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Abstract: The conceptual and theoretical development of cost accounting has been at a standstill for several decades, despite its poor state and drastic changes in its environment. The concept of cost itself and related concepts are both unclear and unrelated to relevant concepts in other areas of economics, and several critical issues remain unresolved.

Part of the blame for this state is laid at the door of those writers and interpreters of several key pieces of literature, or sets of writings on specific topics. The works involved in the "miscues" are J. M. Clark's emphasis on different costs for different purposes in his Studies in the Economics of Overhead Costs; Paton and Littleton's difficulties in clarifying the cost concept; the American Institute of Accountants' definition of depreciation accounting as systematic and rational allocation; the direct/variable costing literature; and the rejection of allocation. An effort is made to show how each of those miscues harmed the cause of cost accounting.

Part I: Issues

"We may start with the general proposition that the terminology of costs is in a state of much confusion . . . ." [Clark, 1923, p. 175]. The persistence of that state to this date must be an outcome beyond Clark's worst fears, but that outcome appears to be of no concern to the accounting profession. Until the mid-1980s, it was rare to see or hear expressions of dissatisfaction by accountants regarding the early twentieth century style of product cost accounting that is prevalent, from all indications, in American enterprises and textbooks. Now we see a few signs of life [Hakala, 1985; Hunt et al., 1985; Johnson and Kaplan, 1987; Kaplan, 1986; NAA, 1985; Seed, 1984; and others]. Nevertheless, a report that product cost accounting is emerging from the dark ages of its conceptual and theoretical development would be premature.

In this paper, I show why I consider the conceptual and theoretical development of cost accounting to have been in the dark ages for several decades, then go on to explore the thesis that the writing and interpretation of several especially
influential pieces of literature deserve part of the blame for those dark ages.

**The Dark Ages**

What have management accounting practitioners been doing for the past sixty years? If there has been much innovation between 1925 and 1980, other than the introduction of discounted cash flow procedures . . . the innovating practitioners have managed to keep it mostly secret [Johnson and Kaplan, 1987, p.176].

A perusal of the literature suggests that its golden age might have extended beyond 1925, perhaps to 1940, as there were a number of interesting contributions to the literature in that 15 year period [Baxter, 1938; Church, 1930; Edwards, 1937; Harris, 1936], but they were largely ignored by practitioners and textbook writers. It seems safe to say that the generally taught model of product cost accounting has not changed perceptibly for several decades; whether it is four, five or six decades does not matter. A senior practitioner who learned product costing from a 1940 text might arrive at the same unit cost number in a given situation as a beginner who learned cost accounting in 1987, subject to the range of choice discussed in both eras. The significant differences between 1940 texts and 1987 texts are in the areas of control and ad hoc cost analysis tied to decision models, together with whichever management science, economics, and behavioral science topics the particular authors chose to present in an experimental spirit. As of mid-1987, however, product costing is still in the dark ages.

Evidence that cost accounting is in a period of stagnation can be gathered by reviewing a series of issues on which no obvious progress has been made since 1940. The long history of four perpetually recycled issues, to use Sterling's [1974, p. 4] expression, and two more fundamental but less debated issues shows that the theoretical development of cost accounting came to a standstill in 1930s, despite much unfinished work, and has not been resumed to this date.

**Recycled Issues**

*The Historical Cost/Current Cost Issue.*

The earliest literary recognition of this issue is unknown to me. A hint of its age was given by R. S. Edwards in 1937 [p.82]: "Another problem concerns the price to adopt in charging out
raw materials; one school claims that materials should be issued at original cost, while the other side champions 'replacement cost.' The list of authorities that have supported some form of current measurement of inputs to production processes is long and distinguished, while the set of textbooks recommending (as a first choice) an alternative to historical cost is, as far as I know, empty. Is the case for the value of historical cost data that strong? I think the weight of informed opinion today is against it.

The Average Cost/Variable Cost Issue.

The origins of this controversy are mired in history. One could speculate that the first accountant to suggest that marginal cost be used as a measure of product cost was the first accountant to understand the marginalist economics espoused by Leon Walras [1874] and Alfred Marshall [1890] in the nineteenth century. Solomons [1952, p.34], however, has pointed out Dionysius Lardner's [1850, pp.216-253] clear distinction between variable and fixed costs and his railway overhead accounting scheme based on that distinction. Jonathan Harris (1936) is generally credited with introducing variable costing in the United States. In England, Ronald Edwards [1937, pp.88-89] considered "...it the cost accountant's main job to inform the management regarding the minimum at which additional work can be taken," which "...will vary according to the extent to which capacity is being used..." thus recognizing the variability of marginal cost with output. Furthermore, "...for each department the accountant should prepare, and continuously revise, schedules showing the additional cost of additional output." By 1962, Gillespie was able to list 56 articles on variable, direct, or marginal costing. The case for abandoning average cost has been before the profession for a long time, but the major text writers stick with it as their primary method — without proving their case, in my opinion.

The Allocation Issue.

The evidence accumulated by Solomons [1952] shows that the allocation of overhead in product costing was developed and generally accepted in the nineteenth century, but it had hardly been fully worked out before it began to be challenged as arbitrary.

What...is the use of splitting up a manager's salary between departments? If a department be shut
up, can a portion of the manager be dispensed with? If such divisions have any value it is a relative one only, as between one year and another. They have no absolute value for they do not answer to facts which confirm past action, or give rise to new — the only facts worth having in business [Hamilton, 1910, quoted in Solomons, 1952, p.33].

Subsequently, other writers on cost accounting expressed grave concern regarding the merits of overhead allocation, especially fixed overhead. These include Edwards [1937, p.78], Baxter [1938, p.269], Paton and Littleton [1940, p.120], Baxter and Oxenfelt [1961, p.300], Thomas [1969, p.77], and others. However, several thoughtful writers suggested that the overhead allocation process, while not being justified as measuring expiration of historical costs, may accomplish something much more valuable: “Allocated oncosts may correspond to ‘opportunity costs’” [Baxter, 1938, p.272]. Similar views were expressed by Solomons [1948, p.290], Devine [1950, p.389], Baxter and Oxenfelt [1961, pp.302-303], Vatter [1970, p.550], and Zimmerman [1979, p.519], none of whom cited their predecessors. In view of the widespread opposition to allocation among academics and its widespread use in business [Fremgen and Liao, 1981], it seems safe to assert that the allocation issue is unresolved.

The Cost of Capital.

The idea of including some version of return to attract capital among the costs of production has been broached repeatedly since Norton [1889, p.79] insisted on its inclusion in the cost of manufacture. The debate reached a crescendo in 1913 when the January to June volume of the *Journal of Accountancy* included ten articles on the subject, some pro and others con. Perhaps the most determined advocate of inclusion of interest in the cost accounts was Scovell, whose 1924 book has been quoted widely. R. N. Anthony’s [1975] *Accounting for the Cost of Interest* may be the most recent major attempt to sway readers towards the inclusion treatment. At this stage in the evolution of product costing, the inclusion of cost of capital is a major unresolved issue.

Neglected Fundamentals

Why have the above four issues not been resolved? Part of the answer may lie in neglect of certain more fundamental issues.
How Many Elements of Cost?

Textbook descriptions of product costing almost invariably include three cost elements: direct materials, direct labor, and overhead, although some descriptions of standard cost systems break overhead into variable and fixed components. How three-element product costing became so common is not clear. The "earliest important English textbook on cost accounting" [Parker, 1969, p.146], Garcke and Fells’ seven-edition Factory Accounts [1887-1922], did not establish that pattern. "Under present-day economic conditions . . . regard has to be paid to all elements which enter into or have to be considered with regard to the costs of a commodity. Such costs range themselves under eight generic factors" [Garcke and Fells, 1922, p.8]. Several of those factors were dominated by costs which would now be omitted from manufacturing cost, including interest on circulating capital. Church [1930, pp. 62-65] replaced one overhead pool with six different services to be associated with products. In modern practice, certain companies merge direct labor and overhead [Hunt et al., 1985; Hakala, 1985]. In other cases, the three common elements are supplemented by separate recognition of a service performed by an outside contractor. Writers might take issue with the descriptive validity of the three-cost-elements view of cost classification, especially when certain subdivisions of "overhead" are large enough and direct enough to be charged to products separately, and fringe costs of labor are easily loaded onto "direct" labor instead of being run through a general overhead pool [NAA, Statement on Management Accounting No. 4C, 1985]. The three-cost elements view of product costing is a vestige of the dark ages; it should be replaced by the n-resources view before the twentieth century ends.

Issues in Defining Cost and Costing.

"Most branches of Science and Art possess a terminology in which words employed as 'terms of art' have distinct and definite meanings, but the progress of Accountancy has been retarded by its chief terms and phrases having multiple and ambiguous meanings" [Garcke and Fells, 1922, p.4]. Horngren and Foster [1987, pp.20-21] for example, write of "... costs as resources sacrificed or foregone to achieve a specific objective" and "... as being measured ... as monetary units ... that must be paid for goods and services." Other prominent sources are equally indirect and inconclusive.
Surely our terminology is critical to the theoretical development of our subject. Vagueness in the definition of cost might well lead to our inability to resolve other issues in cost accounting. Consider the questions raised by the above, and other, definitions: (1) Do costs exist, as suggested by “unexpired costs,” or do they happen? Are they stocks or flows? Recorded by a debit or a credit in the balance sheet. Resources sacrificed or sacrifices of resources? (2) Are costs limited to a subset of economic sacrifices — past, present and future cash disbursements, for example — or are all economic sacrifices costs? (3) In product costing, is the object of costing a thing or an activity? The product or the process? (4) Is the unit cost of a stocked resource employed for an object of costing determined when that resource is acquired by the firm (as implied by Horngren and Foster’s second statement or when it is used (as suggested by the first)? (5) Is objectivity a highly desirable quality of cost information, as Paton and Littleton [1940, pp.18-21, 123, 126] insisted, or is cost “ephemeral” and “not objectively discoverable” [Thirlby, 1973, pp.139-140]. The importance of these issues in my way of thinking about cost accounting can be suggested by predicting that their resolution can lead directly to the resolution of several of the issues presented in previous paragraphs.

Conclusion, Part I.

The comatose state of cost accounting's conceptual/theoretical development is especially remarkable when one compares the stagnation in that field with the progress that has been made since World War I in microeconomics, finance, and general accounting theory. Cost accounting seems to be out of touch. Also remarkable is the lack of impact that major changes in the environment of cost accounting have had on its development. In 1940, fringe labor costs were immaterial, indirect costs were low relative to direct labor, costs of using plant assets were relatively low, few nonmanufacturing enterprises accumulated unit cost data, the theory of finance and the cost-of-capital concept were not well developed, and data processing costs were relatively high. But cost accounting concepts and theory have not changed. Attribution of partial blame for cost accounting’s dark ages to the authors and/or interpreters of certain influential publications is discussed in the next section.
Part II: Explanations

Why have the six issues mentioned above not been resolved? In the cases of the first four, it surely is not for lack of thought or attention on the part of accountants. In the cases of the other two, it can hardly be for lack of importance. Of course, one could insist that they have been resolved, but just not in convincing manners, in the cases of the first four. Or perhaps my analyses are flawed, in the last two cases. In any event, my position is that the evidence presented above supports the view that product cost accounting has a lot of unfinished business meriting serious attention.

Five cases of important written works having regressive influence on the development of cost accounting are discussed here. I shall not attempt to blame either the authors or their followers; the point is simply that the works of several generally thoughtful contributors have had adverse consequences. These works are, in chronological order, J. M. Clark's [1923, Chapter IX] emphasis on different costs for different purposes; Paton and Littleton's [1940] peculiar concept of cost; the American Institute of Accountants' definition of depreciation accounting as systematic and rational allocation in Accounting Research Bulletin No. 20 [1943, p.167]; cost accountants' ongoing flirtation with indiscriminate application of direct costing; and the revolt against allocation.

John Maurice Clark

"Different costs for different purposes" was part of the title of Clark's [1923] Chapter IX: "Different Costs for Different Purposes: An Illustrative Problem." Since the publication of his Studies in the Economics of Overhead Costs, Clark's expression has been accorded recognition as a principle [Deakin and Maher, 1987, p.7] and often is accepted by accountants as an explanation of why the cost numbers produced by conventional accounting practices are not appropriate for many uses. A different explanation should be considered.

A review of Clark's work shows that he did not recognize the concept: object of costing. Consequently, he did not see that his different decision problems called for information on different objects of costs, or cost objectives. EXHIBIT I shows his nine decision problems and the associated objects of costing for which cost data are needed. I conclude that instead of "different costs for different purposes," Clark should have stressed proper identification of the object of costing in each case.
EXHIBIT I. OBJECTS OF COSTING IN CLARK'S NINE CASES

<table>
<thead>
<tr>
<th>Decision Problem</th>
<th>Object(s) of Costing</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The plant is not yet built: to build or not</td>
<td>Entire project from beginning to end of its life</td>
</tr>
<tr>
<td>2. Size of plant to build</td>
<td>Several objects of costing each involving a different size of plant</td>
</tr>
<tr>
<td>3. Whether to change methods of production</td>
<td>(a) Producing for a period by the existing method and (b) producing for a period by the alternative method</td>
</tr>
<tr>
<td>4. Maximum dividend that may be paid</td>
<td>All activities undertaken from incorporation to date</td>
</tr>
<tr>
<td>5. How cheaply will it pay to sell additional goods?</td>
<td>Starting with a given level of output, an incremental unit of production</td>
</tr>
<tr>
<td>6. How low can prices be cut in order to hold its business?</td>
<td>Starting with a given level or output, a decremental unit of production</td>
</tr>
<tr>
<td>7. Should the plant be shut down temporarily in a depression?</td>
<td>(a) Producing for a period at a given volume and (b) holding the plant idle for a period</td>
</tr>
<tr>
<td>8. Should a side line be produced during the slack seasons?</td>
<td>(a) Producing the side line and the main product at given volumes for a year and (b) producing only the main product for a year</td>
</tr>
<tr>
<td>9. Plant abandonment</td>
<td>(a) Making use of the plant for an incremental period and (b) closing and selling the plant</td>
</tr>
</tbody>
</table>

1Based on an example in Clark [1923], Chapter IX.

essence of cost — an economic sacrifice — remains constant; only its scope — the object of costing, what we want to know the cost of doing — changes across the nine cases.1

This misunderstanding by Clark and his accountant followers appears to have diverted attention away from the need for a generally applicable definition of cost; irrelevance of cost numbers was excused on the ground that a different meaning

1See Wells [1978, p.23] for a different interpretation of Clark's point.
of cost was needed for the purpose at hand. That may explain why cost accountants have tolerated poor definitions of cost and have neglected the object-of-costing concept for so many decades. In other words, Clark failed to find the common element in his nine applications involving cost, so accepted and perpetuated the notion that the meaning of cost varied with the circumstances — obviously an unsuitable conceptual base for a theory. Such an error was excusable in 1923. Cost theory was not highly developed in the economics literature at that time; for example, Jacob Viner did not introduce cost curves until 1932. But the failure of generations of scholars and practitioners to correct that error can only be explained by a lack of interest in the fundamentals of cost accounting.

**Paton and Littleton**

*An Introduction to Corporate Accounting Standards* [Paton and Littleton, 1940] may deserve a share of the blame for the failure of cost accountants to develop a clear concept of cost. That work did more to perpetuate accountants' misconceptions about costs than any other single publication. At the heart of the matter was their failure to identify costs as either stocks or flows, but not both. If a generation of accounting authors are not clear as to whether one of their most fundamental concepts is a stock or a flow, it should not be surprising if confusion persists.

Broadly defined, cost is the amount of bargained-price of goods or services received or of securities issued in transactions between independent parties . . . .

The common tendency to draw a distinction between cost and expense is not a happy one, since expenses are also costs in a very important sense, just as *assets are costs*. "Costs are the fundamental data of accounting, and the term should therefore be used in its broadest sense. The word "cost" is substantially the equivalent of "price-aggregate" (unit price times quantity) or "bargained price." Consequently, it is possible to apply the term "cost" equally well to an asset acquired, a service received, and a liability incurred. Under this usage assets, or costs incurred, would clearly mean charges awaiting future revenue, whereas expenses, or cost applied, would mean charges against present revenue, each with suitable subclasses as occasion required [Paton and Littleton, pp. 24-26]. (Emphasis added.)
The above quotations, together with other statements, suggest that:

1. The authors did not think of costs peculiarly as either stocks or flows, but as both.
2. Costs are related to liabilities in the same way as to assets: "[C]ost is the amount of bargained-price of goods or services received or of securities issued . . . [I]t is possible to apply the term 'cost' equally well to an asset acquired, a service received, and a liability incurred. . . . [T]he standard of recorded costs applies to both sides of the balance sheet" [pp. 24-26, 37].
3. Costs flow in and out. "Recording the inflow of cost is in large measure a matter of close observation and efficient clerical process; recording the outflow of costs as embodied in revenue is essentially a matter of judgment and interpretation" [p. 69].
4. Costs can be either unexpired or expired [pp. 33, 125]. This unfortunate legacy continues to the 1980s: "Assets may be referred to as unexpired (or deferred) costs and expenses as expired costs or 'gone assets'" [Davidson, et al., 1985, p. 46]. Here we see the confusion between assets being costs and assets being measured by, and recorded at, the costs of acquiring them.

It is hard to imagine how a more confusing discussion of cost could have been created intentionally. Such confusion about the nature of cost might not have been a serious problem if cost had not played such a central role in the Paton and Littleton theory. "The primary purpose of accounting . . . is the measurement of periodic income by means of a systematic process of matching costs and revenues. . . . [p. 123]. [T]he function of accounting is . . . the reporting of costs actually incurred by a single enterprise whether or not it is typical of the industry" [p. 35]. If no chain is stronger than its weakest link, one cannot help but wonder about the contribution made by a cost-based theory that was, in a sense, costless.

The specific consequences of the Paton and Littleton confusion are not easily identified. It is tempting to speculate regarding how accounting thought might have developed if Paton and Littleton had clearly identified cost as an outflow of something. That might have been associated with treatment of expenses and losses as subsets of costs and recognition of
revenue as an inflow (rather than the noncommittal "product of the enterprise" [p. 46]). It could have led to a rigorous distinction between stocks and flows, and even raised questions like "stocks of what" which, in turn, could have opened the door to a serious investigation of asset and liability measurement. The possibilities are staggering. In the more specific context of the present work, recognition of costs as outflows of wealth could have raised questions regarding their measurement and the objectives for which costs were incurred, i.e., objects of costing. But that is speculative, of course.

Paton and Littleton do not deserve all of the blame for 47 years of confusion regarding cost. Blind repetition of their confusing statements has done most of the damage. Once the decision-usefulness objective was introduced [Staubus, 1954] and popularized among academics (AAA, 1965), they should have been able to focus on a concept of cost that fitted the decision context. The most general model of the economic decision process is comparison of costs and benefits of proposed actions. For that purpose, it is clear that benefits are inflows of wealth, recorded in accountants' balance sheets by debits to assets and/or liabilities, and that costs are outflows, recorded by credits. I challenge anyone to demonstrate the general usefulness of a concept of cost that conflicts with that conception. The state of accountants' concepts in 1987 should be an embarrassment to those still repeating the Paton and Littleton phrases long after Professor Paton's renunciation of his depression-induced lapse [Paton, 1971, pp. x-xi].

American Institute of Accountants Definition of Depreciation Accounting

The 1943 AIA Committee on Terminology's notorious definition of depreciation accounting — the Committee declined to define depreciation except as a derivative of depreciation accounting — has remained a part of generally accepted accounting principles to this day. No one seems to be able to say anything good about it, but no authoritative body has been willing to change it.

Depreciation accounting is a system of accounting which aims to distribute the cost or other basic value of tangible capital assets, less salvage (if any), over the estimated useful life of the unit (which may be a group of assets) in a systematic and rational manner. It is a process of allocation, not of valuation. Depreciation for the year is the portion of the total charge
under such a system that is allocated to the year. Although the allocation may properly take into account occurrences during the year, it is not intended to be a measurement of the effect of all such occurrences [AIA, ARB, No. 20, 1943, p. 167].

These definitions imply that depreciation expense may be arbitrary and is not a measurable economic phenomenon. They suggest that the only tests of satisfactory accounting for a long-lived asset — and perhaps for others — are that it be systematic and rational in the sense that customary depreciation accounting is, and that it allocate the total cost less salvage value over the estimated useful life. Why earnings and owners' equity numbers dependent upon such arbitrary numbers representing no economic phenomena should be of interest to users of financial statements is a puzzle. But then, the AIA never said that financial statements should be useful. It should not be surprising that accountants have little enthusiasm for such a modest goal. It contrasts dramatically with the objectives of financial reporting and the definitions of elements of financial statements in the FASB's [1978, 1980] conceptual framework.

The specific harm done to cost accounting by the AIA definition was approval of product cost inclusions quantified in an arbitrary manner in lieu of serious efforts to measure costs of services and commodities put into productive activities. It struck a blow for a de minimus view of cost accounting. In my opinion, the AIA contributed a defective building block to the structure of product costing — one that impairs the latter's effectiveness to this day.

The Direct Costing Literature

The American literature on this subject usually is dated from Jonathan Harris' 1936 article in the N.A.C.A. Bulletin. Harris stated that the "direct cost plan" [p. 508] was commenced January 1, 1934 in a manufacturing company. His description of the "direct production expenses" which were charged to inventory along with direct materials and direct labor made it clear that he viewed direct associability and variability as essentially synonymous. Most of those costs that had previously been treated as overhead but were to be included in inventory under the new direct cost plan — "direct production expenses" — had only been treated as overhead for convenience; they were individually immaterial in amount. A few other costs were indirect with respect to products in a
multi-product department, but were direct with respect to the department and period. But today we are accustomed to the idea that direct associability (even of immaterial costs) and variability are not the same. Harris did not address that issue. Thus, the case started off with confusion on that score.

Of more importance are the arguments that Harris gave for his plan — the criteria on which he judged it to be superior to full absorption costing. He enumerated four advantages [p. 503], but they are not (today) very impressive as stated. Translated into modern criteria, they can be reduced to simplicity and cost of accounting. Few would argue. But the point that seemed to carry the most weight was management’s intuitive belief that profit varies with sales volume and not with production volume. That must have been so obvious in 1934-1936 as to require no support; production was seldom a constraint in that period. Existence of the opposite circumstances just a few years later must have delayed the acceptance of Harris’ plan by other companies. Another factor delaying acceptance may have been the conflict between the two points of view in favor of the plan. Management’s feeling that profits should vary with sales volume calls for variable costing — avoiding carrying forward fixed costs in inventory. The accountant’s desire for simplicity leads towards direct costing of material items only. Harris did not discuss marginal cost or incremental cost.

Harris’ actions and views in the 1930s are not being deplored here. He developed an innovation that suited the circumstances reasonably well. Output volumes typically were low, and data processing costs were high. In this case, the miscue — interpreting cueing as involving communication between a sender and a receiver — can be blamed on the receivers who advocated Harris’ plan in quite different circumstances. Data processing costs are much lower now, and output volumes cover a wide range. In my opinion, “variable costing” is advocated now on the assumption that variable cost is less than average cost. It may be true that few cost accountants in the 1930s were aware of the concept of marginal cost, and fewer still of the now conventional geometric depiction of the marginal cost curve rising through the average cost curve at the latter’s minimum. Those practicing cost accountants who had studied economics would not have been taught the relationship between marginal cost and average cost as it was not in the economics textbooks at the time. But what is the modern cost accountant’s and cost-accounting textbook writer’s excuse for accepting the linear view of cost behavior? As
far as I know, the curvilinear view of marginal cost, subject to various shapes, is generally accepted now. There is no justification for general acceptance of a costing method that is based on the assumption that marginal cost is materially below average cost. And if variable costing does not rest on that assumption, on what does it rest? On the whole, the direct costing literature is now a handicap to the development of cost accounting. If the cost accountant wants to put into inventory the increase in total costs caused by small changes in output from the current level, he or she surely can do it with more finesse than that displayed in the typical piece of direct costing literature. Harris did not attract the wide following that he deserved in 1936, and those following him half a century later are too far behind. A linear view of cost behavior and great emphasis on the cost of data processing are out of date.

**Criticisms of Allocation**

That allocation has long been controversial was documented in the first section above. Until 1969, the controversy was an evenly balanced one; some writers opposed allocation in general, some accepted the status quo, and others argued for elimination of only the more flagrantly arbitrary cases. Then Professor Thomas [1969] made an impressive case against allocation. In essence, he insisted that accounting for nonmonetary assets by splitting their costs among periods and products generally is done in technically arbitrary ways. The resulting asset and operating cost data cannot be proven to be superior to data based on alternative arbitrary allocations. Many believe that Thomas demolished the “systematic and rational allocation” approach to amortization of limited-life nonmonetary assets, at a minimum. To the extent that demolition was achieved, it is potentially a great service to the financial world.

Unfortunately, some of those impressed with Thomas’ work have shied away from all kinds of accounting for “indirect costs” of production. Indeed, his work (including Thomas, 1974, and various journal articles) may have contributed to the decline in interest in the measurement of wealth and income. It also might have contributed to the indiscriminate acceptance of variable costing. But “... some kind of response is required ...” [Thomas, 1969, pp.83-84]. My own preference is for a constructive response rather than shrinking from the measurement challenge. Abandonment of arbitrary allocations of costs could have been followed by a turn towards accounting
for flows of resources into, within, and out of the enterprise. Overhead could disappear as an element of manufacturing cost if fringe costs of direct labor were loaded onto labor cost, if fringe costs of acquiring and holding materials were loaded onto those specific resources, if the family of costs associated with using equipment services, including related space costs, were pooled for semi-direct association with objects of costing, and if those remaining costs not associable with specific resources were immediately drained off to expense. Such accounting would involve serious efforts to estimate the values of major resources using surrogate and simulated market prices, not arbitrary allocations. "Surrogates are an appropriate response to a lack of data, but not to a lack of theory" [Thomas, 1969, p. 12]. Allocation lacks theory. Accounting for the values of resources used in the enterprise is based on microeconomic theory, the theory of finance, and the decision-usefulness theory of accounting.

**Concluding Comments**

To blame the dark ages of cost accounting entirely on miscues in the literature surely would be unfair. The roles of various constituent groups should be analyzed by anyone seeking a full explanation for the dark ages. The management group might be found to lack motivation for promoting serious attempts to measure wealth and income. Information systems specialists could be blamed for passing up opportunities under pressure of managements and governmental agencies. Academics, who could have such a great influence of management accounting practices, have not been models of professional responsibility in their research and textbook-writing activities. Beyond those specific constituencies, progress in cost accounting has been held back by a lack of interest in the measurement of wealth and income for external financial reporting and by the strong influence of tax reporting requirements on all accounting. But those of us interested in progress in cost accounting theory should not use any of those regressive influences as excuses for not straightening out our concepts and theory. Recognition of the past limitations of our literature

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2 For more detail on nonallocative accounting for costs of using commodities services, see Staubus (1986, 1987).
can be a step in that direction. At bottom, we live in the dark ages of cost accounting because no one gives a damn!

**Conclusion**

Whether or not, and how much, the five features of accounting literature discussed above harmed the development of cost accounting is a matter of opinion. There is no way to prove or measure the effects. If those publications were harmful, can the harm be blamed on writers and readers? Communication is a two-way street. Both parties have responsibilities. If one feels that cost accounting has not been in the dark ages, this concern with miscues may not be shared. Those who share my view of cost accounting’s suboptimal performance may agree that the development of concepts and theory should be resumed. “[C]oncept formation and theory formation in science go hand in hand . . .” [A. Kaplan, 1964, p. 52]. The best time to resume interest in the measurement of entity wealth and income might be when that interest is at its perigee.

