that a student who has been in a good office, and who has the natural ability to assimilate what he sees and reads, makes a better accountant than the man who starts off with the halo of a University education (Applause). I think that our method of examination, subject to certain qualifications, is a far better test than even a degree in economics in the Berlin University. (Hear, hear) We get far better results from a practical examination than from one in mere theory." Nelson, p. 20. This attitude persisted in the profession through World War II.

<sup>46</sup>Grimwood, pp. 114-20.

<sup>47</sup>McCloskey and Sandberg, p. 92. The list of charges is repeated in McCloskey, p. 4.

<sup>48</sup>Saul, p. 396.

<sup>49</sup>An excellent description of management's preparation (in research, develop-ment, and marketing) against obsolescence can be found in Sydney H. Higgins, *Dyeing*. Higgins wrote this study after a lengthy tour of factories in various coun-tries. The chapter on color production is especially interesting because of the future orientation of the German dyeing industry. Indeed as management became more future oriented it became less susceptible to obsolescence. Members of the Anglo-American management accounting team who visited the USA in 1950 were amazed to find American manufacturers discontinuing product lines or replacing plant and equipment that were perfectly "good" on the grounds that market and production forecasting showed they had no future.

#### BIBLIOGRAPHY

- Abel, Rein. "The Impact of Environment on Accounting Practices: Germany in the Thirties," *The International Journal of Accounting*, 7 (Fall, 1971), pp. 29-48.
- Anglo-American Council on Productivity. *Productivity Report, Management Ac-counting*. Report of a Specialist Team which visited the U.S.A. in 1950 (Leices-ter, England: Blackfriars Press, Ltd., 1950).
- "As Others See Us," *The Journal of Accountancy* (1907), pp. 158-61.
- Ballewski, Albert. *Der Fabrikbetrieb* (Berlin: Julius Springer, 1905).
- Berichte aus dem Gebiete des technischen Hochschulwesens*. Vol. IV of Abhand-lungen und Berichte ueber technisches Schulwesen (Leipzig: B. G. Teubner, 1912).
- Brady, Robert A. *The Rationalization Movement in German Industry, A Study in the Evolution of Economic Planning* (Berkeley, California: University of California Press, 1961).
- Bray, F. Sewell. "The English Universities and the Accounting Profession," *The Accounting Review*, 24 (1949), pp. 273-76.
- \_\_\_\_\_. "Recent British Accounting Developments," *The Ac-counting Review*, 21 (1946), pp. 199-204.
- Byrd, Kenneth F. "The University Contribution to Education in Accountancy," *Accounting Research*, 3 (1972), pp. 24-47.
- Devinat, Paul. *Wissenschaftliche Betriebsfuehrung in Europa* (Geneva: Internation-al Labour Office, 1927).
- Dodge, James M. and Schlesinger, Georg. *Industrielle Betriebsfuehrung, Betriebs-fuehrung und Betriebswissenschaft* (Berlin: Julius Springer, 1913).
- Eckert, Christian. *Die staedtische Handels-Hochschule in Coeln* (Cologne: Paul Neubaer, 1911).

- "English and American Practices," *The Incorporated Accountants' Journal*, n. s., 18 (May, 1907), pp. 192-93.
- "English vs. American Practice," *The Journal of Accountancy*, 3 (March, 1907), pp. 388-93.
- Fells, J. M. "The Accountancy of Tomorrow," *The Incorporated Accountants' Journal*, n. s., 22 (July, 1912), pp. 69-74.
- Floud, Roderick. "Changes in the Productivity of Labour in the British Machine Tool Industry, 1856-1900," in McCloskey, Donald N. ed., *Essays on a Mature Economy* (Princeton, New Jersey: Princeton University Press, 1972), pp. 313-44.
- Forrester, David A. R. *Schmalenbach and After, A Study of the Evolution of German Business Economics* (Glasgow: Strathclyde Convergencies, 1977).
- Garcke, Emile and Fells, J. M. *Factory Accounts. Their Principles and Practice. A Handbook for Accountants and Manufacturers* (London: C. Lockwood & Son, 1887).
- Gardner, Samuel Paul. *Evolution of Cost Accountancy to 1925* (University, Alabama: The University of Alabama Press, 1954).
- Garrett, A. A. "Accounting Research, An International Function," *Accounting Research*, 3 (April, 1952), pp. 168-80.
- Grimwood, J. "Costing in Relation to Government Control, Efficiency and Economy," *The Incorporated Accountants' Journal*, 30 (March, 1919), pp. 114-20.
- Habakkuk, John H. *American and British Technology in the Nineteenth Century* (Cambridge, England: University Press, 1962).
- Higgins, Sydney H. *Dyeing in Germany and America, with a Chapter on Colour Production. A Report* (Manchester: At the University Press, 1907).
- Isaac, Alfred. *Die Entwicklung der wissenschaftlichen Betriebswirtschaftslehre in Deutschland seit 1898* (Berlin: Spacht & Linde, 1923).
- Jones, E. Furnival. "Some Accountancy Problems of Yesterday and Today," *The Incorporated Accountants' Journal*, 48 (1936-1937), pp. 181-88.
- Kammerer, Otto, "Ueber den Einfluss des technischen Fortschrittes auf die Produktivitaet," in *Verhandlungen des Vereins fuer Sozialpolitik*, Vol. III. *Die Produktivitaet der Volkswirtschaft* (Leipzig: Duncker & Humblot, 1910), pp. 371-425.
- Lexis, Wilhelm, ed. *Das Unterrichtswesen im deutschen Reich*, 4 vols. (Berlin: A. Asher & Co., 1904).
- Lilienthal, J. *Fabrikorganisation, Fabrikbuchfuehrung und Selbstkostenberechnung der Ludw. Loewe & Co. A.-G.* (Berlin: Julius Springer, 1907).
- Littleton, Ananias C. *Accounting Evolution to 1900* (New York: Russel, 1966).
- Locke, Robert R. "Industrialisierung und Erziehungssystem in Frankreich und Deutschland vor dem 1. Weltkrieg," *Historische Zeitschrift*, Vol. 225 (October, 1977), pp. 265-96.
- McCloskey, Donald N. "Did Victorian Britain Fail?" *The Economic History Review*, 2nd ser., Vol. 33 (1970), pp. 446-59.
- \_\_\_\_\_. "International Differences in Productivity. Coal and Steel in America and Britain Before World War I," in McCloskey, Donald N., ed., *Essays on a Mature Economy*. . . , pp. 285-309.
- \_\_\_\_\_. "Productivity Change in British Pig Iron, 1870-1939," *Quarterly Journal of Economics*, Vol. 82 (May, 1968), pp. 281-96.
- McCloskey, Donald N. and Sandberg, Lars G. "From Damnation to Redemption: Judgements on the Late Victorian Entrepreneur," *Explorations in Economic History*, n. d., Vol. 9 (1971), pp. 89-108.
- Manegold, Karl-Heinz. *Universität, technische Hochschule und Industrie* (Berlin: Duncker & Humblot, 1970).

- Mantsuranis, Johann. *Die Hauptbeitraege der Laender USA, Deutschland und Frankreich zum heutigen Stand der Betriebswissenschaft* (Berlin: Triltsch & Huther, 1939).
- Matz, Adolph. "Cost Accounting in Germany," *The Accounting Review*, Vol. 15 (September, 1940), pp. 371-79.
- \_\_\_\_\_. "Uniformity in German Cost Methods," *NACA Bulletin*, Vol. 27 (September, 1945).
- Murphy, Mary E. "Research in Public Accountancy," *Business History Review*, Vol. 24 (March, 1970), pp. 43-50.
- Nelson, C. Hewetson. "Professional Education," *The Incorporated Accountants' Journal*, Vol. 23 (October, 1911), pp. 15-20.
- Rawlinson, E. B. "Some Notes on Cost Accounts," *The Incorporated Accountants' Journal*, n. s., Vol. 22 (1910-11), pp. 264-68.
- Redlich, Fritz. "Academic Education for Business: Its Development and the Contribution of Ignaz Jastrow (1856-1937)," *Business History Review*, Vol. 31 (Spring, 1957), pp. 35-91.
- Rider, James. "Cost Accounts, A Lecture," *The Incorporated Accountants' Journal*, n. s., Vol. 15 (1903-04), pp. 178-79.
- Riedler, Alois. *Ein Rueckblick auf die Weltausstellung in Chicago* (Berlin: Leonhard Simon, 1894).
- \_\_\_\_\_. *Emil Rathenau und das Werden der Grosswirtschaft* (Berlin: Julius Springer, 1916).
- \_\_\_\_\_. *Unsere Hochschulen und die Anforderungen des zwanzigsten Jahrhunderts* (Berlin: A Seydel, 1898).
- \_\_\_\_\_. *Zur Frage der Ingenieur-Erziehung* (Berlin: Leonhard Simon, 1895).
- Saul, Sydney B. "Some Thoughts on the Papers and Discussions on the Performance of the late Victorian Economy," in McCloskey, Donald N., ed., *Essays on a Mature Economy*, pp. 393-97.
- Schlesinger, Georg. *Selbstkostenberechnung im Maschinenbau* (Berlin: Julius Springer, 1911).
- Schmalenbach, Eugen. *Dynamic Accounting* (London: Gee, 1959).
- Schmaltz, Kurt. "The Business Periodicals of Germany," *The Accounting Review*, Vol. 5 (September, 1930), pp. 235-42.
- Schmidt, Fritz. "Is Appreciation Profit?," *The Accounting Review*, Vol. 6 (December, 1931), pp. 289-93.
- Schoenfeld, Hanns-Martin. *Cost Terminology and Cost Theory: A Study of Its Development and Present State in Central Europe* (Champaign-Urbana: Center for International Education and Research in Accounting, 1974).
- Schranz, Andrew. "Modern German Accountancy," *The Accounting Review*, Vol. 5 (June, 1930), pp. 162-67.
- \_\_\_\_\_. "Recent Tendencies in German Business Economics," *The Accounting Review*, Vol. 12 (1937), pp. 278-85.
- Showell, A. E. "Cost Accounts," *The Incorporated Accountants' Journal*, n. s., Vol. 13 (1901-1902), pp. 59-64.
- Singer, Hans Wolfgang. *Standardised Accountancy in Germany* (London: Cambridge University Press, 1943).

**Robert W. Gibson**  
DEAKIN UNIVERSITY

## **DEVELOPMENT OF CORPORATE ACCOUNTING IN AUSTRALIA<sup>1</sup>**

**Abstract:** Corporate accounting in Australia can be said to have passed through four phases. The initial phase involved the introduction of minimum standards of statutory disclosure. The second phase was largely an extension of these statutory requirements to include income statements and consolidated statements. This was followed by the activities of the accounting profession, stock exchanges and others to improve the details of disclosure.

The final phase which is still under way has directed attention more and more to the problems of accounting measurement reflected in the financial statements. It has been marked by efforts to formulate accounting standards and to enforce compliance with those standards. Modern developments have been marked by a gradual shift from change based on statutory demands towards change based on the role of such non statutory influences as the accounting profession.

### ***Introduction***

An outstanding Australian civil engineer connected with the building of the highway system, Sir Louis Loder,<sup>2</sup> once described how this development took place in four phases. When he first drove Highway 1 between Melbourne and Sydney, after 60 miles from Melbourne it literally became a track winding through the trees. It therefore was necessary to clear the trees and “get out of the bush”. (“bush” is Australian for wildwood or “the sticks”). The track thus established soon became a wet season quagmire and work was needed to “get out of the mud”. The gravel roads then became a summer time nightmare of clouds of dust and the task was to “get out of the dust”. Now that the road is bituminised or black topped the task is to apply safety engineering in an effort to “get out of dangers”. Finally it must be noted, the adoption of modern safety engineering and road rules does not solve the problem of securing compliance with those rules and we need the services of the highway patrol. All of these highway developments have been witnessed in one man’s lifetime. There is an analogy between this and the development of Australian corporate accounting which has taken place over little more than the traditional lifetime of three score years and ten.

### ***“The Beginnings”***

The beginnings of corporate accounting in Australia can be regarded as the passage of acts facilitating the routine incorporation of companies by registration on similar lines to the English Act of 1862.<sup>3</sup> These were the acts of Queensland 1863,<sup>4</sup> Victoria 1864,<sup>5</sup> South Australia 1864,<sup>6</sup> New South Wales 1874,<sup>7</sup> Western Australia 1893<sup>8</sup> and Tasmania 1920.<sup>9</sup> These acts left the details of accounting and auditing to be decided by the individual company as laid down in its own articles which it could modify as it saw fit. The idea of disclosure as the “price” for limited liability was conveniently overlooked. These acts emphasised the accountability of directors to establish that the contributed capital had been expended on appropriate assets. Concepts of depreciation and income measurement were not reflected in any manner in the legislation. Legislation passed in the infant colonies understandably was based closely on English precedents. The great body of applicable law was in fact the inherited common law and statutes of England.

### ***“Getting Out of the Bush”***

The earliest accounting and reporting practices of companies in Australia, as in other parts of the world, were ill-defined generally and at the whim of individual managements. There were no guideposts and a company could take any “path through the woods” which it was pleased to take. The impetus to change was the popular mandate given to a new Victorian government following the suffering after the collapse of the Land Boom<sup>10</sup> at the close of the nineteenth century. When the mania for land took hold of the people it was stimulated by the corporate forms of the so called land banks and building societies. Without any prohibition on speculating in land they became direct investors as well as lenders to prominent individual speculators. New companies were registered at an unprecedented rate and investors rushed to share in the bonanza. The collapse was spectacular and along with the millionaire bankrupts there were thousands of small depositors left penniless. The collapse of the financial institutions reverberated throughout the economy and every aspect of trade slumped. A man of outstanding legal talent who was later to become the first Australian born head of state, as vice regal representative, the Governor General of Australia, Mr. Isaac Isaacs, while a member of the Victorian Parliament was stimulated to action when he discovered that a committee of the English House of Lords<sup>11</sup> proposed to establish

minimum disclosure requirements as the first signposts through the dark forests of corporate non-disclosure and obscuritant accounting. Isaacs took up the idea and pushed legislation through the Victorian Parliament in 1896<sup>12</sup> requiring every company in which there were publicly held shares to present to the annual meeting and to send to each shareholder an annual report including a balance sheet which disclosed a minimum range of information. The bill was opposed bitterly by the landholders and businessmen who dominated the Legislative Council, the upper house of the Victorian Parliament.<sup>13</sup> After the bill had see-sawed between the houses, been referred to a Select Committee<sup>14</sup> and had been endlessly amended, Isaacs accepted the amended bill declaring 'The Assembly had secured at the point of a sword, a distinct improvement on the present law, but not in his opinion, nearly enough'.<sup>15</sup> While Isaacs had failed to secure compulsory disclosure by all companies he had done so in respect to those companies which desired the right to invite the public to invest in them. The Act of 1896 as part of the compromise with the Legislative Council introduced the term "proprietary company" to describe a company which is given all the privileges of incorporation except for the right to invite the public to subscribe for its securities as the price of retaining complete privacy of its financial affairs.<sup>16</sup> It was intended as a privilege for "family companies" but was soon adopted by other companies such as subsidiaries of public companies in an attempt to thwart the disclosure provisions. The fact that the English had not gone ahead with the House of Lords' proposal of the nineties on which Isaacs had modelled his legislation, did not deter the Australians. What had happened was that Isaacs in his enthusiasm had got the law enacted before the sailing ships of the time could make the three month journey to bring news of the English decision not to proceed with the proposed bill.

This legislation established the pattern of specifying items to be disclosed but leaving the problem of measurement in the hands of the accounting profession. Perhaps the most important provision of the Act was the introduction of compulsory audits for public companies thereby anticipating such developments in England and the U.S.A. by decades. Similar legislation setting out such minimal guideposts through the "woods" was not passed by the other states of Australia for another quarter century. This was achieved in the acts of Tasmania 1920,<sup>17</sup> Queensland 1931,<sup>18</sup> South Australia 1934,<sup>19</sup> New South Wales 1936<sup>20</sup> and Western Australia 1943.<sup>21</sup>

***“Getting Out of the Mud”***

It did not take very long for observers to see that the path of such minimum disclosure easily became “muddied”. The absence of profit statements to link the periodic balance sheets had an effect not unlike the muddy stretches of road which divided the better drained and surfaced strips of road that passed through the centre of the separate towns located along the highways. This problem was demonstrated forcibly to Australian accountants in the widespread publicity attached to the trial of Lord Kylsant<sup>22</sup>—the famous Royal Mail case. The nature of the proceedings in the case are of little relevance. As Mr. Justice Wright pointed out in his summing up what was important was the revelation that a company in which the public invested had been able to report profits and pay dividends which had come not from current earnings, but from undisclosed transfers of secret reserves.<sup>23</sup> The international repercussions of the economic crash of 1929 also influenced the Australian legislators. Although there had not been the securities malpractices which came to light in the U.S.A., the Australian community had suffered severely from the economic consequences of the loss of international markets for its primary products, particularly wool and wheat. At this time there was still relevance in the adage that Australians lived off the sheep’s back.

The Victorian legislators, spurred on by the active lobbying of the accounting profession, again led the way and in 1938,<sup>24</sup> extended the disclosure provisions to require adequate profit or income statements and the presentation of consolidated statements for corporate groups. Thus, the basis was laid for an “all weather reporting road” without the missing links from balance sheet to balance sheet. The “road builders” did not proceed in sequential order from state to state from here on but instead a more complex pattern of developments marked the next quarter century. These two fundamental enactments were adopted in due course by Western Australia 1943,<sup>25</sup> Tasmania 1956,<sup>26</sup> New South Wales <sup>27</sup> and Queensland 1961<sup>28</sup> and South Australia 1962.<sup>29</sup>

***“Getting Out of the Dust”***

While the “official road builders” were building this “all weather road”, slowly but surely there were also other “unofficial builders” who might be regarded as having directed their attention at getting rid of the dust which billowed up and obscured the view from time to time. During these earlier years by far the most valuable con-



tribution to the effort to “lay the dust” was made by the Stock Exchanges. The first formal printed schedule of listing requirements was drawn up in 1925 by the Stock Exchange of Melbourne. From 1936 the requirements of the two principal exchanges in Melbourne and Sydney have been identical and since 1954 they have been issued under the imprimatur of the Australian Associated Stock Exchanges covering the exchanges in all states. In 1925 the statutory disclosure provisions applicable to holding companies were limited to the requirement in Victoria and Tasmania to publish a balance sheet for the holding company. The 1925 listing requirements required a company to include with its report the balance sheet of any company in which it owned a controlling interest. The 1927 amendments introduced the alternative of an aggregate statement of the assets and liabilities of the subsidiary companies. This can be regarded as the precursor to the concept of consolidated statements. By such steps the Stock Exchanges established for themselves a role of introducing advances in reporting ahead of the relevant legislation. The Stock Exchanges have been remarkably effective in securing compliance with such advances in reporting relying primarily on the threat of delisting from what has become effectively the sole organized market for securities in Australia. The Companies Acts prohibit what is described as “share hawking” and all attempts so far to establish a second market have failed. Perhaps no one issue has demonstrated so well the capacity of the Australian Associated Stock Exchanges to influence corporate reporting as the development of interim reporting.<sup>30</sup> Over a decade the typical form of report has been changed from a vague generalized or descriptive statement to the statement of actual dollar amounts of sales and profits. This change has been brought about by the gradual tightening up of the listing requirements.

The second “unofficial builder” has been the accounting profession. The first recommendations<sup>31</sup> of the Institute of Chartered Accountants in Australia (ICAA) were issued in 1945. The first quarter century of such activity mainly achieved effective results in matters of presentation rather than the substance of measurement. In spite of the limited scope of the recommendations during this period, they did contribute to reducing “the dust” by establishing a greater degree of consistency and conformity in terminology and presentation. When they attempted to deal with matters of measurement, such as inventory valuation, they revealed a lack of power on the part of the profession to secure compliance on a widespread basis.<sup>32</sup> A much more active programme has been pursued in the seventies commencing with the formation of a Profes-

sional Standards Committee by the ICAA in 1970. These activities are discussed more fully below.