**REFERENCES**


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3For proposals aimed at a renaissance to follow the dark ages of cost accounting, see Staubus (1987 or 1971). That is much too large a subject to be incorporated in a primarily historical paper.
Staubus: The Dark Ages of Cost Accounting


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ANTE-BELLUM BANK ACCOUNTING — A CASE STUDY: The New Orleans Savings Bank In The 1830s

Abstract: This is a case study of the history, operating practices and financial reporting system of an antebellum-era financial institution. The New Orleans Savings Bank, which served the people of Louisiana from 1827 to 1842, was founded as a philanthropic endeavor and is an example of altruistic capitalism — as it was practiced in the nineteenth century. This institution is of particular interest to accounting historians because it maintained a relatively sophisticated accounting system which was, in many respects, similar to financial reporting systems in use today.

Introduction

Accounting history is, among other things, a study of the evolution of the communication of financial information — from its primitive beginnings to the sophisticated systems in use today. If we are to understand the rationale for today's accounting practices, we must be aware of how accounting has developed. One way to gain this awareness is to study the financial reporting systems used by different types of organizations throughout history, as well as the organizations themselves. From such observations we can draw conclusions as to the manner in which today's accounting practices and procedures have evolved and why they have evolved in this manner.

Unfortunately many accounting historians have tended to focus on accounting as a whole, rather than on the internal accounting practices of specific organizations and the organizations themselves. H. Thomas Johnson, for example, has stated that "they [accounting historians] regarded the published works of accountants as the only sources they needed to consult for their investigations. Accounting historians were limited, too, by their conviction that all accounting was a technical process one could study exclusively in terms of itself" [1986].

Other accounting historians, however, have felt that a great deal can be learned from the study of specific organizations and their accounting systems. Among the organizations
they have studied have been mercantile establishments [Bruchey (1976); Coleman, et al (1974); Baxter (1965)], railroads [Vangermeersch, 1979], plantations [Razek, 1985] and manufacturing firms [Johnson (1972); McKenzie (1971); Stone (1973)]. Few accounting historians, however, have studied the accounting practices of specific financial institutions — especially those which operated in early to mid-nineteenth century America.

A possible reason for this dearth of studies is the lack of records available to study. Few of the financial institutions operating before the Civil War exist today and fewer still have maintained records of transactions which took place over a century ago. Thus, it was a stroke of good fortune to discover the records of a small antebellum-era savings bank — records which are in very good condition and largely intact.

The institution to which these records pertain is of interest because (1) even though it was founded and managed by prominent members of the New Orleans Business Community, little mention is made of it in either current or nineteenth century banking literature or in contemporary newspaper accounts, (2) its life cycle and activities were very similar to those of many of the savings and loan institutions currently in the news, (3) it was probably the first institution of its kind to operate west of the Allegheny Mountains and one of the earliest to operate in America, (4) it represented an early application of the concept of altruistic capitalism and, (5) it was able to survive the Panic of 1837, only to fall victim to a banking law which was hailed as “one of the most ingenious and intelligent acts in the history of legislation about banking” [Summer, 1896]. Of particular interest to accounting historians, however, is this institution’s use of a fairly sophisticated, double entry accounting system.

The New Orleans Savings Bank

In the late 1960’s, the Board of Liquidation of the City of New Orleans moved to a new office. During this move Board personnel discovered a number of recordbooks, which they donated to the New Orleans Public Library. Among these materials were the records of the New Orleans Savings Bank.¹

¹The records in the New Orleans Savings Bank Collection are as follows:

Volume I — Minute Book ................................. 1827-55
The New Orleans Savings Bank Society (herein referred to as the Savings Bank) was chartered by the State of Louisiana on March 19, 1827. It opened for business on April 26th of that year. That its purpose was philanthropic in nature is apparent from its charter which reads, in part, that:

Whereas a number of the citizens of the City and Parish of New Orleans have petitioned the Legislature for an act of incorporation for the laudable purpose of encouraging . . . habits of industry and thrift, by receiving and investing in stock . . . such small sums of money that may be saved from the earnings of tradesmen, mechanics, laborers, servants and others . . . thereby affording the double advantage of security and interest, and the Legislature considering it their duty to cherish all laudable attempts to ameliorate the condition of the poor and labouring classes of the community [La. Laws 1827, Act 46].

The moving force behind the establishment of the Savings Bank was Beverly Chew. Chew, a prominent merchant, was the first postmaster of New Orleans, a founder of the New Orleans Canal and Banking Company and president of the New Orleans Branch of the Second Bank of the United States. He was also collector of customs for the Port of New Orleans and is well-known for his attempts to curtail the activities of the famous pirate, Jean Laffite.

Although this set of records is not complete, it is comprehensive enough to provide a good picture of the operations of the Savings Bank.

2While not the first institution of this type in the United States, the New Orleans Savings Bank was probably the first one west of the Allegheny Mountains. Other early-day savings banks were the Philadelphia Savings Fund Society, which is still in existence, and the Provident Institution for Savings (Boston), the Baltimore Savings Bank Society, the Bank for Savings (New York), the Society for Savings (Hartford) and the Savings Bank of Newport (Rhode Island). All of these organizations were chartered between 1816 and 1819 and were founded as philanthropic endeavors by groups made up of bankers, merchants, social and political leaders. For a discussion of the history of the savings bank movement, see Welfling [1968].
Other founders and trustees of the Savings Bank were Richard Relf, a prominent merchant and cashier of the Louisiana State Bank; Peter Derbigny, a governor of Louisiana; Joseph Roffignac, a French nobleman who later became mayor of New Orleans; J. B. Plauche, Judge Samuel Harper and Martin Gordon.

Unlike commercial banks, the Savings Bank had no shareholders. Its trustees were managers, rather than owners, and its depositors were creditors. The Savings Bank's original Board of Trustees was named in its charter, which was received from the State of Louisiana, and this group perpetuated itself by replacing departing members with new ones of its own choice.

Originally the Savings Bank used its depositors' funds to purchase Bank of Louisiana stock. Later, however, it also purchased the stock of other New Orleans banks. The dividends received on these securities were passed on to the Savings Bank's depositors in the form of interest on their savings, which was set at 5% per year. And herein lay the appeal of the Savings Bank to the working classes.

During the early part of the nineteenth century, commercial banks did not pay interest on deposits. The only way a person could earn a return on his or her capital was to start a business or purchase the stock of an existing firm. Most of the firms issuing stock at this time were either banks or insurance companies. Since shares of these firms generally traded for over $40 per share, most people were excluded from this form of investment. By combining the savings of a number of small depositors, however, the Savings Bank could purchase the stock of these firms. Thus, in its early days the Savings Bank served the same function a mutual fund does today. Later, it expanded its investment base by making commercial loans and issuing mortgages.

**Operations**

On April 11, 1827, the Board of Trustees held its first meeting. Here it drafted a set of bylaws which, with minor alterations, served the Savings Bank throughout its entire life. From these bylaws and the minutes of the Trustees meetings a

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Richard Relf and Beverly Chew are also known for their role in the Myra Clark Gains Case, a Nineteenth Century version of the Howard Hughes will controversy. For an interesting discussion of this case and the early careers of Relf and Chew, see Harmon [1946].
great deal can be learned about the day-to-day operations of this institution.  

As with other institutions of this type, the trustees and officers of the Savings Bank were expected to work without pay. The Nineteenth Bylaw specifically states that “No President, Vice President or Trustee shall receive, directly or indirectly, any pay or emolument for his services, nor be responsible for any loss whatsoever” [Minute Book, April 11, 1827]. This donation of “inkind” services by members of the professional community was a major attribute that set the Savings Bank apart from other financial institutions and is evidence of its philanthropic nature.

The heart of the operation of the Savings Bank was the Committee of the Month. This committee, which consisted of three trustees and an officer of the institution, was appointed at the monthly board meeting — service being rotated among the trustees. Members of the Committee of the Month collected the funds of the depositors, invested these funds and, later on, made loans to credit-worthy parties. They also deposited the money collected each day in a local bank. The first Committee of the Month consisted of Beverly Chew, Joseph Roffignac (the Savings Bank’s first president), Martin Gordon and Tobias Bickel.

The Savings Bank was permitted to hire an accountant. The Sixth Bylaw states the specific duties of this person:

It shall be the duty of the accountant to attend the meetings of the Board, and to keep a fair and regular record of the proceedings thereof, to give notice of the meetings to the Managers, and to the members of the Committee of the Month to their turn of service, to consult with the Committees when required; He shall attend the Bank from the hours of eleven AM to two PM on Mondays and Thursdays, and shall receive all deposits and monies paid to the institution. He shall draw out and sign all checks for payments, he shall aid the Committee of the Month in all its operations and business, and shall perform such other duties as may, from time to time, be imposed upon him by the Board of Trustees [Minute Book, April 11, 1827].

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*New Orleans Savings Bank Collection, Volume I, “Minute Book,” 1827-1850. This volume contains not only minutes of the meetings of the Board of Trustees, but copies of the bylaws of the Savings Bank and of various reports submitted to the Louisiana Legislature.*
Notice that many of the duties of the accountant were similar to those of the members of the Committee of the Month. This was probably a deliberate attempt to apply some basic principles of internal control. Notice also the limited banking hours. In 1835, these hours were extended to “the usual banking hours, Sundays excepted . . .” [Minute Book, January 2, 1835].

It was considerably easier to deposit money in the Savings Bank than it was to withdraw it. According to the Ninth Bylaw, “No money can be withdrawn, except on the third Mondays of February, May, August and November, and two weeks notice before the day of withdrawing must be given to the accountant . . .” [Minute Book, April 11, 1827]. The reason for this rule was that, unlike commercial banks, the Savings Bank did not keep much cash on hand. At this time, banks did not have strict reserve requirements. As a result, almost all funds received from depositors were invested in loans and in the stock of other banks — investments which could not be liquidated on short notice.

Operating History

The Savings Bank’s first year of operation was modest, but successful. Its annual report to the Louisiana Legislature summarized this year as follows:

That from the 26th day of April, 1827, the date of its organization, until the 21st of January last, the sum of $8,618 has been deposited in the institution by forty-six different depositors. That of this sum, $7,200 has been invested in stock of the Bank of Louisiana. That an aggregate of $1,085 has been withdrawn severally by five depositors and the balance distributed in necessary expenses . . . [Report to the Louisiana Legislature, Minute Book, February 21, 1828].

The above report was accompanied by the financial statement shown in Figure 1.
Figure 1

First Annual Financial Report to the Louisiana Legislature
New Orleans Savings Bank in a/c Current
with J. M. Kennedy, accountant

<table>
<thead>
<tr>
<th>DR</th>
<th>CR</th>
</tr>
</thead>
<tbody>
<tr>
<td>To 72 Shares of Bank of La. Stock purchased at various times</td>
<td>By Amount of deposits received from 45 persons from 26th April, 1827 to 21st January, 1828, inclusive</td>
</tr>
<tr>
<td>$7,200.00</td>
<td>$8,618.00</td>
</tr>
</tbody>
</table>

Sundry Expenses

" Premium & Brokerage on part of the above stock $ 63.25
" Interest due to sundry deposits up to the 5th July, 1827 inclusive, unpaid 47.67
" Interest paid to sundry persons who have withdrawn their deposits 26.40
" Benj. Levy's bill for stationary 283.88
" J. H. Gladdings & M. Claver's bills for painting sign 15 × 12 27.00 448.20
" 5 deposits withdrawn 1,085.00
" Cash in Bank 20.47

New Orleans $8,753.67 $8,753.67
January 21, 1828
Joseph M. Kennedy, Accountant

Source: New Orleans Savings Bank Collection, Volume I, Minute Book, February 21, 1828
Trouble, however, was beginning to appear. An entry in the minutes of the Trustees meeting of May 15, 1828 states that "The Accountant, having stated to the Board that he had been notified by six different depositors of their intention to withdrawal on the 3rd Monday of May instant their respective deposits amounting in all to the sum of $1,364.52 and that the whole amount now to the credit of this institution in the Louisiana State Bank does not exceed $1,228.36" [Minute Book, May 15, 1828]. The Board authorized to accountant to borrow the difference.

Thus, it can be seen that the Savings Bank faced a problem endemic to this type of institution — lack of liquidity. While its assets were greater than its liabilities most of these assets were in the form of Bank of Louisiana stock, for which there was not a ready market. Hence, the need to borrow. Evidently the loan was eventually repaid because no more mention is made of it. In later years, however, the Savings Bank frequently reverted to short-term loans to repay its depositors.

By the Trustees meeting of June 19, 1828, the Savings Bank had apparently become liquid again. At this meeting, Martin Gordon proposed a motion that "the accountant be paid $250 for services rendered of the New Orleans Savings Bank and that the balance of cash now on hand, to wit, $385.93 ½ be lent out on a note at 4 months to be approved by the President" [Minute Book, June 19, 1828]. It would appear that it was at this time that the Savings Bank changed its investment policy to include loans of various types.

After its first year of operation, the Bank appears to have entered a period of decline. Over the next seven years, only a few new accounts were opened. Meetings of the Board of Trustees were few and far between and, when held, little business appears to have been conducted.

There must have been some activity, however, because in March, 1832, the Trustees passed a resolution to open the office of the Savings Bank daily and to pay the accountant $75 per month [Minute Book, March 13, 1832]. In addition, the depositor list for this year shows 124 new accounts [Register of Depositors, 1832].

After April, 1835, the Trustees began to meet regularly and the Savings Bank entered a period of growth. In its January, 1836 report to the Louisiana Legislature, the Board of Trustees reported:

That in obedience to the 6th Section of their Act of Incorporation, they herewith transmit the annual
report of the State of the Funds of the New Orleans Savings Bank to January 31, 1836, by which it appears that the number of depositors at that period was 453 — The amount deposited from January 31, 1835 to January 31, 1836 was $96,125.20. The amount due to depositors, on January 31st, 1836, was $79,863.20 — and the amount of Bills Receivable, and other credits of the institution at the same time was $87,384.96 — and thus showing that the Savings Bank is in a prosperous and improving condition, and accomplishing the philanthropic objects contemplated by the Legislature in its incorporation [Minute Book, February 21, 1828].

Notice the reference to the “philanthropic” nature of the Savings Bank. Even though it was operating like a commercial bank, its intent was still to serve the poor and working classes, a constituency not ordinarily served by commercial banks at that time.

Unlike many other banks in America, the Savings Bank prospered during the Panic of 1837. A clue as to why it did so is given in the Seventh Bylaw, which states that “All monies received by the Bank shall be in specie or in bills taken in deposit by the incorporated banks of this city” [Minute Book, April 11, 1827].

The Savings Bank’s policy of limiting its deposits to “sound” currency enabled it to avoid a serious problem that plagued other banks of this period — the use of banknotes which could not be redeemed at or near their face value. Of course, even the Savings Bank had to discount notes occasionally. However by limiting what it would take in currency to banknotes of a known value, which could be redeemed locally, it managed to avoid many of the problems faced by other banks — which would take the notes of out-of-town institutions.\(^5\)

By 1842, the amount due to depositors had grown to $134,487 and the amount of bills receivable and other credits to the institution to $37,963. Except for a few shares of Canal Bank stock, valued at $900, these assets were all notes or mortgages [Balance Statements, February 28, 1842]; and therein lay the cause of the downfall of the Savings Bank — its inability to collect these notes and mortgages as they came due.

\(^5\)For a discussion of the economic environment in which the Savings Bank operated see Hammond [1957].
On June 4, 1842, the depositors of the Bank received the following notice:

Whereas the extraordinary difficulties which at this time prevail throughout the community have put an entire stop to the punctual collection of the Mortgages and other notes, in which the Trustees of this institution have invested its funds, and some time is absolutely necessary to enable them to obtain judgements and sell the property mortgaged to them or otherwise make their collections, so as to return the depositors their money.

Be it resolved, First — That no further deposits of any kind will be received until . . . the Bank is ready to resume active operations.

Second — That all notifications for the withdrawal of money which are now on the notification book of the Bank be suspended and that no further payments be made . . . .

Third — That . . . the rate of interest allowed on Deposits now in the Bank shall be increased to eight per cent per annum and be paid on demand to the depositors every three months . . . .

That at the same time the Quarterly Payments of Interest are made so much of the Capital as shall have been collected within the preceding three months shall be paid to such of the depositors as may desire it, in such proportion as their deposits may bear to the whole amount of the Deposits in the Bank, and this shall continue until the whole amount of their deposits shall have been returned to them [Poydras Home Collection, Box 20, Folder 3, 1842].

The next eight years were spent collecting notes and mortgages and repaying the Bank's depositors. In 1850, the records of this institution were turned over to the City of New Orleans and the New Orleans Savings Bank faded into oblivion.

Why the Savings Bank Failed

To the casual observer, it might appear that it was the actions of the Trustees that brought about the failure of the New Orleans Savings Bank. That they shifted the Savings Bank's investment policy from one of holding bank stocks to
one of making mortgage and commercial loans might be con-
strued as evidence that they were caught up in the same
speculative fever as the rest of the business community. And to
a certain extent this is probably true. Yet, in spite of this shift
in investment policy, the Savings Bank managed to survive not
only the Panic of 1837 and the other banking crises of the late
1830's but the yellow fever epidemics of 1837 and 1839, the
lowering of tariffs on cotton and sugar and the flood of 1840 —
events that severely damaged other banks in New Orleans. So
what caused this institution to fail?

In the view of this researcher it was the Bank Act of 1842,
which required all banks in Louisiana to back one-third of their
liabilities with specie and to invest the remainder of their
depositors' funds in loans maturing in ninety days or less, that
destroyed the Savings Bank. This law had the effect of con-
tracting the money supply drastically and, since money was
not available, people could not liquidate their debts. A
Nineteenth Century historian reported that:

Such was the pressure throughout the whole com-
munity from the absence of a sufficiency of a sound
currency to meet the general wants that even the
taxes could hardly be collected . . . in the year 1842
[Gayarre, 1861].

Because of the new law, the Savings Bank was forced to
call in many of its outstanding long-term loans and was unable
to renew them for more than ninety days. This action had a
devastating effect on factors and other businesses, whose assets
consisted primarily of receivables, land, buildings and slaves.

In addition, since banks were now allowed to make loans
only to the extent of their capital and since its capital was
practically zero the Savings Bank was also forced to call in its
outstanding mortgages and was unable to make any more
loans of this type — thereby defeating one of the purposes for
which it had, at least indirectly, been founded. Thus, it was a
law that was designed to save the Banking Industry of
Louisiana that destroyed the Savings Bank.

An Ante Bellum Financial Information System

Of the surviving recordbooks, three are of particular inter-
est to this discussion. These are the Cash Book [Volume VI], the

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6For a discussion of this law and its effects on the New Orleans Banking
Community, see Green [1973].

https://egrove.olemiss.edu/aah_journal/vol14/iss2/12
Journal of Receipts and Expenditures [Volume V] and the Balance Statements [Volume III]. All three recordbooks are leather-bound and contain lined paper. They are in excellent condition and the handwriting in all of them is very easy to read. What is of particular interest to accounting historians, however, is that they demonstrate the use of a modern-day accounting system by this relatively small and unsophisticated organization.

The Cash Book

Transactions were recorded, as they occurred, in the Cash Book — which was actually a day book (see Figure 2). The left-hand pages of this volume were used to record cash receipts, each page starting with the month's beginning balance or a balance brought over from the previous page. These balances were followed by items such as deposits, repayments of notes and interest payments. When deposits were recorded, the name and account number of each depositor was listed, along with the amount deposited. When repayments of notes and interest payments were recorded, however, just the name of each borrower was listed, along with the amount received.

At the end of each day, the cash receipts were totaled and this amount was recorded in the right hand column. At the end of each month the total of the beginning cash balance and the cash received during the month was recorded and the entry "To Balance," which recorded the ending cash balance (beginning balance plus cash receipts less cash payments), was made. This, of course, represented the beginning balance of the following month.

The right hand pages of the Cash Book (Figure 3) were used to record cash disbursements. When depositors made withdrawals the entry "By deposits paid," along with the name of the depositor, the depositor's account number and the amount withdrawn, was made. Accrued interest was paid at the time of withdrawal, such payments being separately recorded. In addition each payment to a borrower was recorded along with the name of the borrower. The entry to record payments to borrowers was "By bills receivable — name of borrower — amount borrowed."
Figure 2

Cash Book
Sample Cash Receipts Page
February, 1842
(Abbreviated)

<table>
<thead>
<tr>
<th>Date</th>
<th>Brot over (from previous page)</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>To Deposits received from Sarah Foley 346 10 ---</td>
</tr>
<tr>
<td></td>
<td>John Mooney 238 90 ---</td>
</tr>
<tr>
<td></td>
<td>John Lyons 80 25 ---</td>
</tr>
<tr>
<td></td>
<td>P. M. Stipe 232 125 ---</td>
</tr>
<tr>
<td></td>
<td><strong>13,947.26</strong></td>
</tr>
<tr>
<td>8</td>
<td>To do do do John Doyle 336 15 ---</td>
</tr>
<tr>
<td></td>
<td>A. Ionan 256 5 ---</td>
</tr>
<tr>
<td></td>
<td><strong>911.90</strong></td>
</tr>
<tr>
<td>9</td>
<td>To do do do Peter Hill 345 10 ---</td>
</tr>
<tr>
<td></td>
<td><strong>1,157.00</strong></td>
</tr>
<tr>
<td>10</td>
<td>To Interest on P. Tulane's note disc. 320.58</td>
</tr>
<tr>
<td></td>
<td>Williams &amp; Grant 6.42</td>
</tr>
<tr>
<td></td>
<td>Fullerton 17.60</td>
</tr>
<tr>
<td></td>
<td>Briggs 117.44</td>
</tr>
<tr>
<td></td>
<td>Nicholson 67.78</td>
</tr>
<tr>
<td></td>
<td>Ferret 500.00</td>
</tr>
<tr>
<td></td>
<td>Goff &amp; James on 4 notes and McIntosh 160.74</td>
</tr>
<tr>
<td></td>
<td>L &amp; L Kerr's 90.00</td>
</tr>
<tr>
<td></td>
<td>J. L. Lewis 70.85 <strong>1,351.41</strong></td>
</tr>
<tr>
<td></td>
<td><strong>17,617.57</strong></td>
</tr>
<tr>
<td>15</td>
<td>To Bills Recble J. L. Lewis note coll. 2,500 ---</td>
</tr>
<tr>
<td></td>
<td>N. S. Sinnott 50 ---</td>
</tr>
<tr>
<td></td>
<td>Behan &amp; Freeland 1,000 ---</td>
</tr>
<tr>
<td></td>
<td>do &amp; do 1,000 ---</td>
</tr>
<tr>
<td></td>
<td>do &amp; do 777.77</td>
</tr>
<tr>
<td></td>
<td>W. Selleck 205 ---</td>
</tr>
<tr>
<td></td>
<td>E. D. Miller 1,000 ---</td>
</tr>
<tr>
<td></td>
<td>D. J. Rogers 500 --- <strong>7,032.77</strong></td>
</tr>
<tr>
<td></td>
<td><strong>26,345.34</strong></td>
</tr>
</tbody>
</table>

Page 3 Total: **30,021.46**

Source: New Orleans Savings Bank Collection, Volume VI, Cash Book of Receipts and Expenditures
### Figure 3

#### Cash Book

Sample Cash Disbursements Page

February, 1842  
(abbreviated)

<table>
<thead>
<tr>
<th></th>
<th>By Deposits Paid</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>John Ahrens</td>
<td></td>
<td>326</td>
</tr>
<tr>
<td>2</td>
<td>Cath. Donavan</td>
<td></td>
<td>334</td>
</tr>
<tr>
<td></td>
<td>Eliza Harrigan</td>
<td></td>
<td>105</td>
</tr>
<tr>
<td>3</td>
<td>Leath &amp; Conroy</td>
<td></td>
<td>254</td>
</tr>
<tr>
<td></td>
<td>John Reardon</td>
<td></td>
<td>136</td>
</tr>
<tr>
<td></td>
<td>F. Pfeiffer</td>
<td></td>
<td>172</td>
</tr>
<tr>
<td></td>
<td>A. Caldwell</td>
<td></td>
<td>182</td>
</tr>
</tbody>
</table>

**By Interest**

<table>
<thead>
<tr>
<th></th>
<th>do</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>John Ross</td>
</tr>
<tr>
<td></td>
<td>Pat. Nestor</td>
</tr>
<tr>
<td></td>
<td>E. W. Sewell</td>
</tr>
<tr>
<td>4</td>
<td>Wm. Averill</td>
</tr>
<tr>
<td>5</td>
<td>Robt. Hart</td>
</tr>
<tr>
<td></td>
<td>Angelina Minor</td>
</tr>
</tbody>
</table>

**By Expenses**

<table>
<thead>
<tr>
<th></th>
<th>G. C. Duncan -- rent of office in Canal St.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>To Feb 1</td>
</tr>
<tr>
<td>6</td>
<td>P. Tulane note</td>
</tr>
<tr>
<td></td>
<td>Williams &amp; Grant</td>
</tr>
<tr>
<td></td>
<td>Wm. Fullerton</td>
</tr>
<tr>
<td></td>
<td>E. Briggs</td>
</tr>
<tr>
<td></td>
<td>Jas. Nicholson's</td>
</tr>
<tr>
<td></td>
<td>G. A. Feret</td>
</tr>
<tr>
<td></td>
<td>F. D. Goff</td>
</tr>
<tr>
<td></td>
<td>James &amp; McIntosh</td>
</tr>
<tr>
<td></td>
<td>F. D. Goff</td>
</tr>
<tr>
<td></td>
<td>James &amp; McIntosh</td>
</tr>
<tr>
<td></td>
<td>L &amp; L Kerr note</td>
</tr>
</tbody>
</table>

**Page 1 Total**

|   | 19,546.05 |

**Page 5 Total (End of month)**

|   | 26,423.13 |

**28 By Balance (See Exhibit II)**

|   | 3,598.33 |

|   | 30,021.46 |

Source: New Orleans Savings Bank Collection, Volume VI, Cash Book of Receipts and Expenditures
One item found in Figure 3 is particularly interesting — the $1,680 note of P. Tulane. This is probably Paul Tulane, after whom Tulane University is named. For the same day, interest on this note is shown on the left-hand page of the Cash Book (Figure 2) by means of the entry "Interest on P. Tulane's note disct, $320.58." Evidently interest was deducted in advance and recorded, at that point, as a cash receipt. Other notes were treated in a like manner.

For the month illustrated, February, 1842, one item of expense was recorded in the Cash Book — a payment of $75.00 to G. C. Duncan for the prior month's office rent. Amounts of $3.00 and $3.50, paid for the protest of two notes (not shown), were also recorded this month.

The cash disbursements were totaled at various times and at the end of each page. At the end of each month the total of the disbursements made during the month was recorded, along with the ending cash balance. The total of these amounts was equal to the beginning cash balance plus the cash received during the month. The accountant then reviewed the transactions recorded during the month, summarized them by category of receipt or disbursement, and transferred this information to the next recordbook of interest — the Journal of Receipts and Expenditures.

Journal of Receipts and Expenditures

This recordbook contains a summary of all cash transactions, by account (see Figure 4). The upper section of each page, which was used to summarize cash receipts, is headed "Cash DR — to Sundries." In its left-hand margin is the number 500, which is the account number for Cash. Evidently the Savings Bank maintained a chart of accounts.

The second line from the top starts with the number 499, slightly to the right of the number shown on the previous line. This, presumably, indicates a credit balance in the account listed on that line — "Deposits — This amount received this month," after which the amount $8,499.90 is recorded. This amount is equal to the sum of the deposits shown for the month in the cash receipts section of the Cash Book.

The second account with a credit balance is number 511, "Interest — This amount received this month," after which the amount $1,413.37 is recorded. This balance also agrees with the Cash Book.
## Figure 4

Journal of Receipts and Expenditures  
February 28, 1842

<table>
<thead>
<tr>
<th>500</th>
<th>Cash DR</th>
<th>To Sundries</th>
</tr>
</thead>
<tbody>
<tr>
<td>499</td>
<td>Deposits</td>
<td>This amt. received this month 8,499.90</td>
</tr>
<tr>
<td>511</td>
<td>Interest</td>
<td>do do do do do 1,413.37</td>
</tr>
<tr>
<td>556</td>
<td>Bills Receivable</td>
<td>J. L. Lewis 2,500 ---</td>
</tr>
<tr>
<td></td>
<td></td>
<td>N. Sinnott 50 ---</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Behan &amp; Freelande 1,000 ---</td>
</tr>
<tr>
<td></td>
<td></td>
<td>do 1,000 ---</td>
</tr>
<tr>
<td></td>
<td></td>
<td>do 777.77</td>
</tr>
<tr>
<td></td>
<td></td>
<td>W. Selleck 205 ---</td>
</tr>
<tr>
<td></td>
<td></td>
<td>E. D. Miller 1,000 ---</td>
</tr>
<tr>
<td></td>
<td></td>
<td>D. L. Rogers 500 ---</td>
</tr>
<tr>
<td></td>
<td></td>
<td>J. Kemp &amp; Others 1,000 --- 8,032.77 17,946.04</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>500</th>
<th>Sundries DR</th>
<th>To Cash</th>
</tr>
</thead>
<tbody>
<tr>
<td>496</td>
<td>Deposits</td>
<td>This amount paid this month 9,331.63</td>
</tr>
<tr>
<td>512</td>
<td>Interest</td>
<td>do do do do do 25.18</td>
</tr>
<tr>
<td>543</td>
<td>Protests</td>
<td>J. Nixon 3.50; W. Kennedy 3.00 6.50</td>
</tr>
<tr>
<td>516</td>
<td>Expenses</td>
<td>This amount paid this month 75.00</td>
</tr>
<tr>
<td>553</td>
<td>Bills Receivable</td>
<td>Ed. Sewell’s note 590.08</td>
</tr>
<tr>
<td></td>
<td></td>
<td>P. Tulane 1,680.00</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Williams &amp; Grant 444.00</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Wm. Fullerton 488.88</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ed. Briggs 1,400.00</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Jas. Nicholson 1,000.00</td>
</tr>
<tr>
<td></td>
<td></td>
<td>G. A. Feret 5,000.00</td>
</tr>
<tr>
<td></td>
<td></td>
<td>F &amp; D Gott 543.75</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Jamison &amp; McIntosh 553.12</td>
</tr>
<tr>
<td></td>
<td></td>
<td>F &amp; D Gott 543.75</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Jamison &amp; McIntosh 553.12</td>
</tr>
<tr>
<td></td>
<td></td>
<td>L. L. Kerr 900.00</td>
</tr>
<tr>
<td></td>
<td></td>
<td>E. D. Miller 763.12</td>
</tr>
<tr>
<td></td>
<td></td>
<td>J. L. Lewis 2,125.00</td>
</tr>
<tr>
<td></td>
<td></td>
<td>D. L. Rogers 400.00 16,984.82 26,423.13</td>
</tr>
</tbody>
</table>

The third account with a credit balance is number 556, "Bills Receivable." This account is interesting because each bill or note on which payment was received during the month is recorded, along with the name of the borrower. The amount of each bill is recorded in a separate column, which is sub-totaled in the next column — $8,032.77.

The three subtotals shown for Cash, Interest and Bills Receivable are totaled at the bottom of the right hand column and a horizontal line is drawn across the page, indicating the end of the cash receipts section. The total amount shown in this section, $17,946.04, is equal to the total of the receipts recorded this month in the Cash Book, $30,021.46, minus the beginning cash balance, $12,075.42.7

The lower section of the Journal of Receipts and Expenditures was used to record cash disbursements. It is similar in format to the upper section, but is headed "Sundries DR — To Cash." The word "to" was commonly used, at this time, to mean "credit."

The account number "500" is to the right of the other account numbers, indicating credits to Cash and debits to the other accounts. These other accounts are number 496, "Deposits — This amount paid this month" — $9,331.63; number 512, "Interest — This amount paid this month" — $25.18; number 543, "Protests — J. Nixon, $3.50; W. Kennedy, $3.00" — $6.50; number 516, "Expenses — This amount paid this month" — $75.00; and number 553, "Bills Receivable" — P. Tulane, $1,680.00, etc.

The Bills Receivable account is broken down into sub-accounts for each bill or note on which payment was made that month. The total of these payments was $16,984.82 and the grand total of all payments made by the Savings Bank that month was $26,423.13. This latter amount is recorded in the right hand column.

Notice that while Cash was recorded in one account (number 500) Deposits, Interest and Bills Receivable were each recorded in two accounts, one representing inputs and the other representing outputs. At the end of each month these accounts (and any related subaccounts) were combined and, as with Cash, the net changes were added to their beginning balances in order to determine their ending balances. Protests

7A test of the mathematical calculations performed by the Savings Bank's accountant over a five year period fails to disclose any errors.
was treated as an asset account and was credited when a protested note was settled.

In summary, it appears that transactions were recorded each day in the Cash Book. At the end of each month the entries in this book were summarized, by account, in the Journal of Receipts and Expenditures. These summaries were then added to the beginning balance of each account, when such balances existed, and ending balances were determined. The ending balances were then recorded in the third recordbook of interest — the Balance Statements.

The Balance Statements

This recordbook begins with a Statement of Affairs. The Statement of Affairs lists the Savings Bank’s depositors, and their account balances, and its outstanding bills and notes, as of December 31, 1841.

Figure 5
Balance Statement
February 28, 1842

<table>
<thead>
<tr>
<th>Account</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash</td>
<td>3,598.33</td>
</tr>
<tr>
<td>Bills Receivable</td>
<td>120,542.35</td>
</tr>
<tr>
<td>Canal Bank Stock</td>
<td>900.00</td>
</tr>
<tr>
<td>Wilkenson, McNeil &amp; Co.</td>
<td>2,082.98</td>
</tr>
<tr>
<td>Bauder, Wilkerson &amp; Wright</td>
<td>1,684.77</td>
</tr>
<tr>
<td>Lastropes &amp; Desmare</td>
<td>1,660.00</td>
</tr>
<tr>
<td>Bullitt, Shipp &amp; Co.</td>
<td>84.40</td>
</tr>
<tr>
<td>J. Mulray</td>
<td>1,800.00</td>
</tr>
<tr>
<td>Wm. Christy</td>
<td>2,750.00</td>
</tr>
<tr>
<td>Bier &amp; Steerer</td>
<td>4,818.94</td>
</tr>
<tr>
<td>J. Hagan, Jr.</td>
<td>761.33</td>
</tr>
<tr>
<td>Buchannan &amp; Hagan</td>
<td>2,333.34</td>
</tr>
<tr>
<td>D. McLeod</td>
<td>1,722.22</td>
</tr>
<tr>
<td>J. Gray</td>
<td>2,000.00</td>
</tr>
<tr>
<td>M. Portier</td>
<td>2,500.00</td>
</tr>
<tr>
<td>L. Peyroux</td>
<td>1,275.00</td>
</tr>
<tr>
<td>Expenses</td>
<td>75.00</td>
</tr>
<tr>
<td>Protests</td>
<td>33.00</td>
</tr>
<tr>
<td>Deposits</td>
<td>136,404.45</td>
</tr>
<tr>
<td>Interest</td>
<td>1,388.19</td>
</tr>
<tr>
<td>Herman, Briggs &amp; Co.</td>
<td>374.07</td>
</tr>
<tr>
<td>Profit &amp; Loss</td>
<td>12,454.95</td>
</tr>
</tbody>
</table>

Source: New Orleans Savings Bank Collection, Volume III, Balance Statements
The remainder of this recordbook is devoted to Balance Statements and Statements of General Balance. Balance Statements were prepared each month while Statements of General Balance were prepared on an “as needed” basis, about every fifth month. Unfortunately a Statement of General Balance was not prepared for the month of February, 1842, whose activities are illustrated.

Both types of statements resemble modern-day trial balances. They contain lists of accounts and columns for debits and credits. The Balance Statements list all accounts used by the Savings Bank, including certain outstanding notes, and their end-of-period balances (see Figure 5). They are comparable to pre-closing trial balances.

The Statements of General Balance list the Savings Bank’s asset and liability accounts and its “adjusted” Deposits and Profit and Loss accounts. They are comparable to post-closing trial balances. When these statements were prepared, the expenses incurred since the preparation of the last such statement were deducted from the interest received that period and the resulting balance was allocated between the depositors’ accounts and Profit and Loss. Since no other statements comparable to the one shown in Figure 1 were found in any of the existing recordbooks, it can be assumed that after 1828 the financial statements sent to the Louisiana Legislature and those used for other external reporting purposes were prepared in the Statement of General Balance format.

Conclusion

This is a case study of the history, operations and financial reporting system of one of the earliest savings and loan organizations in America — the New Orleans Savings Bank. Although this institution was founded as a philanthropic endeavor, it operated on commercial principles and thus served as an example of altruistic capitalism.

What is of particular interest to accounting historians, however, is the rather sophisticated financial reporting system used by this institution and the resemblance of this system to those in use today by small financial institutions. Since this study covers only one organization, a broad statement cannot be made as to how common such systems were before the Civil War. Was the use of this system an isolated instance or were such systems the norm at this time?

It can be argued that the trustees of the Savings Bank (the primary users of the information derived from the accounting
system just described) were engaged in a wide variety of commercial pursuits and, as a result, were conversant with and probably demanded much financial information. Presumably, other antebellum-era organizations used systems that provided similar information. For example, in a previous research paper [Razek, 1985], it was demonstrated that a plantation owner in Southeastern Louisiana maintained a fairly sophisticated accounting system at this time. We will never really be certain, however, unless accounting historians systematically search and analyze the records of other enterprises which operated at the same time, especially financial institutions. Hopefully, future researchers will do this and one more piece will be added to fit the puzzle of ante-bellum accounting history.

REFERENCES


New Orleans Savings Bank Collection, located in the Louisiana Division of the New Orleans Public Library, New Orleans, La.

Poydras Home Collection, 1816-1859. Ms. located in the Special Collections Division of the Howard-Tilton Library, Tulane University, New Orleans, La.


Robert C. Elmore  
UNIVERSITY OF ALABAMA — HUNTSVILLE

THE INFLUENCE OF TAX LEGISLATION ON FINANCIAL ACCOUNTING: A STUDY OF THE TIMBER INDUSTRY, 1905-1925

Abstract: The purpose of this paper is to examine the financial accounting records of a Mississippi timber company and its subsidiaries in light of the dynamic tax environment of the period 1905 to 1925. The financial accounting records and correspondence with the Commissioner of Internal Revenue indicate deficiencies in the following areas: asset valuation, a lack of a cost accounting system to adequately value inventories, and the depletion and depreciation deduction. The demands of the new tax laws were often in conflict with the accounting practices of this period of time forcing changes in accounting practice.

Introduction

The accounting practices of individual corporations are shaped by their dynamic relationships with regulatory and environmental conditions. The conflict between accounting practices and regulations should be studied"... in terms of changes-rather than its static order"[Saito, Spring 1983, p. 2]. An example of a conflict between practices and regulations existed between accounting practices and the newly enacted tax laws at the beginning of the twentieth century. No other period of time has experienced the sweeping changes in the tax environment as did the years of 1905 to 1925, with the enactment of the Corporation Excise Tax of 1909, and the Revenue Acts of 1913, 1918, 1921, and 1924. The requirements of these new tax laws often conflicted with the existing accounting practices in the areas of inventory valuation, depletion, asset valuation, and depreciation. Prior to the enactment of these tax laws, corporations faced few constraints from any type of governmental regulation. The purpose of this paper is to examine the financial records of a Mississippi timber company, the L. N. Dantzler Company, and its subsidiaries, and the influence of this dynamic tax environment on their financial accounting principles and cost accounting systems.

Methodology

The practice of accounting has often been influenced by tax
legislation. An examination of the financial statements, journals, and correspondence with the Commissioner of Internal Revenue of the L. N. Dantzler Co. provides evidence of changes made in the accounting system in order to comply with tax legislation. In addition, a 1917 tax protest provides an explanation of the accounting methods used and the motivation for various changes made in the accounting system. Court cases indicate that Dantzler’s tax and accounting problems were common to the timber industry at the beginning of this century. Contemporary tax guides and journal articles are used to explain accounting practices in the timber industry during this period.

Background

The timber industry is the oldest industry in the United States, beginning on the east coast and gradually moving west as new timber supplies were needed. Timber production reached its peak in the South in 1909. From 1870 to 1920 an estimated 511,000,000,000 board feet of timber, four-fifths of the original timber, was cut [Smith, August 1933, p. 221]. During this period of high production, the Southern timber industry, with many small companies, was characterized as highly competitive. The tremendous growth began to slow in the 1920’s, and by 1930 the Southern timber industry was in decline [Pixton, Dec. 1932, p. 448]. Therefore, during the implementation of these new tax laws the timber industry was a very important part of the economy of the Southeast and of Mississippi.

The L. N. Dantzler Lumber Company, with outstanding capital assets of $200,000, was incorporated in 1888 as one of the first chartered private corporations in the state of Mississippi. By 1900 Dantzler was producing over 90,000,000 board feet of lumber annually, being one of the three large timber companies in the Moss Point, Mississippi area. During the period of time examined by this paper, Dantzler purchased numerous small timber companies in the Moss Point-Pascagoula area. The financial records of several of these small companies are available for the period prior to their purchase by Dantzler. Later, the Dantzler Company expanded their timber operations into Nicaragua, Prince Edward Island, Oregon, and Georgia. Dantzler also had export businesses in New Orleans and Tampa, and a distribution business involving twenty barges and tugs, 200 miles of railroads with 24 steam locomotives, and 300 log cars. Other business interests included shipbuilding, foundry and machine shops, and planta-
tions in the Mississippi Delta. Operations were suspended in 1938 because of the depression; however, World War II resulted in operations being restarted. The company ceased all manufacturing and logging operations in 1949.

Corporation Excise Tax of 1909

The first important tax legislation enacted during the period 1905-1925 was the Corporation Excise Tax of 1909. This tax was not a direct tax and "was not intended to be and is not in any proper sense an income tax law," but an excise tax "measuring the amount of tax by the income of the corporation with certain qualifications prescribed by the Act itself" [Stratton's Independence v. Howbart, 231 U.S. 399]. Therefore, this excise tax was considered constitutional prior to the passage of the sixteenth Amendment. A deduction was allowed for depreciation, but no mention was made of the allowability of a depletion deduction. This resulted in attempts by various companies engaged in the production of natural resources to have depletion deducted as depreciation. The Commissioner of the Bureau of Internal Revenue disagreed. Eventually this disagreement culminated in several court cases. The courts disallowed the depletion deduction in mining companies, but allowed it in the timber industry. In Stratton's Independence vs. Howbart [231 U.S. 399], an important lawsuit involving a mining company, the plaintiffs contended that the mining of ore is the reduction of an ore deposit which would be depreciation of a capital asset and therefore deductible. The Supreme Court ruled that allowance of a depletion deduction for mining companies would exclude them from the tax the manufacturers had to pay, therefore denying the depletion deduction. A later court decision, Doyle vs. Mitchell Brothers Company [247 U.S. 179], decided in 1918, but under Section 38 of the Corporation Excise Tax of 1909, accepted the depletion deduction for timber companies based upon the market value of the timber at the time of the act. The Court concluded in this case that "in order to determine whether there has been gain or loss, and the amount of gain if any, we must withdraw from gross proceeds an amount sufficient to restore the capital value that existed at the commencement of the period under consideration." This Court decision established that the return of capital is not income, therefore allowing the depletion deduction. By the time this decision was made, later tax laws had already established the appropriateness of a deduction for timber depletion. There are several possible reasons why depletion was deducta-
ble for timber, but no ore deposits under this 1909 Act. First, and most obvious is that timber is easier to estimate because it is above the ground. Secondly, the courts were not willing to allow the mining companies to avoid the Act by deducting the entire difference between net income and gross receipts as the original cost of the ore, and therefore a return of capital [McGill, 1936, p. 305].

The Effect of the 1909 Excise Tax on the Timber Companies

The financial records of three Mississippi timber companies are available for the periods before and after the implementation of the 1909 Act. The 1909 Excise Act had a different effect upon the accounting reporting practices of each of these three companies. The first company providing financial records is the Ten Mile Lumber Company of Ten Mile, Mississippi. This was a very small company that was later purchased by Dantzler. Financial statements prepared regularly preceding and subsequent to this act include a Statement of Assets and Liabilities, and Statements of Sales, Purchases, and Timber Costs. The statements were all prepared on a cash basis. Costs and revenues are only matched when each shipment is made. The emphasis on the balance sheet and ownership interests is evident, as would be expected during the period prior to the emphasis on income required by the tax laws. Furthermore, there is no deduction of depletion or depreciation. The financial records of the Ten Mile Lumber Company showed no response to the enactment of the Excise Tax of 1909.

Financial statements for the Native Lumber Company of Howison, Mississippi are also provided during the implementation of the 1909 Excise Act. Included in these financial statements are Cost Statements, a Statement of Lumber Sales, a Realization Schedule, and a Reconciliation of Profit and Loss. The 1911 Realization Schedule is presented in Exhibit 1. A change in emphasis that is evident was from income by order or shipment to income for the company as a whole. Also an adjustment was made for lower of cost or market valuation of inventory. The Reconciliation of Profit and Loss and the Realization Schedule also indicate that depreciation was deducted, but depletion was not deducted.
The third company examined for this period of time is the L. N. Dantzler Lumber Company. The Cost Statements, Lumber Sales Statements, a Realization Schedule, and Reconciliation of Profit and Loss are the financial statements provided. The 1912 Realization Schedule is presented in Exhibit 2, sheets 1 and 2. Reconciliation of Profit and Loss indicates a matching of revenues and expense for the entire company and deductions for both depreciation and depletion.
### Exhibit 2

#### Sheet 1

**REALIZATION SCHEDULE**

**L.H. BARTELLE LUMBER COMPANY**

**YEAR 1918.**

<table>
<thead>
<tr>
<th>Sales:</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Lumber</td>
<td>43,637,674</td>
<td>43,648,768</td>
</tr>
<tr>
<td></td>
<td>Lumber</td>
<td>(51)</td>
<td>1,009</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>43,637,674</td>
<td>43,649,768</td>
</tr>
<tr>
<td>Loss:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Loading &amp; Tallying</td>
<td>11,677.98</td>
<td>11,677.98</td>
</tr>
<tr>
<td></td>
<td>Hinge Expense</td>
<td>1,700.66</td>
<td>1,700.66</td>
</tr>
<tr>
<td></td>
<td>Freight &amp; Yoyage</td>
<td>6,756.68</td>
<td>6,756.68</td>
</tr>
<tr>
<td></td>
<td>Commissions &amp; Insurance</td>
<td>4,001.28</td>
<td>4,001.28</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>24,919.94</td>
<td>24,919.94</td>
</tr>
<tr>
<td>Asset Value of Sales:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Logs - Cost -</td>
<td>Adjustments</td>
<td>11,128.66</td>
<td>11,128.66</td>
</tr>
<tr>
<td>Log - Total</td>
<td>439,987.10</td>
<td>439,987.10</td>
<td></td>
</tr>
<tr>
<td>Saw Mill Manufacturing</td>
<td>186,493.06</td>
<td>186,493.06</td>
<td></td>
</tr>
<tr>
<td>Planing Mill Manufacturing</td>
<td>19,085.87</td>
<td>19,085.87</td>
<td></td>
</tr>
<tr>
<td>Lumber Purchased in Stock</td>
<td>59,703.47</td>
<td>59,703.47</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>694,187.50</td>
<td>694,187.50</td>
<td></td>
</tr>
<tr>
<td>Inventory Decrease</td>
<td>11,168.92</td>
<td>11,168.92</td>
<td></td>
</tr>
<tr>
<td>Cost of Product Sold - Realization before Depreciation</td>
<td>608,548.99</td>
<td>593,018.58</td>
<td></td>
</tr>
<tr>
<td>Depreciation</td>
<td>81,658.48</td>
<td>81,658.48</td>
<td></td>
</tr>
<tr>
<td>Realization before Depreciation</td>
<td>526,890.51</td>
<td>511,360.10</td>
<td></td>
</tr>
<tr>
<td>Realization on logs cut from Company</td>
<td>216,713.11</td>
<td>216,713.11</td>
<td></td>
</tr>
<tr>
<td>Timber</td>
<td>13,633,962</td>
<td>13,633,962</td>
<td></td>
</tr>
<tr>
<td>Depreciation</td>
<td>81,658.48</td>
<td>81,658.48</td>
<td></td>
</tr>
<tr>
<td>Realization after Depreciation</td>
<td>194,649.66</td>
<td>194,649.66</td>
<td></td>
</tr>
</tbody>
</table>

### Exhibit 2

#### Sheet 2

**REALIZATION SCHEDULE**

**L.H. BARTELLE LUMBER COMPANY**

**YEAR 1918.**

<table>
<thead>
<tr>
<th>Continued from Sheet No.1:</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Realization after Depreciation</td>
<td>19,633,962</td>
<td>19,649,66</td>
<td></td>
</tr>
<tr>
<td>Realization as above</td>
<td>194,649.66</td>
<td>194,649.66</td>
<td></td>
</tr>
<tr>
<td>Add - Stumpage on Logs Purchased</td>
<td>29,705,723</td>
<td>29,705,723</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>43,637,674</td>
<td>43,637,674</td>
<td></td>
</tr>
</tbody>
</table>

**Note:** It is impossible to arrive at the actual cost of hauling, and running of the logs purchased and delivered to Moss Point, but from the knowledge of the conditions existing at that time, we would say that four (4.00) dollars for hauling and two dollars twenty-five cents (2.25) for running. Making a total of six dollars twenty-five cents (6.25) as the maximum we would leave an average of four dollars eighty-one cents (4.81) for stumpage on logs purchased and delivered at Moss Point.

To work back the realization on this basis, say:

| Realization - Net after Depreciation | 194,649.66 | 4.476 |
| Add - Stumpage on logs purchased | 29,705,723 | 148,874.90 |
| Net Realization | 43,637,674 | 7.787 |
Why was there a difference in the reaction to the 1909 Excise Act by three timber companies operating in the same geographical area? Perhaps the most significant difference is in the preparers of the financial statements and the tax records. The Ten Mile Lumber Company, prior to becoming a subsidiary of Dantzler, provided statements emphasizing the balance sheet, with no "Realization Schedule". The lack of a "Realization Schedule", providing a matching of revenues and losses for the entire company, and the emphasis on profitability by order shipped, indicates a continuation of the same accounting practices prior to the enactment of the 1909 Act. On the other hand, Native Lumber Company emphasized profit and loss for the company as a whole, and used the depreciation deduction, indicating an awareness of the change in the law. The lack of a depletion deduction is understandable at this time due to the uncertainty of its deductibility because of the time lapse between the implementation of the act and the court decision allowing the depletion deduction. Both of these companies used local accountants. Finally, Dantzler prepared a Realization Schedule taking both the depreciation deduction and the depletion deduction. Their correspondence with the Bureau of Internal Revenue indicates that they retained a Washington, D.C. law firm to compute their taxes. Seemingly, compliance with the new tax law depended to some extent upon the ability to hire a tax practitioner that understood it.

The Revenue Act of 1913

The Sixteenth Amendment was ratified on February 25, 1913, and on March 1, 1913, the first income tax law went into effect. The Act provided for "a reasonable allowance for the exhaustion, wear, and tear of property arising out of its use or employment in the business" [Revenue Act of 1913, Section II, G]. In Stanton v. Baltic Mining Co. [240 U.S. 130] the courts determined that Congress had the statutory power under the Sixteenth Amendment to either allow or not allow deductions for depreciation and depletion. Such a deduction was not "a matter of right," but if any such deduction is taken" ... authority must be found in the statute" [Burnet v. Thompson Oil Co. 283 U.S. 301].

Complete financial statements for the L. N. Dantzler Lumber Company, the Ten Mile Lumber Company of Ten Mile, Mississippi, and the Native Lumber Company of Howiston, Mississippi are available for 1911-1913. By the time of the enactment of the 1913 Revenue Act, all three companies were
deducting depreciation and depletion. Also, all the companies were preparing some type of realization schedule on the accrual basis, matching revenues and expenses for the fiscal year. The 1913 Realization Schedule for L. N. Dantzler is presented in Exhibit 3, sheets 1 and 2.

**Exhibit 3 Sheet 1**

<table>
<thead>
<tr>
<th>Sales:</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lumber</td>
<td>$765,056.75</td>
</tr>
<tr>
<td>Slabs</td>
<td>1,107.41</td>
</tr>
<tr>
<td>Total</td>
<td>$766,164.16</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Losses:</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lumber &amp; Logging</td>
<td>$7,129.70</td>
</tr>
<tr>
<td>Damage &amp; Valuing</td>
<td>$4,670.52</td>
</tr>
<tr>
<td>Freight &amp; Transportation</td>
<td>$1,028.40</td>
</tr>
<tr>
<td>Commissions &amp; Insurance</td>
<td>38.09</td>
</tr>
<tr>
<td>Total</td>
<td>$11,811.79</td>
</tr>
</tbody>
</table>

| Total Net Mill Value of Sales | $580,631.00 |

<table>
<thead>
<tr>
<th>Logs</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Logs</td>
<td>$458,692.39</td>
</tr>
<tr>
<td>Total</td>
<td>$38,482.94</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Logs</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Logs</td>
<td>$458,692.39</td>
</tr>
<tr>
<td>Total</td>
<td>$38,482.94</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Realization on Feet Cut</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Company Timber</td>
<td>$259,625.56</td>
</tr>
<tr>
<td>Depreciation</td>
<td>$23,931.87</td>
</tr>
<tr>
<td>Total</td>
<td>$303,669.71</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Realization before Depletion</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>$259,625.56</td>
<td>$4,410</td>
</tr>
<tr>
<td>$23,931.87</td>
<td>$2,040</td>
</tr>
<tr>
<td>$303,669.71</td>
<td>$12,970</td>
</tr>
</tbody>
</table>

**Exhibit 3 Sheet 2**

<table>
<thead>
<tr>
<th>Realization before Depletion</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>$205,695.71</td>
<td>12.970</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Total</th>
<th>205,695.71</th>
</tr>
</thead>
<tbody>
<tr>
<td>12.970</td>
<td>205,695.71</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Add - Stumpage on Logs Purchased</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>$256,269.71</td>
<td>6.179</td>
</tr>
</tbody>
</table>

| Notes: | |
|--------| |
| It is impossible to arrive at the actual cost of hauling, and running of the logs purchased and delivered to Moss Point, but from the knowledge of the conditions existing at that time, we would say that four ($4.00) dollars for hauling and two dollars twenty-five cents ($2.25) for running, making a total of six dollars twenty-five cents ($6.25) as the maximum that would leave an average of six dollars fifty-five cents ($6.55) for stumpage on logs, purchased and delivered at Moss Point. |

| How to work out the realization on this basis, say: | |
|--------------------------------------------------| |
| Realization - Net before Depletion | 205,695.71 |

<table>
<thead>
<tr>
<th>Add - Stumpage on Logs purchased, the cost is included in Logs Purchased</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>256,269.71</td>
<td>6.179</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Net Realization</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>256,269.71</td>
<td>9.174</td>
</tr>
</tbody>
</table>
Correspondence with the Commissioner and the tax protest for the 1917 calendar year provide insight as to how the various amounts on the financial statements were computed, and changes that were made in order to comply with the new tax laws. The correspondence and the protest mention several areas of deficiency in the financial accounting system that created tax problems. First, records of timber valuation and of timber cuttings were often not accurate. The cost depletion method required in the timber industry was based upon accurate records of timber cuttings. Records did not indicate where the timber was cut, only where it was shipped. These records were extremely important because they were the basis for depletion and the units of production method of depreciation. Second, assets were recorded at cost, with little attention paid to subsequent use or disposition. Since depreciation was not always deducted prior to 1913, records beyond the initial purchase of the assets were not always maintained. Assets from one company were often intermingled with assets from other companies as the need for them would arise. Finally, there was no separate cost accounting system. Timber cuttings were very much estimates. Only a financial accounting system existed which also provided records for tax purposes. Therefore, tax laws had a direct effect upon the financial accounting system. Each of these financial accounting deficiencies are discussed in the following sections.