A third force which could have been a useful contributor to "building a better road" is the annual report award instituted by the Australian Institute of Management (AIM). In spite of its high ideals it has tended even more than the accounting profession to have concentrated its major effort on matters of typographical and illustrative presentations rather than the substance of financial measurement and disclosure.<sup>33</sup> There have been specific items of reporting which constitute exceptions to this generalization. The AIM Award policies appear to have been significant in overcoming Australian reluctance to disclose such a vital item as sales.

Australian legislators still found the need from time to time to legislate for further items of information to be disclosed in an effort to "surface the reporting road and lay the dust". The excesses of some finance companies about 1960<sup>34</sup> in raising secured loan capital and passing it on as unsecured loans to subsidiary and associated companies led to specific enactments covering public borrowing corporations.<sup>35</sup> Specifically the knowledge that one company continued to raise funds when it was known the half year resulted in a loss which had not been disclosed led to the inclusion of half yearly reporting requirements for these companies. The most recent exercise led to the enactment of such extensive detail relating to financial statements and directors' reports that there is a fear that now the road is obscured by excessive detail.<sup>36</sup> One version of what happened, not entirely an apocryphal story, is that the Committee of Attorneys General of all States and Federal Government called for a summary of all the proposals submitted by interested parties and quite remarkably and unexpectedly agreed to enact the whole package. At least this version accords with the extensive detail now demanded to comply with the Act.

### *"Getting Out of Danger"*

In spite of all that had been done in recent time, Australia was not without its share of corporate scandals nor could the accounting profession isolate itself from what was happening overseas. The Australian company failures of the sixties, when investigated in detail, led to damaging criticism of the accounting profession<sup>37</sup> to which the profession responded with a new effort to develop more effective means of securing improved corporate financial reporting. The accounting profession was stimulated similarly by the malpractices revealed by the massive Cormack-Rae Committee<sup>38</sup> in-

vestigation of securities markets following the boom and bust in mining securities of 1970. In spite of legislative and voluntary requirements to report a great amount of detail there was very little which directly dealt with the measurement process underlying that disclosure. Without some assurance of the quality of the measurements included in the financial statements, the investor relying on those statements is travelling a dangerous road. The developments in the seventies have been directed at such problems. Like the highway builders, the accounting profession can be said to be at the stage now of getting the investor "out of danger" so far as protection can be given by assuring the quality of information provided to the securities market as well as its quantity. The accounting profession has adopted a two-pronged attack by increasing the effort put into the development of standards and by strengthening the means of enforcing those standards.

The determination of the ICAA to make a new effort to formulate standards was evidenced by the establishment of a new Accounting Principles Committee in November, 1969.<sup>39</sup> This ICAA committee was extremely active over the following eighteen months to two years while there was little evidence of activity by the Australian Society of Accountants (ASA). Moves towards joint action by the ASA and ICAA were aided by the establishment of the Australian Accountancy Research Foundation (AARF). It had been established in 1965 with joint sponsorship of the ASA and the ICAA. The circumstances suggest that it was probably more the result of the ASA's initiative. Members of the ICAA are predominantly in public practice and have a near monopoly of the audit of listed companies in contrast to the ASA membership which is dominantly employed in companies. The role of the ASA may therefore be contrasted with the criticism of the dominance of the audit segment of the profession in the machinery for formulating accounting rules then in operation in the U.S.A. By 1970 the stage had been reached where the joint executives of the ASA and the ICAA recommended that each body should continue all work in progress but that the results would be communicated to each organization via the AARF with a view to issuing joint statements. In 1971 the ASA renamed its Committee.<sup>40</sup> This also marked the time when the ICAA and the ASA came to an agreement to work together in the future and to seek to issue any future accounting pronouncements in the joint names of the ICAA and the ASA.<sup>41</sup> Zeff puts forward the explanation that this action was accelerated by the discovery that both bodies were developing independent statements on the use of equity accounting.<sup>42</sup> (Two of the author's colleagues at the University of Melbourne were sepa-

rately involved with the ICAA and the ASA while unaware of what the other was doing). The joint status of professional pronouncements was brought closer by the endorsement in 1972 by the ASA of the existing ICAA pronouncements D1.2 covering profit and loss (income) statements and D5 covering depreciation.<sup>43</sup> D1.2 had endeavoured to regulate the abuse of prior period adjustments by defining them more clearly and to introduce a definition of extraordinary items which was similar to American practice. The net operating income concept was retained at this time. D5 reaffirmed that depreciation was confined to the allocation of historical cost although there was some confusion of definition which was eliminated in a later revision. In September, 1973, it was announced that all statements issued since 1970 were to be jointly revised.<sup>44</sup> Early in 1974 it was announced that these developments were to be further enhanced with a complete pooling of the resources of the two organizations.<sup>45</sup> At the present time accounting standards issued in the joint names of the ASA and the ICAA cover profit and loss (income) statements, inventories, taxation, depreciation, materiality, expenditure carried forward, accounting policies and extractive industries. In 1978 a further modification has been made to these arrangements.<sup>46</sup> This arose from the major effort expended on the current cost accounting project causing undesirable delays on other projects considered to be of importance. The new administrative arrangements will mean that exposure drafts are issued in the name of the Australian Accounting Research Foundation (AARF). However a special Current Cost Accounting Standards Committee has been formed apart from the AARF and will report to the joint committee of the ASA and ICAA.

### *"Enforcing the Safety Rules"*

An indication of possible professional moves to toughen up the enforcement of professional standards was given by the editorial in the June, 1970 issue of the Chartered Accountant in Australia. This followed a few months after the establishment of the new Accounting Principles Committee of the ICAA. The editorial urged the inclusion of an explanation in any report departing from professional standards. Meanwhile in 1970 the ICAA established a Professional Standards Committee and the members were invited to submit information on instances where reports were considered to 'disclose a standard of performance short of that normally accepted as best practice'.<sup>47</sup> However, the move lacked enforcement powers, and the announcement clearly stated 'the committee has no disciplinary

purpose or powers'. From a letter by the Chairman,<sup>48</sup> it became known that the State Committees of the ICAA were asked to examine published company reports for compliance with professional standards and to report at semi-annual intervals. The objective was to present 'a summary of the principal departures from official statements to the membership of the Institute'. The idea of sanctions against members for non-compliance was actively discussed within the ICAA. In the following year a further editorial<sup>49</sup> reviewing the work of the Accounting Principles Committee pointed out the necessity to ensure the application of the results expected from the Committee's work and indicated that:

General Council has authorized the issue of a statement urging observance of the recommendations, and outlining the steps which the Institute proposes to take to encourage uniformity.

This statement designated K1 'Conformity with Institute Technical Statements' referred to the perusal of the published statements of companies and advised:

In the event of a Committee becoming aware of any significant deviation, the member concerned may be requested to explain the underlying circumstances.

The statement urged the members to ensure that ICAA recommendations were followed and where this was not done to see that an explanation of the effect of the non-compliance was included in the report concerned. Statement K1 was the center of intense discussion because it was the first positive step towards institutionalizing the concept of mandatory accounting standards. However, stronger measures would be needed to enforce this ideal. A new version of the statement issued in January, 1973 required that:

. . .significant departures from applicable accounting standards be disclosed and explained. The financial effects of those departures should be estimated and disclosed, unless this would be impractical or misleading in the context of a true and fair view. If the financial effects of significant departures from accounting standards are not disclosed, the reasons for such non-disclosure are to be stated.

What is perhaps most important is the reason why this step was taken. According to the President of the ICAA,<sup>50</sup> the new statement K1 followed the declaration late in 1972 by the Commissioner for

Corporate Affairs in New South Wales as to his intentions concerning the directors of companies whose accounts had been repeatedly qualified by their auditors.<sup>51</sup> If the ICAA had not taken this most recent action, it is possible that the Commissioner might have sought to achieve his aims by legislation. In the opinion of the ICAA this would not be a desirable solution at this stage. The Commissioner in his statement said he was aware that some of the professional recommendations leading to a proliferation of qualified audit reports ' . . . were accorded something less than universal acceptance. . . '. However of more significance was his declaration that if some means was not found to resolve the conflicts the Corporate Affairs Commission might be forced to act. He suggested in more precise terms a possible approach to the supreme court:

. . . for a declaration that accounts containing an auditor's qualification of the type under discussion failed to give the true and fair view required by the act.

This was a serious threat with extreme consequences because such a court approach could be assumed likely to find for only one view of the 'true and fair view' of the company. In those circumstances either the directors or the auditors could then be shown to be guilty of an offense against the Companies Act because each party in compliance with that Act would have signed a declaration that to the best of their belief the balance sheet presented a true and fair view of the state of affairs of the company at the balance date and that the profit and loss account presented a true and fair view of the result of operations for the period of the reports.<sup>52</sup>

The ICAA has continued to monitor published reports. Since September 1976 this review function has been centralised in the Sydney Office. In the previous six years the Committee in Victoria reviewed over 550 sets of accounts, 160 of which were prepared after the first accounting standards came into force. This group provided 71 instances of departures from standards shared among 44 companies which were significant enough to warrant a letter enquiring into the reasons for the departure.<sup>53</sup>

The ASA also moved in 1973 to secure compliance with the standards and issued a statement<sup>54</sup> requiring members, whether acting as directors, other officers of a company or auditors, to secure compliance with professional standards and the inclusion of an explanation of the effect on the statements of any departure from those standards within the statements,

In June 1974 the Australian Associated Stock Exchanges (AASE) decided that in future the listing requirements would include a recommendation that:

Published accounts are required in normal circumstances to be prepared in accordance with the Statements of Accounting Standards issued from time to time by the Institute of Chartered Accountants in Australia and the Australian Society of Accountants.

Where in special circumstances there has been a significant departure from those Accounting Standards each such departure is required to be properly disclosed and explained in the published accounts or in the notes thereto, together with the reasons for the departure.

The financial effects of each such departure are required to be estimated and disclosed, unless this would be impractical or misleading in the context of a true and fair view. If the financial effects of significant departures are not disclosed, the reasons for such nondisclosure are required to be stated.<sup>55</sup>

The above is not mandatory but does indicate a positive development towards assisting the accounting profession in securing compliance with its standards.

### *“A Change in Orientation”*

There has been a significant change also in the orientation of the Australian profession which is reflected in the content of some new accounting standards. Commencing with legislation such as the Victorian 1864 Act<sup>56</sup> the law was based generally on English precedent. So important was this that in 1910 the Victorian Act was revised to bring it into conformity with English law<sup>57</sup> from which it had departed due to the events of 1896 referred to above. The first recommendations of the accounting profession reflected the same bias, being, in essence, the English equivalents with Australia substituted where necessary for England and Wales. In more recent time there has been however, a noticeable turn towards the American profession and the influence of American thinking is found readily in the more recently issued standards. One instance which illustrates this new orientation is the adoption of the U.S.A. form of income statement and use of the terms abnormal items and extraordinary items.<sup>58</sup> This clearly is different from the usage in earlier Australian

laws<sup>59</sup> and would have led to conflicting requirements if the law had not been amended at about the same time as the new standard was issued. Another example is the adoption of interperiod tax allocation.<sup>60</sup> The relevant standard had to be amended<sup>61</sup> when the inclusion of the tax benefits of losses led to misleading financial reports. The original standard had failed to adequately recognize that unlike in the U.S.A. losses may not be set off against past profits but may only be carried forward for a limited number of years.

### *Conclusion*

A detailed study of the impact of new professional standards applying in the seventies found that the accounting profession had not yet had any great impact on the concepts and practice of accounting measurement.<sup>62</sup> In this respect we must look for future development and change. The Australian profession has been brave enough to be the first to attempt to introduce Current Cost Accounting as a mandatory requirement.<sup>63</sup> While it has had to have second thoughts on this, the action could be interpreted as a sign that the profession is determined to have a greater influence on the basis of accounting measurement in the future. What this survey reveals is that for seventy years the development of corporate accounting in Australia was tied to legislative changes but now it has moved into a new era in which the accounting profession should be expected to become the major influence if there is to be built a safer road for investors in corporate securities.

### FOOTNOTES

<sup>1</sup>Gibson, (1971).

<sup>2</sup>Sir Louis Francis Loder Kt., 1896-1972, was Chief Engineer Victorian Country Roads Board 1928-40, Chairman 1940-44, Director General Allied Works 1944-45, and Director General Commonwealth Department of Works 1945-61.

<sup>3</sup>*Companies Act 1862.*

<sup>4</sup>*Companies Act 1863.*

<sup>5</sup>*Companies Statute 1864.*

<sup>6</sup>*Companies Act 1864.*

<sup>7</sup>*Companies Act 1874.*

<sup>8</sup>*Companies Act 1893.*

<sup>9</sup>*Companies Act 1920.*

<sup>10</sup>Cannon.

<sup>11</sup>Victoria, Parliament, Vol. 78, p. 2573.

<sup>12</sup>*Companies Act 1896.*

<sup>13</sup>Victoria, Parliament, Vol. 81, p. 1025.

<sup>14</sup>Victoria, Parliament, Vol. 82, p. 1648.



- <sup>15</sup>Victoria, Parliament, Vol. 84, p. 4918.
- <sup>16</sup>Victoria, Select Committee, (1896), para. 5.  
Australian Society, (1962), p. 27.
- <sup>17</sup>*Companies Act 1920.*
- <sup>18</sup>*Companies Act 1931.*
- <sup>19</sup>*Companies Act 1934.*
- <sup>20</sup>*Companies Act 1936.*
- <sup>21</sup>*Companies Act 1943.*
- <sup>22</sup>Brooks.
- <sup>23</sup>Brooks, p. xiii.
- <sup>24</sup>*Companies Act 1938.*
- <sup>25</sup>*Companies Act 1943.*
- <sup>26</sup>*Companies Act 1956.*
- <sup>27</sup>*Companies Act 1961.*
- <sup>28</sup>*Companies Act 1961.*
- <sup>29</sup>*Companies Act 1962.*
- <sup>30</sup>Gibson, (March, 1966).  
Gibson, (December, 1966).  
Gibson, (1969).  
Gibson, (1975).
- <sup>31</sup>Institute of Chartered Accountants, (1946).
- <sup>32</sup>Gibson, (1976).
- <sup>33</sup>Australian Institute of Management.
- <sup>34</sup>Chambers,  
Australian Society, (1966).
- <sup>35</sup>New South Wales, (1964).  
Queensland, (1964).  
South Australia, (1964).  
Tasmania, (1966).  
Victoria, (1963).  
Western Australia, (1964).
- <sup>36</sup>Queensland, (1971).  
New South Wales, (1971).  
South Australia, (1972).  
Victoria, (1971).
- <sup>37</sup>Australian Society, (1966).
- <sup>38</sup>Australia, Parliament.
- <sup>39</sup>Institute of Chartered Accountants, (1971), p. 17.
- <sup>40</sup>Zeff, p. 40.
- <sup>41</sup>Zeff, p. 20.
- <sup>42</sup>Zeff, p. 21.
- <sup>43</sup>Zeff, p. 40.
- <sup>44</sup>Australian Society and Institute of Chartered Accountants, (1973).
- <sup>45</sup>Australian Society, (1974).  
Institute of Chartered Accountants, (1974).
- <sup>46</sup>Parry, p. 216.
- <sup>47</sup>Institute of Chartered Accountants, (1970).
- <sup>48</sup>Hilliard, p. 37.
- <sup>49</sup>Institute of Chartered Accountants, (1971), p. 2.
- <sup>50</sup>Burgess, p. 35.
- <sup>51</sup>New South Wales Commissioner for Corporate Affairs.
- <sup>52</sup>Victoria, (1961), section 162.

- <sup>53</sup>Marcard, p. 46.  
<sup>54</sup>Australian Society, (1973), p. 341.  
<sup>55</sup>Munro, p. 263.  
<sup>56</sup>see references 4 thru 9 above.  
<sup>57</sup>*Companies Act, 1910*.  
<sup>58</sup>Australian Society and Institute of Chartered Accountants, (DS1.2, 1974).  
<sup>59</sup>Fitzgerald, pp. 80-82.  
<sup>60</sup>Australian Society and Institute of Chartered Accountants, (DS4, 1974).  
<sup>61</sup>Australian Society and Institute of Chartered Accountants, (DS4, 1976).  
<sup>62</sup>Gibson, (1976).  
<sup>63</sup>Australian Society and Institute of Chartered Accountants, (1976 and 1978).

#### BIBLIOGRAPHY

- Australia, Parliament, *Australian Securities Markets and their Regulation, Report from the Senate Select Committee on Securities and Exchange*, Government Publishing Service, Canberra, 1975.
- Australian Institute of Management, Sydney Division, *Report of the Panel of Adjudicators, Annual Report Award*, Sydney, 1961.
- Australian Society of Accountants, *Accounting Principles and Practices Discussed in Reports on Company Failures*, Melbourne, 1966.
- Australian Society of Accountants, "Editorial, Accountancy Research", *Australian Accountant*, Vol. 44, April, 1974, p. 139.
- Australian Society of Accountants, *History of the Australian Society of Accountants*, The Society, Melbourne, 1962.
- Australian Society of Accountants, "New Accountancy Research Structure Announced", *Australian Accountant*, Vol. 44, April, 1974, p. 178.
- Australian Society of Accountants, "Pronouncement of General Council, Conformity with Society Statements of Accounting Standards", *Australian Accountant*, Vol. 43, July, 1973, p. 341.
- Australian Society of Accountants and Institute of Chartered Accountants in Australia, "Revision of Statements on Accounting Practice and Issue of Statements of Accounting Standards", *Australian Accountant*, Vol. 43, September, 1973, p. 487 and *Chartered Accountant in Australia*, Vol. 44, September, 1973, p. 58.
- Australian Society of Accountants and Institute of Chartered Accountants in Australia, *Statement of Accounting Standard, DS1.2 Profit and Loss Statements*, Melbourne, Melbourne, 1974.
- Australian Society of Accountants and Institute of Chartered Accountants in Australia, *Statement of Accounting Standard, DS4 Accounting for Company Income Tax*, Melbourne, 1974 and revised 1976.
- Australian Society of Accountants and Institute of Chartered Accountants in Australia, *Statement of Provisional Accounting Standards, DPS1.1 "Current Cost Accounting"*, Melbourne, October, 1976 and amended August, 1978.
- Brooks, Collin (ed.). *The Royal Mail Case*, Butterworth, London, 1933.
- Burgess, E. G. "Letters to the Editor, Conformity with Institute Technical Statements", *Chartered Accountant in Australia*, Vol. 53, May, 1973, p. 35.
- Cannon, Michael. *The Land Boomers*, Melbourne University Press, Melbourne, 1966.
- Chambers, R. J. "Company Losses—Safeguarding the Investor", *Current Affairs Bulletin*, Vol. 34, October 12, 1964.
- England, Statutes, *Companies Act 1862, 25 & 26 Vic, C. 89*.