Timber Valuation and Depletion

As mentioned previously, deductions for timber depletion had been allowed since 1909. During the period 1909-1918 the Treasury Department issued rulings allowing a depletion deduction from gross receipts, or a charge against the cost of manufacturing the timber into lumber [Holmes, 1922, p. 767]. These rulings were eventually written into the statutes allowing for timber as well as other natural resources “a reasonable allowance for depletion and for depreciation of improvements, according to the peculiar conditions in each case, based upon cost, including cost of development not otherwise deducted. Provided, that in the case of such properties acquired prior to March 1, 1913 the fair market value of the property on that date shall be taken in lieu of cost up to that date” [Internal Revenue Act of 1918, Section 234 (a) (9)].

The requirement by the federal tax acts that the timber acquired prior to March 1, 1913, be accounted for at the fair market value of the timber at that date caused complications for the timber companies. Timber had to be revalued, and had
to be accounted for separately from the timber acquired subsequent to this date. Timber was acquired in three ways: purchase of timber land, purchase of timber rights, or purchase of logs. This provided records of the original cost. Depletion was determined by first estimating the amount and quality of standing timber and then estimating the average cost of all the stumpage owned. This average cost of stumpage owned was then multiplied by the number of board feet cut to determine the depletion. Estimates of standing timber were made by "professional timber cruisers" who were, according to Wyler, "more or less trustworth" [June 1923, p. 108]. However, Smith [Aug. 1933, p. 202] points out that the material records, with the exception of lumber shipped, were "...more apt to be incorrect than correct." An incorrect estimate could cause the accountant the embarrassment of having timber on the books and none in the woods if these timber estimates were not conservative [Smith, August 1933, p. 202]. Generally the amount cut was determined at the point that the lumber was loaded for shipment. Inventories were based upon the following:

\[
\text{Logs cut @ sawmill log scale} + \text{overruns} + \text{ending inventories} - \text{Lumber shipped} = \text{Lumber inventory at the end of the period}
\]

This computation caused few problems because of the ease of determining the amount of timber cut, but the estimate of the total amount of timber available was difficult to compute, and served as a basis for subsequent depletion charges. Wyler [June 1922, p. 108] indicated that "In the past many lumber manufacturers have used an arbitrary rate for depletion, which was not based directly upon the cost of timber." Furthermore, the very prosperous mills would use as a basis the market value of the finished product. These market rates would fluctuate making their use difficult. Only the smaller mills used actual cost. As if the accountant did not have enough problems, the average depletion unit would usually change from year to year because of additional purchases.

**Inventory Records**

The L. N. Dantzler Lumber Company was also experiencing problems with the estimates used as a basis for valuation of the standing timber for depletion purposes and the lack of
accurate records of subsequent timber cuttings. In the formal tax protest, Dantzler admitted their financial accounting reporting weaknesses to the Commissioner of the Bureau of Internal Revenue. Their tax advisor stated that the "Dantzler Lumber Company, as did a majority of other companies prior to the year 1917, paid comparatively little attention to depletion, and therefore whatever amounts were taken as depletion, up to 1917, do not represent the results of any careful analysis of either cost or March 1, 1913 value, but were rather rough estimates." Dantzler's tax advisor also admitted the March 1, 1913 valuation used as a basis for depletion and depreciation was a "rank guess" and was not figured accurately until the "later part of 1919." Depletion was a "rough estimate" at best. Due to the newness of the tax laws, there seemed to be little comprehension of requirements for compliance in the accounting records.

Court Cases on Depletion Under The 1913 Act

Dantzler Lumber Company's problems were not unique. An examination of the court cases of the time shows that lack of accurate records was common to the entire timber industry. The difficulties were created by the requirement that the March 1, 1913 market value became the basis for depletion deductions on timber purchased prior to the enactment of the Revenue Act of 1913, and also the basis for unit of production depreciation. The Commissioner would contest the market value attempting to reduce it thereby reducing subsequent depletion and depreciation deductions. Generally, the courts held that the burden of proof was on the taxpayer to show "competent evidence" that the Commissioner's valuation and subsequent depletion deductions were incorrect [Nickey and Sons v. Commissioner, 3 BTA 173]. Accountants of this time complained that depletion was used to manipulate profit. The deduction would either be based on the fair market value of the finished product or the fair market value prior to cutting depending on whether the company wanted to show a profit or a loss [Wyler, June 1922, p. 107]. After the enactment of the income tax, the Commissioner tried to discourage this type of manipulation. Although the arguments for valuation are of little interest today, several factors involving financial accounting reporting are involved.

First, a reading of the various court cases supports the impression that separate cost accounting records of timber valuation and of subsequent cuttings were generally not maintained. The timber companies were often forced to recapitulate
their records at a future date working “back to stumpage.”

Secondly, the courts seemed somewhat confused by the entire valuation and subsequent depletion process. Generally the testimony of expert witnesses weighed heavily upon the decision [W. M. Ritter Lumber Co. v. Commissioner, 30 BTA 231]. This was especially true if they were impartial. Compromises were often accepted [Houston Bros. v. Commissioner, 22 BTA 51]. Perhaps, the lack of expertise of the judges in timber valuation had an effect upon the willingness of the judges to compromise despite the fact that the Regulations allowed only changes for fraud, misrepresentation, or gross error [Benson Lumber Co. v. Commissioner, 9 BTA 593; Boyne City Lumber Co. v. Doyle, 47 F2d 772].

Thirdly, there seemed in some cases to be little comprehension by the timber companies that they would actually have to maintain accurate records for documentation of valuation basis for depletion and depreciation [A. B. Nickey & Sons v. Commissioner, 3 BTA 173]. This review of court cases indicates that difficulty in compliance with the new income tax law was not just a problem for Dantzler. Compliance with the new tax law was also difficult for other companies in the timber industry.

Asset Valuation and Depreciation

Depreciation of assets in the timber industry was usually based upon the exhaustion of the available timber, using the same basis as depletion. The depreciable value was divided by the available timber supply resulting in a timber rate that was multiplied by the saw mill cut in order to determine the annual depreciation. This units of production depreciation was accepted for timber companies by the courts. For example, the Court in Bacon-McMillan v. Commissioner [20 BTA 556] allowed a “...reasonable deduction on account of the exhaustion, wear and tear of the physical property ... that ... should be allowed as would return to the taxpayer the cost or March 1, 1913 value.” The physical assets would be exhausted when “the timber or other resources in connection with which it is used “...have become exhausted.” Straight-line depreciation was only used when there was a perpetual cut, which was generally not done at this time. Therefore, depreciation had the same valuation problems as depletion. Depreciation also had to be adjusted each year based upon additional timber acquired. The plant was reduced to salvage value when the timber was exhausted [Wyler, June 1922, p. 107].
Dantzler's depreciation was not always recorded. When small timber companies were purchased, their assets were intermingled and moved as they were needed on other tracts. Often the source of the timber cuttings was ignored, making use of the units of production method very difficult. Furthermore, the auditors did not seem to understand, or perhaps did not want to become involved in the computation of depreciation. For example, a Savannah, Georgia auditor stated in Dantzler's annual audit report that, "I did not enter depreciation this time. Considerable repairs have been made in your property, and I consider that the plant has appreciated."

Separage Cost Accounting Systems

As late as the 1930's, accountants were still critical of the financial accounting records maintained by the timber companies. A common criticism was that very often a cost accounting system was not maintained separately from the financial records. Even in the most sophisticated systems, Smith [Aug. 1933, p. 221] pointed out that the only cost accounting records maintained were the "timber cruiser's estimate of standing timber, log scale in the woods, saw-mill log scale, board measure of lumber shipped, and . . . the periodical log and lumber inventories." Smith further complained that material records and costs had not received the study and attention that they deserved. An accurate cost accounting system maintained at the mill would have provided documentation of the timber cuttings.

Although the L. N. Dantzler Company did admit the lack of a cost accounting system in their tax protest, they did prepare a separate cost statement for logging, which became part of the financial accounting system. This format of this cost statement was as follows:

Total Cash Costs for Logging
+ Stumpage
+ Addition Expenses (General and Administrative)
+ Purchases of Timber
+ Beginning Inventory
- Ending Inventory
= Costs

This logging cost was matched against sales in a Sales Statement, and then carried on the Realization Schedule and the Reconciliation of Profit and Loss.
Subsequent Revenue Acts

The 1921 Revenue Act also required the use of March 1, 1913 market valuation "in lieu of cost" as a basis for depletion [Internal Revenue Act of 1921, Section 234 (a) (9)]. However, the 1924 Act made a significant change in the computation of depletion. The basis "... upon which depletion, exhaustion, wear and tear, and obsolescence are to be allowed shall be the same as provided ... for the purpose of determining the gain or loss upon the sale or other disposition of such property. The basis used for property acquired before March 1, 1913 will be the cost or the fair market value 'whichever is greater' " [Internal Revenue Act of 1924, Section 204 (b) and Section 204 (c)]. The Finance Committee and the Ways and Means Committee of Congress pointed out that this "... changes the existing law in the interest of the taxpayer and that it simplifies exceedingly the rule and effect under the present law without appreciable loss to the Treasury [Holmes, 1925, p. 637].

The 1917 Tax Protest of Dantzler

The Washington, D. C. law firm prepared numerous documents to support Dantzler's position in their hearing with the Commissioner. This included the establishment of a 1921 valuation and a "back to stumpage" recapitulation of the financial statements. The amount of tax disputed for 1917 was $6,835.28. An expense of $1,999.61 for "U.S. Government Suit and Cost" also appears on one of the Reconciliations of Profit and Loss. Considering the fact that Dantzler's Realization Schedules for the years prior to this protest indicate a net income for each year of $300,000 to $400,000, the $6,835.28 seems rather immaterial. However, Wyler [June 1922, p. 106] in a Journal of Accountancy article refers to 1917-1921 as the "high tax period". Therefore, the taxes may not have been high based upon current tax laws, but they were considered high by Dantzler's contemporaries.

Also prior to World War I, most of Dantzler's timber was being shipped to foreign markets. The Reconciliation of Profit and Loss for 1917 shows an net loss of $8,268.59, expressing financial difficulties caused by shipping problems created by World War I. Furthermore, a footnote to the 1917 financial statements indicates that Dantzler only operated part of 1917 because of the problems created by the war. Therefore, the war created a rapid change in Dantzler's financial condition.
Conclusion

This paper has summarized the changes in the tax laws faced by several Mississippi timber companies during the period 1905-1925. This period of time saw an uncertain and rapidly changing tax environment not experienced at any other time in our history. These changes in the tax environment also forced changes in the financial accounting systems because of the lack of other authoritative bodies to establish accounting practices. Exhibit 4 presents the observed changes in the financial statements in response to each new tax legislation. The 1917 tax protest indicated the influence of the tax laws upon the following areas of financial and cost accounting of the L. N. Dantzler Co.:

(1) Changes in the emphasis from the balance sheet and ownership interests to the income statement and income determination;
(2) Acceptance of the depreciation and depletion deduction;
(3) Improvements in accounting for assets;
(4) Improved recordkeeping for inventories.

The lack of separate cost accounting systems and the inadequacies of inventory valuation created difficulties in asset valuations and subsequent depreciation and depletion charges. This caused the resulting net income figures that were used for income tax purposes to very often be questioned when existing financial accounting systems could not provide the appropriate documentation to the satisfaction of the Bureau of Internal Revenue. Problems of estimation were not crucial until reliance upon them for tax purposes. Furthermore, these were the first dealings these companies had with a federal tax system. Therefore, companies, such as Dantzler, found difficulty in knowing how to deal with the tax situation due to this lack of prior experience.
EXHIBIT 4

SUMMARY OF SIGNIFICANT TAX LEGISLATION AND THE EFFECT UPON THE MISSISSIPPI TIMBER COMPANIES

FINANCIAL STATEMENTS
PRIOR TO THE CORPORATION EXCISE TAX OF 1909:

Balance Sheet
Cash Basis Shipping Reports
Matching of Revenues and Expenses by Shipment.

TAX ACT:

CHANGES IN FINANCIAL STATEMENTS AFTER THE ACT:

Corporation Excise Tax of 1909

Ten Mile Lumber Co.:
No change

Native Lumber Co.:
Addition of Accrual Bases Realization Schedule
Deduction of Depreciation

L. N. Dantzler Co.:
Addition of Accrual Basis Realization Schedule
Deduction of Depreciation
Deduction of Depletion

Revenue Act of 1913

Ten Mile Lumber Co.:
Addition of Accrual Basis Realization Schedule
Deduction of Depreciation
Deduction of Depletion

Native Lumber Co.:
Deduction of Depletion

L. N. Dantzler Co.:
Protest of 1917 Taxes under the 1913 Act

Revenue Act of 1924

Change from March 1, 1913 fair market value as a basis for depletion and depreciation to greater of fair market value or cost.
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Abstract: This paper traces in descriptive fashion some of the developments of thought about capital maintenance during this century. The adverse consequences of neglecting the subject are mentioned after a basic review of the concepts. Contrasts among the theories from the United Kingdom and Ireland, Canada, Australia and other countries are also made.

Introduction

To have income is to have an increment of capital; to have a loss is to have lost some capital. Capital maintenance and income are interdependent building blocks of financial accounting. All other notions either derive from or build on those foundation stones. Despite that mutual dependency, they have not had equal attention in the development of financial reporting in the United States. Neglect of capital maintenance in the development of income theory has not been without penalty to financial reporting. This paper traces some developments of thought about capital maintenance during the twentieth century. The paper is largely descriptive of the issues. Attention is not directed to strengths and weaknesses of arguments that have been made about the issues. Sterling et al [1981] have done that well. Some brief comments are made about adverse consequences of the neglect of capital maintenance.

Some simple thoughts about capital maintenance and income are offered first. The substance of financial accounting for a business enterprise concerns investment in assets looking towards a return of and on the investment. Investment in that sense refers to the act of giving up assets in exchange for other assets to be used in producing a return on the investment. Return of the investment refers to the receipt of assets equivalent to the assets relinquished in making the investment. Return on the investment is income, that is, the receipt of assets in excess of the return of investment.

Capital maintenance concerns the division of the aggregate return into its two components: return of and on investment.
Financial accounting cannot, of course, assure that capital is maintained. It can only report whether the aggregate return includes any income or, if it does not, that there has been a loss of capital. Capital maintenance refers therefore to a threshold — on one side is income; on the other, a loss. An increment of capital is income; a decrement is loss.

Financial accounting is not very tidy in the use of terms. Investment refers to the act of acquiring an asset. Investment also is used to refer to certain kinds of assets so acquired, such as, stocks, bonds, mortgages, and the like.

Capital also is used to mean several things. The most fundamental use is in characterizing an element of the accounting equation, in which capital appears as the excess of assets over liabilities. Capital also is used to characterize a kind of asset and a kind of expenditure. So capital is used to identify a kind of element on the right side of the balance sheet and an element on the left side. Anthony [1983] has recommended that the term capital be confined to the left side to characterize resources. In a capital maintenance context the same ambivalence exists. One view holds that assets themselves (or perhaps net assets), including similarly useful assets, constitute capital. An opposing view is that a measure of the wealth (or financial well-offness) represented by the assets of the enterprise is the capital.

Capital Maintenance Issues

To identify issues about capital maintenance, some elemental matters are considered first. An individual makes an investment of $1,000 in a monetary instrument (whatever its form). Suppose that the aggregate return is $1,200. To determine the income one first determines the amount required to maintain capital. The amount of cash invested, $1,000, surely is a candidate. Suppose, however, that the inflation rate currently is 10 percent. Is $1,000 adjusted for 10 percent inflation, that is $1,100, also a candidate? Suppose further that the return is $1,200 but that the price of the asset in which the investment was made has increased to $1,150 at the same time that the inflation rate is 10 percent. Is $1,150 also a candidate for the amount of capital to be maintained? Income would be $200, $100, and $50, respectively, for the three candidates.

Turn now to business income. New complications are inevitable. Note first, however, that the fundamental notion of capital maintenance is much the same as for an individual investor. The business is an investor in assets. There is a sought
after return on the investment. Income (if any) of the business therefore is the portion of the aggregate return that exceeds the amount deemed to be a return of investment. Income is anything left over after capital is maintained.

The characteristics of a business give rise to issues in determining the capital that were not present in the situation for an individual investor. A business invests in and deploys a mix of assets. Some are monetary, some are nonmonetary subject to amortization over varying service lives. Some expire unexpectedly because of technological supersession. Further, a business ordinarily is leveraged to some extent. The leveraging involves short-term debt, long-term debt often for significant amounts, and may involve preferred stock.

Finally, a business is impersonal in the sense that it is a constructed alter ego of individual owners with residual interests in the business — a proprietary view. Or, the business may be viewed as free standing with its own capital and its own income — the entity view.

**Capital — Physical or Financial**

The unique characteristics of a business produce a set of issues concerning capital maintenance that may be added to the issues highlighted earlier for an individual investor, that is, the consequences of inflation and of changes in specific prices.

The argument that capital is physical in nature had its roots in the proprietary view of a business. The proprietary view focusses on the residual interest in identifying the capital sought to be maintained. The argument is made that residual interests often are concerned about and interested in a sustained level of income from the mix of assets comprising the business as an operating unit. Accordingly, the capital to be maintained is the operating capability or capacity of the business. The argument supports the conclusion that the capital is a physical phenomenon.

Maintenance of financial capital stands in opposition to maintenance of physical capital. The financial capital view assumes that capital is a financial manifestation of wealth and, accordingly, that the physical characteristics of assets are not an appropriate focus to determine income. Those who hold that view may disagree about the attribute (invested cost, current cost, realizable value, etc.) used to measure wealth, but they agree that capital is a financial phenomenon. At this point it is noted, without elaboration, that the system of accrual ac-
counting practiced currently in the United States is based essentially on maintenance of financial capital.

Before commenting on some world-wide developments concerning the nature of capital, brief observations are made about implications of the proprietary and entity views of a business enterprise.

The entity view raises some unique questions bearing on the nature of capital. One concerns the role of creditors and the return to them in measuring capital. One view is that creditors and equity interests (preferred as well as residual) should be treated alike in accounting for the capital of the business enterprise. One possible consequence is that there should be an accounting for the "cost" of equity capital as an expense similar to the accounting for interest paid to creditors. One might argue, of course, that returns to creditors and returns to owners would be treated alike also if neither is treated as a cost, but rather that both are treated as distributions of entity income.

The most pervasive capital maintenance issue is whether capital is financial or physical. Consideration of that issue has been sporadic in the United States. Indeed, as mentioned earlier, capital maintenance was a neglected issue in the United States for almost all of the first three quarters of the current century. The issue was addressed somewhat earlier in other countries of the world. Since the principal effects of the choice between financial capital and physical capital concern changes in prices of assets, differences in the timing and degrees of inflation in various countries have influenced differences in the timing of attention to the subject.

Theodore Limperg of the Netherlands is credited with being the principal originator of the physical capital notion. Limperg, accountant and self-taught business economist, entered the profession of accountancy in its formative years in the Netherlands. He also was a professor of business economics at Amsterdam University. Limperg's thinking and theories dominated business economics and accountancy in the Netherlands for more than forty years, beginning about 1920. [van Sloten, 1981].

Central features of Limperg's general theory of business income were the derived conclusions that (a) in normal circumstances, where the business is profitable, cost of replacement is the recordable amount for the means of production and (b) profit is the disposable accretion to wealth of those dependent on the production process. The second of those conclu-
sions has become the building block for the view that operating capability, a physical quality, is the capital threshold for determining business income.

Limperg's influence on accounting in the Netherlands carried over into practices followed by a few well-known Dutch companies, including N. V. Philips Gloeilampen fabricken, Koninklijke Wessanen N. V., and the Group, comprising AKU and KZO. A study conducted by the Economic Institute of the Free University, Amsterdam in 1968 shows, however, that replacement value accounting was not the prevailing practice in Netherlands. Various aspects of replacement value accounting were reflected, however, in the financial statements by a significant minority of the companies studied [Burgert, 1972].

**Holding Gains and Losses**

Determination of income for a period by comparing capital at the beginning of the period with capital at the end of the period ceased, as a practical matter, at least in the United States, very early in the history of public financial reporting. Accrual accounting in which periodic income is determined by deducting invested (historic) costs from revenues assumes that the costs deducted measure the capital used up during the period. Articulation of the income statement with the opening and closing balance sheets presumably provides the test as to whether the invested capital has been maintained.

In that context, a physical capital approach would call for the matching of replacement costs of operating capability with revenues. Since operating capability in an environment of changing technology is not susceptible to direct measurement, surrogates are necessary. The usual assumption is that replacement costs of productive assets in use generally will serve as a satisfactory surrogate.

In a replacement cost system that articulates through double entry accounting, changes in replacement costs of specific assets necessarily give rise to credits or debits offsetting the recorded changes in replacement costs. Those offsetting credits and debits have come to be called holding gains and holding losses — gains if costs have increased, losses if they have declined. To label cost increases as gains and decreases as losses may seem twisted, depending on the perspective. From a capital maintenance perspective, a cost increase is a gain because of the advantage gained in using an asset for which the actual outlay was less than the outlay for that asset would have
been today, and vice versa for a cost decrease. In short, gains and losses measure opportunities forgone.

The controversy about whether capital is financial or physical focusses principally on the accounting for holding gains and losses. They are income credits or charges for financial capital purposes, since they manifest changes in wealth in financial terms. They are capital adjustments for physical capital purposes, since they manifest changes in the measure of operating capability, rather than a change in operating capability itself.

**Standard Setting Developments**

**United States**

As mentioned earlier, little attention was given to capital maintenance in the United States during the first seventy-five years of this century. In 1976 the Financial Accounting Standards Board exposed for public consideration a Discussion Memorandum concerning a conceptual framework for financial accounting and reporting. Among the issues dealt with were the attributes (historical costs, current costs, and others) of financial statement elements. Capital maintenance necessarily was an issue to be addressed if attributes other than historical cost are studied. In 1979 the FASB issued Statement of Financial Accounting Standards No. 33 requiring certain companies to report certain information supplementally about current costs of assets and constant dollar measurements. The Statement contained a discussion of financial capital views and physical capital views, but did not contain an expression of the Board’s preference, although the earlier Exposure Draft did contain an expression of the Board’s preference for financial capital. The matter has not had further Board attention. The recent decision to withdraw the requirement of Statement No. 33 probably means indefinite postponement of standard-setting attention to capital maintenance in the United States.

**United Kingdom**

In January 1976 the Chancellor of the Exchequer and Secretary of State for Trade and Industry of the British government appointed a committee to inquire into inflation accounting. The committee, commonly referred to as the Sandilands Committee, submitted its report in June 1975. The committee indicated a preference for “value to the business” as the measure of assets for balance-sheet purposes. Value to the business of an asset may be replacement cost, net realizable
value or "economic value," depending on the circumstances. As a practical matter, however, replacement cost ordinarily would represent value to the business. The accounting proposed was entitled current cost accounting. The Committee concluded that the most useful representation of enterprise income would exclude all holding gains and losses in order to come to a figure characterized as operating profit. A leaning toward physical capital was thus set in motion for standard setters.

In March 1980 the Accounting Standards Committee of the United Kingdom and Ireland issued Statement of Standard Accounting Practice No. 16 on current cost accounting. The Statement required certain companies to present current cost financial statements either as a supplement to the historical cost statements or a replacement for those statements. Income would be shown in two tiers:

- Current cost profit (of the enterprise), and
- Current cost profit attributable to shareholders.

Physical capital underlies the determination of enterprise income. Recognition is given to net monetary working capital as a necessary element of operating capability. As prices of goods and services change, additional (or lesser) net monetary working capital is required. Accordingly, current cost profit is adjusted for those required capital changes.

Provision is made for a gearing adjustment in determining current profit attributable to shareholders. The gearing adjustment reflects the effect of leveraging on what is distributable to common shareholders. It recognizes that operating capability (which requires working capital) will have been financed in part by borrowing and to that extent holding gains and losses (less interest paid on the borrowings) accrue to shareholders. Lemke states that the "rationale for the gearing adjustment is quite straightforward. It assumes that a firm's debt-equity ratio will remain fairly stable and that a portion of current cost increases can therefore be financed by debt (without changing the risk characteristics of the firm)" [Sterling et al, 1980].

Australia

In October 1976 the Australian Society of Accountants and the Institute of Chartered Accountants in Australia issued a provisional statement on current cost accounting, which was amended in 1978 and superseded in November 1983 by Statement of Accounting Practice, Current Cost Accounting. The
Statement is unequivocal on the capital maintenance issue, where it states: "Profit under CCA is measured by increments in capital, defined as operating capability. This avoids the inadvertent erosion of operating capability which may occur as the result of conventional measurement of profit" [p.x].

The Statement strongly recommends presentation of supplementary current cost financial statements in addition to conventional statements. The portion of holding gains and losses attributable to monetary liabilities and monetary assets would be taken to a current cost reserve — a proprietary view.

The Statement offers an interesting comment on the proprietary/entity view of an enterprise by illustrating how a proprietary result would be calculated, together with the following comment:

As gains on loan capital do not increase operating capability, and hence are not an element of the CCA net profit of the entity, any distributions to shareholders from the gain on loan capital reserve constitute a reduction in the operating capability of the entity unless replaced by additional equity funds or loan capital [p.x].

Canada

In December 1982 the Accounting Research Committee of the Canadian Institute of Chartered Accountants recommended that large publicly held companies present as a supplement to their historical cost financial statements (a) certain information about the current cost of inventory and property, plant and equipment and (b) certain information measured in constant dollars. The recommendations were characterized as intended to assist in assessing maintenance of enterprise operating capability, as well as maintenance of operating capability financed by common shareholders, thus opting for maintenance of physical capital in determining income (loss).

The recommendations accommodate varying views of the nature of capital by recommending disclosure of a financing adjustment that might be useful in assessing maintenance of the common shareholders' proportionate interest in operating capability. Also recommended for disclosure is a constant dollar financing adjustment intended to assist in assessing maintenance of financial capital. The financing adjustment concerns the portion of holding gains and losses presumed to have been financed by borrowings and, accordingly, to that extent are not borne by (or a benefit to) common shareholders.
International

The International Accounting Standards Committee, in issuing IAS 15, *Information Reflecting the Effects of Changing Prices* [1981], referred to two approaches to the determination of income:

(a) income after the general purchasing power of shareholders' equity has been maintained, and
(b) income after the operating capacity of the enterprise has been maintained, which may or may not include a general price level adjustment [p.x].

Except for those indirect references, capital maintenance is not mentioned in the Statement.

Neglect of Capital Maintenance — Consequences

Two factors contributing to the dormancy of attention to capital maintenance in the United States until the 1970s were (a) an inflation rate modest enough not to upset the usual assumption that the effects of inflation could be ignored for purposes of financial accounting and (b) a focus on the matching of costs with revenues as a driving mechanism for periodic income determination. Capital maintenance was assumed to be a fall out of a "good" match.

Neglect of capital maintenance as the conceptual twin of income led to some developments in financial reporting that might be characterized as instinctive reactions to symptoms, rather than reasoned analysis with an anchor.

The first of those reactions grew out of the perception that if prices have risen, the conventional historical cost system would produce an "unreal profit" element in income unless replacement or current costs were matched with revenues. Thus was born a family of patches on the conventional accrual system, including Lifo costing of cost of sales and accelerated depreciation charges. Holding gains and losses under those practices were not accounted for (or, at least, the accounting was delayed) and, accordingly were excluded from income, thus tending to a physical capital effect in a system ostensibly based on maintenance of financial capital. Thus the capital maintenance and income notions inherent in the system were mixed. The resulting capital maintenance notion was interpretable except to say that capital was partly financial in nature based on some historical measures of changes in wealth and partly physical.
The second instinctive reaction concerned the nature of periodic income, as compared with lifetime income. Many observers long have been uneasy with the idea that a measure of periodic income, for a year or any part of enterprise lifetime, should be similar in nature to income for a lifetime. Although there is agreement that lifetime income runs from the point of cash (or cash equivalence) invested by owners in forming a business to final cash distribution to owners upon liquidation, there has been concern that periodic income would be distorted if a cash grounding were the basis for determining periodic income. Cash grounding in an accrual system means that revenues manifest likely cash prospects and expenses represent actual or probable cash outlays. The uneasiness led to putting more patches on the system. A notable example was the deferred method of allocating income taxes under which events with probable cash consequences, like a change in tax rates, are ignored currently. Another example was the earlier practice of providing for no insurance (commonly called self insurance) even though the timing and amount of cash outlays for risks not insured were not predictable with reasonable accuracy. Patches like that fly in the face of the idea that income is a capital increment. Whatever the nature of capital, so is the nature of income.

The third reaction is more subtle. Standard setters for financial reporting have visited and revisited on a number of occasions the question of financial statement geography or display of the effects of extraordinary, unusual, or nonrecurring happenings. Treatment of those effects have been modified many times. Eventual erosion of the results has not been unusual. In the 1940s the tugging forces were characterized as the operating performance view of an income statement versus the all-inclusive view. In the 1980s the same forces are tugging at each other. Continuing debate about treatment of nonrecurring items is a manifestation of an unresolved issue that is much more fundamental than issues of display.

The argument that the capital sought to be maintained should be that which produces a sustainable source of income implies that the effects of windfalls, or of unforeseen happenings should be excluded from income. Presumably, the effects of windfalls, gains in some instances and losses in others, tend to be offsetting over time and accordingly, so the argument goes, should be ignored in determining the capital necessary to sustain a level of income. Attention to conceptual issues concerning capital maintenance would have, at least, provided a
reasoned basis for resolving issues about extraordinary items. The ad hoc approach has not withstood the forces of erosion.

Unfortunately, attention to capital maintenance spurts and flags, depending on the rate of change in inflation. Continuing attention through periods of modest inflation, as well as periods of high inflation, would heighten chances for improved financial reporting and, most certainly, would provide a better rationale for any patches put on the financial accounting model.

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PREHISTORIC ACCOUNTING AND THE PROBLEM OF REPRESENTATION:
ON RECENT ARCHEOLOGICAL EVIDENCE OF THE MIDDLE-EAST
FROM 8000 B.C. TO 3000 B.C.

Abstract: Recent archeological research offers revolutionary insight about the precursor of abstract counting and pictographic as well as ideographic writing. This precursor was a data processing system in which simple (and later complex) clay tokens of various shapes were aggregated in hollow clay receptacles or envelopes (and later sealed string systems) to represent symbolically assets and economic transactions. Scores of such tokens (the recent explanation of which is due to Prof. Schmandt-Besserat) were found by archeologists all over the Fertile Crescent in layers belonging to the time between 8000 B.C. to 3100 B.C. — after this date cuneiform clay tablets emerged.

The economic-philosophic implications of this discovery are important. First, it suggests that accounting preceded abstract counting as well as writing. Second, it suggests that conceptual representation emerged gradually. Third, it confirms the previous hypotheses that counting emerged in several stages. Fourth, it reveals the existence of an abstract input-output principle some 10,000 years ago and a kind of double entry over 5,000 years ago. Finally, it offers the earliest illustration of the (occasional) validity of the correspondence theory.

To assist readers I have inserted at the beginning of the fifth section some explanatory paragraphs on Wittgenstein's work.

Introduction

The quest for the origin of symbolic representation is not unrelated to Wittgenstein's perennial question: How is lan-
guage possible? Indeed a disclosure of the historical roots of representation might lead to a novel and empirical answer to Wittgenstein's major query — at least as far as written language is concerned.

During the last decade Professor Schmandt-Besserat, an archeologist at the University of Texas in Austin [1978, 1980, 1981, 1981a, 1982, 1984, 1986, 1986a] has shed much light on the origin of writing and counting.¹ I shall concisely recapitulate the history and results of her research² and offer interpretations of it from a philosophic as well as economic point of view.

Symbolic Representation and the Evolution of Writing

The invention of writing has long been shrouded in awe and mystery. Over the centuries many unsuccessful attempts have been made to explain the origin of this event [Schmandt-Besserat 1986, pp. 31-32] until in the early 19th century archeological expeditions to Mesopotamia began to clarify this problem by hard and fast evidence. A pictographic limestone tablet unearthed at Kish, dating from about 3000 B.C.³ is usually regarded as the earliest piece of writing known. But such isolated pictographs are very rare. In contrast to them are the oldest collections of clay tablets found in great quantities in Uruk (the biblical Ereš), dating from 3100 B.C. The writing they contain is predominantly ideographic (abstract) intermingled with only occasional pictographic signs (sketches of objects such as a plow, chariot, sledge, boar, etc.) — but at this stage the boundary between ideographic and pictographic signs is blurred, and interpretations vary. This ideographic nature of early cuneiform writing from the 4th millennium B.C. was already recognized by Falkenstein [1936, p. 25], the first person to investigate them.⁴ The meaning of this early or

¹For details about the individual contributions of A. Leo Oppenheim, Pierre Amiet, Denise Schmandt Besserat, and others to the clarification of the origin of writing and the record keeping use of clay envelopes and string aggregates, see: Schmandt-Besserat [1980, pp. 358-361] as well as Jasim and Oates [1986, p. 348]. For a somewhat different interpretation see Vallat [1986, pp. 334-337].
²The recapitulation is mainly based on Schmandt-Besserat [1986].
³Mallowan [1961, p. 67] as well as Hawkes [1963, p. 378] still state this date with 3500 B.C.
⁴Falkenstein [1964, p. 11] also emphasizes that the invention of cuneiform writing is the invention of the Sumerians, and that it was created exclusively for the recording of economic transactions.
archaic writing is still an enigma, partly because of its ideographic nature, partly because most ideographs could not be traced back to the later cuneiform writing of the first and second millennium B.C. — only the ideographs for sheep, oil, metal, labourer, measures of grain, animal and a few others were traceable.

The abstract form of these symbols as well as the large repertory of them (over a thousand different signs) combined with the scarcity of preceding pictographs posed a vexing question as to the evolution of writing. Surely it cannot have happened overnight, it must have gradually evolved. Yet where was the missing link, where was the prototype? It seems plausible that writing started with a relatively small number of pictographs, which gradually increased in number, slowly changing into ideographs. Out of lack of any evidence, it was hypothesized that the proto-writing must have been on perishable material and thus lost to posterity [Diringer 1968, p. 19].

However, Schmandt-Besserat advanced a much better substantiated and more plausible hypothesis. She noticed (from 1969 onwards) on occasion of visits to many archeological sites and museums an unexpectedly large number of odd and hitherto unexplained artifacts of various shapes to which she refers as “tokens” and among which she distinguished two major types: the earlier plain tokens (spheres, disks, cylinders, triangles, rectangles, cones, ovoids, and tetrahedrons) from ca. 8000 B.C. onwards, and the later complex tokens (variously incised or punctated and usually perforated, also of a greater variety of forms — added shapes: e.g. vessel forms, parabolas and bent coils). These small, ubiquitous objects (ca. 1 to 4 cm. across) were carefully hand-molded of clay and hardened by

Exhibit 1

1. Plain clay tokens

burning at a relatively low temperature (of ca. 600° C). At some sites only small numbers of these tokens were preserved, but at other sites (e.g. at Jarmo, Iraq, dated 6500 B.C.) some 1500
specimens were unearthed. Whether in Israel, Syria, Iraq, Turkey or Iran those artifacts were present all over the Middle East in layers dating from ca. 8000 to 3000 B.C. and even later. This ubiquity and wide dispersion obviously pointed at their religious, cultural or economic importance; but what was this important function? All archeologists and experts working in this area encountered these tokens, but none had a satisfactory explanation for their former use; a few experts thought they were amulets or game figures. But Schmandt-Besserat [cf. 1986, p. 34-35] noticed that the shape of many tokens matched with the form of archaic signs on tablets. For example, a disk with a cross, can be found among the tokens as well as among the signs on clay tablets where it became a circle with cross enclosed. But this ideograph is traceable to later writings and stands for "sheep"; similarly, an ovoid with circular incision stands for a "jar of oil", a triangle with five incised lines means "metal (silver?)". The cone and the sphere stand for small and large measures of grain respectively; a cylinder may be interpreted as "one animal (sheep or goat?)" while a disk refers most likely to a "flock of animals probably half a score (i.e. ten)." But let us listen to Schmandt-Besserat herself:

Exhibit 2

2. Complex clay tokens

"About 200 spherical clay envelopes (including fragments) have been recovered in an area extending from Palestine to Iran, including Saudi Arabia. The seals impressed upon their surface indicate their formal character, and it seems clear that the tokens they contain stood for goods and stated liabilities. The envelopes would have remained of esoteric
interest but for the discovery of their relationship to the invention of writing. Indeed, their evolution illustrates no less than the transition between an archaic abacus and writing according to the following sequence: (1) the invention of envelopes to hold tokens of specific transactions; (2) the impression of markings on the surface of the envelopes to indicate the shape and number of tokens included inside; (3) the collapse of the envelopes into clay balls or tablets bearing impressed signs; and (4) the elaboration of the impressed signs into incised pictographs.

The study of the envelopes therefore provides new insights into the origins of writing. It makes clear the process of its emergence from an archaic recording system based on tokens and throws light upon the fortuitous nature of its invention. It demonstrates that the cradle of writing was not confined to Mesopotamia but extended to the west as far as the upper Euphrates valley in Syria and to Elam at the east. The date of the events can be pinpointed to the Uruk IV period of 3200-3100 BC'" [Schmandt-Besserat, 1980, p. 385].

On the basis of this evidence few experts will doubt that the precursor of writing was the representation of commodities by means of clay symbols, not all of which were miniature models but many were abstract shapes the meaning of which was determined by convention. But what kind of messages did these symbols convey?

Data Processing and Accounting in Prehistoric Times

The plain clay tokens are dating from ca. 8000 B.C. onwards and were discovered among village finds (and later temple finds) unearthed in the Fertile Crescent of the Middle East.5 These tokens were sometimes enclosed in a "clay envelope" (hollow clay ball some 10 cm in diameter, the surface of which bore markings — which in turn are among the first

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5The first plain tokens (around 8000 B.C.) were extracted from the remains of "round hut compounds" on many archaeological sites of the Fertile Crescent — typical sites: Tell Mureybet and Tell Aswad in Syria, as well as Tepe Asiab and Ganj Dareh Tepe in Iran. By the seventh millennium B.C. simple tokens were also used in an area reaching from present Turkey to Israel.

The proportion of perforated tokens varies according to sites. At Uruk, only 46% are perforated but at other sites, such as Habuba Kabira in Syria, up to 80% of the tokens have a hole.
evidence of writing — indicating the content for quick recognition, and seem to represent one of the earliest systematic accounting systems. One or several specimen from Uruk, for example, yielded the following tokens which Schmandt-Besserat could match to the corresponding commodities as shown below (adapted from Schmandt-Besserat 1983, p. 120):

Exhibit 3

3. Clay envelope (showing seal on surface) with five clay spheres.

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<thead>
<tr>
<th>Item</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 incised ovoids</td>
<td>= 3 jars of oil</td>
</tr>
<tr>
<td>1 cylinder</td>
<td>= 1 animal (sheep or goat)</td>
</tr>
<tr>
<td>9 tetrahedrons</td>
<td>= 9 units of services</td>
</tr>
<tr>
<td>3 trussed ducks⁶</td>
<td>= 3 trussed ducks</td>
</tr>
<tr>
<td>5 ovoids</td>
<td>= 5 ?</td>
</tr>
<tr>
<td>4 parabolas</td>
<td>= 4 ?</td>
</tr>
<tr>
<td>1 triangle</td>
<td>= 1 small measure of grain?</td>
</tr>
<tr>
<td>26 spheres</td>
<td>= 26 bariga of grain⁷</td>
</tr>
</tbody>
</table>

⁶"Trussed ducks" on the left hand side refers to small clay tokens resembling trussed ducks, while the same expression on the right hand side refers to the slaughtered animals, similar to those in the supermarket.

⁷A *bariga* is a (larger) unit of measure used in Sumer — perhaps equivalent to the English "bushel."
It is not difficult to recognize that each of these eight lines represents a different commodity account identified by a specific shape of concrete tokens — just as businessmen give different names to different accounts, so the inhabitants of ancient Mesopotamia assigned different shapes (or tokens of different shapes) to different commodity accounts. Thus the singularity of "token accounting" lies in the multiplicity of shapes given to easily maleable clay tokens. Although these simple and concrete tokens were first associated with village life and agriculture, later on these "accounts" were kept (often together and even mixed with collections of the more sophisticated abstract tokens) by priests and temple administrators, so that the various shapes did not easily change their meaning — the shapes were conventionalized and seem to have kept their meaning for thousands of years. An envelope of tokens probably functioned as a personal account about a steward or debtor indicating the equity invested in such a person; but simultaneously it was an inventory list detailing this investment. Not always did one token stand for a single piece of commodity, sometimes it represented a specific measure of grain or a jar of oil, etc. Yet those units were only loosely standardized and should not be interpreted in any mathematical sense. But it is crucial to note that before 3,200 B.C. there is still no evidence that those concrete tokens represent numerals. At this stage, counting in the abstract sense, as we know it today, had not yet

Exhibit 4

4. Clay envelope (showing traces of seal as well as impressions of hardened tokens) with tokens.
emerged. Thus it is correct to say that accounting preceded abstract counting.

Complex Tokens

Complex tokens are distinguished from plain tokens by a greater variety of token shapes, by markings on those tokens (incisions, punctations or appliqué coils, and pellets added to the token surface), by a perforation of those tokens for the purpose of stringing them and sealing them together (instead of putting them into a clay envelope), and, above all, by their more abstract usage. The term “abstract token” might be confusing.

5. Sketched reconstruction of a string aggregate (showing clay seal on top and five perforated ovoid tokens on string) — designed by Ellen Simmons.

8The crucial step from token counting to a numerical system is best described by Bertrand Russell [1919/60, p. 3] who points out that “it must have taken ages to discover that a brace of pheasants and a couple of days were both instances of the number two.”

9Whereas the plain or concrete tokens had plain unmarked surfaces and came in a limited number of simple geometric shapes (flat and lenticular disks, cones, tetrahedrons, cylinders and occasionally commodity and animal shapes), the later complex or abstract tokens (closely tied to Sumerian temple institutions) bore marks on their surface and came in a much greater number of shapes (spheres, disks, cones, tetrahedrons, biconoids, ovoids, cylinders, bent coils, triangles, parabolas, rectangles, rhomboids, container, animal and other shapes). Each shape and marking had a well specified meaning. Typical objects of reference of a token were: a measure of grain, a jar of oil, a fleece of wool, or even a pot of beer. The cone and sphere were usually used for grain. They correspond to the Sumerian ban and bariga which find their analogy in the English peck and bushel.
because those complex tokens are still concrete clay objects, but now they are used in a way that approaches numerals in the abstract sense. Thus the term "abstract" does not refer to the token itself but to its use. But just as in the case of clay envelopes, those sealed string collections are equivalent to personal accounts about stewards and debtors, and simultaneously lists of inventories.

The Input-Output Principle: From Ancient Mesopotamia to the 20th Century

We have seen that by 3200 B.C. two kinds of accounting techniques were employed, often simultaneously. The first consisted in keeping plain tokens of different shapes in a marked and sealed clay envelope, the other in keeping an even greater variety of complex (incised), perforated tokens on a sealed string. There is sufficient evidence indicating that the plain tokens referred to such assets as grain and cattle while the complex tokens referred to services and manufactured goods. This separation resembles the distinction between cash items (including receivables, payables, etc.) and non-cash items (inventories, equipment, land, etc.) in double entry accounting of the Italian Renaissance. And since grain and cattle were the payment units or "cash items" of ancient Mesopotamia, the parallel is all the more striking.

Each kind of token shape, whether plain or complex, can be interpreted as a type of account, and the number of tokens (in a clay envelope or on a string) of a particular shape represents the quantity of pertinent items. Then all tokens together (of different shapes in a particular envelope or on a string) represent an equity loosely aggregated by an envelope or string (instead of the highly abstract aggregation attainable by monetary values). This may seem primitive, yet it spared the Sumerian scribe the valuation problem, which not only plagues modern accountants but also removed accounting representation one further step from objective reality, creating subjectivity and adding ambiguity. Thus the "aggregate" or superaccount represented by a clay envelope or a collection of tokens on a string, is not too much different from a balance sheet. It certainly had a dual significance: in its details, it represented the individual assets, in its totality it represented an equity.

But what was the entity behind this equity? Since these "aggregates" were most frequently (but not exclusively) found in former temple grounds (often a great number of such envelopes and string systems were stored in a single temple), the
entity usually was a temple or, less frequently, an individual person, family, or other small social group. There is archeological evidence that temples levied taxes possibly on the basis of farming out temple assets to individual persons (debtors or stewards). Thus the entity was (at least by 3200 B.C.) in most cases a temple institution, and the “debtor” probably was a particular person. But to determine the entire equity of such a temple government one would have had to further aggregate all the envelopes and string aggregates within a temple precinct — but there may not have been any need for doing this since the main purpose of those accounting systems was the monitoring of the obligations and levies from individual stewards and tax payers. Such a system also lends itself to recording the actual payments in kind by the debtor — archeologists have, indeed, repeatedly emphasized the debt-nature of such a token aggregate and of many clay tablets of a later age. It is possible even that the tokens or token aggregates were handed over as receipts to the debtor or donor by the temple administrator once the former’s debt was “paid” or a donation was made. But whatever the individual practices and techniques may have been, there can be little doubt that those ancient people moved clay tokens from one place to another in strict correspondence with the transfer of commodities and debt relations.

A Duality Principle

This means, first of all, that those ancient people of the Middle East had record keeping systems, the basic logical structure of which was virtually identical with that of modern double entry. One might reply that the transfer of ordinary goods, from one person to another, already possessed this logical structure which we call the input-output or duality principle. This is perfectly correct, but the ingenious stroke was to transfer this idea or principle from actual commodities by a one-to-one correspondence to a conceptual system of representation. Once this crucial

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10 For some thirty years I have tried to make clear to accountants that the crucial event in accounting is not double entry — which, after all, is a mere technique — but the logic structure behind it [Mattessich 1957/82, 1964, 1987]. A set-theoretical analysis of this “flow” or “input-output” structure in terms of ownership and debt relations is found in Appendix A of Mattessich [1964, pp. 448-465]. I have also demonstrated that this structure can manifest itself in matrices, net works, vectors, algebraic equations, etc. Now we have evidence that this logic structure was already present in record keeping systems some 10,000 years ago.
fact of the input-output or duality principle has been established, the question whether the ancient Sumerians or any other tribe used (more than five thousand years ago) a double entry system, is of secondary importance.

However, a good case can be made that even double entry (in the literal sense of the word) emerged as early as 3200 B.C. From this time stem the earliest clay envelopes (bullae) that bear on their surface the impressions of the tokens contained inside. Putting those tokens into an envelope undoubtedly meant the recording of quantities of various assets, or what we today would call "making debit entries." But apart from this were two further needs: (1) to reveal from outside the hidden content of the envelope, and (2) to reveal at a glance the entire equity represented by the envelope — as far as such an aggregation is possible without a common denominator. By sheer coincidence both of these functions could be fulfilled by a single act, namely by impressing the hardened tokens into the surface of the softer clay envelope. If this interpretation is correct, then those "mirror impressions" can be regarded as genuine counter-entries (in this case, credit entries) on the equity side of such an accounting system — since each token inside the envelope represents an asset, and each impression outside is part of the total equity.

Considering that this not only happened more than five thousand years ago, before writing and abstract counting was invented, the long tradition of accounting must either inspire some awe or reinforce the view that accounting is a dusty discipline indeed — one that literally arose out of the clay or dust of the earth. But there are at least two further important aspects to be discussed, both of which have philosophic implications.

**The Correspondence Theory of Representation**

The importance of Ludwig Wittgenstein for the philosophy of science as well as for every individual science lies in his enduring concern with questions of representation: How can language represent reality? What makes it possible for a combination of words to represent a fact? How is it that a sentence can say that such-and-such is the case?

In his first major work, the *Tractatus Logico-Philosophicus*, Wittgenstein [1922] developed his "picture theory" which regards a sentence as a picture (i.e. a model of reality) in the following sense: How is it possible that confronted for the first time with a sentence (composed of familiar words), we under-
stand this sentence without any explanation? Although a sentence cannot say its meaning (it is only capable of saying that so-and-so is the case), it can show its meaning.\textsuperscript{11} And if it can show this, then it must be some kind of picture of reality. Even more critical is that in the \textit{Tractatus} Wittgenstein asserts that the relation between the elementary or atomic parts of a true sentence must be in one-to-one correspondence with the objects and constituents of a fact, i.e. with reality — and it is, above all, this "logical atomism" together with its "correspondence theory of truth" which he abandons in his later philosophy.\textsuperscript{12} Because if

challenged to explain \textit{why} we must suppose that language is related to the world in that particular way, he was — on his own confession — in no position to give any literal reply... Propositions were capable of modeling and, so, describing reality; but they could not simultaneously describe \textit{how} they described it, without becoming selfreferential and consequently meaningless" [Janik and Toulmin, 1973, pp. 189-190].

Thus the \textit{Tractatus} has the merit of revealing the limitations of propositional language. It shows that logic as well as ethics are transcendental. The \textit{Tractatus} must not be misinterpreted to be a positivistic work: "Positivism holds — and this is its essence — that what we can speak about is all that matters in life. Whereas Wittgenstein passionately believes that all that really matters in human life is precisely what, in his view, we must be silent about" [Engleman, 1967, p. 97].

Wittgenstein's second major work, \textit{The Philosophical Investigations} (published posthumously in 1953) at least as influential as the \textit{Tractatus}, constitutes a rejection of some of his major previous thoughts, but it also is a continuation of his

\textsuperscript{11}"In a letter to Russell, Wittgenstein remarked that his "main contention" was this distinction between what can be said in propositions — i.e. in language — and what cannot be said but can only be shown. This he said, was "the cardinal problem of philosophy" Malcolm [1967, p. 330].

\textsuperscript{12}With reference to the important problem of Wittgenstein's connecting of elementary or atomic propositions with complex propositions, [Hintika, 1987, p. 30] offers the following crucial insight: "In the \textit{Tractatus}, Wittgenstein used the truth function theory to extend his picturing idea from atomic propositions to all complex ones. In 1928-29 he gave up his belief that truth-function theory could serve as such a bridge. Henceforth the same role had to be played by suitable human activities ("calculi", later "language games"). The nature of these activities was the main problem of his later philosophy."
earlier philosophic quest. Here the notion of "language games" and the importance of linguistic conventions supersede the "picture theory." From now on the meaning of a sentence is not derived from the picture property but from the use and application of the sentence. Wittgenstein's second philosophy is no longer limited to the natural sciences and rejects the notion that every form (structure) of a proposition can be anticipated as a new combination of simple objects. On the contrary, new language games are possible and embody new "forms of living" (Lebensformen). The meaning of a name is not the object it pertains to; and naming is not prior to the meaning of a sentence because before we know what a name stands for, we must already have mastered the pertinent language game.

So, from now on, Wittgenstein focused his attention instead on language as behaviour: concentrating his expressions, on the language games within which those rules are operative, and on the broad forms of life which ultimately give those language games their significance. The heart of the "transcendental" problem thus ceased (for Wittgenstein) to lie in the formal character of linguistic representations; instead, it became an element in "the natural history of man" [Janik and Toulmin, 1973, p. 223].

The accounting systems of the Sumerians and other ancient peoples are obviously not comprehensive or complete language systems (in the ordinary sense), and thus cannot offer any evidence for or against the validity of logical atomism and the correspondence theory of truth. But they are something like specialized and limited language systems or, more precisely, representational systems for the purpose of giving account of an entity's wealth and its flow. And as such they might provide evidence for the usefulness of the correspondence theory of representation. Not only did every piece of commercial reality (a measure of grain, a ewe or ram, a jar of oil or a weight of silver)

13 "The Tractatus held that the ultimate elements of language are names that designate simple objects. In the Investigations it is argued that the words "simple" and "complex" have no absolute meaning." In the Tractatus the existence of simple objects was conceived as following from the requirement that the sense of sentences is definite. In the Investigations this requirement is regarded as another philosophical illusion. We have imagined an "ideal" of languages that will not satisfy actual needs ... Wittgenstein denied that we always understand a sentence ... sentences have sense only in special circumstances; in other circumstances we do not understand them ... The view of the Tractatus is entirely different [Malcolm, 1967, pp. 335-336].
correspond to a specific token, but also such relations, as transfer, property rights, and debt claims, were represented by proper correspondences in this accounting system (through the location of certain tokens in a particular aggregate).\textsuperscript{14} It does not matter that this system itself consisted of relatively concrete objects (like clay cylinders, cones, etc.) instead of more abstract, written symbols; on the contrary this intermediary step reveals to us the evolution of a conceptual system — it not only demonstrates that abstraction is a matter of degree but also how more abstract representational systems evolved from less abstract ones. Above all, the archeological evidence shows that the first systematic representational system was based on a correspondence notion. The crucial thing is that input-output relations apply not only to the actual transfer of commodities but also to their representations. Because for the purpose of giving account of those transfers of commodities, property claims, and their results, clay tokens were removed from one place and put into another.

This archeological evidence shows two things: (1) that the precursor of written language was a system of representation that exploited the one-to-one correspondence between segments of reality and certain more or less abstract symbols, and (2) that such a one-to-one correspondence proved useful for almost five thousand years as a major element of what was probably the only systematic representational system available to early agricultural communities as well as to the first phase of urban culture. With this statement we do not negate the objections raised against logical atomism, but we suggest that in certain representations situations — particular in those with a manageable range and clearly defined concepts — there is a place for the correspondence theory.