- Fitzgerald, A. A. "Items of an Abnormal Character", *Australian Accountant*, Vol. 14, March, 1944, pp. 80-82.
- Gibson, R. W. "Company Interim Reports", *Chartered Secretary*, Vol. 27, April-June, 1975, pp. 55-57.
- Gibson, R. W. *Disclosure by Australian Companies*, Melbourne University Press, Melbourne, 1971.
- Gibson, R. W. "Improvements in Company Interim Reports", *Australian Accountant*, Vol. 39, December, 1969, pp. 557-60.
- Gibson, R. W. "Survey of Company Interim Reports", *Australian Accountant*, Vol. 36, December, 1966, pp. 667-72.
- Gibson, R. W. "Survey of Company Interim Reports—Are They Substantially Satisfactory?", *Australian Accountant*, Vol. 36, March, 1966, pp. 133-36.
- Gibson, R. W. *The Uniformity Problem and the State of Australian Company Financial Reporting*, unpublished Ph.D. thesis, University of Cincinnati, 1976.
- Hilliard, J. M. "Letters to the Editor, Proposed Published Accounts Committee", *Chartered Accountant in Australia*, Vol. 42, July, 1971, p. 2.
- Institute of Chartered Accountants in Australia, "Accounting Principles: An Indispensable Committee", *Chartered Accountant in Australia*, Vol. 42, July, 1971, p. 2.
- Institute of Chartered Accountants in Australia, "Editorial, New Role for Accountancy Research Foundation", *Chartered Accountant in Australia*, Vol. 44, April, 1974, p. 3.
- Institute of Chartered Accountants in Australia, "The Institute's Accounting Principles Committee", *Chartered Accountant in Australia*, Vol. 42, July, 1971, p. 17.
- Institute of Chartered Accountants in Australia, "Institute News, Formation of Professional Standards Committee", *Chartered Accountant in Australia*, Vol. 40, March, 1970, p. 41.
- Institute of Chartered Accountants in Australia. *Recommendations on Accounting Principles*, Sydney, 1946, later redesignated *Statements on Accounting Principles and Recommendations on Accounting Practice*.
- Marcard, J. H. M. "A Note on Departures from Standards", *Accounting Education*, Vol. 17, November, 1977, p. 46.
- Munro, R. F. "Australian Associated Stock Exchanges: Compliance with Accounting Standards", *Australian Accountant*, Vol. 44, June, 1974, p. 263.
- New South Wales, Statutes. *Companies Act 1874*, Act No. 19, 1874.
- New South Wales, Statutes. *Companies Act 1936*, Act No. 33, 1936.
- New South Wales, Statutes. *Companies Act 1961*, Act No. 71, 1961.
- New South Wales, Statutes. *Companies (Amendment) Act 1964*, Act No. 20, 1964.
- New South Wales, Statutes. *Companies (Amendment) Act 1971*, Act No. 61, 1971.
- New South Wales Commissioner for Corporate Affairs, "Qualified Audit Reports, Statement by the NSW Commissioner for Corporate Affairs", *Chartered Accountant in Australia*, Vol. 43, December, 1972, p. 39.
- Parry, J. B. "Reorganization of the Australian Accounting Research Foundation", *Australian Accountant*, Vol. 48, May, 1978, p. 216.
- Queensland, Statutes. *Companies Act 1863*, Act No. 4, 1863.
- Queensland, Statutes. *Companies Act 1931*, Act No. 53, 1931.
- Queensland, Statutes. *Companies Act 1961*, Act No. 55, 1961.
- Queensland, Statutes. *Companies Act Amendment Act of 1964*, Act No. 10, 1964.
- Queensland, Statutes. *Companies Act Amendment Act 1961-71*, Act No. 8, 1971.
- South Australia, Statutes. *Companies Act 1864*, Act No. 13, 1864.
- South Australia, Statutes. *Companies Act 1934*, Act No. 2196.
- South Australia, Statutes. *Companies Act 1962*, Act No. 56, 1962.
- South Australia, Statutes. *Companies Act Amendment Act 1964*, Act No. 52, 1964.

- South Australia, Statutes. *Companies Act Amendment Act 1972*, Act No. 52, 1972.
- Tasmania, Statutes. *Companies Act 1920*, Act No. 66, 1920.
- Tasmania, Statutes. *Companies Act 1956*, Act No. 29, 1956.
- Tasmania, Statutes. *Companies Act 1966*, Act No. 28, 1966.
- Victoria, Parliament. *Minutes of the Proceedings of the Legislative Council, Report of the Select Committee of the Legislative Council on the Companies Act 1890 Further Amendment Bill, 1896.*
- Victoria, Parliament. *Parliamentary Debates.*
- Victoria, Statutes. *Companies Act 1896*, Act No. 1482.
- Victoria, Statutes. *Companies Act 1910*, Act No. 2293.
- Victoria, Statutes. *Companies Act 1938*, Act No. 4602.
- Victoria, Statutes. *Companies Act 1961*, Act No. 6839.
- Victoria, Statutes. *Companies Act 1971*, Act No. 8185.
- Victoria, Statutes. *Companies (Public Borrowings) Act, 1963*, Act No. 7089.
- Victoria, Statutes. *Companies Statute 1864*, Act No. 190.
- Western Australia, Statutes. *Companies Act 1893*, Act No. 8, 1893.
- Western Australia, Statutes. *Companies Act 1943*, Act No. 36, 1943.
- Western Australia, Statutes. *Companies Act Amendment Act 1964*, Act No. 69, 1964.
- Zeff, S. "Forging Accounting Principles in Australia", *Society Bulletin*, No. 14, March, 1973.

*Paul F. Anderson*  
VIRGINIA POLYTECHNIC INSTITUTE  
AND STATE UNIVERSITY

## **DISTRIBUTION COST ANALYSIS METHODOLOGIES, 1901-1941 \***

*Abstract:* The attempt to develop cost analysis methodologies for the marketing function began at the turn of the century. Early attempts followed the pattern of factory cost analysis and progress was slow until the break-through in the years 1940 - 1941.

### *The Pioneers*

The first 20 years in the development of the methodologies of distribution cost analysis were characterized by the attempts of cost accountants to apply the costing methods of the factory to the marketing function. The early development of the area was dominated by cost accountants, and the most natural approach for them to take was to employ the methods with which they were most familiar. While they recognized the inherent differences between the production and marketing functions, the pioneer writers in the field felt that the similarities were greater than the dissimilarities. As such, the early work in the area was little more than an application of the developing production costing methodologies to the problem of distribution cost accounting. The early writers were fully cognizant of the fact that they were exploring a new area, however, and there was much disagreement in the early years concerning the proper approaches to be used and the correct methodologies to employ. Indeed, it could be said that as of the end of the 1920s there was no "generally accepted" system of distribution cost accounting.

To see how the methods of distribution cost analysis evolved from production cost accounting, we must go back to the turn of the century. One of the earliest discussions of the subject is to be found in an article published by Alexander Hamilton Church in *The Engineering Magazine* in 1901.<sup>1</sup> The article is entitled "The Proper Distribution of Establishment Charges" and is the last in a

---

<sup>1</sup>Based on a paper of the same title presented at the 1978 Annual Meeting of the American Accounting Association and published in its *Collected Papers*.

series of six articles which Church wrote for the magazine on the subject of overhead allocation. The articles were later combined into a book entitled *The Proper Distribution of Expense Burden* which was published in 1908.<sup>2</sup>

Church includes both office and selling expenses in his definition of "establishment charges," but he appears to view their allocation with some reservation. As he points out, "A more or less arbitrary basis of incidence" must be used when apportioning selling costs among products.<sup>3</sup> His view of the marketing, or "selling" function as he calls it, is an example of the classic production orientation of the time. In comparing production costs with office and selling costs, he states:

There is no visible and tangible result connected with concrete things in the case of general charges. Nothing is produced. Expenditure may, in fact, lead to no result at all—nay, does often lead to pure loss of money and time. It is this vagueness of the general charges that forbids our regarding them as bed-rocks on which we can base deductions without further inquiry.<sup>4</sup>

Church's recommended method of distributing "general charges" is quite simple and straightforward. He first suggests that products be grouped into classes which "correspond as closely as possible to the differences in their commercial treatment."<sup>5</sup> Next, the various natural expense categories should be allocated to the product classes on some reasonable basis. He points out that "the element of judgement is very strongly involved in this analysis." However, he believes that there is no reason why "a very close approximation to the facts should not be made at this stage if the work is carried out by a competent person, who has access to all the data necessary for decision."<sup>6</sup> Unfortunately, he fails to provide the reader with any guidance as to possible bases of allocation. He merely offers an example and assumes that "a competent person" would be able to determine a rational justification for the percentage allocations employed.

While Church's approach is primitive by contemporary standards, it does contain the essence of what has come to be known as the "traditional approach" to cost-revenue analysis, that is, the allocation of marketing expenses to product groups using an allocation base which has been determined by careful study. Indeed, we can say that his methodology is a considerable improvement over previous approaches which, according to Church, simply averaged general charges over all products produced.

Eleven years after the publication of Church's article, George E. Frazer, an instructor in Business Administration at the University of Wisconsin, published an article in which the subject is treated with more sophistication.<sup>7</sup> His analysis is surprisingly insightful and presages many later developments in the field. For example, he comes very close to conceptualizing the costs of distribution in terms of the costs of performing distribution functions—which was later to become the most significant contribution of the Department of Commerce studies in the late 1920s. Frazer classifies the costs of distribution in terms of the various departments which exist in the "sales" organization. (The term marketing did not begin to appear in the distribution cost literature until the early 1920s.) Frazer identifies three major classifications:

1. The cost of selling,
2. The cost of storing, packing and delivery, and
3. The cost of collection.

He also identifies a large number of subcategories of each of the above and recommends that separate ledger accounts be employed for each of the elements of the cost of distribution.

In discussing the nature of the various distribution costs, Frazer indicates that he is very much aware of the carry-over effects of selling and advertising effort and the problems this creates for distribution cost accountants. On this subject he states:

. . . It must be taken into consideration that the salesman is employed not only to secure a particular order or orders, but also to constantly advance the good will of customers toward the house that he represents, so that his visits, whether resulting in immediate orders or not, may in the future result in business transactions.

The difficulty found in attempting to charge expenditures for advertising and salesmen directly to particular orders arises from the fact that neither advertising nor salesmanship is a process expended upon the sales order secured . . . . The direct casual relationship is between the advertisement or salesman and the buyer, and not between the advertisement or salesman and the goods sold.<sup>8</sup>

The problem of carry-over effects and their potential for distortion of profit and loss statements was one which perplexed the distribution cost writers for some time.

Frazer suggests a number of different bases for the actual allocation of distribution costs. In the case of selling costs (which includes the cost of advertising), he recommends the use of what he calls the "actual price realized" method. This is nothing more than the development of an application rate by dividing total selling costs for the period by total net revenue for the same period. This percentage would then be multiplied by the net revenue of each individual order to determine the selling cost content of the order. The method is analogous to that used in production cost accounting where factory overhead is apportioned to products on the basis of some variable item such as direct labor hours. In this case the variable item being employed is net revenue.

Frazer's reason for recommending such a simplistic method is a function of his concern over the previously mentioned carry-over effects of selling and advertising expenditures. It is his belief that "No records can be devised . . . that will show advertising and salesmanship as processes expended upon particular sales orders in the same way that stock requisitions and labor tickets show materials and labor respectively to have been expended upon production orders."<sup>9</sup>

Herein lies the crux of the problem which arose when production cost accountants began to concern themselves with distribution cost accounting. The cost accountants were familiar with "tangible" production processes. In the plant the costs of labor, materials, and overhead have a very close relationship to the product produced. It is quite a simple process to allocate the weekly expense of a worker to the products he produces in that week. It is quite another thing to allocate the weekly expenses of a salesman to the orders he writes in that same week. The cost accountants, in their attempts to apply production costing techniques to distribution, found it very difficult to reconcile themselves to the inherent differences in the two functional areas. This led to a good deal of debate in the 1920s and 1930s over the best means for handling the costs of distribution.

In the case of the indirect costs of storing, packing, and delivery, Frazer suggests a method very similar to that employed for selling costs. However, he believes that the direct expenses of this department are chargeable to individual orders. As for the costs of collection, Frazer believes that many of the costs in this department are direct charges to particular orders (e.g., credit information costs, legal expense, etc.) and can be determined from a check of the department's records. He suggests that indirect collection costs may be apportioned on the basis of net sales revenue per order.



### ***The National Association of Cost Accountants***

One of the most important developments in the history of distribution cost analysis was the continuing interest of the National Association of Cost Accountants—now the National Association of Accountants. Throughout the 1920s and 1930s the NACA provided a forum for the discussion of developments in distribution cost analysis. Through the presentation of papers at its annual meetings and the publication of articles in its official journal, the *NACA Bulletin*, the association did much to stimulate interest in distribution costing.

The NACA's interest dates from 1922. In that year four members of the association presented papers at the group's annual convention on the subject of sales and administrative costs. The four papers which were presented are evidence of the embryonic state of the art at this time. All four take a different approach to the subject, and each author tends to stress a different point which he considers to be the most important issue in the field.

For example, William Basset, a member of a New York City accounting firm, believes that the most important use of distribution cost data is in the control of salesmen and sales managers.<sup>10</sup> It is his belief that salesmen spend far too much time and effort trying to obtain orders from marginal accounts which are frequently unprofitable. Basset believes that control of salesmen can be achieved through a two-part allocation of selling costs—one allocation to salesmen and one to customers. He states that the common practice of allocating selling expense to orders on the basis of an expense-revenue ratio (Frazer's method) fails to account for the differences in the cost of selling to various types of customers. (Basset estimated that 95 percent of the firms represented at the 1922 convention used this ratio method.)

Basset's method for controlling individual salesmen consists of comparing each salesman's cost per call against a standard cost per call figure. This marks the first time that standard costs have been suggested for use in the distribution costing literature. It is interesting to note that as late as 1941 Donald R. Longman pointed to the use of actual rather than standard costs as "the most important of all criticisms of current methods of [distribution] cost analysis."<sup>11</sup>

Basset's approach to customer profitability involves the construction of a customer profit and loss analysis. In developing the P & L statement, he charges each customer with a standard cost per call multiplied by the actual number of sales calls made on the customer.

Other direct selling expenses are charged directly to the customer, i.e., display advertising, newspaper advertising, billing costs, and the cost of goods sold. In this way each customer's profit or loss can be determined. Basset suggests that these data may be used to determine which customers should be abandoned and which customers should be cultivated further because of their unfavorable or favorable expense-to-revenue ratios.

Another approach to distribution cost analysis was taken by William Castenholz.<sup>12</sup> His main concern is the problem of the carry-over effects of selling and advertising effort. It is his contention that carry-over effects distort the monthly profit and loss figures in that "there is absolutely no relationship, as a rule, between the things shipped and the actual expenses of selling during a particular month."<sup>13</sup> His solution to this problem is to apply the same methods used in production cost accounting to the distribution function. He recommends that when marketing costs are incurred, they should be charged to an account entitled "Deferred Marketing Costs." These expenses will then be charged out of this account on the basis of a "per unit loading rate" when goods are actually shipped to the customer. With this approach, any over- or under-absorbed marketing expense at the end of the year is simply treated as a favorable or unfavorable variance.

The two other papers presented at the 1922 convention deserve at least passing notice because they serve to illustrate the wide range of approaches taken during the early development of distribution cost methodologies. James A. Reilly, an accountant with the American Writing Paper Company, presents an approach which seeks to include the cost of selling in the factory overhead rate.<sup>14</sup> Specifically, he suggests the inclusion of selling costs in the rate applied to direct machine hours. In this way the firm will be able to employ "the same method of accounting throughout the entire accounting system."<sup>15</sup> Reilly believes that it is impractical to allocate selling costs to sales districts or commodities since expenditures for particular districts or products invariably benefit other sales territories and commodities.

The final paper presented at the convention is significant because it appears to be the first suggestion that a return on investment analysis should be performed on product lines. Mr. R. H. Gregory, the comptroller of the Western Electric Company, strongly recommends the use of return on investment figures for product lines.<sup>16</sup> The major problem with such an approach is that an ROI calculation by product requires not only an allocation of costs but also a

detailed allocation of assets to each product category. Gregory suggests that careful analysis of the accounting records will reveal reasonable bases upon which assets may be assigned to product lines. However, we find here, as in the allocation of marketing costs, that it is often difficult to identify rational bases of allocation.

Throughout the 1920s and on into the 1930s the interest in distribution cost accounting on the part of the NACA continued. The two publications of the association, the *NACA Yearbook* and the *NACA Bulletin*, carried many articles on the subject during this time period.\* However, little that was new in terms of techniques or methodologies was added by the majority of these articles. Many were how-to-do-it approaches which simply described a particular method currently being used in a specific firm or industry.

### *The Department of Commerce Studies*

During the 1930s, distribution cost analysis took a new direction as a result of the pioneering work by the Department of Commerce. Beginning in 1927, the Department's Bureau of Foreign and Domestic Commerce launched a study designed to improve the current methods of distribution cost analysis.<sup>17</sup> One of the participants in the project was Wroe Alderson, who was on the staff of the Department of Commerce from 1925 to 1934.<sup>18</sup> Alderson was largely responsible for the development of what has come to be known as the traditional approach to distribution cost analysis.\*\* The work of Alderson and the Department of Commerce group is clearly the most important single contribution to the development of the field in the pre-1940 period. With only minor modifications, the basic approach developed by the Commerce Department is contained in many contemporary marketing and accounting textbooks.\*\*\*

The Department began its study by carefully analyzing the profit and loss statements of a large number of firms in the wholesale and retail trade in an attempt to determine the relationship between the various distribution expense items and the firms' products and customers.<sup>19</sup> However, it was soon determined that it was necessary to use very arbitrary bases to allocate natural expense accounts to

\*For a bibliography, see, Longman, pp. 259-68.

\*\*See, for example, Alderson and Miller; Millard and Alderson; and Alderson and Haag. Apparently, the original idea for the methodology developed from a wholesale hardware firm which implemented a similar technique as early as 1918. See, Millard, p. 4.

\*\*\*See, for example, Kotler, pp. 457-62; McCarthy, pp. 640-49; Stanton, pp. 548-51; Rayburn, pp. 98-125; Neuner and Deakin, pp. 499-521; Shillinglaw, pp. 396-419; Matz and Usry, pp. 704-16.

products and customers. As a result, attention was directed to the process by which the various costs were accumulated, and it was discovered that the costs of performing certain distribution activities tended to vary directly with the various types of products sold and customers served. These activities were grouped into "functions" on the basis of the degree of similarity of the cost variation with product and customer types. For example, Alderson, in an early study published by the Department, identifies three basic functions which are useful for cost allocation:<sup>20</sup>

1. Establishment or Maintenance—effort expended on commodities without reference to particular customers.
2. Contact—effort expended on customers without reference to particular commodities.
3. Movement—effort of assigning particular commodities to particular customers and therefore having direct reference to both.

Each of the three basic functions is associated with two major types of costs:

1. Establishment or Maintenance
  - a. Investment cost—interest on merchandise owned, plus similar financial charges involved in carrying merchandise.
  - b. Storage costs—the rent of warehouse and similar costs of maintaining the space required by inventory.
2. Contact
  - a. Promotion costs—including all costs which partake of the nature of institutional advertising, covering in some instances costs not usually so classified such as a portion of sales effort and the prestige value of site.
  - b. Reimbursement cost—including all effort involved in obtaining reimbursement for goods sold, whether a cash or credit system is followed.
3. Movement
  - a. Handling cost—including all physical labor of getting the commodity to the customer and other costs arising directly in facilitating this flow of goods.
  - b. Checking cost—including all phases of clerical and routine selling activity that are involved in determining what the customer wants and making sure that the order is filled.<sup>21</sup>

Once the various functional cost groups have been determined, the next step is to allocate the natural expense accounts contained in the general ledger to the functional groupings. The table on the following page is one which was used by Alderson to illustrate this process. Alderson states that in using this form "the accountant considers each of the customary expense items separately, dividing the total amount of each item into the parts that apply to the several functions and entering each amount so obtained in the appropriate column."<sup>22</sup> Some of the allocations can be made on a fairly rational basis. Wages and salaries, for example, can be allocated by determining each employee's total wage cost and allocating it to the function in which the employee is engaged. On the other hand, some expense items, taxes and insurance for example, may require somewhat arbitrary bases of allocation. In Alderson's view, "The selection of arbitrary factors calls for intimate knowledge of the business and a nicely balanced judgement."<sup>23</sup>

Once the ledger accounts are fully allocated to functional groupings, the next step is to allocate the functional totals to product or customer classes. Here we can see the real contribution of the Commerce Department approach. It is clear that costs which are classified by functions are easier to allocate than costs which are classified in natural accounts. For example, it is quite obvious that a reasonable basis for the allocation of the storage costs of a firm is the space occupied by each product class. It would be much more difficult to find appropriate allocation bases for all of the components of the storage function if they were classified in their natural groupings. The key to this step of the analysis is the identification of "appropriate units of measurement for the sort of work performed in the process of carrying on each activity."<sup>24</sup> These units of measurement may then serve as bases of allocation.

Throughout the 1930s and 1940s the Commerce Department continued to publish distribution cost studies.\* Although these studies expanded upon the original work which was done in the late twenties, the basic methodology remained the same. The Department's studies became the most widely known and influential studies in the distribution cost area. The essence of the Aldersonian approach, the two-step allocation to functions and then to products or customers, became the model for many future studies in the field. From an historical standpoint, the significant contribution of these studies was that they clearly showed that the straight applica-

---

\*For a bibliography, see Sevin, pp. 55-56.

Natural Account Allocation		FUNCTIONAL-COST GROUPS									
		Totals	Storage	Inven- tory In- vestment	Physical Handling	Order Routine	Promo- tional Selling	Adver- tising	Credit Routine	Collec- tions	
Salaries and wages	27,100	2,000	—	5,000	3000	10,100	2000	2000	3,000		
Interest	700	70	600	20	5	—	—	5	—		
Rent	5,700	4,500	—	200	200	200	200	200	200		
Delivery	19,500	—	—	19,500	—	—	—	—	—		
Sales expense	28,200	—	—	—	2000	22,600	3600	—	—		
Insurance	1,500	1,200	—	150	20	100	—	10	20		
Taxes	3,000	2,000	200	600	20	120	10	10	40		
Office supplies, postage, etc.	3,400	600	—	400	1000	400	400	500	100		
Depreciation	700	400	—	200	5	75	—	5	15		
Bad debts	5,700	—	—	—	—	—	—	—	5,700		
Heat, light, etc.	1,400	800	—	200	200	25	25	125	25		
Telephone, telegraph	300	—	—	50	100	100	25	—	25		
Collections	1,500	—	—	—	—	—	—	—	1,500		
Miscellaneous	1,300	100	—	200	200	200	200	200	200		
<b>Totals</b>	<b>100,000</b>	<b>11,670</b>	<b>800</b>	<b>26,520</b>	<b>6750</b>	<b>33,920</b>	<b>6460</b>	<b>3055</b>	<b>10,825</b>		

Table 1: Source — R. S. Alexander, Frank M. Surface, Robert F. Elder and Wroe Alderson, *Marketing* (New York: Ginn & Co., 1940), p. 576.

tion of production cost accounting techniques was inappropriate in the marketing area.

### **Pre-War Landmarks**

In the years 1940 and 1941, three books were published which were landmarks in the development of distribution cost analysis. The first, published in 1940, was J. Brooks Heckert's *The Analysis and Control of Distribution Costs*.<sup>25</sup> Later editions of *Distribution Costs* with Robert B. Miner as co-author became classics in the field of distribution cost accounting.<sup>26</sup>

Also in 1940, Alexander, Surface, Elder, and Alderson published their book entitled *Marketing*.<sup>27</sup> The significance of this book is that it is the first marketing textbook to contain a detailed description of the traditional approach. Chapter 23, which was written by Alderson, gives a detailed outline of the Commerce Department approach.

The third important work to be published at this time was Donald R. Longman's *Distribution Cost Analysis*.<sup>28</sup> As with Heckert's book, later editions of *Practical Distribution Cost Analysis* with Michael Schiff became classics.<sup>29</sup> Both Longman's and Heckert's work were standard reference books in the area for many years. Together they are probably the best examples of the traditional approach to distribution cost analysis. This is true despite the fact that Longman's book is something of a reaction against many of the methods employed in the traditional approach. However, Longman's criticisms of the traditionalists do not reflect fundamental conceptual differences. He is more concerned with improving certain aspects of contemporary cost analysis methods rather than attempting to develop an entirely new approach.

Longman's main contribution was to identify and attempt to correct some of the problem areas in the field. Heckert, on the other hand, was more important as a popularizer of the traditional methodologies. Heckert's work was essentially a how-to-do-it approach to distribution costing. Little in his book was new, but it was well written and very easy to understand. One could easily use Heckert's book as a guide to implementing a distribution costing system.

Finally, the field of distribution cost accounting owes a great deal to Wroe Alderson. Alderson, of course, was primarily responsible for the development of the traditional approach. In addition, his role is significant because he helped make the marketing and accounting professions aware of the nature and importance of distribution cost analysis. Alderson was convinced that accurate distribution

cost data were important tools for marketing decision making. He believed that their proper role was that of a supplement to "managerial judgement." As he stated in 1940, distribution cost analysis "must remain in its proper sphere—that of affording a factual background against which that judgement can be exercised intelligently. It will pay rich dividends to the business whose executives use it consistently in this manner."<sup>30</sup>

#### FOOTNOTES

- <sup>1</sup>Church, 1901, pp. 367-76.
- <sup>2</sup>Church, 1908.
- <sup>3</sup>Church, 1908, p. 100.
- <sup>4</sup>Church, 1908, pp. 111-12.
- <sup>5</sup>Church, 1908, p. 106.
- <sup>6</sup>Church, 1908, p. 108.
- <sup>7</sup>Frazer, pp. 25-43.
- <sup>8</sup>Frazer, p. 31.
- <sup>9</sup>Frazer, pp. 31-32.
- <sup>10</sup>Basset, pp. 103-15.
- <sup>11</sup>Longman, p. 65.
- <sup>12</sup>Castenholz, pp. 127-40.
- <sup>13</sup>Castenholz, p. 127.
- <sup>14</sup>Reilly, pp. 143-50.
- <sup>15</sup>Reilly, p. 147.
- <sup>16</sup>Gregory, pp. 116-26.
- <sup>17</sup>Alexander, et al., p. 573 and Millard.
- <sup>18</sup>Smith, p. 64.
- <sup>19</sup>Longman, p. 50.
- <sup>20</sup>Millard and Alderson, pp. 40-49.
- <sup>21</sup>Paton, p. 1335.
- <sup>22</sup>Alexander, et al., p. 571.
- <sup>23</sup>Alexander, et al., pp. 572-73.
- <sup>24</sup>Alexander, et al., p. 576.
- <sup>25</sup>Heckert, 1940.
- <sup>26</sup>Heckert and Miner, 1953.
- <sup>27</sup>Alexander et al.
- <sup>28</sup>Longman, 1941.
- <sup>29</sup>Longman and Schiff, 1955.
- <sup>30</sup>Alexander et al., p. 593.

#### BIBLIOGRAPHY

1. Alderson, Wroe and Frederick Haag, Jr., *Problems of Wholesale Electrical Goods Distribution*, U.S. Department of Commerce, Washington, D.C., 1931.
2. Alderson, Wroe and Nelson A. Miller, *Problems of Wholesale Dry Goods Distribution*, U.S. Department of Commerce, Washington, D.C., 1930.
3. Alexander, R. S., et al., *Marketing*, Ginn and Co., New York, 1940, pp. 569-93.
4. Anderson, Paul F., "The Development of Distribution Cost Analysis Methodologies, 1901-1941," in *Collected Papers of the American Accounting Associa-*



- tion's Annual Meeting, American Accounting Association, Sarasota, FL, 1978, pp. 505-30.
5. Basset, William R., "Sales and Administrative Costs," *NACA Yearbook*, National Association of Cost Accountants, New York, 1922, pp. 103-15.
  6. Castenholz, William B., "The Application of Selling and Administrative Expense to Product," *NACA Yearbook*, National Association of Cost Accountants, New York, 1922, pp. 127-40.
  7. Church, A. Hamilton, *The Proper Distribution of Expense Burden*, The Engineering Magazine, New York, 1908.
  8. Church, A. Hamilton, "The Proper Distribution of Establishment Charges," *The Engineering Magazine*, December, 1901, pp. 367-76.
  9. Frazer, George E., "The Pro-rating of Distribution Expense to Sales Orders," *Journal of Accountancy*, January, 1912, pp. 25-43.
  10. Gregory, R. H., "Cost of Distribution," *NACA Yearbook*, National Association of Cost Accountants, New York, 1922, pp. 116-26.
  11. Heckert, J. Brooks, *The Analysis and Control of Distribution Costs*, The Ronald Press Co., New York, 1940.
  12. Heckert, J. Brooks and Robert B. Miner, *Distribution Costs*, The Ronald Press Co., New York, 1953.
  13. Kotler, Phillip, *Marketing Management*, 3rd ed., Prentice-Hall, Englewood Cliffs, NJ, 1976.
  14. Longman, Donald R., *Distribution Cost Analysis*, Harper and Brothers, New York, 1941.
  15. Longman, Donald R. and Michael Schiff, *Practical Distribution Cost Analysis*, Richard D. Irwin, Homewood, IL, 1955.
  16. Matz, Adolph and Milton F. Usry, *Cost Accounting*, 6th ed., South-Western Publishing Co., Cincinnati, OH, 1976.
  17. McCarthy, E. Jerome, *Basic Marketing*, 6th ed. Richard D. Irwin, Homewood, IL, 1978.
  18. Millard, J. W., *Analyzing Wholesale Distribution Costs*, U.S. Department of Commerce, Washington, D.C., 1928.
  19. Millard, J. W. and Wroe Alderson, *Costs, Markets and Methods in Grocery Retailing*, U.S. Department of Commerce, Washington, D.C., 1931.
  20. Neuner, John J. W. and Edward B. Deakin, III, *Cost Accounting*, Richard D. Irwin, Homewood, IL, 1977.
  21. Paton, W. A., et., *Accountants Handbook*, 2nd ed., The Ronald Press Company, New York, 1934.
  22. Rayburn, Gayle L., *Financial Tools for Marketing Administration*, AMACOM New York, 1976.
  23. Reilly, James A., "Sales and Administrative Costs," *NACA Yearbook*, National Association of Cost Accountants, New York, 1922, pp. 143-50.
  24. Sevin, Charles H., *Distribution Cost Analysis*, Economic Series No. 50, U.S. Department of Commerce, U.S. Government Printing Office, Washington, D.C., 1946.
  25. Shillinglaw, Gordon, *Managerial Cost Accounting*, 4th ed., Richard D. Irwin, Homewood, IL, 1977.
  26. Smith, Wendell R., "Leaders in Marketing—Wroe Alderson," *Journal of Marketing*, January, 1966, p. 64.
  27. Stanton, William J., *Fundamentals of Marketing*, 5th ed., McGraw-Hill Book Company, New York, 1978.

*Akira Nakanishi*  
CUO UNIVERSITY

## ON THE LIFE OF LUCA PACIOLI

**Abstract:** Many aspects of Luca Pacioli's life remain to be clarified for us. The author has, through personal research, thrown light on Pacioli's last resting place and his date of death.

Luca Pacioli is famous among accountants as the "Patriarch of Accounting". The career of this internationally known monk has been the subject of intensive research by many scholars. Yet, there are still aspects of his unique life in the golden age of the Renaissance to be clarified. Among these are the date and place of his death and his final resting place.

### *Date of Death*

Recently the editor of the *Journal of Accountancy* wrote "Pacioli, an Italian mathematician who is considered the 'Father of the Balance Sheet,' lived from about 1445 to 1520".<sup>1</sup> But it is now widely held in his own country that he passed away in 1517. A new publication by the headquarters of the Franciscan Conventuali Order lists his name as a famous deceased member: "*il matematico Luca Pacioli da Sansepolcro (1517)*".<sup>2</sup> This dating of his death is probably a result of the scientific investigations of Don Ivano Ricci, which resulted in the book, *Fra Luca Pacioli - L'uomo e l'Scienziato* published at Sansepolcro in 1940.

In researching old documents in the archives of Sansepolcro, Don I. Ricci, the late chief librarian there, found two significant letters from the Convento di S. Francesco (Monastery of St. Francis) of that city. The first, dated April 15, 1517, was addressed to members attending the annual meeting of the Franciscan Order at Assisi and states: "We, all the friars, do justly hope to have Master Luca Pacioli elected as the Provincial Minister of Assisi, as he is so virtuous, duly aged and respected by the people of this district. . . ." The second, dated October 20, 1517 and addressed to their provincial minister requests a pardon for the violence of two friars who were the nephews of Luca Pacioli, using the expression "*la bona memoria di m<sup>o</sup>. Luca* (in the good memory of the late Master

Luca)". Therefore, Ricci concluded that the great mathematician must have died in 1517, sometime between those two dates.<sup>3</sup>

Hoping to be able to ascertain the exact date of Pacioli's death, the author and some comrades visited Italy in 1972 and 1973. Kindly accompanied by an Italian priest, they visited the Conventuali monasteries at Sansepolcro, Perugia, Urbino and Firenze (Florence), one of which may have been the last sojourn of Luca Pacioli. They did not find his mausoleum which was specified in his wills of November 9, 1508 and December 21, 1511.<sup>4</sup> Later, P. F. Taniguchi, who had translated Ricci's book into Japanese, advised the author that Pacioli's name must have been traditionally recorded with his date of death in the *necrologium* (necrology) of the monastery to which he belonged. Fra Luca Pacioli belonged to the Franciscan monastery at Sansepolcro, but in 1505 he changed to that at Firenze, Convento di Santa Croce, the largest monastery in the state of Tuscany. Last Autumn the author did revisit the famous cathedral and examine its records with the special permission of authorities.

Upon entering the Cloister of Santa Croce, on October 17, 1978, I was guided by Guard (Abbot) Mario Franchi, to one of the quiet rooms, where a large book lay open on a desk. This mild priest did immediately place his finger on an open page at the notation:

1517, S. Sepolcro — P. M. Luca Pacioli, per primo dette all'algebra linguaggio e struttura di scienza, dettò opere di matematica, consultato, da Leonardo da Vinci, morì forse in patria a 70 anni. (1517, Sansepolcro—Father & Master Luca Pacioli, who was the first man in illustrating and systematizing the algebra, who wrote books on mathematics and who was consulted by Leonardo da Vinci, died perhaps in his native place at seventy years of age.)

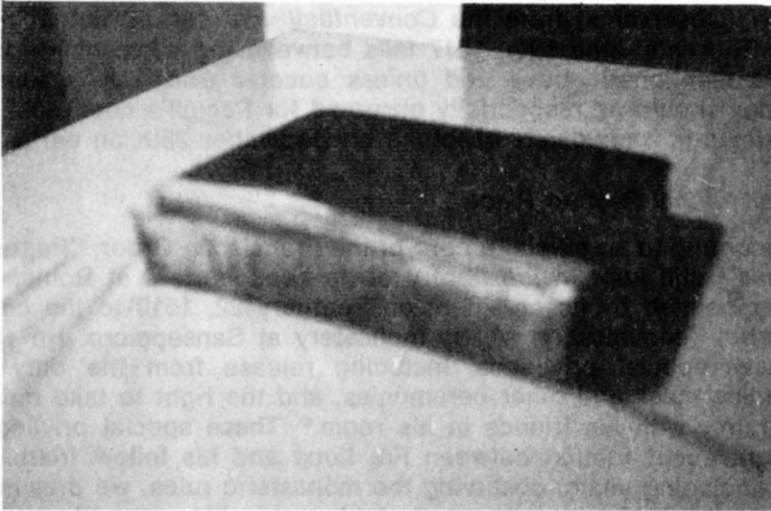
These Italian words were typed on a separate fragment of paper and attached to page 171 of the book. The Franciscan monk stated that this sentence had been prepared by Fra Tarcisio della Rovere and inserted several years ago. It is to be regretted that the exact date of the recording is not certain and could not be verified, because that scholarly friar died in 1976 in that monastery. The present abbot explained that before this new insertion there had been recorded on an earlier page: "S. Sepolcro—P.M. Luca Pacioli" without the year or other particulars.

On the title page of this book appears:

*"Necrologium — Almae Provinciae Thucciae — Fratrum Minorum Conventualium — Jussu adm. P. T. M. Julii*

Baglioni — *Ministri Provincialis — editum.*” (The List of the Deceased — (in) the Prosperous Province of Tuscany — (among) the Brothers of Franciscan Conventuali — Issued under the supervision of P. T. M. Julii Baglioni — Provincial Minister — the editor.) On the back cover, which is rather soiled and a bit torn, there appeared the following Latin title:

“*Die undevicesima Junii defun.*” (died on June 19th)



**The necrologium of June 19th at the Monastery of Santa Croce**

The monk acting as our guide explained that the present *necrologium* had been prepared by the late provincial minister, J. Baglioni in 1930-1931. Its contents has been taken primarily from a prior *necrologium*. It can, therefore, be presumed that the name of Luca Pacioli had been in the *necrologium* of the monastery for hundreds of years, but there is no actual supporting evidence. The compiler of the present *necrologium* died in 1945 and all older documents were destroyed in the cellar of the monastery by the inundation of the River Arno in 1966.

It is the custom of the big monastery to prepare a separate *necrologium* for each day of the year in memory of the friars of that monastery who died that day over the years since its founding. Every

year for a long period, perhaps through the centuries, a sacred mass has been held on the morning of June 19 in memory of Luca Pacioli and other friars who died on the same day. His name has also been chanted on June 18 in the cloister in its eve after their late dinner.

Reasonable presumption would permit us to accept June 19th as the day of Pacioli's death. This date is not a particular memorial day for his clerical order, for his famous patrons nor for his guardian saint. The failure of earlier records to indicate the year may have been due to the unsettled conditions of the year 1517. In the Franciscan Order, the fierce movement of separation of the *Minori* (Observants) from the *Conventuali* was carried out in that year. The date June 19th, 1517 falls between the dates of the two letters mentioned above and unless counter evidence is found, this day should be respectfully observed for Pacioli's death just as Christmas is traditionally observed on December 25th on earth.

#### *Pacioli's Final Resting Place*

According to an official record of the Franciscan Order, "*Regesta Ordinis*", still kept in the library of its headquarters at Rome, he was appointed by its president on February 22, 1510 to the *commissarius* (commissary) of the monastery at Sansepolcro. He was to have special privileges, including release from the duty of attending mass and other ceremonies, and the right to take meals separately with his friends in his room.<sup>5</sup> These special privileges brought about friction between Fra Luca and his fellow friars. In his concluding years, observing the monastic rules, we presume, the old theologian was to comfortably enjoy his quiet life in the cloister at his native town.

It is certain that Pacioli lived in the monastery at Sansepolcro for more than one year before his death. He had been temporarily appointed professor of mathematics at the pontifical university at Rome in 1514, but appears to have retired to Sansepolcro in the next year. There is no record yet discovered of Pacioli's having lived at any other city after the year 1515. A minute of the Comune (city) Sansepolcro dated March 14, 1516 states: "*Rev.dus pater sacre theologiae M<sup>o</sup>. Lucas Pacioli*" was living *se concordaverunt et pacificaverunt*" (harmoniously and peacefully) with his fellow friars, having given up his "*privilegiis apostolicis*".<sup>6</sup>

According to his testament, he wished to be buried in the church of the monastery where he will have died. In the evening of his life, he may have visited nearby monasteries such as Santa Croce, but our investigations have not found any evidence of his dying at

these monasteries. Only at Sansepolcro, by the Franciscan monk, P. Ugo Renzi, was it asserted that the body of Luca Pacioli is traditionally believed to have been buried under the altar of the chapel of that monastery. Old documents that might attest to this fact were lost during the invasion of the Napoleonic armies. However, we did not find, in the precinct of the monastery, the tomb that Pacioli provided for in his wills. Pope Julius II in 1508 had given him permission to possess his own property and he apparently had the means to endow a memorial.<sup>8</sup> Some leading citizens of Sansepolcro insisted that his body will be found with his memorial *pergamena* under the altar of *Chiesa di S. Giovanni* (Church of St. John), where his parents and ancestors were buried. This ancient church, built in 1331 and situated at the north-east section in the rampart, is now used as a warehouse under the administration of *Comune Sansepolcro*.

Still another question is raised by the last phrase of the Italian inscribed in the *necrologium* above mentioned: "*mori* (he died) *forse* (perhaps) *in patria* (at his native place) *a 70 anni* (when 70 years old)". If he was 70 years old at his death in 1517, he would have been born in 1447. But, according to the research of Professor R. E. Taylor, "the year 1445 is accepted as the correct date of Pacioli's birth".<sup>9</sup> This Taylor's book is well respected in Italy, too, but that scholarly monk of Santa Croce gave no explanation of his conclusion regarding Pacioli's birth date. It is to be hoped that in the future additional evidence will be discovered to settle this question.

### *Pacioli's Priesthood*

When he entered into holy orders is another question that was investigated. It is well established that Pacioli began his career as a lecturer in mathematics at the University of Perugia in 1475. In those days, this newly accepted subject was a branch of theology at the university under the Pope's administration and its teachers had to be members of the priesthood. It has traditionally taken at least three years for any novice to be ordained a Franciscan priest regardless of how well qualified he may be in his subject. Thus, Luca Pacioli must have taken the vow to become a monk in 1472, the year his great patron, Leon Battista Alberti, died in April at Rome.