\textsuperscript{14}One might argue that the much older paleolithic cave paintings and miniature art constitute earlier evidence for a correspondence theory of representation. But in these caves only objects (e.g. animals and hunters) are clearly represented while the relationships are, at best, merely implied. Certainly, the systematics necessary for a representational system, and the evidence afforded by the clay envelopes and string aggregates of the token accounting systems, is nowhere found in paleolithic art. In other words, paleolithic art represented mainly objects while neolithic record keeping represented objects as well as facts in Wittgenstein's sense (i.e. relations between objects). However, this hypothesis may founder if Margulis and Sagan's [1986, p. 222] guess is correct that "hunter-gatherers were sketching maps and plotting the movement of planets and stars as early as 40,000 years ago."
Janik and Toulmin [1973] claim that the historical root of Wittgenstein's concern for language and "pictorial" representation lies less in Russell's influence than in Wittgenstein's Viennese background:

Far from originating in Wittgenstein's *Tractatus*, as we shall see, the idea of regarding language, symbolism and media of expression of all kinds as giving us "representations" (*Darstellungen*) or "pictures" (*Bilder*) had by 1910 become a commonplace in all fields of Viennese cultural debate. Among scientists this notion had been in circulation at least since the time of Hertz, who had characterized physical theories as providing just such a *Bild* or *Darstellung* of natural phenomena [footnote omitted]. At the other extreme, it was equally familiar among artists and musicians; Arnold Schönberg, for instance, wrote an essay on musical thoughts, with the title *Der Musikalische Gedanke und die Logik, Technik, und Kunst seiner Darstellung* [footnote omitted]. By the time Wittgenstein came to the scene, this debate had been going on for some fifteen or twenty years in the drawing rooms of Vienna...” [Janik and Toulmin, 1973, p.31].

These authors also refer to the influence which the writings of the renowned physicist Heinrich R. Hertz [1894] — who was trying to present a "picture theory" as a system of mathematical models — had on Wittgenstein:

We form for ourselves images or symbols of external objects; and the form which we give them is such that the necessary consequence of the images in thought are always the images of the necessary consequence in nature of the things pictured. In order that this requirement may be satisfied, there must be a certain conformity between nature and our thought. Experience teaches us that the requirement can be satisfied, and hence that such a conformity does in fact exist. When from our accumulated previous experience we have once succeeded in deducing images of the desired nature, we can then in a short time develop by means of them, as by means of models, the consequences which in the external world only arise in a comparatively long time, or as the result of our own interposition. We are thus enabled to be in advance of the facts, and to decide as to present affairs in accordance with the insight so obtained. The images which we here speak of are our
conceptions of things. With the things themselves they are in conformity in one important respect, namely, in satisfying the above-mentioned requirement. For our purpose it is not necessary that they should be in conformity with the things in any other respect whatever [Hertz, 1899, pp. 1-2].

It seems that Hertz too had in mind a correspondence theory, but limited to mathematics in relation to the essential features of physics. Wittgenstein, on the other hand was ambitious enough in his *Tractatus* to expand this idea to language in general as well as to all aspects of factual reality (i.e. excluding value judgments). And this venture had to fail as the emergence of Wittgenstein's [1953] second philosophy clearly showed [Mattessich, 1978, pp. 95-97]. In other words the correspondence theory of representation may be defensible only when applied to certain precisely defined languages in correspondence with a limited aspect of reality (physical phenomena, certain economic and accounting phenomena, etc.).

*Early Accounting Systems as Precursor of Counting, Writing and Model Building*

Counting seems to have emerged in three different stages — counting by (1) one-to-one matching of unspecialized tokens like pebbles, sticks, etc., (2) by specialized tokens (abstract symbols as well as those with morphological similarities to the objects represented), and (3) counting with genuine numerals, abstracted from any token symbols [Schmandt-Besserat, 1983 and 1986a]. Only the last stage is counting in the proper or modern, abstract sense; it seems to have emerged around 3200 B.C., simultaneously with writing. This is no coincidence because the evidence is strong that both activities arose from the need to mark the surface of the clay envelopes in such a way that the number and kinds of tokens contained in them could easily be discerned. This was done by impressing each token contained on the soft clay surface (the precursor of cuneiform writing), but often not enough space may have been on the surface, so a specific shape may have been combined with a purely numerical sign (e.g. a number of dots, the first truly abstract numerals).

But those early accounting systems reveal more, something of special interest to philosophers pondering over Wittgenstein's ideas. Those token systems show that the one-to-one correspondence between the tokens (including their position in a specific envelope or on a string aggregate) and the pertinent
economic facts, are not logic relations that can be syntactically defined, but are semantic relations to be "shown" by usage. But this might hold only when dealing with "abstract token shapes." Where tokens with morphological similarities to the commodities are involved, one might be able to argue that the link between the written language and reality is a geometric, hence logical-mathematical relation.

In spite of the fact that this still leaves a "semantic gap" between written and spoken language, it hints at the possibility that there may be an evolutionary link between logic (in the narrow sense of syntactics) and semantics — not only on the theoretical but also on the practical level. This difference between syntactics and semantics might come close to the distinction between "stating" and "showing." And the connection between the two assumes particular importance in our modern world of video and computer technology. Because the latter has acquired the ability to state or describe certain aspects of reality by means of a logical sequence of magnetized dots (digital representation) which in turn are further processed to show this reality in form of sounds and more or less genuine pictures (analogue representation).

To master their environment and to manipulate it for the satisfaction of their own needs, biological organisms have evolved a great variety of reaction mechanisms. In the higher animals the most important one is the creation of ideas or mental images. This is our window to the world, which, however, requires certain intermediaries. These are encoding/decoding systems in the form of the internal neuronal language system and various external language systems. Whether it is a representation through neurons, or the prehistoric representation of reality through tokens, or modern video-computer imagery, in all cases the semantic gap between an abstract representation (e.g. a sequence of magnetic dots) and the more concrete representation (a television picture) is bridged by some kind of language code. Such a code may be purely syntactical, but usually incorporates a system of conventions ("usages") which go beyond mere logical relations. But whether the latter are too complex or ambiguous for scientific purposes or whether it is for any other reason, the fact is that modern semantics fashioned itself to a considerable extent on

\textsuperscript{15}In Wittgenstein's terminology: "said", "stated" or "described" in contrast to "shown". But possibly my interpretation of those words somewhat differs from that of Wittgenstein.
the syntax of logic which, however, should not blur the difference between the two.

Two Views

Furthermore we have seen that both, the prehistoric recording systems as well as the modern video and computer systems, demonstrate that the representational view (of the early Wittgenstein) and the functional view (of the later Wittgenstein) are compatible and do not need to exclude each other. Prehistoric accounting systems reveal the logical, indeed set-theoretical, structure inherent in certain economic aspects of reality. The clay envelopes and string aggregates possess the structure of sets — or precisely sets of sets, because the super-set of the entire aggregate can be understood as containing subsets, each represented by a different token shape. Hence the relations involved are those of "being a subset of" (⊂), "being an element of" (∈) and a "transaction" (an input-output vector). And the notorious duality of accounting arises out of the dual interpretation of a set as a collection of elements (the input) on one side, and as a kind of totality (the output), on the other. And a deeper analysis reveals that this duality, in turn, is rooted in a physical input-output dichotomy manifesting a conservation principle: the giving account of a certain input in terms of its output in such economic transactions as the transfer of commodities from one "place" to another, be it for the purpose of buying, lending, repaying, manufacturing, selling, etc.

My Answer to Wittgenstein

Based on the preceding analysis, let me draw my conclusions:

First, how can we characterize the difference between "saying" and "showing"? And is there a link between the two? To simply state that sentences say, while pictures show, will not do. Probing into the prehistory and early history of writing has hopefully lifted some fog. Token accounting as well as cuneiform writing, hieroglyphs, offer many examples of various steps by which morphological tokens (i.e. those with similarity to its referent) and pictographs (both of which seem "to show") developed into abstract tokens and ideographs (both of which seem "to say"). And now we may raise two questions: (1) At what stage did a symbol lose its ability "to show"? And (2) at what stage did it gain the ability "to say"?
The first question is relatively easy to answer: As soon as the structural similarity between a symbol and its referent gets lost, it can no longer "show" — in this morphology and its loss lies the difference between "showing" and "saying." And this loss usually occurs at a fairly early stage in the development of a sign.

Even more important, and perhaps more difficult to answer, is the second question. My personal reply is this: morphological tokens and pictographs do not only "show", they also "say" (Marshall McLuhan may have said: "pictographs are the message"); or more formally: from its earliest development on such symbols are endowed with the power to say.\(^\text{16}\) Thus the morphological tokens and pictographs not only describe structures, they themselves are similar structures. Yet in subsequent steps of development — when these morphological similarities have vanished — how can those now abstract tokens or signs (in conjunction with some relations: e.g. placing a token into a specific receptacle) continue to describe factual entities and relations? The evolution of those tokens and linguistic signs clearly shows that this "miracle" is made possible through the previously established associations between each abstract sign and the corresponding morphological token or pictograph which in turn is structurally related to the pertinent empirical object or fact. On a higher or later level this crucial association is established by conventions — which might explain why the later Wittgenstein put so much emphasis on linguistic conventions.

Our facit is that morphological tokens and pictographs are a common denominator for "showing" and "saying" — those symbols might be the missing link between those two activities. And because there exists such a connection, it might be possible that aggregates of machines like a complete video system is capable of transforming something that shows into something that says, and vice versa.

And finally, my answer to Wittgenstein's perennial question is that: the representation of reality by means of signs is possible because language itself is a double-sided Janus-faced creation — not unlike our mind/brain system. Language is

\(^{16}\)This seems to be in disagreement with Wittgenstein's [1922 item 4.1212] "what can be shown, cannot be said" and I wonder whether this is due to a difference in our notions of "showing" and "saying" or in some misunderstanding.
capable of conveying ideas, yet it is deeply rooted in such physical realities as vibrations of air, tokens and tablets of clay, ink on papyrus or paper, magnetized dots on plastic tapes, etc. Both, language and the mind/brain system, belong to the realm of concepts and forms as well as to the realm of matter and energy. Everyday languages as well as scientific and technical languages are possible for the same reason that makes our genetic, our neuronal and our hormonal language systems possible. Our social languages are certainly not our own original inventions, they are merely copies or re-inventions of nature's work; and it seems that all "natural" as well as "social" languages are a manifestation of nature's basic duality of conceptualization and legislation, on one side, and execution and material manifestation on the other.

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Mattessich: Prehistoric Accounting and the Problem of Representation


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The illustrations of Clay Tokens and Token Accounting Systems are from Susa, Iran, ca. 3350-3200 B.C. (courtesy Musée du Louvre, Department des Antiquités Orientales).
1987 Accounting Hall of Fame Induction

Philip Leroy Defliese

CITATION

Presented by: Robert M. Trueblood Professor Yuji Ijiri
Carnegie-Mellon University

Written by: Professor Thomas J. Burns
The Ohio State University

In fiction, he would be a detective in a Dashiell Hammett Novel. In real life, he has described himself as "a New Yorker" with the subtlety of an "elephant." When he was told of his election to the hall, he retorted why had it taken so long. Maybe this forceful yet genial accountant is a bit hard-boiled, but he is also widely regarded for both his wit and his ability.

A child of the long depression, he talks and acts in the straightest way possible, perhaps he took his first full-time job at the age of 16, spent five nights a week, for seven years, to earn his first college degree, and has never stopped working since. How could he not be a realist when having started as a mailboy? He took a pay cut of $2.50 per week to become an accountant — (and replaced an older man making twice as much). How could he not be a pragmatist when he could do better financially as a teacher — of high school or at Adelphi University — than he could in public accounting? For four years, he was a "permanent substitute" high school teacher of accounting under Mayor LaGuardia before passing the CPA exams and becoming a "permanent temporary" junior accountant at Coopers and Lybrand. Earning his master’s degree in business education in evening classes at City College of New York, he completed all but his dissertation for his Ph.D. at New York University.

In World War II, he was a lieutenant in the Pacific who specialized in anti-submarine warfare; afterwards he married Pauline who had lived only a block away but who met him on a blind date. When he came back to the firm in 1948, he requested a three-part assignment: auditing in the field, teaching in the officer training school, and assisting the firm's SEC specialist. During the twenty years until he became the firm's managing partner and the dozen years afterwards, his leader-
ship emphasized the technical skills and the educational aspects of the firm such as, for example, centralizing and developing firm-wide training. Simultaneously, an activist in many other organizations such as the New York Society and the National Association of Accountants, he was also a vice president for the American Accounting Association, and a chairman (and a gold medal winner) for the American Institute of Certified Public Accountants.

His most challenging opportunity was to serve nine years on the Accounting Principles Board (APB) including three years as the last APB Chairman; during which he helped write 26 often controversial opinions but ones mostly still in use; and now with the Governmental Accounting Standards Board, he has helped it issue its first seven standards. He is a director of several corporations, a consultant to the U.S. Defense Department, and former eagle scout, an award-winning scout master, the first chairman of the audit committee for New York City, a long time hiker, with a son and daughter-in-law who are both accountants, and a daughter and a second son who are not (but the latter son has almost completed his Ph.D.), the co-author of four editions, including the first college edition, of the classic Montgomery's Auditing, first authored by the hall member from his firm, Colonel Robert Montgomery, and for ten years now, he has been an accounting professor at Columbia University. Similar to the last member of the hall from Coopers & Lybrand, Lord Benson, he is an ardent sailor, especially at Lake George, and the most enthusiastic of water skiers, especially with his children, as recent as this summer. But as a golfer, he plans to break 100 more often. A distinguished American accountant who has found time for everything, this renaissance accountant is elected as the 47th member of The Accounting Hall of Fame: PHILIP LEROY DEFLIESE.

RESPONSE

by

Philip Leroy Defliese

I am truly honored to be admitted into the Accounting Hall of Fame, particularly because of the company I join — some of the finest accountants the profession has had. Of the 46 preceding me, I have personally known 30 and have worked directly with 20, as I know whereof I speak (three are former partners).
When one is honored by such an award — especially at the sunset of a career — it becomes an occasion to revisit, not the accomplishments upon which the award is supposedly based, but the personal satisfactions obtained as one pursued them. As chairman of a major firm, I have seen the firm multiply and prosper before, during and after my tenure. As staff trainer, I have seen my trainees achieve partnerships and beyond, and my programs, peer reviews and other innovations progress. As professor, I have had a student receive a medal for highest grades on the CPA exam. As a public-company director, I have helped management and auditor understand each other better.

However, I believe my greatest satisfactions have come from my involvement in standard setting. In the auditing area, my clarification of fraud detection responsibility and qualified opinion criteria remain — despite subsequent semantical changes — essentially the same. (Incidentally, although I do not oppose the recent proposals in this area, I do not believe they will alter the public’s perception of the auditor’s responsibility.) As for the Opinions of the Accounting Principles Board (APB) with which I have been associated, many still remain as effective as ever — notably APB 15 “Earnings per Share” (where I was committee chairman and held the first public hearing) and APBs 16 and 17 “Business Combinations” and “Intangibles” (in which I had a heavy hand in the compromising.) I was also deeply involved in the APB 11 compromise on deferred income taxes; and while the Financial Accounting Standards Board (FASB) is now busy revising it, it appears that the net result will be refinement rather than change. As for my work with the Governmental Accounting Standards Board (GASB), the jury is still out.

Those who observed me as a standard setter must have viewed me as a sort of hybrid. As a practitioner, I approached it from the practical side and from knowing where the problems were. As an in-out-in-again academic, I felt the need to strive for the purest theory possible. Perhaps that accounts for some of the inconsistencies the APB has been accused of. (In this respect, it is not alone.) I was never a full-time standard setter, although it often felt that way.

Today we find ourselves in an era of standard setting on a grand scale. Everyone seems to want to get into the act. It is only natural that there will be conflicting pronouncements and inconsistencies. It is easy to criticize this until one attempts to reconcile or do something about it. We seem to forget that accounting — or more properly, financial reporting — is a
man-made form of communication that cannot be based on absolute natural laws. We must expect that individual viewpoints will differ, and a standard becomes only what a 4-3 majority of standard setters says it will be.

Consequently, we must also expect that compromises will be made, and positions once taken in good faith will be reversed. The fact that I dissented only once (APB 26) from the 26 APB Opinions with which I was associated does not mean that I was in full agreement. I assented because I felt that progress was being made or abuses were being cured. Improvement in our art comes slowly, and often for every two steps forward we take one step backward.

Standard setters must remember that there is no Mt. Sinai or Mt. Olympus from which the tablets are handed down, and that their work is never set in stone. They must constantly seek the Holy Grail of economic reality, but recognize that they will never find it. They must avoid the tendency to argue over how many angels can dance on the head of a pin, but strive to set standards that are simple, straightforward and workable — standards that communicate rather than confuse. (I have in mind the current attempt to determine the compensatory aspect of a market-value stock option grant — something the APB settled by making stock options common stock equivalents in the computation of earnings per share.)

The use of the balance sheet as the prime criterion in the determination of income seems logical until we remember that the auditor’s opinion that the balance sheet presents fairly financial position would be an unmitigated lie if it did not contain the qualifying phrase, “in conformity with generally accepted accounting principles,” i.e., as pronounced by the standard setters. We still do not have the answer to current value, opportunity cost, interest on capital, discounting, not to mention such mundane issues as inventory cost valuation and depreciation methods. I can assure you that I do not have the answers.

We must remember that the objective is to communicate; Beaver has concluded that disclosure is more important than the form of the disclosure. In this respect, the tendency to aggregate defeats the disclosure objective when fully-disclosed disaggregation is otherwise available. We have a tendency to deify our concepts and build houses of cards. Realism, someone has said, is needed. Our only problem is that realism, pragmatism, and economic reality are only in the eyes of the beholder. If we locked twelve accountants in a room to solve a
problem, we would get four different answers; twelve economists would come up with twelve answers. My comments in this area are intended to be as much self-deprecating as they are critical; a perspective is certainly needed.

One further word — about auditing. Ever since the McKesson case (when standard setting began in earnest), the profession has been in turmoil. I cannot seem to remember a tranquil period. This is because we have moved away from a stewardship mode (as it was since Biblical days) to a predictive mode. The alleged current problems are not all audit failures. At best they are perception failures; at worst, people failures. Instead of watch dogs, we are expected to be guardian angels. No amount of revamping of standards currently underway will change this now. Our only solution is to work hard at exercising the best judgments and to do high quality work — with a minimum of competitive predatory thrust.

One satisfaction I must remember — through it all I have had a long happy family life with an understanding (albeit vocal) wife and three respectful and successful children. Thank you for this honor.
THE AMERICAN ASSOCIATION OF PUBLIC ACCOUNTANTS (1908)*

By Thos. Cullen Roberts, C.P.A.,
Secretary of the Association

It may be said that the American Association of Public Accountants is of Anglo-American origin. Its birthplace was the office of a firm of English Chartered Accountants, 120 Broadway, New York City, the business place of Messrs. Barrow, Wade, Guthrie & Co., whose representative we should have been glad to welcome here to-day.


The first meeting recorded was on Friday, December 2, 1887. The certificate of incorporation is dated August 20, 1887, so the Association comes of age this year.

Its aims were high. The objects as set forth in the certificate of incorporation were “to associate into a society or guild for their mutual benefit and advantage, the best and most capable public accountants practising in the United States, and through such Association to elevate the profession of public accountancy as a whole, and to promote the efficiency and usefulness of such society by compelling the observance of strict rules of conduct as a condition of membership, and by establishing a high standard of professional attainments through general education and knowledge.”

The living and the dead are brought very close together — with the birth of the Association is recorded at the first meeting of its members, the death of Mr. Robert L. Fabian, who was president of the Council of Incorporators, and, glancing at the

*As published on pp. 116-124, Twenty-First Anniversary Year-Book, (1908) of the American Association of Public Accountants (AAPA), forerunner of the American Institute of CPAs. These addresses were presented at the AAPA annual banquet on October 22, 1908.
names of the incorporators, those pioneers of the accountancy profession in the United States, viz.: Messrs. James Yalden, John Heins, Mark C. Mirick, C. H. W. Sibley, Robert Fabian, William Calhoun, and Rodney McLaughlin, it is somewhat saddening to reflect that not one of them is among us to-day.

The entrance fee in those days was $100 and the annual certificate fee $25. It is now $25 for entrance fee as a fellow at large, and $10 for annual certificate fee. For state societies no entrance fee is charged and only $5 for annual fees.

The Association began well. There were an abundance of promises for membership. Twenty-six had promised then and six were "thinking" of it. At the next meeting, the enthusiasm of two had abated, and their resignations were accepted. The first regularly appointed secretary of the Association was Mr. James T. Anyon. This appointment dated from March 6, 1888, and was an honorary one, but he was empowered to appoint an assistant secretary at such remuneration as might be fixed by the Finance Committee.

On April 3, 1888, our highly esteemed friend, and past president of the Association, Richard F. Stevens, was admitted to membership, and, on the same occasion, a standing committee on membership was appointed consisting of the president, vice-president, and three members of the council (who were then what the Board of Trustees is to-day), and who were to report upon the applications before submitting them to the council. Accountants did not fall over each other in their hurry to join the Association. So in December, 1888, a committee was appointed to consider the best means and methods to enlarge the scope and objects of the Association, and increase the membership, and to consider the question of initiation fee and annual subscription. Later on, the committee which was appointed, were instructed to continue their labors; and the first annual meeting of the members was appointed to be held on May 15, 1889. At this first annual meeting, the president reported that there were but 25 fellows and 7 associates, and from the balance sheet which was submitted, and signed "E. and O. E." (Scientific accuracy in accounting was evidently not at its zenith in those days), it appeared that eighteen members were in arrears with the payment of their dues, amounting to $820. The president in his remarks said, "The final success and universal recognition by the commercial and investing citizens of the advantages of our services, can only be developed slowly by care and prudence in the management of its affairs, and by unanimity of feeling towards those engaged in the profession."
One more quotation from this report, and I am through with the first year: "On all sides and in all directions we hear of the advantages of accountancy, and it is universally admitted that our services are needed, and are necessary and requisite, but how much more so will they be if it can be demonstrated that we are in existence, and associated together with unanimity and harmony working to effect the highest proficiency in our business for the benefit of those employing us, and bound down by our Association in strict rules of conduct, insuring faithful and efficient work to our respective clients and the public generally."

At the end of the second year, the "Council" became a "Board of Trustees." Later on, efforts were made to obtain a charter, and Mr. Henry R. M. Cook was empowered to call upon the Regents at Albany to confer with them on that question. A little later there was a proposal to establish a "College of Accounts" with degree-conferring powers.

The result of an interview with the Regents at Albany was that the Regents were not prepared to endorse the whole proposal of the Association — they were ready to open examinations for such persons as desired to become public accountants. This was regarded as encouraging, and the belief was expressed that the Board of Regents was alive to the fact that the profession was one of great importance to the business community, and the study of it should be incorporated as a portion of the educational systems of the state the same as law and medicine.

At the meeting on November 10, 1892, Mr. Cook remarked, that the Association was, he thought, endeavoring to oblige the public to recognize and uphold an institution somewhat un-American in its nature, and unadapted to meet the requirements of this state and country for the reason, that its lines were similar to those adopted by our brethren across the water (The Institute of Chartered Accountants in England and Wales), which although we might recognize their usefulness, could not be carried out in the same manner here, for the reason of the dissimilarity between the laws of the two countries, and therefore, he thought it would be better to abandon them and for us to become originators, rather than remain unsuccessful copyists.

It was found impracticable to form a "College of Accounts" unless there should be provided an endowment of $500,000, but the Association was congratulated upon having the honor of inaugurating and placing upon a proper basis, the profession of Public Accountant.
At the annual meeting, January 17, 1893, the then president, the late James Yalden, said: "Since we last met, the Board of Regents at Albany have forwarded to us a charter for the incorporation of the New York School of Accounts. The objects of the school were to educate young men for the profession of accountancy, and also in the principles of commercial life." This school of accounts started with a full line of professors, and an elaborate curriculum, but its success was ephemeral, for we find recorded on the minute book of July 11, 1894, "RESOLUTION: That in the opinion of the Faculty it is undesirable to continue the School of Accounts and they recommend that the Trustees take such action as they may decide upon to surrender the charter to the Board of Regents or otherwise. At a meeting on September 5, 1894, Mr. Richard Stevens, the then president of the Association, is recorded as saying: "A year has passed since the inception of the School of Accounts, and what has been accomplished? A class of seven pupils have gone through the year's course — that is all. Not a business man has come forward to aid us in any way, the whole burden has fallen on the shoulders of a few of our members, now disheartened and disillusioned. The Board of Regents of the university have stood silent and aloof, not a word has been said about commissioning or licensing our members, and communications addressed to them on the subject of legalizing the profession by legislative enactment have remained unanswered. The members under this state of affairs naturally, have ceased to take an interest in the school, the professors have resigned or been slack in their attendance, the scholars supine and the further continuance of the school in its present status seems idle." Mr. Stevens concluded by saying: "If we can induce the gentlemen having control of either of our great universities, Columbia, or the College of New York to receive our little school under its fostering wing, we will, I think, be on the right road to success, and bring up our profession to the true plane where it should belong, and that would 'ere long give to the world a class of educated, scholarly men, who would reflect honor upon any profession."

How right Mr. Stevens was in saying this, the report of the Committee on Education bears witness.

In the month of February, 1895, Mr. Francis Gottsberger, a member of the Board of Trustees, laid upon the table a draft of a bill to license public accountants, and, at that meeting, a resolution was adopted that a special committee of three be appointed by the Chair to confer with the Bankers' Association with a view to promote the mutual interest of the respective
associations. This bill failed to pass. Although we were disappointed, we were not discouraged, and another bill was introduced "To regulate the profession of public accountants," which bill is now known familiarly as the "C.P.A. Act." This bill passed the third reading in the Assembly, 120 votes to one, and in the Senate, unanimously, and was signed by the governor on April 18, 1896.

On April 22, 1896, a resolution is recorded "That a vote of thanks be tendered to Vice-President Broaker on his untiring and successful efforts by which the accountants' bill of recognition was in a good measure due, which passed the New York Legislature, and having been approved by the Governor has now become one of the Statute Laws of the State of New York."

All honor to our old friend, Francis Gottsberger for his inception of the act — all honor to our old friend, Frank Broaker, for the glory of the achievement in fighting and winning in obtaining for the United States the first Certified Public Accountant Law and of whose certificates he may well glory in possessing No. 1.

With legal recognition, the profession recognized the necessity of belonging to an association which was largely composed of professional or certified public accountants. Other states, seeing its importance fell into line and agitated and fought until they also obtained legal recognition. These State Societies at one time formed themselves into a federated body, but, in the year 1905, the whole of this federated body joined the American Association of Public Accountants, which now numbers in all, some 800 members, with twenty State Societies in full accord. (Please remember that at the close of the first year there were but thirty-two members).

I am afraid I have been somewhat tedious in telling you these things, but it has been to me, and many of the older members, a great joy to see the Association grow, and to know its usefulness is extending. It is a happiness also to state that all members work together in perfect harmony.

During the thirteen years it has been my pleasure to be your secretary, never on any occasion have I heard of trouble or want of harmony in committee. I can not speak too highly of that great and good man, our esteemed, immediate past president, Mr. E. W. Sells, who has ever been mindful of the interests of the Association, and under whose two-years' presidency the Association has advanced by leaps and bounds to its present high position.
Mr. James G. Cannon:

I feel very much at home in this presence this evening, as I have framed in my library a certificate, dated in the year 1890, showing my membership in the old Institute of Accounts of New York City, and the certificate further states that I am a certified accountant of the Institute of Accounts of New York. Consequently, I feel that I am not among strangers or in a strange land when I appear before you to say something on the subject of "The Relation of the Banker to the Public Accountant."