Professor Taylor did well point out that the images of Luca Pacioli can be recognized among the figures painted by Piero della Francesca, the instructor of Luca Pacioli at Sansepolcro. In

the picture "Madonna and Child, with Angels and Saints" at Brera, Milano (Milan), Pacioli appeared in the black habit of a Franciscan friar. As a reasonable assumption from the models of Madonna and Child, Taylor states that "the year (that the great artist began to paint) must have been 1472".<sup>10</sup>

Pacioli's religious training undoubtedly influenced his life and is observable in his published works. Although his lectures on mathematics were well received in colleges, public halls, the royal courts, and even in churches, he regarded himself as "*sacre theologie humilis professor*" (a humble teacher of sacred theology).<sup>11</sup> In his published books, he took pains to demonstrate techniques useful for the "eternal prosperity", but he did not ignore the religious side of life. In his *Summa*, he prefaced the accounting records with "*al nome de dio*" (in the name of the Lord). Also in the trial balance, where the amount of "Per" (debit) equals the amount of "A" (credit), he writes, "*a sui laude et gloria*" (for the praise and glory of God).<sup>12</sup> This pious mediator seems to have intended the realization of "*divine proportione*" (the divine proportion) through "the most certainty", i.e. mathematics.

Last year, for my published essays in Japanese on Luca Pacioli, I had the honor of receiving the academic award of 1978 from the city authorities of Sansepolcro. The award is made to those who contribute to the recognition of the cultural heritage of the city. After being cordially welcomed in its commendation ceremony at this peaceful town on October 12, I was told by *Il Sindaco* (the mayor), Ivano Del Furia, the Chief Librarian, Dr. F. Comanducci and other officials that their citizens cherish the desire to have an international meeting of accountants in Sansepolcro, the birth place and last resting place of Luca Pacioli.

#### FOOTNOTES

<sup>1</sup>J. of A., December 1977, p. 74.

<sup>2</sup>Fonzo, etc., p. 70.

<sup>3</sup>Ricci, pp. 23-24.

<sup>4</sup>Ricci, pp. 45-52.

<sup>5</sup>The original *Regesta Ordinis* states:

1510, 22 Febr.: Reverendus Magister Lucas de Burgo instituitur Commissarius sui conventus, cum facultate eadem quam ipse Minister si personaliter adesset, in beneficium dicti conventus et fratrum salutem, et in illis casibus in quibus auctoritas Misistri esset opportuna et omnia alia facienda quae ad vitiorum expiationem et ad perfectum vivendi statum ei videbitur opportunum, inhibendo omnibus inferioribus ut eum non cogant ad sequelam chori vel refectorii, hebdomariam in choro aut missas decantandas, imo ei conceditur

*quod possit comedere in camera una cum suo socio quotiens sibi placuerit.  
Mandatur fratribus ut ei in dicta Commissione obediant.*

<sup>6</sup>Ricci, p. 23.

<sup>7</sup>Ricci, p. 50.

<sup>8</sup>Ricci, p. 45.

<sup>9</sup>Taylor, p. 9.

<sup>10</sup>Taylor, p. 119.

<sup>11</sup>Ricci, p. 45, p. 50.

<sup>12</sup>Pacioli, 11. 198-210.

#### BIBLIOGRAPHY

Fonzo, L. D., G. Odoardi and A. Pompei, ed. *I Frati Conventuali — Storia e Vita 1209 - 1976*, Roma, Curia Generalizia, O. F. M. Conv., 1978.

Littleton, A. C. *Accounting Evolution to 1900*, New York, Russel & Russel, 1933, 1936.

Pacioli, Luca. *SUMMA DE ARITHMETICA GEOMETRIA PROPORTIONI ET PROPORTIONALITA*, Venezia, 1494.

Ricci, Ivano. *Fra Luca Pacioli — L'uomo e lo Scienziato*, Sansepolcro, Boncompagni, 1940.

Taylor, R. Emmet. *No Royal Road — Luca Pacioli and His Times*, University of North Carolina Press, 1942.



**Thomas E. McKee**  
EAST TENNESSEE STATE UNIVERSITY

## **AN 1870 CORPORATE AUDIT COMMITTEE**

**Abstract:** Board of directors' audit committees are becoming an increasingly popular vehicle for enhancing the objectivity and independence of auditors and overseeing the financial information generating process. This is occurring at a time when directors and auditors are facing criticism and increased litigation due to corporate failures and disclosures of illegal or questionable payments.

This article examines the workings of a corporate audit committee that operated in the mid-nineteenth century. The committee functioned as "auditor" for the company since there was no established public accounting profession in the U.S. at that time. They disentangled the financial affairs of the company and probably directly contributed to the replacement of the President of the company. Although the activities of corporate audit committees have changed or evolved considerably through the years, both the 1870 corporate audit committee and modern corporate audit committees have pursued a common goal of achieving accuracy and completeness in corporate financial reports.

The establishment of corporate audit committees has become increasingly popular in recent years. Both the Securities and Exchange Commission and the American Institute of Certified Public Accountants have recommended that all public companies establish audit committees. They are currently required for all New York Stock Exchange Companies.<sup>1</sup>

The books and records of the East Tennessee and Western North Carolina Railroad Company (ET&WNCRR) located at corporate headquarters in Johnson City, Tennessee provided the data for this article. These records disclose the existence of an historical predecessor to modern corporate audit committees that functioned over a century ago. On February 28, 1870, shareholders of the ET&WNCRR appointed a special committee to ". . . inspect the accounts of the offices of the Board of Directors of the company and report at the next meeting." The "offices" referred to in the previous resolution were the offices of the company President and Secretary-Treasurer. This may be one of the earliest documented instances in the United States of an audit committee reporting to the board of directors of a corporation.

### **BACKGROUND AND ORGANIZATION OF THE COMPANY**

The ET&WNCRR was incorporated under an Act of the Tennessee Legislature passed May 24, 1866, ". . .for the purpose of construct-

ing a railroad from the East Tennessee and Virginia Railroad, commencing at either Carter or Johnson Depots on said road, running by way of Elizabethton, Doe River Cove, and Crab Orchard to the North Carolina line, near Cranberry Iron Works."<sup>2</sup> The company's charter allowed two years to start construction with the provision that the railroad would be completed within five years. The completed line was approximately 34 miles long per reference to an 1883 timetable.<sup>3</sup>

The first meeting of the stockholders was held on February 17, 1868, in Elizabethton, Tennessee. The stockholders elected a board of directors who unanimously elected Elijah Simerley as President and John W. Cameron as Secretary-Treasurer.

During this period the State of Tennessee was actively encouraging railroad construction through the issuance of state bonds to railroads. The railroads could then sell the state bonds to raise part of the money needed for construction.<sup>4</sup> On March 26, 1868, the board of directors of ET&WNCRR authorized the President to draw \$150,000 of these bonds<sup>5</sup> from the State. He was ". . .authorized and instructed to make a special deposit of the bonds drawn as per Resolution No. 2 in some safe bank or banks." He was also ". . .authorized and instructed to sell from time to time or place an amount of the bonds in the hands of the Treasurer of said road (Railroad) sufficient to meet the expenses and liabilities of said company." The board of directors also instructed the Secretary-Treasurer to post a \$10,000 bond. The \$150,000 in bonds was received from the State of Tennessee in April, 1868.

On May 21, 1868, the board of directors authorized the President to draw another \$100,000 of the State of Tennessee bonds. On October 24, 1868, the President reported that he had sold the first bonds with a face value of \$150,000 for \$113,901.07 and deposited the proceeds in the Phoenix National Bank in New York subject to his sight draft.

At the February 15, 1869, annual meeting of the stockholders the President reported on the progress of the railroad construction. He had spent \$92,500 of the \$113,901.07 bond proceeds leaving a balance in his hands of \$21,401.07. "From this amount, however, must be deducted commissions paid for the sale of the bonds as well as some other contingent expenses which will appear in my next annual report." The second bond issue of \$100,000 bonds had been partly sold ". . .but none of this fund has yet been used." E. Simerley was subsequently re-elected President of the railroad. Isaac A. Taylor was elected as new Secretary-Treasurer after defeat-

ing J. W. Cameron for the position<sup>6</sup> and the bond for that office was raised to \$20,000.

The company minute book mentions little of the activities of the company during the period February, 1869, to February, 1870, other than references which indicated the company was still in the construction phase and apparently having difficulty raising sufficient money to pay its creditors and buy materials, particularly iron, for the railroad construction.

At the February 28, 1870, annual stockholders' meeting the President reported that during his approximately two years of office he had received \$400,000<sup>7</sup> in bonds from the State of Tennessee of which \$350,000 had been sold for \$224,415.07 and \$50,000 remained unsold. He reported that from these proceeds he had paid \$80,500 to the former Treasurer, John W. Cameron, \$58,920.90 to the current Treasurer, Isaac A. Taylor, and \$34,588.49 to Gredegar Iron Company of Richmond, Virginia for iron and equipment leaving a balance of \$50,441.68 in his hands. At that same meeting the stockholders elected a committee composed of N. G. Taylor, J. G. Smith, J. M. Johnson, A. Jobe, and W. B. Carter “. . .whose duty is to inspect the accounts of the offices of the Board of Directors of the company and report at the next meeting of the board of directors.” No mention is made in the minutes of the discussions held at the shareholders' meeting but one might hypothesize that the state of the company's finances was a major topic. Newspapers in the region had given full coverage in 1869 to the disappearance of George Swepson, President, and Milton Littlefield, another official, of the Western North Carolina Railroad with \$4,000,000 worth of bonds from the company's treasury.<sup>8</sup> A Commission investigating the activities of Swepson and Littlefield reported that “. . .they operated on the basis of personal charity—particularly to themselves.”<sup>9</sup> With the publicity given this nearby railroad scandal and their own lack of financial resources it is likely that the directors and shareholders of ET&WNCRR naturally wanted a full accounting of the funds of their company.

#### WHY WAS AUDIT PERFORMED BY A COMMITTEE REPORTING TO THE BOARD OF DIRECTORS?

In order to understand why a committee as opposed to a professional auditor was appointed to audit the officers of the ET&WNCRR it will be necessary to briefly review significant historical developments of that time period.

According to Boyd, nineteenth century auditing developments followed the construction of railways, the growth of insurance companies, banking companies, and other joint-stock concerns.<sup>10</sup> The railway age apparently came into its own in the 1820's with improvements in locomotives.<sup>11</sup> A building spurt began in England which carried across the Atlantic to the U.S. "Work was begun at Baltimore in 1828 upon the Baltimore and Ohio railroad, which was the first important railroad project undertaken in the United States."<sup>12</sup> Railroad investments began to come from abroad, particularly England, during the mid-nineteenth century. The British accounting profession began to develop during this same period and by the 1870-1880 period British accountants were doing significant audit work on investments in the U.S. This gave impetus to the growth of the U.S. public accounting profession which began to develop on a small scale in the 1880's. The size of the U.S. profession is evidenced by reference to the 1888 membership list of the American Association of Public Accountants, the predecessor of the American Institute of CPAs which shows only 26 members at that time.<sup>13</sup>

Thus, it appears that an audit committee reporting to the board of directors was established for two reasons. While some public accounting services may have existed in the U.S. in 1870 they were concentrated in only a few of the larger cities. In addition, the practice of having a select board of citizens audit the accounts of certain public officials had been well established in Great Britain by 1600 A.D.<sup>14</sup> This practice had apparently carried over to the U.S. since references to it dating back to the 1600's can be found for certain American colonies. The shareholders of ET&WNCRR were apparently following accepted business custom of the time in appointing an audit committee to report to the board of directors.

#### THE AUDIT COMMITTEE'S EXAMINATION

The board of directors met again on August 9, 1870, in Johnson City, Tennessee. ". . .we are anxious to have a report from the President of the financial condition of the company. . ." declared the board of directors. The President was absent due to illness so they adjourned without conducting any business to meet on Saturday, August 13, 1870, ". . .at Hampton near the residence of the President that we may there if possible confer with him, receive his report and transact such business as may be deemed necessary."

At the August 13, 1870, meeting in Doe River Cove near Hampton, the President, E. Simerley, was apparently still sick. The board of directors adjourned without conducting any business, ". . .to meet

again at the call of the President, E. Simerley, as soon as he is able, and the meeting to be notified by the Secretary and Treasurer.”

President Simerley was present at the next meeting of the board of directors on October 13, 1870. Three items of minor business were transacted. Although the details are not provided in the minutes there was apparently some discussion of appointing a new audit committee since a motion was made, seconded, and carried “. . .that the directors have know (sic) right to appoint a new committee to settle with the President.”<sup>15</sup>

The board of directors met again on January 7, 1871, “. . .with the President being absent on account of sickness. . .” The board was presented the reports of the audit committee and made them a matter of record by putting them in the minutes. The report on the Secretary-Treasurer’s activities was brief and essentially gave the Secretary-Treasurer an “unqualified opinion” with respect to the funds entrusted to him. A copy of that report is contained in Exhibit I. The report of the President’s activities was much longer, taking approximately three full legal-size pages in the corporate minute book. The essentials of this report were that the President had received \$261,332.17 and had disbursed \$196,742.05 leaving a balance of \$64,590.12 owed to the company. The President, E. Simerley, had claimed two separate expense items totaling \$5,643.28 which the audit committee disallowed since they had been paid by the Treasurer. The committee also disallowed various items totaling \$1,228.27 for which no vouchers had been submitted.<sup>16</sup> The committee commented “Mr. Simerley is no doubt entitled to money due him for expenses but he has furnished your committee with no data by which they could determine the amount. As to his salary as President—your committee leaves that question wholly to your Board.”

The annual shareholders’ meeting was held on February 27, 1871, in Elizabethton, Tennessee. A new board of directors was elected which consisted of approximately the same directors as in the previous year. The board then appointed a new audit committee for an audit of the current year. The old audit committee was retained to complete the previous audit and instructed to try to finish within thirty days. The election for President resulted in John Hughes receiving nine votes and E. Simerley receiving one. E. Simerley was elected as a director, however. J. C. Hardin was re-elected Secretary-Treasurer. The former president had apparently lost the confidence of the shareholders as a result of the audit report.

The board of directors met on March 15, 1871. They voted to allow the former president, E. Simerley, credit for \$4,890 of ex-

penses previously incurred “. . .in going to Nashville and getting certain business through the legislature in reference to said railroad.” After many different motions and ballots the board also voted to allow the former president a salary of \$1,600 per year and \$800 per year to cover expenses. On June 27, 1871, the next board of directors’ meeting, J. C. Hardin was appointed to “. . .wait on the ex-president, E. Simerley, and request him to turn over the assets of said RR Co. . . .”

The board of directors met on July 10, 1871, and heard the final report of the committee auditing the former president. The balance due per their first report was \$64,590.12 and when reduced by the salary and expenses allowed at the March 15, 1871, meeting and various other minor items for which vouchers were found, the former president owed \$49,178.19 plus \$1,920.78 on his stock purchases. However, a review of minutes through the next decade did not reveal any evidence that these funds were received by the ET&WNCRR.

The minutes are rather sparse for the 1871 through 1876 period but Sulzer supplies some of the details:

The railroad defaulted on its indebtedness to the State and on November 15, 1871, the railroad with its attendant rights and franchises was sold to John Hughes and others for \$20,000 in bonds of the State of Tennessee. Subsequently, the purchasers requested the Chancery Court of Carter County to confirm the sale of the properties to A. Pardee and others for the sum of \$25,000. This was confirmed by a decree on February 16, 1876.<sup>17</sup>

The 34-mile line railroad was completed by the new owners in 1882 and portions of the track are still in operation today.

## SUMMARY AND CONCLUSIONS

Prior to the rise of the auditing profession in the United States, the auditing task was frequently handled by committees such as the audit committee of the East Tennessee and Western North Carolina Railroad. In view of the committee’s lack of accounting background, they performed a needed function in a creditable manner. The disentangling of the financial affairs of the East Tennessee and Western North Carolina Railroad probably directly contributed to the replacement of the President of the company. Due to the lack of records, it is uncertain whether President E.

Simerley ever repaid the amount the committee said he owed the company.

A modern day corporate audit committee performs a different function than did the ET&WNCRR audit committee although a major common goal of each is (was) achieving accuracy and completeness in corporate financial reports. The ET&WNCRR audit committee achieved this goal by functioning as "auditor". Modern day corporate audit committees function as "audit recipients" and oversee the overall audit process which may be performed by both external and internal auditors.

### EXHIBIT I

#### 1871 REPORT OF AUDIT COMMITTEE ON AFFAIRS OF SECRETARY-TREASURER

To The President and Directors of The ET&WNCRR Company

Gentlemen,

The committee appointed by the shareholders of your Road at their last meeting to settle with your Treasurer beg leave to report that they have carefully examined his accounts and find that he has received from E. Simerley, President, at various times

Cash to the amt of	\$58,920.90
Cash Rec from Stockholders	134.00
	<u>\$59,054.90</u>

and he has distributed 59,054.90

All of which is respectfully submitted  
Errors excepted  
January 5, 1871

(Signed)  
N. G. Taylor, Chairman  
Wm. B. Carter  
A. Jobe  
Jas. G. Smith

(Source: ET&WNCRR, 1871 Minute Book, p. 48)

#### FOOTNOTES

<sup>1</sup>Arthur Andersen & Co., p. 2.

<sup>2</sup>Sulzer, p. 87.

<sup>3</sup>Sulzer, p. 84.

<sup>4</sup>Sulzer, p. 87.

<sup>5</sup>These were \$1,000 denomination, 6% coupon bonds maturing on January 1, 1900.

<sup>6</sup>There was apparently more interest in this office after the salary was set at \$300 per year.

<sup>7</sup>The \$400,000 total for the bonds is confirmed by Dykeman who reports, "a total of \$400,000 in state bonds was issued to ET&WNC. . ." (Dykeman, p. 87).

<sup>8</sup>This railroad was unrelated to the ET&WNCRR although both operated in the Tennessee-North Carolina border area.

<sup>9</sup>Dykeman, pp. 154-155.

<sup>10</sup>Boyd, p. 92.

<sup>11</sup>Pollins, p. 334.

<sup>12</sup>Cleveland and Powell, p. 61.

<sup>13</sup>Tansill, p. 9.

<sup>14</sup>Boyd, pp. 81-83.

<sup>15</sup>This appears to have been a spelling error in the minutes and "no" was intended by the directors rather than "know".

<sup>16</sup>Auditors had apparently established early in history their power to disallow questionable items. Boyd reports, "charges were frequently disallowed for reasons which are explained as being insufficiently vouched. Thus, of the sum of six hundred and forty pounds charged in the Chamberlain's accounts of 1337 and 1340 for stores to Lochleven sixty pounds was disallowed, after the vouchers had been called for, as having been already charged in a previous account." (Boyd, p. 76).

<sup>17</sup>Sulzer, p. 87.

#### BIBLIOGRAPHY

- Arthur Andersen & Co., *The Audit Committee of the Board of Directors* (Chicago, Illinois: Arthur Andersen & Co., 1977).
- Boyd, Edward, "History of Auditing," in Richard Brown, editor, *A History of Accounting and Accountants* (Edinburgh: T. C. & E. C. Jack, 1905).
- Cleveland, F. A. and Powell, F. W., *Railroad Promotion and Capitalization in the United States* (New York: Longmans, Green, and Co., 1909).
- Dykeman, Wilma, *The French Broad* (Knoxville, Tennessee: The University of Tennessee Press, 1955).
- East Tennessee and Western North Carolina Railroad Company (ET&WNCRR) Financial Books and Records (minute books, cash books, journals, and ledgers for period 1868 to 1908) located at Johnson City, Tennessee.
- Pollins, Harold, "Aspects of Railway Accounting before 1868," in A. C. Littleton and B. S. Yamey, editors, *Studies in the History of Accounting* (London: Sweet and Maxwell, Ltd., 1956).
- Sulzer, Elmer G., *Ghost Railroads of Tennessee* (Indianapolis, Indiana: Vane A. Jones Company, Publishers, 1975).
- Tansill, X. Bender, *Lest We Forget—Lest We Forget!* (New York: AICPA Library, 1972).