I have always been deeply interested in the subject of accountancy, and I assisted, as far as possible, the gentlemen who, in 1896, procured the passage of the law in the State of New York, "To Regulate the Profession of Public Accountants." In March, 1905, in an address at Atlantic City, before the New Jersey State Bankers' Association, I urged the bankers of this country to establish the custom of requiring statements of the financial condition of borrowers to bear the certificate of a certified Public Accountant, and in the same year I secured the adoption by the New York State Bankers' Association of a new form of property statement blank, in which the borrower is asked the question, "Have the books been audited by a Certified Public Accountant? . . . If so, name and date of audit."

I have watched with a great deal of interest the passage of the certified public accountant laws in the various states of the Union, and assisted their passage where it has been in my power to do so. Therefore, I hope that you will bear with me, and remember that I am speaking as a friend of the Certified Public Accountant, when I present some thoughts in connection with this matter, which may seem in a spirit of criticism.

During the ten years that the certified public accountant law has been in existence in New York State, 617 candidates have presented themselves for the examination under the law, and 409 of them have been rejected. In other words, about 66\(\frac{2}{3}\)% percent of the men who desired to enter this profession during the first ten years of the law, failed to pass the examination. The total number of certificates issued up to and including June, 1907, by examination was 208, by waiver, 177, making a total of 385. Of this number, 54 were junior certificates, so-called, leaving the total number of full Certified Public Accountant certificates issued in the State of New York for the first ten years 331, of which 177 were given by waiver, leaving 154 certificates as the result of the new law.

This, I believe to be a very unsatisfactory condition of affairs, especially so if the bankers and business men of the
great State of New York are to depend more and more upon the work of Certified Public Accountants, as the addition to this profession of only fifteen a year enables a few men to retain almost a monopoly of this business, which, to my mind is not proper. There is certainly some reason for this situation, and I have made a careful examination into several points, I find that for the first ten years the members composing the Boards of Examination for Certified Public Accountants of the State of New York, with two exceptions have all received the degree of Certified Public Accountant under the waiver, and of the fourteen men who have composed this Board, one man has served for seven years, one man for five years, two men for four years, four men for two years, and six men for one year each.

A further study of those who were rejected shows that a large proportion of the rejections came through the topic of "Practical Accounting," 91 percent of the men presenting themselves in 1907 having failed on this topic, and an examination of some of the questions asked under this heading would make it appear as if they were purposely made so difficult that candidates would not pass. I noticed one question in particular where the candidates were asked to prepare an "Articulation" statement. This designation of a statement is not one of general use, and is probably a term applied by a particular accountant who had a share in the preparation of this problem. I made a careful examination of many of the other problems which the students have been called upon to answer, and they certainly are not clear and concise, and I believe that it would be practically impossible for one-half of the men holding certificates under the waiver to answer them satisfactorily. The examiners seem to have confined themselves to special problems which have arisen in their own line of business, which it is unreasonable to expect students to answer in a given length of time, and are, consequently, of little or no value in a general examination. What is wanted in New York State, I believe, is a far more comprehensive system of examinations for the degree of Certified Public Accountant. There seem to have been altogether too many technical questions asked of the applicants for the degree, and many of these questions do not involve a real knowledge of accounting. It is this class of examinations which will produce Certified Public Accountants who will only scratch the surface of things.

Examinations are required, and properly so, in all of the twelve states having State laws on this subject, and Accountancy Boards, but the time has arrived when this whole ques-
tion should receive the attention which it deserves, and the accounting profession, instead of spending further time on the securing of Certified Public Accountant laws throughout the country, should give their best efforts to the training of candidates for the degree.

As far as practical experience is concerned, three states, Colorado, New York, and Pennsylvania, are the only ones that require a period of time of practical experience, and I believe that the regulation in New York with regard to practical experience should be changed. Pennsylvania rules provide for two examinations, a preliminary and a final, and the registration in the office of a certified public accountant, or any recognized school of accounting, where the applicant can make preparation for his final examination. This is much better than the present rule of New York, where the applicant must spend one year in the office of a certified Public Accountant before receiving his degree. I think this is a hardship to many men, and keeps good men from securing their degree.

Of the junior certificate issued in New York State in the last ten years, seven only were issued to men who were under the age limit, and from a careful examination of the time of these certificates, nearly all of these men would be entitled now to full certificates were it not for the fact that they are compelled to take a year in the office of some Certified Public Accountant, which in many instances it is impossible for them to do.

I am calling the attention of the gentlemen of this profession present this evening to these few facts because it appears to some of us who are anxious to use the Certified Public Accountant more and more, that the profession savors more of monopoly than it should, and the whole subject should be carefully brought before the Regents of the State of New York, and many changes made in the method of procedure and examinations, if the profession of accountancy is to take the place it deserves and secure the confidence of the business and of the banking community.

The bankers need your assistance in all directions, and the benefits to be derived from an examination of business concerns by a Certified Public Accountant is of inestimable value to both, and when a statement of a concern's assets and liabilities is presented to the banker, he gives it an added confidence from a knowledge that the statement has a true foundation. This confidence might exist even though such an examination was not made by a Certified Public Accountant, but granted that it is made by an accountant selected by the
There is no question that his confidence in the statement is increased.

There is the further satisfaction to him of knowing that it is properly, made and compiled, and that it is produced from books of account, capable of bearing out the condition submitted. But in recommending the accountant we must know not that he is simply a man who is capable of transcribing the books of a concern, but that he can grasp all the surrounding situations as related to the profit and loss account and other essentials which come from his examination of the results of trading, and whether the items of plant, accounts receivable, and merchandise are taken at their true value. We must have more thoroughly qualified Certified Public Accountants, who can give this added knowledge of the situation of firms and corporations, and the business should not be held in the hands of a few.

If we are to recommend that statements of borrowers from banks should have a certificate of a Certified Public Accountant, we must have plenty of broad-minded, energetic men in the profession, and these men must make themselves attractive to those requiring banking accommodations, so that other benefits may accrue to the borrower entirely apart from the improvement in his financial standing.

A properly qualified public accountant should not only be familiar with the requirements as relating to the bookkeeping of a concern, but from coming in contact with all kinds and classes of men and businesses, he unquestionably acquires a most varied experience, and should be in a position to counsel not only as to how the books should be kept, but as to many other requirements in a properly equipped business. Contact, therefore, with a Certified Public Accountant of the kind I am trying to describe, is frequently of inestimable benefit to the business man. I have known of instances where suggestions have been made by Certified Public Accountants which have resulted in saving many firms from disaster. I have reached the conclusion that many failures have occurred because, through ignorance, the management was kept in the dark as to the true conditions, until too late to rectify them.

A large part of the value, however, to the banker, of an independent investigation by a certified public accountant must be a belief in the honesty and capacity of the accountant, and that is why I prefer an examination to be made by an individual accountant whom you can hold personally responsible, rather than by a corporation.
I am very anxious that the profession of the certified public accountant should be placed upon a broader and firmer basis, for it is my conviction that more and more statements submitted to bankers for the purpose of procuring credit, will be subject to confirmation by a Certified Public Accountant, and this will be of inestimable value, not only to the banker, but to the honest borrower, by the elimination of the dishonest and disreputable, by decreasing the margin of loss to the banker, also resulting in a decrease of interest charges to the borrower.

It is not many years since it would have been considered strange to ask for a signed statement of assets and liabilities from borrowers, but this condition has now practically passed away, and no one now feels hurt at being asked to make such a statement. With the immense increase of the business interests of this country, it becomes more and more difficult for bankers and other creditors to have the close and intimate knowledge of borrowers which formerly existed, and from this increased business there is naturally an increase in the amount of commercial paper outstanding, and I believe that the advantages of an examination by a Certified Public Accountant, and a certificate of the assets and liabilities properly authenticated, will be of great benefit to both the borrower and the lender due to the increased confidence which they will have in each other.

I am aware that the Certified Public Accountant law is only ten years old, but it has been in operation long enough for its friends to see its defects and point them out for remedy, and if the profession is going to enlarge its scope of usefulness and broaden its activities, it must eliminate some of the errors of the past, and bring to bear upon its problems more practical common sense.

There is plenty of business for good Certified Public Accountants who will not drag out a day’s work to an unlimited time on the books of a concern, but will do their business with vigor and dispatch, and handle their affairs with a broad vision.

We want first class men, we want them well trained in the profession, but I do not believe the present methods are reaching that end. They are deterring many young men from entering the profession, and I come here tonight as a friend and well-wisher to sound a note of warning and ask that this American Association of Public Accountants give this matter their best consideration. If you will do this you will have performed a great act of service to the Certified Public Accountant.
A COMMENTARY ON CPAs IN 1908

The editors of the Journal have chosen in this issue to reprint the comments of two distinguished speakers on the occasion of the annual meeting of The American Association of Public Accountants at the time of that organization's coming of age — its 21st birthday in 1908. Not coincidently this present year of 1987 represents the 100th birthday of the Association, and thus also of the organized profession of public accountancy in the United States.

The Association, of course, was a predecessor of the American Institute of Certified Public Accountants, which now represents the bulk of CPAs in the United States in all of the manifold areas of practice. One of the first and major accomplishments of the new organization was to legitimize its claims to professional status for accountants by persuading the legislature of New York in 1896 to pass a bill "To regulate the profession of public accountants," the first such statute in this country.

Mr. Thos. Cullen Roberts, Secretary of the Association in 1908, and the first speaker, devoted his time to a recounting of the trials, the tribulations, and ultimately the accomplishments of the new organization and the men who created it. The Association attained success in obtaining legal recognition through the passage of the New York "C.P.A. Act," suffered failure in trying to establish an institution of higher education for accountants, and along the way experienced some difficulty in attracting and keeping Association members. (At the time of the first annual meeting in 1889, eighteen of the then thirty-two members were in arrears with the payment of their dues.) High ideals motivated the organizers, forming, as they did, "a society or guild for . . . mutual benefit and advantage . . . . by compelling the observance of strict rules of conduct . . . . and by establishing a high standard of professional attainments . . . ." Mr. Roberts ended with a perhaps overly rose-colored remembrance that during his tenure as Secretary "all members work(ed) together in perfect harmony."
Mr. James G. Cannon, although a holder of a certificate as a member of the old Institute of Accounts of New York City, spoke in this instance for the users of the services of professional accountants, specifically for bankers. He was sympathetic, but complained of much that was being done in the profession and offered comments in the form of constructive criticism. Aspects of regulatory monopoly bothered him. He pointed out, for example, that the failure rate in taking the examination was about 66%, most rejections coming in "Practical Accounting," where the questions were so difficult as to make it appear that this was so in a deliberate attempt to eliminate candidates. Mr. Cannon spoke in favor of an examination of broader scope and for repeal of the experience requirement for certification (which is "a hardship to many men"). He took much credit for urging bankers and others to require the services of public accountants, and praised the value of those services to the financial community.

Does It Matter?

All of this celebration is ancient history, comparatively speaking, in the minds of today's accountants, and yet a landmark of no little significance. Why a landmark? Why significant? What can we in today's complex and only imperfectly understood social and commercial milieu learn from the struggles and difficulties and aspirations of our comrades of 80 years ago? A simpler time with little relevance to the late 20th century and the tribulations of contemporary professionals? Perhaps not. Surely not!

History remembered is necessary to today interpreted. Shakespeare said in The Tempest, "What's past is prologue;" Francis Bacon observed in his Essays Of Studies, that "Histories make men wise." In other words, we need to know our past or we cannot in the least understand our present. So relevance is in part created by a very real necessity to know whence we came.

Further, the problems of the past, as outlined by Messrs. Roberts and Cannon are very much the problems of today. It is instructive to contemplate the recurrence of particular issues in the consciousness of the profession and how they tend to appear again and again, in different guises to be sure. But recurrence nonetheless indicates a continuing effort to wrestle with what may well seem intractible issues. And the fact that the effort is continuing is in itself significant. Those who expect quick and facile solutions to current problems little understand how gradual improvements at the margin are necessary in
professional affairs, and how radical progress seldom can be expected.

Most important to a consideration of the relevance of yesterday to today in the accountancy profession is what E. D. Hirsch, Jr. [1987] has referred to as "cultural literacy," or a common heritage of basic precepts, facts and concepts necessary to a true understanding of verbal communications in a particular society.

Although Dr. Hirsch speaks to society at large, his comments are pertinent to the accountancy profession specifically. If we as professionals do not have a broad acquaintanceship with our common heritage — historical and contemporary — then written and oral communications are meaningless. Words in their dictionary meaning are precise but unintelligible without context. Context, in turn, depends importantly on historical framework. Who can appreciate the full meaning of the accountant's reference to the "historical cost model" without a background encompassing other possible accounting models, their infirmities, their implications for investors, and indeed their relevance in presenting financial information in varying situations?

**Education and the Professional**

The whole topic of professional education is an example of recurring and continuing matters of concern to professionals. The sad, but hopeful, struggles of accountants in the late nineteenth and early twentieth century to establish a school of accountancy foreshadow what concerns us today. Imagine, a year into the existence of the School of Accounts and the faculty recommends its dissolution! State boards of accountancy today gradually but steadily are increasing the educational requirements for certification. Professional schools of accountancy are being established, citing medical and law schools as models. Studies are being made of the common body of knowledge necessary to the practice of public accountancy, and academic efforts are being made to meet such necessities.

On the other hand, some are becoming concerned with the trend toward too narrow an educational background (the "trade school" approach, if you will) and put forth the case for a more liberal education for professional practice, not just the practice of a profession. A committee of the American Accounting Association recently finished a major study on this topic and concluded that, among other things, future accountants should complete a general education program providing
background in the humanities, arts and sciences before undertaking any general or specialized accounting training. The objective of the committee was to consider educational requirements appropriate for all accounting students, not just for those intending to hold themselves out as public accountants. In the broadest and most desirable sense, however, the "profession" should encompass all trained in the discipline, and the committee's conclusions are relevant as well to those whose historical efforts are here being described.

Such a fundamental as a consideration of ethical problems may be neglected or given short shrift in today's college curricula more often than not. The presence of difficult moral issues is indicative of the very existence of a profession and their study is neglected at the peril of producing a generation of pragmatists. It is interesting that, although academe may not be devoting much obvious time and effort to ethical matters, the profession very emphatically is doing so. A major restructuring of the code of professional standards is even now under way, and a proposal to that end will be put before the AICPA membership this fall. Elements of this proposal of particular interest include required quality control (peer) reviews for firms and expanded educational requirements for future candidates for AICPA membership. As of August, 1987, 39 state CPA organizations have endorsed the planned changes.

Examinations and the Professional

Mr. Cannon complained of the severity of the professional examination of his time, saying in effect that it was being used to keep prospective accountants out of the practice so as to preserve a monopoly position for those already admitted. Whether this actually was true is not so important as the perception of its truth. The general public (laity), not being capable of independently judging competence in a discipline requiring specialized education, must of necessity rely upon peer validation of professional credentials. (How do you find a "good" doctor?) Examinations are an integral part of the social necessity for proof of the basic (minimal?) competence of those who hold themselves out to the public as "qualified," but tension remains between necessity for reliance and suspicion regarding motives.

Even today a controversy is raging (not too strong a word) over the uniform CPA examination and changes proposed to it. The very existence of a uniform CPA examination, administered in every jurisdiction and recognized throughout the Un-
ited States as a part of the ritual through which every aspirant to the title must pass, is itself a major accomplishment of the profession. Without it, the uniformity of practice would suffer, perhaps irrevocably.

Nevertheless, changes in the format and coverage of the examination now are being proposed to take account of a recent study (soon to be repeated) of the knowledge, skills and abilities ("KSAs") necessary to the practice of public accountancy. Discussions are takin place regarding the kinds of KSAs that should be recognized in the examination, the level of cognitive skills that should be tested, and how this should be done. While the outcome is still in doubt, the very fact of the discussion is evidence of the vigor of a mature profession in search of its future.

**Accounting as a Profession**

Social scientists who have studied the characteristics of professions and the factors that distinguish them from occupations have identified some elements descriptive of the course an occupation follows on its way to full professional status. Barber [1965] for example mentions, specifically, several that are relevant here. He states that a profession, among other things, (a) has a high degree of generalized and systematic knowledge, and (b) possesses a high degree of self control of behavior. Leaders of professions attempt to promote and develop these characteristics. The concerns of leaders of the early accountants — as well as those of today — evidence clearly the extent to which professional accountants aspire to acquire these characteristics for themselves and their associates.

The early attempts to strengthen the budding professional Association are clear evidence of a striving for professional status. The very stated objectives of the early Association included an acknowledgment of significance to an emerging profession, and that is the necessity for self control of behavior ("compelling the observance of strict rules of conduct"). The interest in developing a school of accounting is another such acknowledgment. The essays of Messrs Roberts and Cannon, and indeed the anniversary celebration itself, clearly chronicle this developmental pattern.

Lest we think that history and the profession of accountancy began with the formation of the American Association of Public Accountants in 1887, it did not. Of course, the CPA in the United States owes much to his forbears in the United Kingdom, and the knowledge and traditions of the Chartered Ac-
countants who followed investment funds to this country. Nevertheless, Bryant and Stratton’s 1861 textbook set out advice to aspiring accounting students in what we would consider today to be quaint and unworldly language:

.... Be in earnest. Whatever is worthy of your attention at all, is entitled to your best energies of thought and action. Do not despise the day of small things. If you would be sure of success in any department of life, earn it. Do not place a false estimate upon yourself, but accept the estimate of others as the safest standard upon which to act. Never despair of obtaining what you desire, and have a right to possess. Seek to rise upon your own merits, rather than through the favor of friends. Do not defer action, in hopes of some better starting point in the future. In whatever you do, act from principle, appealing to your own conscience, and the revealed Word for decision in every doubtful case [Bryant and Stratton, p. 10].

This in a text on accounting and “commercial science!” Representative of the best aspirations of the founding fathers of The American Association of Public Accountants? Probably so. Words to live by as we today struggle to form new codes of ethics, new methods of practice, new professional schools and organizations? Not bad. Not bad.

REFERENCES

REVIEWS

BARBARA D. MERINO, EDITOR
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REVIEW ESSAY

SOME EIGHTEENTH CENTURY ACCOUNTING TREATISES

Reviewed By
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The accounting treatises of Malcolm [1731], Mair [1768]1 and Mitchell [1796] span most of the eighteenth century — the midcentury between Pacioli’s famous work (1494) and the present time. They invite comparison with earlier and later accomplishments, and with changes within that industrial-advent century itself. The Malcolm text is the first edition of two, the later being 1743. The Mair text is the sixth of nine editions spanning the years 1773 to 1807 with an earlier work running through eight editions from 1736 to 1767. The Mitchell text is a single edition and one of the earliest American treatises [Previts and Merino, 1979, p. 28; Sheldahl, 1985]. Malcolm and Mair are two of a notable group of Scottish authors of that era [Yamey et al., 1963, p. 172].

1Mair died in 1769, a year after he wrote this text. The actual edition of the text examined is the sixth, printed in 1793.
Bookkeeping Aspects

As with Pacioli, all three authors are concerned with the bookkeeping of merchants. A particular focus of Malcolm [p. 3] and Mair [p. 8] is to set forth rules and principles while Mitchell [p. v] attempts to simplify these types of treatises — particularly Mair's — which he claims to be "too diffuse" and "so overburdened with rules ... that the young bookkeeper ... gets bewildered and lost." The larger part of the Malcolm and Mair and virtually all of the Mitchell texts illustrate complete sets of records. Pacioli, however, provides neither general rules and principles of double entry nor sets of illustrative specimen accounts.

The three authors indicate little difference in the declared purpose of bookkeeping. Both Malcolm [p. 2] and Mair [p. 1] collapse such purposes into knowing what the quantities and value of merchandise on hand are and what profit or loss on sale of goods is. Mitchell [pp. 1, 210] affirms these balance sheet interests but speaks to the concern for profit only tangentially and much later in his text. Both Malcolm and Mair endorse the use of the three books of accounting recommended by Pacioli — the waste (day or memorial) book which simply notes in sufficient detail what each transaction is so that it can later "at leisure and retirement, thought and deliberation" [Mair, p. 7] be set up into its constituent debit and credit aspects in the journal and from thence to be transformed to the third book, the (general) ledger. Malcolm and Mair admit that the waste book and the journal could be efficiently combined, and both demonstrate the use of a cash book as a specialized book of original entry which would permit a single monthly cash account posting to the ledger, relieving the latter account of much space-consuming detail. Mitchell [p. vi] provides barely twenty-five pages of commentary in his 450-page book, believing that the student can best learn from "paying attention to actual statements of accounts." His concern is with bookkeeping efficiency and to this end he recommends the greater use of specialized books of original entry permitting monthly posting totals for a good number of accounts — cash, merchandise, accounts and bills receivable and payable. This advocacy may be part of a larger experiment by several authors across Europe at that time to respond to the increasing size and activity of businesses [ten Have, 1976, pp. 106-108]. It

Both the Malcolm and Mair texts offer the very briefest of commentary on the bookkeeping of land estates.

https://egrove.olemiss.edu/aah_journal/vol14/iss2/12
is to be distinguished from the introduction of the journal-ledger which is more of an attempt to incorporate all transactions and summaries (excluding subsidiary ledger receivables and payables) into the one synoptic record.

Though Mitchell’s system achieves posting economies and goes beyond that of Malcolm and Mair in its use of a ledger control account for the subsidiary records (of bills receivable & payable), it fails to disclose in the books of account the value, quantities on hand and profits on each type of inventory (because all goods for sale are recorded by monthly totals to the one merchandise ledger account) as the other texts do. This failure represents a considerable sacrifice in formal ledger inventory control and profit analysis. Mitchell [p. 448] may in part realize this shortcoming by implying that such analysis can take place as needed outside the accounts. Quite clearly, the important routines of general ledger accounts controlling subsidiary detailed records had not been completely worked out by these authors.

Both Malcolm and Mair use personification to determine what is to be debited and credited. This method tediously carries forward the notions of “owing to” and “owing by” implicit in earliest creditor and debtor accounts to explain the crediting and debiting of the real accounts of cash, inventory and fixed assets. Here again, our present rule that increases in assets are debits and increases in equities are credits (with everything else flowing from that) is infinitely more elegant as a pedagogical guide. It can also be imagined that when the profit and loss accounts are explained as a “fiction (or) defect . . . contrived to supply the want of a real or personal one” [Mair, p. 18; Malcolm, p. 18], that the subdivision of accounts into assets and equities — a subdivision that may have been aided by the mid-nineteenth century incorporating statutes — is a long way off. On the other hand, a foreshadowing of contemporary comment is Mair’s [p. 14] Ijiri-like phrasing of the relationship between debit and credit as having “a mutual connection and independence, the one being the ground, condition, or cause of the other.” Similarly, his justly famous lyrical passage [pp. 80-81] relating the role of inventory in a firm’s affairs and the resultant reflection and tracing of its sale in the various ledger accounts is an admiral description of both

3Malcolm seems to recognize the conceit when speaking to real accounts: “Debtor and Creditor are here applied in an artificial and improper sense, which is borrowed from Persons” [Malcolm, p. 13].
economic activity and the bookkeeping routines that attempt to mirror that activity.

**Accounting Aspects**

Only Malcolm and Mair offer a modicum of commentary on matters we now think to be the heart and substance of accounting: the barest minimum of attention is paid to issues of asset valuation, profit determination, accrual accounting or for the detailed internal records required for industrial operations; and only with lively imagination can any of the present day accounting convenience of consistency, matching, objectivity, realization or uniformity be read into the commentary.

No hint of accrual accounting is evident: interest is picked up at the time of making a loan — presumably so that the receivable account would be stated in its entirety at the due date; and illustrations are generally not provided in which interest would have had to be accrued or deferred. Examples of bad debts provide the alternative of writing the accounts off completely or grouping them with other bad debts as a viable asset. No discussion is put forward — as it is with Hamilton [1788, p. 334] — to write off some estimate of uncollectibility. Similarly, virtually nothing is mentioned of any aspect of cost accounting though some evidence of detailed manufacturing records that mirrored the conversion of raw material through the factory into finished goods had by this time been exhibited in actual accounting practices [Garner, 1954, Ch. 2] and in late seventeenth and mid and late eighteenth century accounting treatises [Edwards, 1937, pp. 225-227; Hamilton, 1788, pp. 487-88].

A medley of alternatives is provided for the valuation of assets. For inventory, Malcolm [p. 89] offers the alternatives of cost or current value with a preference for the former, while Mair [p. 69] suggests an undefined "prime cost." Malcolm also suggests that "current rates" should be used for winding-up purposes. No hint of the lower of cost or market can be inferred in any of these authors. Neither consistency in valuation nor cost allocation depreciation is mentioned much less urged by the authors. Though some depreciation had been observed by this time in late 18th century records [Pollard, 1963, p. 134], its

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4One exception was noted in which full interest on a bottomree loan account was viewed as an asset though collection had not been made [Malcolm, folios 9 and 17 of Ledger 1].
textbook advocacy would not be generally observed until the corporate industrial accounting of the mid to late nineteenth century. The barest hints of the concepts of periodicity (annual closing out of accounts are recommended) and entity (personal and household expense accounts are pinpointed and the separation of the manager's accounts from any partnership to which he belonged is recommended) can be with imagination inferred. An awareness of conservatism and the objectivity of realization can also be mildly sensed in the concern that reflecting fluctuations in prices may be premature [Malcolm, p. 89]. More generally, however, though there is some small pointing towards the historic cost principle, it would seem that researchers looking for the treatise origins of our existing traditional accounting concepts will find more fertile fields in the industrial and corporately organized nineteenth century.

Eighteenth-century authors [Malcolm, p. iii] commonly extol the double entry method as "perfect" and "comprehensive." The perfection relates largely to the simple mechanical equality of debit and credit balancing. Little explicit understanding is betrayed in these three texts of the double entry's unique purpose in, and method of, introducing the nominal (income) accounts to explain the changes in the real and personal accounts of the balance sheet. Indeed, though the purpose of the double entry method is admitted to include profit and loss, the ambiguity of the authors in this regard is reflected in their suggesting that these accounts arise out of the "defect" or "want" in the real and personal accounts. Similarly, and possibly consistently, the approach to determining profits is a balance sheet one in which revenues are first carried to asset accounts which are later analyzed and adjusted for their profit or loss content. The authors are on somewhat firmer ground when they proclaim comprehensiveness as a unique feature since the method contemplated the recording of all transation-based firm activity.

The texts of Malcolm and particularly Mair [Sheldahl, 1985, p. 7; Mepham and Stone, 1977] were popular and well received in their day. Why then did these texts not incorporate some of the more advanced bookkeeping techniques then in actual use and being demonstrated in other treatises? Hamilton's book [1788] is far more sophisticated and indeed may be

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*No mention is made of depreciation (other than by Hamilton — see note #6 following) in a Yamey survey of English texts of 1543-1800 [Yamey et al. 1963, pp. 155-179].*
the most “modern” text of its time, touching as it does on issues relating to rudimentary depreciation, bad debt estimates, residual income evaluation, process cost accounting and the problems of allocation [Mepham, 1983]. Similarly, textile company cost records [Stone, 1973; Porter, 1980] of the very early nineteenth century (and probably earlier)6 display a variety of accounting techniques — cost centers, predetermined overhead rates and intracompany pricing — that have no ancestry in these texts. It may be that the authors (Mair, p. 4) felt they were putting forward a very general approach to double-entry bookkeeping which could find application in any type of business including manufacturing, and that the special and more complex situations could be handled by treatises devoted exclusively to particular industries.7 Though different in nature, the discrepancy may be no more anomalous than the gulf one finds between the ever-changing rule-laden editions of present-day texts and the best of actual practices, knowledge and thought [Kaplan, 1984, p. 407; Zeff, 1979]. Then, as now, the normative, original, innovative (much less radical!) may not have been what the market was demanding; and the expectation that one should look for these attributes in popular textbooks of any era may be unrealisitic.