Kenneth O. Elvik, Editor  
IOWA STATE UNIVERSITY

## BOOK REVIEWS

David A. R. Forrester, *Schmalenbach and After: A Study of the Evolution of German Business Economics* (Glasgow: Strathclyde Convergencies, 1977, pp. 90. Distributor: International Scholarly Book Services, Inc., Forest Grove, Oregon, \$14.95)

**Reviewed by Konrad W. Kubin  
Virginia Polytechnic Institute and State University**

This book highlights some of the major contributions of German accounting thought to complex issues confronting the profession around the world. Previously, these contributions have not been widely known in English-speaking countries due to (1) the language barrier, (2) the fact that accounting in that country is not considered a separate academic field of inquiry, but an integral part of business economics, and (3) the intuitive rejection of thoughts that originated partially during a totalitarian era.

Forrester's book helps to overcome all three of these obstacles. By retracing the evolution of German business economics, he identifies the leading German accounting academicians as well as their thoughts on inflation accounting, uniformity, and social accounting, which have influenced the development of accounting around the world. Forrester also helps us to understand how rational theorems can be promulgated and professional objectivity and integrity can be preserved during a totalitarian era with its repeated harassments, academic boycotts and even threats to one's life.

Although the book analyzes the historical development of German accounting thought and refers to the contributions of numerous individuals, it is at the same time a biography of Eugen Schmalenbach (1873-1955), the undisputed leader among German accounting academicians. It consists of nine chapters and a unique "Index of Persons and Authors, with References" which should prove to be especially valuable for future research efforts.

The introductory chapter outlines the approach taken by Forrester in presenting Schmalenbach and his major accomplishments.

Chapter II describes Schmalenbach's early years, his brief engineering and manufacturing experience which is reflected in many of his later contributions to product costing and transfer pricing, his years at the universities of Leipzig and Cologne, his marriage to Marianne Sachs and their family life, Schmalenbach's emergence in the 1920's as a leading business economist and consultant, his persecution during the Third Reich, and his last years.

Chapter III summarizes the evolution of business economics and business administration in Germany. Repeated references to Schmalenbach show how this development has been fundamentally influenced by him and his disciples.

In the following chapter, Forrester sketches the German camera-list form of accounting and the influence of state and farm accounting on commercial accounting. Schmalenbach was attracted to farm accounting because it allowed him to study pricing and allocation problems in situations where production and consumption are often so closely interrelated that transfer prices established by a free market system are unavailable. These studies are in effect the embryonic thoughts of today's "shadow prices".

Justifiably, the chapter on "dynamic accounting" is the longest one since it deals with Schmalenbach's best known contributions to accounting theory. It includes elaborations on inflation accounting, valuation, and the approach taken in Germany towards the development of accounting principles. It also discusses the evolution of the German income statement from the 1920's to the present time and the conservative measurement of income which permits the creation of hidden reserves.

Chapter VI discusses the development of uniform charts of accounts in the 1920's, the adoption of such charts by the Third Reich, and the current efforts in the EEC and elsewhere to harmonize accounting with the help of similar charts of accounts. This chapter is followed by further elaborations on Schmalenbach's perceptions of cost and prices. Forrester discusses such concepts as marginal pricing, fixed costs, budgets, and Schmalenbach's notion of "management by prices" instead of rationing or management interventions.

Investment decisions, cost of capital, the valuation of the enterprise as a whole, and the interrelationship between capital, credit and interest are discussed in Chapter VIII. Also summarized are Schmalenbach's deliberations on capital formation by the state through taxes and the relation between capital and labor, including the well known German phenomenon of "worker participation" or "co-determination."

The book closes on a philosophical note when Forrester attempts to extrapolate Schmalenbach's accomplishments. He seems to submit that Schmalenbach's greatest contributions for future generations may very well be threefold: (1) the realization that the individual accountant needs to stand up for professionalism, ethics and integrity instead of capitulating to the economic and political system, (2) the demand for economizing through waste avoidance, and (3) Schmalenbach's emphasis on dissemination of decision-making powers during a time when we rely more and more on professionally trained valuers and other specialists.

To borrow Schmalenbach's philosophy that "too great leniency in criticism is a sin against the profession," it needs to be pointed out that this book is far too short to do justice to Schmalenbach and the development of German business economics in general. Readers who possess only a very sketchy familiarity with Schmalenbach's work will be easily lost without additional background. The very worthwhile introductions to the literature at the beginning of most of the chapters can only partially overcome this problem. Hopefully Forrester will build on his expertise of Schmalenbach and expand this book into a more comprehensive and further cross-referenced volume.

Despite this criticism, the book represents an excellent contribution towards familiarizing the English-speaking world with the thoughts of one of the leading accounting pioneers. The Hour Glass Award given to Forrester by the Academy of Accounting Historians for his achievement is truly deserved. The book should be well received not only by accounting historians, but also those interested in international accounting, accounting theory, cost and managerial accounting, social accounting, as well as business administration and economics in general. It can only be hoped that additional research studies about Schmalenbach and the development of accounting in Germany will be forthcoming as a result of this stimulating publication.

Tito Antoni, *Il Bilancio di una Azienda Laniera del Trecento* [The Financial Statement of a Cloth Manufacturer During the Fourteenth Century.] (Pisa: Columbo Cursi Editore, 1966, pp. 69, Lire 2,000).

**Reviewed by Alvaro Martinelli  
Appalachian State University**

The renewed interest of historical research in accounting and the contribution brought by many scholars during the last fifty years

have left no doubt that the use of financial statements originated during the thirteenth century. Indeed, the earliest example of a balance sheet dates back to 1277, and it belonged to the partnership of Filippo Peruzzi of Florence. It is now recognized that from those earlier times, financial statements were drawn as separate and autonomous documents, although they were always closely related to the entries in the ledger. This is also the conclusion reached by Tito Antoni, a brilliant scholar in the history of accounting.

The documents analyzed in this book were found by the author in the State Archives of Pisa, in the "Book of Accounts" that the company of Biagio delle Brache, merchant from Pisa, kept from 1326 to 1356. In particular, two financial statements were drawn in 1347: one prepared by Biagio "for my own accounts," and the other by one Colo Bugarro for the transactions in the "shop of the wool."

Colo and Biagio had established a partnership for the manufacturing of cloth. Biagio, who contributed the capital, was to receive two-thirds of the profit, and Colo, the merchant-entrepreneur, the remaining one-third. Colo was also the accountant of the partnership.

The pages on which the financial statement discussed in this book was drawn were added and stitched, at different dates, to the ledger of Biagio, where he recorded his personal business transactions. The statement is formed by two different groups of accounts recorded in running form one after the other, with the assets first, followed by the division of profits, liabilities and the owners' equity. The purpose of this statement was to show to Biagio how his capital had been invested and the amount of profits to be shared as of the first of September 1347. The accounts summarize several homogeneous classifications of debts and credits, transferred from the final totals found in the ledger.

The accounts are expressed in arabic numerals, and the monetary unit is an abstract *lira* called "good money" divided into 20 *soldi* and 240 *denari*. Only the submultiples of this abstract currency were minted in silver and copper.

The author gives us a vivid and detailed description of the manufacturing and commerce of woolen cloths during the Middle Ages. Inside the shop of Colo and Biagio only small or minor works were performed, for which no expensive equipment was necessary. When during the long process of transformation of the wool into cloth the two partners had to go through a phase where big immobilization of capital was necessary, such as buildings and machinery, one may

notice the intervention of outside entrepreneurs, specialized in that particular industrial stage of the manufacturing process. Consequently in the shop, the partners undertook the simple operations of cutting, carding and combing, performed by workers called by the generic name of "labourers." The additional operations of washing, spinning (performed mainly in the countryside), warping and weaving, purging, fulling and dyeing, were performed by workers who exercised their art independently.

In order to determine production costs Colo Bugarro kept several subsidiary ledgers where he recorded all the facts in great detail. In the *quaderno* he recorded the cost of the wool delivered to the shop, including the original cost, transportation charges to the port of origin where it was loaded, and eventually the freight, unloading and storage expenses at Porto Pisano, and finally the carriage by land to the shop in Pisa.

All the different manufacturing operations performed outside the shop were initially recorded by Colo in the *libro del mandato*, and later transferred to special ledgers open to weavers, dyers, etc. At the end of the period the totals from these ledgers were used to prepare the financial statement. The *libro del mandato* was one of several subsidiary ledgers used by the partnership. In this book Colo kept record of all orders remitted to outside workers specialized in specific phases of the manufacturing process. Each account was debited for advance payments given to the worker, and it was credited for the total amount of the job just completed. The debit balance represented the debt of the company toward the independent worker.

The financial statement may be summarized as follows:

<i>Assets</i>			
Cash .....	L.	48	s. 6
Accounts Receivable .....		2,685	10
Inventory .....		780	2
Equipment .....		13	9
Prepaid Expenses .....		6	6
	L.	3,533	s. 13
<i>Liabilities and Equity</i>			
Accounts payable (short term) .....	L.	127	s. 16
Accounts payable (long term) .....		1,608	6
Partners' Equity .....		1,207	10
Net Income .....		590	1
	L.	3,533	s. 13

It is of interest to notice that accounts receivable represent 76.46% of the total assets, since there was a long delay between sales and collections. During the Middle Ages money was a scarce commodity, so that quite often the customer had first to sell the merchandise he bought before being able to make any payment. It appears that this practice was causing some problems to the partnership, which had to borrow from Biagio an additional L. 1,608 s. 6. One may also notice that the current ratio is 27:1, however if we include among liabilities the amount loaned by Biagio, the ratio becomes a more modest 2:1.

The author emphasizes how in the fourteenth century the partnership was already considered as a separate entity, more like an abstract person, and the capital account or equity represented a debt of the company toward its owners, as expressed by Colo: "I found that I owe ser Biagio 700 gold florins (L. 1,207 s. 10), which represent our capital."

At the end, Colo will record the division of the profit: "Of three *denari* Colo shall receive one, or L. 196 s. 13. Of three *denari* ser Biagio shall receive two, or L. 393 s. 6." So that Biagio invested his capital with a rate of return of 32.57%.

With this book Tito Antoni makes a significant contribution to the history of accounting in the Middle Ages, and he shows how during the first half of the fourteenth century the profit motive was already well rooted in the average merchant and how real capitalistic organizations were created in order to satisfy this need.

Heinrich Sieveking, *Die Casa di S. Giorgio: Genueser Finanzwesen mit besonderer Beruecksichtigung der Casa di S. Giorgio, II* (Freiburg i. B.: Verlag von J.C.B. Mohr [Paul Siebeck], 1899. Reprint edition: Osaka, Japan: Nihon Shoeseiki, Ltd., 1977, p. 259, \$30.00, (printed in German).

**Reviewed by Norlin G. Rueschhoff  
University of Notre Dame**

This book, printed in German, is the second volume of a two-volume series. The first volume was originally published by Sieveking in 1898, titled *Genueser Finanzwesen vol. 12. bis 14. Jahrhundert*, and reprinted by Nihon Shoeseiki, Ltd., Osaka, Japan, in 1973. The second volume has three chapters covering the time periods 1407-1444, 1447-1561, and 1586-1815. The two volumes thus

cover the history of Genovese finance over a period of eight centuries.

The first chapter of the second volume deals with the establishment of the Casa di S. Giorgio in Genoa, Italy during the first era of its banking business, 1407-1444. The Casa di S. Giorgio, that is, the Bank of St. George, hereinafter referred to as the Casa, received its foundations in 1407 as a central underwriting agent to consolidate various financial paper issues of eight companies and state agencies. The final payment of the refunding bonds was projected through a sinking fund accumulated through tax revenues. Tax revenues in those days were derived through property taxes, customs duties at port of entry, and poll taxes.

The Casa provided an invaluable service for the people of Genoa. In a sense the Casa was an excellent manager in trying to protect the bond investments of the citizens. When opened on March 2, 1408, the Casa also maintained checking accounts for the taxing agencies as well as the public. Thus, it was a central collection agency for taxes which were used to pay off the loans for the local governments. Its books were kept in Roman numerals. All transactions were written in one bank book. For example, a thousand page bank book in 1414 was completely full by the end of June and required two such bank books for that year. By 1418 three bank books were necessary to record the bank's transactions. In 1439, a branch bank was opened with a bookkeeper and a cashier and a half year later a third branch was opened. In 1444 the banks' connection with the state treasurer put the bank in a difficult position. Because the tax collections were slow, timely interest payments were critical. And when the interest payments could no longer be made on time and with the bank's connection to the state government, the bank was liquidated. Thus ended one of the banking periods.

The Casa's life from 1447 to 1562 is covered in the second chapter. An important event for the Casa during this period was the acquisition of its main building, a palace, in 1451. In this building the Casa was re-established. Again its need as an underwriting agent in the consolidation of various financial paper issues gave reason for its being. In 1464 eight auditors were appointed to help with the activities of the Casa. When the bank was again reorganized in 1447, Genoa was under the control of Cyprus. The Casa was instrumental in financing of grain trade with Cyprus. With the establishment of a colony in Corsica, the Casa was also instrumental in providing a development loan. During this era, the key purpose of the Casa was to be a depositing agent for tax revenues. The most

important tax during the time was still the direct property tax, with about two thirds of the revenue coming from this tax and another third from poll taxes. The tax burden was heavy because of the many unfortunate battles around Genoa. Moreover, the Casa was involved in the support of Genoa's great son, Christopher Columbus.

The third chapter deals with the second period of banking for the Casa from 1586-1815. In 1597 Genoa had a population of 60,529 and by 1801 grew to 86,063. During this era, the Casa was involved with transactions of the state treasurer, the public utilities, and the colonial companies. After the end of the sixteenth century, the Genoa government shifted to the use of indirect taxes, such as a 1% sales tax. Furthermore, tax incentives were used to attract industry to Genoa and some tax revenues were raised through customs duty on grain exports. The state of Genoa opened up its own state bakery, and monopolies were established for salt, grain, and even meat. These monopolies in the seventeenth century caused an uneven distribution of resources and special offices to aid the poor were established. Because the state government debt grew rapidly, the maturity dates of the bond issues and later even the interest payments were postponed. A depression in 1646 meant a crisis for the Casa. However, in the plague of 1656 the Casa made considerable amounts of windfall profits because of unclaimed deposits of deceased deposit holders. The Casa survived through economic depressions and political turmoil; it became so respected that the Bank of England was established using the Casa as a model. As the government frequently changed hands, the Casa always stood as a sound financial institution, a non-partisan, respected institution. However, when Genoa came under Napoleon's France, the French decided to liquidate the bank. The long established directors of the Casa tried to convince the French to continue the Casa as an independent institution. In vain, and in May, 1817, the liquidation was completed.

Certainly this book is an interesting commentary on finance, particularly public finance as centered in the bank of Genoa. The reading of the book is not simple, because of the use of many mediaeval German terms, and a considerable amount of interspersing with Latin and Italian terminology. On the other hand, it becomes apparent that Sieveking is truly a scholar, having an excellent writing ability in German, a rather fluent capability in Italian, a working knowledge of Latin, and a very insightful expertise in public finance. However, there is little information on mediaeval accounting in this treatise. Thus, for the accountant, who has a reading



knowledge in German, this book serves as a good source for a background on the history of finance during the times that double entry bookkeeping originated. For the researcher interested in the accounting and tax procedural aspects of finance in Genoa, Seiveking has written another book which has also been reprinted recently. The book is: *Aus Genueser Rechnungs- und Steuerbuchern. Ein Beitrag zur mittelalterlichen Handels- und Vermoegensstatistik*, published in Vienna in 1909 and reprinted by Nihon Shoseki Limited, Osaka, Japan in 1974. The book is a documentary with many excerpts from accounting and tax records. The book's six chapters cover, in order, financial records in the fourteenth century, the accounting records of the Casa di S. Giorgio, tax revenue sources in the fourteenth and fifteenth centuries, calculation of property tax valuations in Genoa, and a comparison with property valuations in Florence and Pisa. As a documentary, the book attempts to make no analysis of the theory or practice of the times. Nevertheless, this book does fill a gap for the accountant, the gap concerning accounting as mentioned in the preceding paragraph.

Emanuel Benjamin Ocran, Jr., *Transportation Costs and Costing 1917-1973: A Select Annotated Chronological Bibliography* (New York and London: Garland Publishing, Inc., Garland Reference Library of Social Science, Vol. 10, 1975, pp. xxvi, 751, \$60 U.S.)

**Reviewed by David B. Vellenga  
Iowa State University**

The purpose of this bibliography is to present an extensive source of references on transportation costs and costing and appears to be the most exhaustive reference ever compiled on this topic. The following sources were used to develop the bibliography: *Applied Science and Technology Index, British Technology Index, Current Literature in Traffic and Transportation, Dissertation Abstracts International, Engineering Index, Industrial Arts Index, Industrial Aerospace Abstracts and Public Affairs Information Service Bulletin*.

The more than five thousand references in the index are cross referenced in several ways and the volume is very easy to use. Entries are generally listed by chronological years (usually decades e.g. 1931-1940), by mode of transport (e.g. air), and by subject headings where applicable. The subject headings include: accounting, competition, costs, fares, finances, insurance, management, operation costs, pricing, rates, securities, statistics, taxation, tolls and

wages. In addition the book has a name index (authors arranged alphabetically) and a subject index structured on the chain indexing procedure. Many of these subject index entries are annotated.

The bibliography also contains four useful appendices which are: Appendix A — Transportation Dissertations, Appendix B — Transportation Statistical References, Appendix C — Journals Cited in the Bibliography and Appendix D — Abbreviations Cited in the Bibliography.

The bibliography will be very useful for reference librarians, transportation managers, transportation economists and students, researchers and consultants working on transportation projects and transportation historians. The book also suggests the need for continued effort and improvement in transportation cost accounting methodology and techniques. This book would be considered a must for any transportation firm and for university libraries. An update from 1974 to the present would be a welcome addition to the literature in transport costs and costing. The author is to be commended for this excellent work.

James Don Edwards, *History of Public Accounting in the United States* (University, AL: University of Alabama Press, 1978. Reprint of edition published in 1960, Michigan State University, 370 pp., paperback, \$7.50).

**Reviewed by Frederic M. Stiner, Jr.  
The University of Maryland**

Now back in print as one of the Accounting History Classic Series, this book is a milestone in accounting thought. This wealth of facts is organized so that Chapters I and II, after a brief introduction, cover the Antecedents of American Public Accounting and Chapter III, Definition of American Public Accounting. Chapter IV covers the Emergence of Public Accounting in the United States, 1748-1895. Chapter V, Public Accounting in the United States, 1896-1913, begins with the time period of the first CPA law, in New York, to the time of passage of the Sixteenth Amendment. Chapter VI covers the period 1913-1928, a time of competing societies and important legislative precedents. The period 1928-1949, Chapter VII, discusses the impact of the securities acts, the extension of audit procedures, World War II, and litigation over unlawful practice of the law. Chapter VIII reports the 1950's. The book concludes with a useful summary and a bibliography.

Two appendices show the first CPA exam, (1896) and original CPA Certificates issued by state and year. An extremely useful errata to the 1960 edition appears after the index.

The book is a useful primary and secondary source. Some documents, which are difficult to obtain now, are reproduced in full, such as the Certificate of Incorporation for the American Association of Public Accountants, the first CPA law, the first CPA exam, and the 1917 Code of Ethics. Many fascinating incidents keep the narrative alive: The first violator of the first CPA law was swiftly convicted nine days after the offense, and given a choice of a \$35 fine or 10 days in jail. At one point in 1924, the Oklahoma State Board continued operating without a law to support it, after their original law was declared unconstitutional.

The book is a fertile source of leads for further research. Most useful is the discussion of the 1950's, where Edwards becomes a primary source himself by spending 100 pages reporting the profound developments of that time. Many original sources, such as letters to Edwards on permissive and regulatory state licensing statutes, are provided. We see the Accounting Principles Board created, and have its initial opinions. The material on the 1950's is useful in understanding the subsequent history of the APB.