Reconsidering Some Speculations

The accounting discipline is particularly fortunate amongst the social sciences in having a relatively great array of historical documents — texts and records stretching over several centuries — to help pace its evolution and assess its contribution. These three texts, specific to a given period, constitute a very small portion of those documents and therefore offer the opportunity for only brief and necessarily restricted commentary on two recurring questions: was the eighteenth century the latter part of a long period of stagnation in the evolution of accounting texts [Littleton, 1933, p. 9; Winjum, 1972, pp. 108-109] and was double entry bookkeep-

6Stone suggests that “because of balances carried forward from a prior ledger, it is clear that the [textile] mill was in operation at an earlier date [than 1810] with a fully developed accounting system as described in this paper” [Stone, 1973, p. 71].

7The Dodson text [Chatfield, 1974, p. 100] illustrates a shoemaker’s accounts. Indeed, Mair’s text gives extensive illustrations of accounts for sugar and tobacco merchant traders.
ing the engine that Sombart maintains propelled capitalism [Yamey, 1964]?

As previously implied, the bookkeeping routines recommended in these texts do not differ in substantive measure from those put forward by Pacioli. Specialized books of original entry whereby column totals are posted to ledger accounts were part of eighteenth century innovation; however the ledger recommended remains a jumble (partly because it was bound!) of innumerable, unordered, individual accounts of debtors and creditors and of the variety of merchandise accounts in which merchants dealt. What is now easy to overlook as terribly prosaic — the introduction of loose-leaf records and the importance of general ledger accounts controlling the detail of subsidiary records — would have aided eighteenth century bookkeeping greatly. At least three-quarters of the three texts contain extended examples of whole sets of records and the commentary thereon is largely confined to the technicalities of what is to be debited and credited and to how a balancing of the accounts is to be obtained. There is only passing interest in valuation and little that is explicit relating to depreciation, to accrual accounting in any of its forms, and to the establishment of accounting principles. Similarly, though the industrial revolution is beginning to emerge toward the end of the century, no guidance is offered in how the merchant bookkeeping illustrated could be adapted to the distinctive needs of this changing environment. The practicing accountant of this era would find little textual guidance beyond introductory bookkeeping routines. “Stagnation” may not be too unkind an adjective to append to this era of bookkeeping pedagogy as evidenced by these three texts. Students using Pacioli and aided by an instructor’s chalkboard examples of illustrative specimen accounts may have been at no disadvantage in learning the bookkeeping routines recommended by these authors.

The Sombart thesis is quite properly debated in contexts much broader than an examination of these three texts of the eighteenth century will permit [Braudel, 1982, pp. 572-578; Yamey, 1964; Winjum, 1972, pp. 15-24]. Though the thesis seems to have fewer adherents among accountants than among non-accountants, it should not be too difficult for the accountant to recognize in these texts some implicit instruction in the Sombartian notion of rationalized profit-seeking. The profit and loss ledger account to which all the nominal accounts are to be annually closed, portrays the operations of the firm in
fairly detailed form. (It should be remembered that it is, in part, on the basis of the very irregular profit determination exhibited in extant records that Sombart’s thesis is dismissed [Yamey, 1964, p. 125]. Gross margins on each type of merchandise are shown, together with the results from activities relating to insurance, bottomree loans, voyages, consignment accounts, rents and the borrowing or lending of money. Nor are such "results" encumbered by the frequently questionable decision-useful refinements of present-day cost-allocated accrual accounting. Indeed, information exists in terms of variable receipts and expenditures to know in some instances the rough magnitude and source of gross contribution margins on cost, and thereby give some direction to the merchant in the allocation of resources within the firm. There is however, no commentary in the texts elaborating that such information may be put to this end nor to more general return on investment considerations.

Historical treatises are well worth thumbing through for both practicing and academic accountants. They alert us to the pace of change, to the problems that have been overcome and to the background of those problems that are as yet unresolved. They prompt us to ask of the present the very question that springs so readily to mind with regard to the past: Are we handling the accounting task any better now than we did then? And occasionally they reach across the centuries to touch us with an important and sad reminder of the immutability of the human condition as we examine an example of a detailed bill of lading for a cargo of African slaves to be sold in the sugar colonies of the West Indies [Mair, p. 490] and as we read the author’s simple instruction to the factor to “sell off the negroes as (you) would do any other sort of merchandise” [Mair, p. 403].

REFERENCES

BOOK REVIEWS:


Reviewed by
Geofrey T. Mills
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This book, an adaptation of Honeyman's 1977 Ph.D. dissertation at the University of Nottingham, is a combination social and business history of the socioeconomic backgrounds of those who formed the entrepreneurial class in Britain during the teeth of the Industrial Revolution. As the author correctly points out such studies of the social roots of entrepreneurs in England are rare, especially compared to the U.S. case where the Horatio Alger myth has been heavily researched. On these grounds alone this book is a welcome addition to the library of scholarship on the Industrial Revolution. In addition the author has painstakingly researched her subject and included much of her data in two appendices, as well as in the body of the text. The book is well written, organized and easy to read. The bibliography is extensive and the index is complete and easy to use.

In her own words the purpose of this study is to "... test the commonly held belief that positions of industrial power in the 18th and early 19th centuries were open to individuals from diverse social origins, and particularly that unprecedented opportunities existed then for small men to attain the role of the entrepreneur." In order to test this hypothesis Honeyman looks at three industries between the period c.1750-1830; cotton spinners both early, 1787, and later, 1811; the lace industry; and lead mining in Derbyshire. Cotton was selected because of its reputation for being a breeding ground of self-made men and because it was characterized by a high degree of mechanization early on. By contrast the lace industry had relatively small capital requirements, but went through periods of rapid organizational and technological change. Lead mining saw both large and small operators with wildly varying financial and organizational structures. Furthermore, it was a highly concentrated industry and became a subsidiary source of income for the people in the chief mining areas.

It is difficult to capture, in such a short review, the riches of Honeyman's data, research and conclusions, but it is possi-
ble to make a few general observations. Sir John R. Hicks commented once that the key feature of the Industrial Revolution was the shift from circulating to fixed capital structures. We can see this process in operation here. At some point all three of the industries attracted men of modest and small means because the initial capital outlays were so small. But in many instances the real key to long run success was assess to working capital which was not nearly so easy. Only those individuals who were better connected, either by dint of social background, marriage, social connections, or initial financial success could ensure continuing access to the credit markets. This fact made success, in the long term, a difficult goal for men of small or modest means and, over the entire period under consideration, meant that people from the bottom of the scale made little real progress. To be sure there were some cases of remarkable success, a tiny number but just enough to perpetuate the myth, of small men making it big, however these were by far the exceptions rather than the rule.

Of the three industries which Honeyman investigates in this book the lace industry of the 1820's appears to have offered the best chances for men of modest or humble origins. This was due to the low capital requirements and the fact that, relatively speaking, continued access to working capital was not as crucial here as in the other two industries. Lead mining held open the finest doors for men from all backgrounds, but was especially treacherous for the individual without capital or connections because of its relatively high barriers to entry, risky returns and need for working capital input. Cotton, both in 1787 and 1811 fell somewhere between lace manufacturers and lead mining. The economic facts of the Industrial Revolution, coupled with the rigidity of British society in this period (which placed a high premium on “connections,” friends and status) all conspired against entrepreneurial success, except in the short run, for all but the best, brightest and luckiest. Despite the vast societal and economic changes in these eight decades there was little real change in industrial leadership. In short, restrictions on upward mobility remained as insurmountable as they had been in the past. The very small group of men who were successful in the long run stand out, in the stark light of Honeyman’s data, as extremely competent and exceptional. Over the long haul luck had little to do with success.

This book is for the specialist, not the general reader of business history, or even the Industrial Revolution for that
matter. It, like all dissertations, is a small slice of pie. I do not intend this to be a criticism, rather a simple fact. Like the small men who made it big Honeyman has poured lots of hard work and creativity into these pages. Meticulously researched, and well written the book fills a gap in our knowledge of the social and economic history of England in the Industrial Revolution. For the specialist this is a rich source of data and inspiration.


Reviewed by
Lucy C. Lee
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Chinese civilization is characterized by a long history of agricultural economy with a culture rich in literature, art and philosophy. However, virtually nothing is known about the history of accounting in China. This two-volume book, written in Chinese, by Professor D. Y. Kuo at Chung-Nan College of Finance and Economics, is an attempt to uncover the development of accounting in ancient China, in a political system and philosophical atmosphere which were basically anti-business. Professor Kuo's research is based mainly on historical literature and partly on recent archaeological finds.

Volume I starts from prehistoric times when people tied knots on strings for "counting" events and ends with the Sung dynasty (960-1279 A.D.). The theme is on the evolution of government accounting. Unfortunately, historical materials were lacking on accounting methods developed in the private sector. Some highlights are as follows.

As early as the Shia dynasty (2205-1766 B.C.), remains of shells and bones showed records of goods and livestock in kind and in quantity, a written language had already been developed. At the first stage of the development of accounting, spanning three dynasties: Shia, Shang (1766-1122 B.C.), and Chou (1122 B.C.-250 A.D.), transactions were recorded chronologically in single entries and in words. Also, the term "accounting" (Kwai-ji) was officially established in the early part of Chou dynasty.

A significant development made during the Han dynasty (206 B.C.-220 A.D.) was to adopt the format of using three sections in accounting reports to higher authorities. Thus, the
headings "In," "Out," and "Balance" became standard usage in reports submitted on a monthly, quarterly and annual basis. The main accounting books included the "Grain Inflow-Outflow," "Cash Inflow-Outflow," and "Goods Inflow-Outflow," all kept on bamboo or wooden tablets, and source documents were numbered.

Accounting reached a level of sophistication due to unification of the monetary system and standardization of accounting figures during the T'ang dynasty (618-975 A.D.). Cash journals, general and subsidiary ledgers were kept in bound volumes of paper. The government accounting office was responsible for internal revenues and the national budget, and the auditing department performed audits on reports from all levels of governmental units. Another significant improvement of the reports was made during this period, which required four sections: "Beginning balance," "In," "Out," and "Ending balance" on the reports.

Volume I ends with the Sung dynasty (960-1279 A.D.) during which government accounting systems were further refined and standardized, but never went beyond single-entry bookkeeping. Apparently single-entry bookkeeping was adequate to generate accounting reports for China's governments for many centuries.

Professor Kuo's work is significant and informative. It provides the eastern side of the story in the world history of accounting. I am looking forward to the forthcoming Volume II which will address the development of accounting in the private sector after the Sung dynasty.


Reviewed by
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This book is a biography of Charles Ezra Sprague (1842-1912), a man described as:
An embodiment in its highest form of the rarest of all combinations, that of the business man, the scholar, and the scientist, having been distinguished as a banker, as a stimulating teacher and linguist and as an author of many invaluable treatises on accounting, some of which were pioneer works in their fields. (Title page)
The book was first published in 1931 and is reprinted under the Arno Press Collection series of noteworthy publications in the development of contemporary accounting thought.

The book has an introduction written by the then dean of the School of Commerce, Accounts and Finance, of New York University in recognition of the role Sprague played in its establishment.

Sprague has made significant contributions to accounting and to the growth of the accounting profession. He wrote numerous articles and books during his life time. His most significant literary contribution to accounting is his book, *The Philosophy of Accounts* (1907). Although it certainly was not the first book in accounting, it is regarded as the first book in print to deal with the "theory of accounts." Sprague's professional career was primarily in a banking institution where he grew from a clerk to being the president of a leading bank of the time. He was one of the first to qualify as a certified public accountant, and served on the board of examiners for certified public accountants. His devotion to accounting led him to be a well remembered accounting teacher while he served as a president of a bank.

This book is divided into six parts. Part I provides an account of Sprague's family history, his upbringing and schooling. Part II describes Sprague as a soldier and his participation in suppressing a rebellion in the South in the Spring of 1862. Part III narrates Sprague's role as a tactics teacher in military schools and his writings on military topics. Also covered in this part is Sprague's involvement and interest in the development of a universal language. Part IV dwells on Sprague's part as a banker and his contribution to the banking profession. Sprague's accomplishments as an inventor are also recounted in this section. The significant role he played in the development of the accounting profession is described in Part IV. Part V discusses Sprague's literary accomplishments. The last part of the book, Part VI, gives an overview of Sprague's achievements.

Except for Part II, which this reviewer found to be a bit tedious, the book is generally very interesting to read. One cannot help being inspired to higher ideals by reading this book. This book has brought into light the biography of one of the prominent personalities in accounting who has used his talent so fruitfully in contributing so much to society. In this respect Helen S. Mann's book on Charles Ezra Sprague is worth reading.

Reviewed by
Lawrence R. Hudack
North Texas State University

The author's stated and attained objectives are to trace the development of Japanese corporate reporting regulation and to determine the operational form of the current regulatory system. While attaining these objectives, she offers a relatively unique perspective on international accounting research.

The author adopts a refreshing and liberal attitude with respect to this complex and dynamic topic. Contrary to contemporary accounting research's fixation with traditional functionalist epistemological premises, a subjectivist approach is considered and applied. An argument against the former illustrates how the researcher is often forced into making overly simplistic analyses of social science phenomena, thereby resulting in limited and often questionable findings. The subjectivist perspective allows for consideration of qualitative characteristics which are often prevalent in the examination of social systems.

A major contribution to international accounting research is provided by the introduction and adaptation of Anthony D. Smith's sociological framework. Prior to this work, the aforementioned research was in search of a suitable model for nation specific studies. In accordance with the FASB, the author explicitly assumes that the regulation process is to be recognized as a dynamic social system, thereby allowing Smith's "modified exogenous framework of processual change analysis" to provide a viable analytic framework.

This framework recognizes internal, external and interacting factors of processual change; decomposes processual change into source phase, diffusion phase, and reaction phase; and analyzes processual change in terms of four major aspects. These four aspects include: environment, intrusive events, intra-system activity, and trans-systems activity.

This broad-minded interpretive framework is consistent with Issiah Berlin's prerequisite of an historical analysis focusing upon interwoven strands of the texture rather than narrow examinations of isolated strands of experience. In accordance with Berlin's concept of history, the study exhibits an
exceptional capacity to associate, e.g., recognition of environment and inter-systems activity.

An effective research strategy which synthesizes existing literature and personal interviews of experts enables the accumulation and dissemination of five "central response events". The five events are then used as "insight-stimulating" examples in the historical and environmental analysis of the Japanese corporate financial reporting regulation system. The author acknowledges Fujita's (Yukio) doctoral thesis "An Analysis of the Development and Nature of Accounting Principles in Japan" (1968), and R. J. Ballon, Tomita Iwao and Usami Hajime's *Financial Reporting in Japan* (1976) as important literary sources. The interview respondents include Japanese regulators, academics, and certified public accountants who provide "an inductive argument from authority" in the selection of the following events: introduction to the Commercial Code (1899), issuance of working rules (1934) and tentative standards (1941), introduction of the Securities Exchange Law (1948), revision of the Commercial Code (1974), and issuances of ministerial ordinances on consolidation (1976).

An overview of the book's contents reveals that a general to specific pattern is employed. The first three chapters incorporate a general perspective offering anyone with an interest in international accounting research some valuable insights. Chapters four and five focus the reader's attention toward a rather informative Japanese specific historical and environmental background of corporate reporting regulation. Chapters six through ten provide a magnified illustration of the Japanese system's historical development and environmental influences through the application of Smith's "modified exogenous framework of processual change analysis" to each of five "central response events". The final chapter offers both conclusions relating to the Japanese system's operational form and implications for future research. The conclusions delineate the system's authorities and mechanisms' social status and functions, and interactivity among authorities in the process of administering, formulating and implementing corporate reporting regulation. The implications circumscribe the international interpretation of accounting and corporate reporting, international transferability of accounting principles and practices, and transferability of "regulation research". In addition, a rather comprehensive bibliography and informative appendices help to enrich this truly significant contribution.
The only potentially negative aspect of this work is the conclusions involving interactivity among authorities. Underlying these conclusions is the presence of corporate resistance, an anomaly which is contrary to an earlier discussion of the Japanese cultural environment's acceptance of "moral basis of government," "the ruler and the ruled," and societal interdependence. Although an "explanation" is provided for corporate resistance's existence, the reader may be left with some doubts because of an apparent inconsistency. However, one must not lose sight of the interpretive (subjectivist) epistemological perspective employed.

In sum, this book should be recognized as a significant contribution to international accounting and historical research; both for its general future research implications and specific informative presentation of Japanese corporate reporting regulation.
Letter to the Editor


My interest with regard to this review centers on the last sentence of the first paragraph on page 110 that says: "and little is known of German thought on this side of the Atlantic." The footnote states that the American accounting academician may have read Schmalenbach's "Dynamic Accounting," translated by Murphy and Most (1959). Of significance is the phrase "may have read." The 1959 translation was based on Schmalenbach's "Dynamische Bilanz" whose first edition appeared in 1919. Murphy and Most's translation, published by Gee and Company, London, was reviewed by Eric L. Kohler in the "Journal of Accountancy," April, 1961, pp. 95-96. On the basis of this review I wrote to the Gee Company for a copy of the book.

The Gee Company mailed me the following answer dated August 31, 1961. I quote from the letter which is still in my possession:

"We thank you for your letter of the 24th instant requesting us to forward you a copy of Schmalenbach's "Dynamic Accounting" but regret to state that due to a certain clause in our contract with the German publishers, unfortunately we are unable to forward this publication to your country, and trust you will understand the position. This book can only be sold to customers within the British Commonwealth."

Fortunately, a business friend of mine visited London a few weeks later and purchased a copy. The original German text had been in my library for some time.

The same footnote also states that not until 1980 was Arno Press's reprint edition of the 1959 edition available in the United States.

The above remarks should indicate why Schmalenbach's philosophy, teaching, and writings, never could penetrate the American accounting profession. To ascertain the amount of lecturing on Schmalenbach's theory at American universities, I learned that in one Graduate Seminar the professor devoted about 30 minutes to that topic for which no reading assignments were made.
I believe that these notations regarding a possible knowledge of Schmalenbach's "Dynamic Accounting" might be of interest to accounting historians.

Very truly yours,
Adolph Matz, PhD
Professor Emeritus of Accounting
The Wharton School
University of Pennsylvania
Blue Bell, Pa 19422
June 25, 1986

A short while after this correspondence was received we learned of Professor Matz's death. We are pleased that he remained actively interested in matters in our discipline throughout his career and that he informed us of an insight which might otherwise have been lost.
Understanding Accounting in its Social and Historical Context: The Case of Cost Accounting in Britain 1914-1925 (London Graduate School of Business Studies, 1986) by Anne Loft.

The study of accounting history can be approached in a variety of ways and some of them are neatly synthesized in the introduction to Loft's book. A dominant choice has been to use a technical focus, concentrating on accounting mechanics and procedures. As a result, the evolution of practice seems to be shaped primarily by fate and necessity. Also popular, particularly in financial accounting and auditing, is research into the history of professional associations. These "official histories" tend, however, to be influenced by a priori assumptions that accountants have high social importance and that organizational form has contributed to their success. A third method, largely originated by Alfred Chandler, has been to related the evolution of cost and management accounting to that of larger business enterprises. A disadvantage here is the relatively narrow perspective which emerges when the firm's environmental context is given little consideration.

In order to bring the contextual relationships of accounting-society into the picture, Loft has adopted the genealogical research perspective developed by Michel Foucault from concepts originated by Nietzsche. Essentially, the approach Foucault took in his book *Discipline and Punish*\(^1\) consisted of documenting the social and historical conditions which nurtured the development of disciplinary institutions and their disciplinary techniques. Translated into the sphere of cost and management accounting, the research topic is restated as addressing, through genealogical historical methodology, "the conditions under which the accounting techniques for knowing (sic) the business organization emerged and spread" [p.16].

Loft recognized that the field of cost and management accounting is just one of the tools for achieving discipline in a

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business organization as expressed in the Foucault model of surveillance and detailed control. So, she turned to Braverman's study of modern management control as a building block for analyzing and highlighting accounting's particular contribution to the process. For general management purposes, replication on paper of all production activities of a physical nature provides a permanent form of knowledge about events for a particular time frame. The special function of cost and management accounting lies in creating specific and visible knowledge about organizational happenings by generating records which link up information about diverse objects and events through translation into a common monetary terminology.

This visible, financially expressed knowledge dealing with human activities must be, if we believe in the old adage, a form of power. Applying Foucault's analysis of knowledge and power relationships, Loft starts to develop lines of thought about ways in which this symbiosis applies to the management accounting domain:

Through cost and management accounting a regime of truth [Foucault, 1980, p. 133] is formed about events. The very possibility of the highly specific knowledge produced by accounting tends to exclude attention from a whole range of other issues. Not given prominence through their accounting system, they can often be ignored as they do not enter into the sanctioned conceptions of the real and the true [p. 18].

In contradistinction to "official" history — which assigns a static role to the intellectual knowledge base — this study's objective was to bring a geneological focus to bear on the professionalism aspect of management accounting techniques during a particular period. The years from the beginning of the first world war in Britain in 1914 until 1925 were selected because they witnessed a rich gestation of certain technical, social, and organizational contextual elements. Cost accounting theory and practice came under intense scrutiny during the war, particularly in connection with government contract pricing. Cost accounting practitioners increased in number and gained public recognition. And, a professional association of

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cost accountants, the Institute of Cost and Works Accountants, was born in 1919. So, all the factors were present, including a state of uncertainty and flux, to provide a setting for an “unofficial” history through a detailed examination of the active interplay between issues, institutions, occupational claims, knowledge, and techniques [p. 21]. Loft’s lengthy yet succinct introduction provides the reader with the necessary frame of reference for the second chapter which develops the theoretical base for the dissertation and consists of seven sections:

1. Genealogical History. Here Loft draws from various writings by Foucault about certain salient issues. First, to guard against falling into the error of looking at the past in terms of the present by considerable expansion of environmental focus. Historians have to understand “truths” in relation to the time when and the place where they are or were accepted as being true, and these truths are linked to the operation of power within each society.

2. Bentham’s Panopticon: Visibility and Discipline. This section looks into the emergence of disciplinary power in a product setting, usually through a pyramid supervisory structure, by adoption of the principle of control by visibility. This principle was the cornerstone of Jeremy Bentham’s plan for an inspection house where in a prison setting the activities of all inmates would be visible at all times to unseen guards. The objective of this architectural design was to induce desired behavior as is the visibility provided by management accounting records.

3. Record-keeping and Discipline: Extending Visibility. Bentham turned his attention to the problems of the poor after his ideas for prison construction came to naught. While keeping to the surveillance design for poor-houses, he added a new feature by requiring detailed bookkeeping as a management aid over the control of some half a million paupers. This scheme thus provided a model which interrelates architecture, record-keeping, and human behavior control.

4. Cost and Management Accounting as a Disciplinary Technique. Because of the use of monetary measures, cost and management accounting systems can serve a dual function of providing information for both decision making about production activities and for disciplining employees. "The cost records are an enabling device for power to act but at the same time the very fact of making the record, of producing knowledge, is an act of power" [p. 58].
5. **Time, Accounting and Discipline.** Measurement and use of time is a fundamental concept which pervades the cost and management accounting process. Much of the discipline in the workplace is maintained through timing devices such as mechanical clocks. While designed to achieve a "positive economy" [p. 59], these measures provide data bases for the events which the costing systems process. In the modern age, unlike the pre-industrial world, time like space has become a quantifiable continuum to be carefully carved up and valued in terms of money.

6. **Disciplinary Power and the Question of Human Agency.** An essential aspect of disciplinary power is the issue of who has power and whose interests do the disciplinary institutions further. As mentioned earlier, cost and management accounting is a powerful disciplinary technique because of the "truths" which it helps create. It is obviously critical to identify the sources of disciplinary technologies both in terms of who they are and who they represent.

7. **Professionalization.** Because the cost accounting which emerged in factories a century or so ago as a disciplinary technique was a human activity, it follows that interdependencies exist with respect to the appearance of specialized cost and management accountants. The more specialized these practitioners became the more authority they began to exert over what should and would be provided in the way of management information and how it should and could be interpreted. When practitioners banded into a professional organization, they became subject to its discipline. So, the association arose as a new source of power over existing practitioners, over potential members through qualifying certification, and over the knowledge base through definition of acceptable practice.

A third chapter, which is an historical introduction, is needed before Loft moves on to her genealogical analysis. This covers over a century and a half and traces the emergence of industry and the industrial revolution in Britain as well as the accounting profession and the cost accounting discipline up to the time of the first world war in 1914. Four chapters successively deal with the first world war, after the war: reconstruction and reality, the Institute of Cost and Works Accountants, and cost accounting and society. The eighth and concluding chapter is a summary.

First is a very useful review of Foucault's genealogical work: *Discipline and Punish*. Its three principle features are: looking at society as one in which the social order is main-
tained by disciplinary institutions and techniques; that both of them produce widely accepted "truths;" and that it is necessary to study the evolution of these techniques in minute detail in order to understand how this situation arose.

At the time of the outbreak of the first world war, cost accounting systems were still in a rudimentary stage, and the occupation of cost accountant had not yet clearly emerged. The war changed many things. Material and financial shortages brought the activities of the costing section of the Ministry of Munitions into prominence and the costing practices of government suppliers into the public spotlight. Chartered accountants devoted considerably more attention and energy to the field of cost and management accounting both in serving clients and in occupying important government positions.

When the war ended, two organizations of cost accounting practitioners were created: one for the chartered and incorporated accountants and the other for those in industry. Society was at the time, though in a state of turmoil, optimistic about cost accounting's potential for improving the combined lot of capital and labor interests. The two organizations reacted in different ways. The chartered institute maintained a conservative profile while the industry group realized its opportunities for professionalization while taking its cues from the chartered institute as a role model. The dissertation concludes with comments about the relationship between accounting and the state and puts forward ideas for future work.

Anne Loft has turned an interesting topic into a more than interesting one by introducing a new methodological approach to historical investigation in accounting. Her dissertation is packed with intriguing ideas about ways of looking at society and what goes on in it which could also be useful for those in other disciplines. She is also to be complimented on her writing style and the way that she brings her readers along with her. We hope to hear more from her.
THE ACADEMY OF ACCOUNTING HISTORIANS 1988 ACCOUNTING HISTORY MANUSCRIPT AWARD

The Academy of Accounting Historians has established an annual manuscript award to encourage young academic scholars to pursue historical research. Any historical manuscript on any aspect of the field of accounting, broadly defined, is appropriate for submission.

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Any accounting faculty member, who received his/her doctorate within seven years, is eligible for this award. Manuscripts must conform to the style and length requirements of the Accounting Historians Journal. Manuscripts must be the work of one author and previously published manuscripts or manuscripts under review are not eligible for consideration.

Seven copies of each manuscript should be submitted by March 31, 1988 to: Dr. Barbara D. Merino, North Texas State University, P.O. Box 13677, Denton, Texas 76205. A cover letter, indicating the author’s mailing address, date doctoral degree awarded, and a statement that the manuscript has not been published or is not being currently considered should be included in the submission packet.

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The Academy’s Manuscript Award Committee will review submitted manuscripts and select one recipient each year. The author will receive a $500 stipend and a certificate to recognize his/her outstanding achievement in historical research. The manuscript will be published in the Accounting Historians Journal after any revisions deemed necessary by the manuscript editor of the Journal. The award will be given annually unless the manuscript award committee determines that no submission has been received that warrants recognition as an outstanding manuscript. The award will be presented at the business meeting of the Academy in Orlando in August 1988.
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