The book belongs in every college and university library, and should be considered as one reading in a graduate seminar. It is an excellent choice for the Accounting History Classics Series, and the Arthur Andersen & Co. Foundation has done a great service to scholars everywhere by supporting the reprint of this important work.

Geo [rge] Soulé, *Soulé's New Science and Practice of Accounts*. Seventh Edition Enlarged, 1903. Reprint. New York: Arno Press, 1976, pp., 749. \$43.00.

**Reviewed by James J. Linn  
Tulane University**

George Soulé was undoubtedly an outstanding practitioner, student and author of business and accounting. All of these are reflected in his book which is primarily and mostly a handbook and secondarily a text. Also, it is a good statement of business practices as of 1903 in New Orleans.

The main emphasis is accounting practice and briefly, the attendant theory. There are also sections on commercial forms, cor-

porations and joint stock companies, partnership law and "correspondence." It is very much a handbook in the sense that in part it is a compendium of illustrations, examples, lists, vocabulary and definitions and it is comprehensive. For example, accounts are defined and described by transaction content, something the students of today often request.

In my opinion a major drawback of this text is the quality and amount of the accounting discussion. To make an evaluation of the accounting, it is natural and proper I believe to refer, for comparative purposes, to the three authors, Sprague, Hatfield, and Cole, that represent accounting thought at the beginning of the present century. These were the men who wrote in the transition period of the depersonalization of accounts and the analytical presentation of double-entry first described by Ezra Sprague.

Judged in this context, Soulé's discussion of accounting, theory, his abstraction from his experiences, is concise, complete but out-of-date. There are less than fifty pages of this 750 page volume devoted to a discussion of accounting basics. However, this defect is offset by a profuse use of illustrations which both further explain the idea or procedure and illustrate applications.

The practical part of this book is the strongest; the accounting is good—very modern. Problems such as liquidation and fire insurance adjustments are discussed and special journals are used. On the other hand, the old personalization of accounts, and the old methods of explaining debits and credits, and transforming transaction data into journal entries are used. The inherent obtuseness of these pedagogical tools is more than offset by the profuse illustrations available. But, the student was forced to memorize a large number of specific transactions and their particular transformation, instead of fewer, general rules as we do today.

There are, according to the author's preface, four major sections in all. They are: Scientific—pp. 18-126; Practical—pp. 127-561; Expert Accounting and Practical Miscellany—pp. 562-679; and Punctuation and Correspondence—pp. 680-710. There is an Index but no Table of Contents.

I found in section three, Expert Accounting and Practical Miscellany, some items of particular interest on locating errors and the use of check figures (digits). There is a short section on auditing that is general but good. For example, it contains an admonition that account balances be verified by investigation and not by mere reference to the ledger; and a comment on determining assets to be free of encumbrances.

Also there is a brief summary history of accounting which was good for the time.

It appears, to this reviewer, that George Soulé wrote a book, and revised it over the years, that was exactly what he needed and used—Soulé Business College is still in existence in New Orleans. It was highly practical and contained material other than accounting and bookkeeping. This book would have been useful as a text and reference for bookkeepers and businessmen. Accountants probably found it useful as a general reference on bookkeeping, forms, letters and other miscellany. I suspect that accountants used other sources as references in what was then accounting theory. It was a useful, practical book in its time. Now, it is interesting to us as an example of commercial and accounting thought and procedure in New Orleans at the beginning of this century. It is interesting to conjecture what it would have evolved to today if a succession of co-authors had kept it current.

*Maureen H. Berry, Editor*  
UNIVERSITY OF ILLINOIS

## **DOCTORAL RESEARCH**

Sound accounting research can only proceed from a thorough understanding of the political, social, and economic roots of the accounting problem. This edition of doctoral dissertation reviews moves away from customary reference to work by accounting scholars to present some recent studies in economic and social history — both to increase understanding of the accounting environment as well as to suggest areas for possible accounting investigation. In keeping with the universal nature of the accounting discipline, these studies have an international flavor. They are also related in their macrolevel focus and public policy concerns.

Collins' study of taxation in Brittany in the early 17th century suggests a rich area for research by pointing out that very little is known of the French taxation system, particularly indirect taxation, of the time and its consequent economic effects. Moving through time and space to Brazil towards the end of the 19th century, Moreira examines the relation of subsistence agriculture to the process of capital accumulation. The perennial problem of public/private relationships is addressed in Frankel's consideration of the role of businessmen in the Canadian government's program of economic intervention in the 1930s. We remain in Canada, but move ahead one generation, to review its problems of capital accumulation, in a study by Tam whose econometric model suggests two important policy considerations for governments wishing to encourage capital investment. Capital accumulation is also at the heart of another vexious problem — that of inflation. Examined from the perspective of a developing nation, Divecha has used a structural model, adapted from Latin America, to analyze the nature and causes of inflation in India and to suggest policy considerations when pursuing development goals. Inflation, deflation, and rates of price change are studied by Kahn as she compares the adaptive expectations and rational expectations approaches, using data from the United States in the latter part of the 19th century. The interrelated theme of fixed versus flexible exchange rates is taken up by Zervoudakis in the final study which examines the behavior of the floating dollar-sterling rate from 1919-25.

*Taxation in Bretagne, 1598-1648* (Columbia University, 1978, 608 pp.; 39/4, p. 2472-A)<sup>1</sup> by James Barry Collins. This dissertation had three main objectives: to trace revenue flows from 1598-1648 in Brittany, as well as the rest of France to the extent possible; to examine the evolution of taxation in Brittany and in France generally; and to examine the effects of taxation on the province of Brittany. The author views this research as the first stage of a larger effort to throw light on the tax system of early seventeenth century France.

The work commences with a review of the development of the French tax system prior to 1598 and a description of its administration and income-producing capabilities from 1598-1648, emphasizing direct taxation. It continues by turning to the Breton tax system. This section concentrates on the pre-1598 evolution of taxation in Brittany and, for the period 1598-1648, examination of such topics as: direct taxation and military levies; the wine duties of the Estates and the portions of these duties allocated to the king and to the Estates; and the regular indirect taxation, domanial income, and sales of offices. The study concludes with a review of the Breton economy and social structure and the effects of the tax system on Breton society.

As a result of his investigation, Collins suggests that we need to reexamine traditional views of the concept of absolutism, as well as understandings of the inter-relationships between Crown, officers, and population. He also evaluates the heavy effect of taxation on the French economy, particularly after 1634, and the impact of French government spending around 1639-40, as well as the Thirty Years' War, on the economic collapse of the 1640s.

*The Accumulation of Capital and the Subsistence Agriculture in Brazil Since 1889* (Cornell University, 1978, 298 pp.; 39/4, p. 2427-A) by Roberto Jose Moreira. Moreira analyzes the process of capital accumulation in Brazil, following the opening of a free labor market after the emancipation of the slaves in 1888, emphasizing the role played by subsistence agriculture.

The history of economic development in Brazil during the past century can, according to Moreira, be segregated into three stages based on observed shifts in financial support for different markets. For the first 40 years or so, until about 1930, primary focus was on agricultural exports. For the next quarter of a century, until 1954,

<sup>1</sup>*Dissertation Abstracts International* volume and page references.

industrial mass consumption goods achieved preeminence. During the current period, capital accumulation shifted to industrial capitalist consumption goods.

Links in this three-sector model were then examined from the standpoint of the main area of interest: agriculture. Moreira again used a tri-partite approach by segregating the agricultural sector into agriculture for subsistence, on which he placed heaviest emphasis, as well as the export market and the import market. According to the author, these intersectoral linkages are formed by continuous processes weaving through the model which he identified by analyzing available data on prices and the structure of production. Among his observations he remarked that relations in industrial capitalist production developed simultaneously with relations in agricultural non-capitalist production. These agricultural relations involved an increase in small farmers, the employment of wage labor, and the use of sharecropping. Sharecropping was gradually replaced by family subsistence units. However, both approaches made significant contributions of food for the internal market and raw material for industry, and also provided rural labor forming a potential reservoir for industrial employment.

This expansion of the agricultural sector had two consequences which played important roles in industrial accumulation: an increase in rural labor productivity and exploitation. The resulting transfers of income served to benefit certain regions, certain crops, and certain types of farmers — thus increasing social inequalities.

*Canadian Business & The 'Reform' Process in the 1930s* (University of Toronto (Canada), 1976; 39/4, p. 2470-A) by Alvin Finkel. The basic question underlying this study concerns the process of public intervention in the private economic sector. Finkel has approached this by examining the origins of major new agencies, primarily at the federal level, established by Canadian governmental units in the 1930s, as well as government-business relations during that period.

The author first dealt with the matter of the often-cited claim that businessmen of the time were "outcasts" by evaluating whether or not certain selected officials at various levels of government could be considered representative of the population. He then turned to the new agencies themselves, including: the Dominion Trade and Industry Commission; the Natural Products Marketing Board and related marketing agencies; the Canadian Wheat Board; the Unemployment Insurance Commission; the National Housing Authority



and other construction and housing-related agencies; and the Bank of Canada. This review covered the origins and activities of these agencies, as well as broader issues concerning the appropriateness of government intervention, the mechanisms it uses, and the level: federal, provincial, or municipal, which is or should be involved. The attitude of business towards these questions received his particular attention.

In performing this research, Finkel's major sources of data were: the manuscript collections of leading politicians and businessmen of the time; Parliamentary debates; presentations made by businessmen to government commissions and committees, industry associations' records; and business journals.

Finkel's conclusions were that, for the period reviewed, business played a dominant role in the formulation and management of most economic reforms. Businessmen, while not united as to ways and means, were, as a group, concerned with maintaining the free-enterprise system, and the power of the big corporations within it, through a government-sponsored reform program. What they envisaged, as Finkel sees it, was a combination of positive government economic participation and restrictive legislation.

*An Econometric Study of Canadian Capital Formation By Industry* (University of Toronto (Canada), 1976; 39/4, p. 2434-A) by Cham-Kau Tam. The Canadian economy is also the focus of Tam's study — but for a generation later and covering the period 1951-72. His purpose was to analyze the investment behavior of 10 industries with respect to 2 types of capital expenditures: non-residential construction and machinery and equipment, and thereby evaluate the impact of government policy on each type of capital investment in each industry.

The 10 industries selected were: agriculture, fishing, hunting, and trapping; forestry; mining, quarrying and oil wells; manufacturing; construction; transportation, storage, and communications; electric power, gas, and water systems; finance, insurance, and real estate; and commercial services. To build the theoretical model of investment, Tam used a two-step procedure in the empirical study of investment. He first derived the optimal capital and then used a partial adjustment mechanism to specify the adjustment process by which the actual capital moves towards its optimal level. Tam describes the construction of the model as follows:

The optimal capital is determined by output, the parameters in the production function and the relative prices

between capital good and labour. The rate of adjustment is governed by the parameters in the cost of adjustment function and the gap between optimal capital and lagged actual capital. Since the optimal capital is not linear in its determinants unless the parameters in the production function are predetermined, the parameters in the production function are therefore estimated from the employment function before investment function can be estimated by linear squares methods.

He goes on to relate this to the data analysis process:

As a rather general lag structure is specified between change in optimal capital and investment and the policy instruments such as tax rate and interest rate are included in determining optimal capital, the lag structure of investment can be characterized and the response of investment to policy changes can be identified for each type of capital expenditure in each industry.

Tam's principal findings were that there were both inter-industry variations between the lag structure of investment and the responses of optimal capital to its determinants (which include output change and the tax and interest rates) as well as intra-industry variations between one type of capital investment and the other. Consequently, there are differences in each case between the magnitude and time path of change in investment after change in the determinants of optimal capital.

Tam suggests two policy implications from these findings: (1) policy measures aimed at increasing capital expenditure should be applied to the industries with higher responses of optimal capital to these measures, and (2) in order to maximize desired effects on investments, policy makers should consider not only the magnitude but also the timing of proposed intervention because of the time lags involved in implementing policy changes.

*An Indian Structural Model of Inflation: An Analysis of Nature and Causes of Inflation From 1951-52 To 1967-68* (Bryn Mawr College, 1976, 301 pp.; 39/4, p. 2438-A) by Rohini Vishnu Divecha. Divecha adapted a Latin American structural model to analyze the nature and causes of inflation in India, with special reference to the 1951/52 to 1967/68 Indian Planning Experiment.

The author identified the Indian structural model of inflation as “rooted in the desire to grow and industrialize faster than the present structure of the economy would accommodate.” As in other developing nations, planning for economic growth received first priority. Because of the substantial resources devoted to development, budgetary deficits arose as well as large increases in monetary resources and the money supply. This resulted in public-sector bottlenecks, leading to problems in the balance of payments — as well as blockages in other sectors of the Indian economy, notably agriculture. In Divecha’s view, such factors as war, weather, and the propagation mechanism of increasing money wages, accentuated rather than initiated India’s inflation — the most important determinants of the general price level being the government’s policy goal and the structural factors. Government, the author claims, must use several policy instruments simultaneously in pursuit of its development goals. Also, the market must be able to send the right signals to producers who, in turn, have to be able to bring about the required adaptive responses. It is up to the policy maker to identify those market areas where government action and assistance is required. As Divecha points out: “Money plays a significant role in monetarists’ and structuralists’ models. In the former case it is activating, in the structuralists’ model it is accommodating. It suggests that price stability has to be sacrificed in the short-run in favor of economic growth and that price stability can be attained in the long-run through economic growth.”

*Price Expectations in the 1860s And 1890s* (Columbia University, 1978, 196 pp.; 39/4, p. 2416-A) by Brenda Joyce Kahn. This dissertation tested two different views of how expectation of future rates of price change are formed: the adaptive expectations approach and the rational expectations approach, using a new body of data for the periods 1860 to 1870 and 1890 in the United States. This new data consisted of yield differences between assets denominated in currency and those denominated in gold. During the 1860s and 1870s, the price of gold moved with other commodity prices within a flexible exchange rate system. The additional 1890 period was selected, even though gold and currency were by then linked in a fixed exchange rate system, because of claims by economic historians that this period was fraught with concern about the probability of devaluation.

In testing whether expectations are revised in either an adaptive or a rational manner, Kahn assumed that differences in yields be-

tween currency assets and comparable gold assets were composed of two elements: the expected rate of change in prices and a risk premium. When inflation is expected, a higher return on currency assets will be demanded in that a currency asset will only be held if the expected real return is equal to the real return on gold. If a constant risk premium can be assumed, then changes in the differential yield can be said to measure changes in market expectations of rates of price change.

Kahn used various ways of controlling for validity of the constant risk premium assumption. For example, all currency bonds involved the same parent company and maturity date and, to the extent possible, the criteria of trading in the same market and comparable issue were applied to the selected gold and currency assets.

Kahn's findings were that, with respect to short-run expectations of rates of price change, interpretation of the results of regression analyses did not support the hypothesis of rational expectations, although this hypothesis could not be rejected for the long-run case. Kahn concluded that "the short run expectations of rates of price change could be explained only by a very slow adaptive expectations adjustment mechanism." Because of the very small differential yield during the 1890s, Kahn challenged the conventional wisdom about anxieties over maintaining prevailing exchange rates.

*Determinants of the Dollar-Sterling Rate 1919-25, and Some Related Issues* (The University of Rochester, 1978, 170 pp.; 39/4, p. 2423-A) by Emmanuel John Zervoudakis. The topic of fixed versus flexible exchange rates is taken up by Zervoudakis who examined the behavior of the floating dollar-sterling rate from 1919 to 1925 in his evaluation of the alternative approaches to exchange rate determination.

Zervoudakis found that the main determinants of the dollar-sterling rate were: monetary conditions in the two countries; a seasonal variation in the level of U.S. goods imported by Britain; and commercial capital movements in anticipation of the seasonal variation. These factors were incorporated into a model which used the ratio of the money supply in both countries as an index of the first factor. The effect of the second factor on the exchange rate was assumed to be demands for money in each country. Observation of turning points formed the basis for expectations about the path of the exchange rate. Because of commercial capital movements there was a lack of periodicity in those fluctuations of the dollar-sterling rate

not attributable to monetary conditions, even though originating in seasonal factors. Zervoudakis claims that an inefficiency in the flexible rates system is indicated by the fact that speculation only modified the path of the exchange rate, rather than smoothing out sharp, seasonal fluctuations.

The author also considered the relevance of the Purchasing Power Parity (PPP) Theory and the forward exchange market. Research in both areas, he claims, have led to incorrect inferences about the determinants of the dollar-sterling rate.

## **Announcement**

### **Third International Congress of Accounting Historians**

The Academy of Accounting Historians

The Accounting History Society

August 16-18th

#### **LONDON 1980**

London, 1980 is to be the venue of the Third International Congress of Accounting Historians. The dates will be 16 to 18 August, and the location will be the London Business School, at Sussex Place, Regent's Park, London NW1 4SA.

The First International Congress of Accounting Historians was held in Brussels in 1970, and the Second Congress in Atlanta, Georgia, in 1976. At both there was a wide spread of nationalities among speakers and participants.

As 1980 will also be the centenary year of The Institute of Chartered Accountants in England and Wales, London is particularly appropriate for the Third Congress.

Congress registration fee is £25. Accommodations are available at London Business School at cost of £98, inclusive of all meals except special Congress Dinner on August 16. Program applications are available from:

Dr. G. A. Lee  
Dept. of Industrial Economics  
University Park  
Nottingham NG7 2RD England

## **Announcement**

**NOW AVAILABLE**

MONOGRAPH #2

The Academy of Accounting Historians

**JOHN RAYMOND WILDMAN  
(1878-1938)**

by

GARY JOHN PREVITS  
RICHARD F. TAYLOR

\*

Paperback, 84 pages

**\$7.50**

Box 658, University Plaza  
Atlanta, Georgia 30303

---

## **THE ACADEMY OF ACCOUNTING HISTORIANS**

### **APPLICATION FOR MEMBERSHIP**

Name (please print) \_\_\_\_\_

Organization \_\_\_\_\_

Street Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_

ZIP Code \_\_\_\_\_ County \_\_\_\_\_

Phone No. (\_\_\_\_\_) \_\_\_\_\_

Accounting History Areas of Interest \_\_\_\_\_

**Our fiscal year ends December 31.**

Annual Dues and Subscription to

Accounting Historians Journal 1-year \$15.00

Contribution to Support Research or 3rd Congress \_\_\_\_\_

Total enclosed \$ \_\_\_\_\_

Make checks payable to: THE ACADEMY OF ACCOUNTING HISTORIANS

Mail to: The Academy of Accounting Historians  
Box 658, University Plaza  
Atlanta, Georgia 30303

## Announcement\*

Professor Ashton Bishop, of Virginia Commonwealth University, Richmond, is Editor of The Academy's working paper series.

The series currently includes 40 titles (see list) and represents an effective means of circulating preliminary research or topics for critique by others qualified and interested in doing so. Manuscripts for the series, and questions relating to format should be submitted to Professor Bishop, School of Business, Virginia Commonwealth University, Richmond, Va. 23284.

The manuscript submitted should be in conformity with the format rules described in the April, 1973 *Accounting Review*, with all footnotes at the end in a listing. Material should be submitted in a final form suitable for clean reproduction. Manuscripts from eight to thirty pages in length are deemed most appropriate for this series. Copies of the working papers are provided free upon request to members. There is a service cost price of \$2.00 per copy to non-members.

21. Early Greek Accounting on Estates (Fourth Century B.C.), by George J. Costouros.
22. The Traditional Accounting Systems in the Oriental Countries — Korea, China, Japan, by Jong Hyeon Huh.
23. The Evolution of Ethical Codes in Accounting, by J. C. Lambert and S. J. Lambert.
24. The Oldest Book on Double Entry Book-keeping in Germany, Kiyoshi Inoue.
25. An Annotated Bibliography for Historical Research in Cost Accounting, by Edwin Barstenstein.
26. The Role of Academic Accounting Research: An Historical Perspective, Eric Flamholtz.
27. The Structure of Scientific Revolutions and its Implications for the Development of Accounting Policy, by Diana Flamholtz.
28. Development of Accounting in Hungary from 1945, by R. L. Scholcz, President Hungarian Association of Auditors.
29. Historic Origins of the Purchase vs. Pooling of Interests Problem, by Wesley T. Andrews.
30. Current Efforts to Develop a Conceptual Framework for Financial Accounting and Reporting, by William G. Shenkir.
31. Influence of Nineteenth and Early Twentieth Century Railroad Accounting on Development of Modern Accounting Theory, by James L. Boockholdt, University of Houston.
32. The Historical Development of Standard Costing Systems Until 1920, by Nathan Kranowski, Radford College.
33. The CPA's Professional Heritage, Part IV. "The Birth of the SEC", by John L. Carey.
34. The Evolution of Accounting Theory in Europe from 1900 to the Present Day and its implications on industrial management of tomorrow, by Paul Weilenmann.
35. Sombart on Accounting History, by Kenneth S. Most, Florida International University.
36. A Most Unforgettable Accounting Historian: Frederic G. Gamble, by Paul Garner and Reza Espahbodi, University of Alabama.
37. Historical Overview of Developments in Cost and Managerial Accounting, by M. Zafar Iqbal, California Polytechnic State University.
38. Comments on Accounting Disclosures in the Baltimore & Ohio annual reports from 1828 through 1850 by Richard Vangermeersch, University of Rhode Island.
39. A Contemporary Review of the Evolution of Value Concepts (1500-1930), by J. W. Martin.
40. Tracing the development of a Conceptual Framework of Accounting — A Western European and North American Linkage: a partial examination, by Stanley C. W. Salvary, Concordia University.

\*See Accompanying Announcement in this issue regarding the working paper monograph containing papers 1-20.

WORKING PAPER MONOGRAPH NO. 2, to include WP 21-40 will be available soon.  
Watch for details or contact the editor of the series.



## **Announcement**

### **ACCOUNTING AND BUSINESS RESEARCH**

**Number 35**

**Summer 1979**

**A research quarterly published by  
the Institute of Chartered Accountants  
in England and Wales**

Editor: R. H. Parker, University of Exeter

#### **CONTENTS**

##### **Editorial**

- |   |                        |
|---|------------------------|
| Narrative Disclosures Contained in<br>Financial Reports: Means of<br>Communication or Manipulation? | Arthur Harris Adelberg |
| Sandilands and the Logic of<br>Current Cost   | Harold C. Edey         |
| On the Use of the Accounting Rate<br>of Return in Empirical Research                                | Geoffrey Whittington   |
| Oldcastle, Peele and Mellis: a<br>Case of Plagiarism in the Sixteenth<br>Century                    | B. S. Yamey            |
| A Critique of the Richardson Report   | David M. Emanuel       |
| The Matching Concept and Cost<br>Allocation   | Shu S. Liao            |
| Book Reviews  |                        |
| Notes on Contributors   |                        |

Subscriptions should be sent to City House, 56-66 Goswell Road, London EC1M 7AB, England. Subscription rates are: U.K. £12, Overseas £15 (U.S. \$29), Airmail Overseas £18 (U.S. \$35).

## Announcement

### **A HISTORY OF ACCOUNTING IN AMERICA**

#### **An Historical Interpretation of the Cultural Significance of Accounting**

Gary John Previts, C.P.A., *Case Western Reserve University*, &  
Barbara Dubis Merino, *New York University*

This unique book describes the growth of professional accounting in America as a developing, vital discipline. Initially descriptive, the book becomes increasingly analytical in examining the issues and influences that have marked the dynamic environment of the past fifty years. Nine chapters consider the social, political, economic, and personal elements of each generation—from Puritan to modern times. Covering the development of accounting theory, education, ethics, and practices, this book gives you an unparalleled overview of the growth of American accounting.

(0 471 05172-1) July, 1979 378 pp. \$17.95

**Ronald Press**  
P.O. Box 092  
Somerset, N.J. 08873

### **NOTABLE CONTRIBUTIONS TO ACCOUNTING LITERATURE AWARD**

Members of the American Accounting Association are invited to suggest works for nomination for the AICPA Notable Contributions to Accounting Literature Award. These nominations are restricted to articles published in either regular or irregular periodicals during the calendar year ending December 31, 1979 and books or irregular publications published during the five year calendar years then ending.

The latest date for receiving nominations is February 15, 1980. Please address your suggestions to: Dr. D. Larry Crumbley, AAA Committee to Nominate Outstanding Contributions to Accounting Literature, Department of Accounting, Texas A&M University, College Station, Texas, 77843.

## THE ACADEMY OF ACCOUNTING HISTORIANS

### WORKING PAPERS 1-20

### VOLUME 1

There is now available a single, 368 page, bound volume of the first 20 working papers to be published by The Academy of Accounting Historians. This 6" x 9" book includes the following:

#### Working Paper

#### Number

1. "The CPA's Professional Heritage, Part I," by John L. Carey.
2. "The Audit of Historical Records As a Learning Device in Studying Environmental and Socio-Economic Influences on Accounting," by Richard H. Homburger.
3. "The Accounts of Ancient Rome," by Kenneth S. Most.
4. "Survey of the Development of Auditing in Germany," by Rosa-Elisabeth Gassmann.
5. "The CPA's Professional Heritage, Part II," by John L. Carey.
6. "A Chronological Index Prepared for John L. Carey's *The Rise of the Accounting Profession*, Volume 1, 1896-1936," by Gary John Previts.
7. "The State of Bookkeeping in Upper Germany at the Time of the Fuggers and Welsers," by Hermann Kellenbenz.
8. "A Chronological Index Prepared for John L. Carey's *The Rise of the Accounting Profession*, Volume II, 1937-1970," by Gary John Previts.
9. "A Bibliography on the Relationship Between Scientific Management and Standard Costing," by Marc J. Epstein.
10. "A Significant Year (1873) in the History of Bookkeeping in Japan," by Kojiro Nishikawa.
11. "Historical Development of Early Accounting Concepts and Their Relations to Certain Economic Concepts," by Maurice S. Newman.
12. "Thirty-six Classic Articles from the 1905-1930 Issues of *The Journal of Accountancy*," by Richard Vangermeersch.
13. "The Development of the Theory of Continuously Contemporary Accounting," by R. J. Chambers.
14. "The CPA's Professional Heritage, Part III," by John L. Carey.
15. "Two Papers on the History of Valuation Theory (I. Management Behavior on Original Valuation of Tangible and Intangible Fixed Assets. II. The Significance of Write-ups of Tangible Fixed Assets in the 1920's)," by Richard Vangermeersch.
16. "The Golden Anniversary of One of Accounting History's Mysterious Contributors: Albert DuPont," by Gary John Previts and S. Paul Garner.
17. "Evidential Matter Pertaining to the Historical Development of the Concepts of Disclosure and Its Uses as a Teaching Aid," by Hans V. Johnson.
18. "The Evolution of Pooling of Interests Accounting: 1945-1970," by Frank R. Rayburn.
19. "The Study of Accounting History," by Vahe Baladouni.
20. "The Evolution of Corporate Reporting Practices in Canada," by George J. Murphy.

**Cost: \$5 to members of The Academy of Accounting Historians \$7.50 to non-members**

ORDER FROM: **Ashton Bishop**  
**Department of Accounting**  
**School of Business**  
**Virginia Commonwealth University**  
**Richmond, VA 23284 USA**

Make Checks Payable to: THE ACADEMY OF ACCOUNTING HISTORIANS

NOW AVAILABLE FOR IMMEDIATE DELIVERY

## SELECTED CLASSICS IN THE HISTORY OF BOOKKEEPING

### A Reprint Collection

#### SERIES I Reprinted 1974

1. **ANYON, James T.**, Recollections of The Early Days of American Accountancy 1883-1893. New York 1925. Reprinted 1974. 68p. Cloth \$12.50
2. **CRIVELLI, Pietro**, An Original Translation of the Treatise on Double-Entry Book-Keeping by Frater Lucas Pacioli. London 1924. Reprinted 1974. *XVIII*, 125p. Cloth \$21.50
3. **GREEN, Wilmer L.**, History and Survey of Accountancy. Brooklyn 1930. Reprinted 1974. 288p. Cloth \$25.00
4. **JÄGER, Ernst Ludwig**, Die ältesten Banken und der Ursprung des Wechsels. *Supplement*. Stuttgart 1881. Neudruck 1974. *VIII*, 91 S. Ln. \$12.50
5. **JÄGER, Ernst Ludwig**, Die Berechtigung der einfachen Buchhaltung gegenüber der italienischen. *Dritte, durch die Geschichte der Buchhaltung und deren Unterwerdung auf die Landwirtschaft, sowie bezüglich des kaufmännischen Theils vermehrte Aufl.* Stuttgart 1868. Neudruck 1974. *IV*, 147 S. Ln. \$21.50
6. **JÄGER, Ernst Ludwig**, Der Traktat des Lucas Pacioli von 1494 über den Wechsel. *Vortrag gehalten am 22. März 1878 vor dem kaufmännischen Vereine von Stuttgart*. Stuttgart 1878. Neudruck 1974. 40 S. Ln. \$12.50
7. **JÄGER, Ernst Ludwig**, Der Wechsel am Ende des 15. Jahrhunderts: *Ein Beitrag zum Paccioli-Jubiläum 1494-1894*. Stuttgart 1895. Neudruck 1974. 29 S. + 1. Ln. \$12.50
8. **KHEIL, Carl Peter**, Benedetto Cotrugli Raugo: *Ein Beitrag zur Geschichte der Buchhaltung*. Wien 1906. Neudruck 1974. 36 S. Ln. \$12.50
9. **PERAGALLO, Edward**, Origin and Evolution of Double Entry Book-keeping: *A Study of Italian Practice from the Fourteenth Century*. New York 1938. Reprinted 1974. 156p. Cloth \$32.50
10. **SIEVEKING, Heinrich**, Aus Genueser Rechnungs- und Steuerbüchern: *Ein Beitrag zur mittelalterlichen Handels- und Vermögensstatistik*. Wien 1909. Neudruck 1974. 110 S. Ln. \$13.00
11. **SIEVEKING, Heinrich**, Genueser Finanzwesen vom 12. bis 14. Jahrhundert. Leipzig/Tübingen 1898. Neudruck 1974. *XV*, 219 S. Ln. \$24.50
12. **WOOLF, Arthur H.**, A Short History of Accountants and Accountancy. London 1912. Reprinted 1974. *XXXI*, 254p. Cloth \$21.50

#### SERIES II Reprinted 1975

1. **DE WAAL, P.G.A.**, Van Pacioli tot Stevin: *Een Bijdrage tot de Leer van het Boekhouden in de Nederlanden*. Roermond 1927. Reprinted 1975 *IX*, 318p. Cloth \$28.50
2. **ELDRIDGE, H.J.**, The Evolution of the Science of Bookkeeping. Second Edition by Leonard Frankland. London 1954. Reprinted 1975. 70p. Cloth \$12.50
3. **GEIJSBEEK, John B.**, Ancient Double-Entry Book-keeping: *Lucas Pacioli's Treatise (A. D. 1494 - The Earliest Known Writer on Bookkeeping) Reproduced and Translated with Reproductions, Notes and Abstracts from Manzoni, Pietra, Ympyn, Stevin and*

- Dafforne*. Denver, 1914. Reprinted 1975. *IV*, 182p. Folio. Cloth \$38.50
4. **GOMBERG, Léon**, Histoire critique de la Théorie des Comptes. Genève 1929. Reprinted 1975. 88p. Cloth \$12.50
  5. **LEYERER, C.**, Theorie und Geschichte der Buchhaltung: *Ein Leitfaden*. Brunn 1919. Neudruck 1975. 40 S. Ln. \$12.50
  6. **SIEVEKING, Heinrich**, Aus venetianische Handlungsbüchern: *Ein Beitrag zur Geschichte des Grosshandels im 15. Jahrhundert. Jahrbuch für Gesetzgebung, Verwaltung und Volkswirtschaft im Deutschen Reich: Neue Folge*. 25.-26. Jahrg./ Leipzig, 1901/2. Neudruck 1975. 72 S. Ln. \$12.50
  7. **SYKORA, Gustav**, Systeme, Methoden und Formen der Buchhaltung. *Von ihren Anfängen bis zur Gegenwart*. Wien, 1952. Neudruck 1975. 114 S. Ln. \$13.00

#### SERIES III Reprinted 1977

1. **DE ROOVER, Raymond**, Le Livre de Comptes de Guillaume Ruyelle, Changeur à Bruges (1369). [Extrait des *Annales de la Société d'Emulation de Bruges, Tome LXXVIII*] Réimpression 1977. Bruges, 1934. pp. 15-95 (81p.) Cloth \$12.50
2. **DE WAAL, P.G.A.**, De Engelse Vertaling van Jan Impyn's Nieuwe Instructie. [Economisch-Historisch Jaarboek: *Bijdragen tot de Economische Geschiedenis van Nederland uitgegeven door De Vereeniging het Nederlandsch Economisch Historisch Archief, Acht-tiende Deel, 1934*] Reprinted 1977. 's-Gravenhage, 1934. 58p. Cloth \$12.50
3. **HÜGLI, Franz**, Die Buchhaltungs-Systeme und Buchhaltungs-Formen: *Ein Lehrbuch der Buchhaltung*. Mit über hundert Formularen und zwei Holzschnitten. Neudruck 1977. Bern, 1887. xii, 680 S. Ln. \$69.50
4. **KEMPIN, W.**, Vom Geist der Buchführung. Neudruck 1977. Köln, 1910. 192 S. Ln. \$24.00
5. **LION, Max**, Geschichtliche Betrachtungen zur Bilanztheorie bis zum Allgemeinen deutschen Handelsgesetzbuch. Neudruck 1977. Berlin, 1928. iii, 39 S. Ln. \$12.50
6. **MURRAY, David**, Chapters in the History of Bookkeeping, Accountancy and Commercial Arithmetic. Reprinted 1977. Glasgow, 1930. viii, 519p. Cloth \$39.50
7. **NIRRNHEIM, Hans (Bearb.)**, Das Handlungsbuch Vicks von Geldersen. Hrsg. vom Verein für Hamburgische Geschichte. Neudruck 1977. Hamburg/Leipzig, 1895. lxxix, 199 S. Ln. \$31.50
8. **SIEVEKING, Heinrich**, Die Casa di S. Giorgio. [Genueser Finanzwesen mit besonderer Berücksichtigung der Casa di S. Giorgio, II] Neudruck 1977. Freiburg, 1899. xvi, 259 S. Ln. \$30.00
9. **STROOMBERG, J.**, Sporen van Boekhouding voor Pacioli. [Overdruk uit J. G. Ch. Volmer: *Van Boekhouden tot Bedrijfsleer, een Bundel opstellen ter Gelegenheid van zijn Vijftientwintig Jarig hooglerarschap door oud-studenten aangeboden*] Reprinted 1977. Woessen, 1934. pp. 246-269. (24p.) Cloth \$12.50

Please send your orders to:

**NIHON SHOSEKI, LTD.** • 2-11, Esakacho 2-chome, Suita City, Osaka 564, Japan

• Telephone 06-386-8601 • Telex [International] J64984 NIHONSHO • Cables [International] BESTSELLERS SUITA

## Announcement

<p>Reprinted and Now Available</p> <p>THE ACADEMY OF ACCOUNTING HISTORIANS</p> <p>Monograph # 1</p> <p><i>A Reference Chronology of Events Significant to the Development of Accountancy in the United States</i></p> <p>by Knight, Previts &amp; Ratcliffe</p> <p>paperback — 102 pp. \$5.00</p> <p>Order from: The Academy of Accounting Historians Box 658 University Plaza Atlanta, Georgia 30303</p>	<p>A History of <b>ACCOUNTING THOUGHT</b></p> <p>by Michael Chatfield</p> <p>This book is recognized, by scholars and librarians, as a standard reference work on accounting history.</p> <p>The original edition has now been bibliographically updated in each chapter and is again available for business school majors, accounting specialists, economists and history majors.</p> <p>Orig. ed. 1974 320 pp.</p> <p>Revised ed. 1977 Hard Cover \$16.50 Paperback \$9.50</p> <p>KRIEGER Publishing Co., Inc. 645 N.Y. Ave., Huntington, N.Y. 11743</p>
---	--

<p>Reprints in the <b>ACCOUNTING HISTORY CLASSICS SERIES</b> under the auspices of <i>The Academy of Accounting Historians</i> and The University of Alabama Press Gary John Previts, Series Editor</p> <p>Volume 1 S. Paul Garner <i>Evolution of Cost Accounting to 1925</i> \$6.50 430 pp. paperback edition. November, 1976. ISBN 0-8173-8900-8</p> <p>Volume 2 James Don Edwards, <i>History of Public Accounting in the United States</i> \$7.50 368 pp. paperback edition. August, 1978.</p> <p><b>ORDER NOW</b></p> <p>The University of Alabama Press Box 2877 University, Alabama 35486</p>
---

## **Announcement**

### **THE ACCOUNTING REVIEW**

*The Accounting Review* is the official journal of the American Accounting Association, and is published quarterly. The Association is a voluntary organization of persons interested in accounting education and research. Membership in the Association entails annual dues of US\$25 for residents of the United States and Canada and US\$12 for others. Libraries may take out subscriptions to the *Review*. All communications regarding membership and subscriptions should be sent to the American Accounting Association, 5717 Bessie Drive, Sarasota, Florida 33583.

### **TABLE OF CONTENTS**

**APRIL, 1980**

#### **MAIN ARTICLES**

The Debt Equivalence of Leases: An Empirical Investigation  
Robert G. Bowman

Should Replacement-Cost Changes Be Included in Income?  
Richard A. Samuelson

The Use of the Generalized Shapley Allocation in Joint  
Cost Allocation  
Susan S. Hamlen, William A. Hamlen, Jr. and John Tschirhart

The Possibility of Partial Accounting Standards  
Michael Bromwich

#### **NOTES**

A Note on the Optimal Tax Lives for Assets Qualifying for  
the Investment Tax Credit  
Jerome S. Osteryoung, Daniel E. McCarty and Karen Fortin

EDUCATION RESEARCH, L. S. Rosen, Editor  
The Independent Auditor's Civil Liability—An Overview  
Joseph J. Schultz, Jr. and Kurt Pany

## GUIDE FOR SUBMITTING MANUSCRIPTS

The Academy of Accounting Historians invites manuscripts on subjects related to accounting history for **The Accounting Historians Journal**. Articles should have scholarly merit and present an original contribution to the knowledge in the field. Articles presenting the results of research from primary sources will be given preference. All articles will be reviewed by two or more members of the Editorial Board. The journal is scheduled to appear each Spring and Fall.

**Manuscripts** should be in English and of acceptable style and organization for clarity of presentation. Submit three copies double spaced on 8½ x 11 inch paper. The manuscript should not exceed 5,000 to 7,000 words. The title page should contain name of author, affiliation and address for further correspondence. The title should reappear on the first page of the manuscript but the author should not be identified.

**Tables and figures** should be numbered, titled and presented in reproducible form. Limited use of original documents etc. can be accommodated in the Journal at modest additional cost to the author by submitting camera-ready copy. Important textual materials may be presented in both the original language together with the English translation.

**Footnote** numbers must be referenced within the article in sequence. The bibliography should contain full reference to sources arranged in alphabetical order by author. Informational footnotes are to be presented at the bottom of the page referenced by letters and should be limited in size and number. **Consult a previous number of the Journal for examples.**

**Proofs.** Galley proofs will be sent to the author as permitted by scheduling but additions of new material must be strictly limited and excessive alterations will be charged to the author. Ten copies of the Journal on publication will be provided to the author.

**Abstract.** An abstract of the article will precede the printed article, and should be submitted with all manuscripts. Abstract should not exceed 100 words.

**Reprints.** Authors may order reprints with covers of their articles from the printer. Costs of these are billed directly to the author by the printer. Minimum order 100, prices to be established by printer.

### **SUBMIT MANUSCRIPTS TO:**

Professor Edward N. Coffman  
School of Business  
Virginia Commonwealth University  
Richmond, Virginia 23284

**THE ACCOUNTING HISTORIANS JOURNAL  
BOX 658, UNIVERSITY PLAZA  
ATLANTA, GEORGIA 30303**

**NON-PROFIT ORG.  
U. S. POSTAGE**

**PAID**

Permit No. 597  
Atlanta, GA 30303