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Objectives

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THE ACCOUNTING HISTORIANS JOURNAL

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CONTENTS

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RESEARCH NEEDS IN ACCOUNTING HISTORY

Abstract: Over 200 books and articles on accounting history published 1969-1977 are listed in an annotated bibliography and assessed in Part I. Part II makes the following suggestions for future research:

(i) more bibliographies
(ii) influence of the economic environment on accounting development
(iii) "scientific revolutions" in accounting
(iv) causes of changes in accounting practice
(v) diffusion of accounting innovations
(vi) more quantitative accounting history
(vii) more biographies including collective biographies
(viii) development of international accounting firms
(ix) development of academic accounting.

This paper is divided into three parts: Part I surveys published works on accounting history during the last eight years; Part II contains suggestions for future research; the Appendix contains a select annotated bibliography of works on the history of accounting, 1969-1977. A bibliography for years prior to this was published by the author in his book *Management Accounting: An Historical Perspective*, London, Macmillan, 1969.

I. RESEARCH IN ACCOUNTING HISTORY 1969-1977

A quick glance through the bibliography (which lists well over 200 books and articles) reveals that many people have been writing about accounting history during the past few years and that the results have been published in a bewildering array of journals. The *Accounting Review* has continued to give generous space to the subject and it has been joined by many new journals. The following list of dates of first publication tells us quite a bit about the contemporary history of accounting:

1963 *Journal of Accounting Research*
1965 *Abacus*
1965 *International Journal of Accounting*

1969 *Journal of Business Finance (and Accounting)*
1970 *Accounting and Business Research*
1976 *Accounting, Organizations and Society*
1977 *The Accounting Historians Journal* (preceded by *The Accounting Historian,* 1974)

In their relatively short lives, most have published important historical material. Relevant articles also continue to appear in most of the professional accountancy journals.

But accounting history is by no means confined to accounting journals, or, indeed, to accountants. During the period under review, articles of interest have appeared in The Economic History Review, Business History, Business History Review, History of Political Economy, Business Archives, Journal of European Economic History, Scripta Mercaturae and, rather more unexpectedly, in Nottingham Mediaeval Studies, Journal of Modern History, Scottish Historical Review, the Gutenberg-Jahrbuch, Speculum, Agricultural History Review, Archives, and the Kyoto University Economic Review.

Of the books and articles classified as "General" in the bibliography the most useful are Chatfield's text book (1974) and his book of readings (1968). Stevelinck's catalogue of the 1970 exhibition in Brussels is a mine of useful information. The American Association's Committee on Accounting History (1970) has defined accounting history, although not to everybody's liking (Goldberg 1974). Ten Have's text in Dutch has been inaccessible to most of us and the English translation just published is greatly to be welcomed.

Little work has been done in Ancient Accounting, the most interesting article being Fu's "Governmental Accounting in China during the Chou Dynasty (1122 BC - 256 BC)" (1971).

Early Italian Accounting continues, for obvious reasons, to attract researchers. G. A. Lee (1972, 1973) has translated and studied the oldest European account book, a Florentine bank ledger of 1211. Peragallo has drawn our attention to Vigano's work on ledger balancing procedure, adjustments and financial statements. Yamey has investigated the intriguing bibliographical puzzle of Pacioli's *second book on accounting* (if it ever existed). Many important documents are reprinted by Melis (1972).

Historians and accountants alike have continued to extend our knowledge of early English and Scottish accounting. Worthy of special mention are Oschinsky's *Walter of Henley and other Treatises on Estate Management and Accounting* (1971), reviewed at length by Harvey in the Agricultural History Review (1972); Kojima and Yamey's reproduction and commentary on Ympyn's "A notable and very excellent woorke" (1975); and Winjum's excellent and stimulating book on *The Role of Accounting in the Economic Development of England: 1500-1750* (1972).

It is obvious from the bibliography that a great deal of work is being done on early American accounting. No doubt bicentennial enthusiasm has had something to do with it! One can detect a tendency to argue that American accounting was less derivative from British than has been believed. A new book by Previts and Merino is eagerly awaited.

The history of early Japanese accounting also flourishes. It is only accessible to most of us, unfortunately, through the occasional English summary.

The history of the accountancy profession still tends to be written very much from the inside. Recent examples are Carey's two volume *Rise of the Accounting Profession* (1969, 1970) and Kapadia's *History of the Accountacy Profession in India* (1973). Detailed and fascinating though these are, one also welcomes the turning of a beadier and less loving eye on the professional bodies (see the article by Birkett and Walker in Abacus). Johnson and Caygill in an article in Accounting and Business Research (1971) deal with the neglected but important topic of the export of professional accountancy qualifications. The history of auditing is a much neglected area.

Three important articles on the history of cost accounting—Johnson on Lyman Mills (Business History Review, 1972), McKendrick on Josiah Wedgewood (Economic History Review, 1970) and Stone on Chorlton Mills (Accounting and Business Research, 1973)—suggest that, relying too much on the text books, accounting historians have underrated the cost accounting of 18th and 19th century firms. Central European developments have been chronicled by Schoenfeld (1974).

Some of the contemporary truisms of management accounting began as engineering techniques or even as the unheeded scribblings of economic theorists. The accounting historian should, but does not always by any means, delve into the histories of engineering and economic thought. In this connection see Gould's article on opportunity cost published, appropriately, in the Baxter *Festschrift* (1974) and the book by Parker (1969).

The present importance of corporate accounting and financial accounting theory has no doubt been part of the stimulus to publication of a number of important books and articles. The writings of Brief and Zeff can be especially recommended. Kitchen has illuminated the early history of British holding company accounting. Moonitz has used the historical record to back his thesis that a professional accounting body, acting by itself, cannot agree upon a set of accounting standards, much less enforce it in practice. Chatov's *Corporate Financial Reporting—Public or Private Control?* (1975) looks at well-known events from an unusual angle and challenges wide-held prejudices and assumptions—widely held, at least, by accountants.

Those harmless but useful drudges, the compilers of bibliographies and chronologies, have been very busy. In England, the Institute of Chartered Accountants in England and Wales has published *Historical Accounting Literature* (1975) and is continuing with supplements; in Scotland, the Scottish Committee on Accounting History of the Institute of Chartered Accountants of Scotland has produced two editions of *Accounting in Scotland;* in the United States, Zeff's chronology of significant developments in the establishment of accounting principles has been reprinted three times already.

II. SUGGESTIONS FOR FUTURE RESEARCH

What research *ought* we to be doing in accounting history? The views that follow are necessarily personal.[1] If they are controversial so much the better.

Whatever one's views as to the function of accounting history, it is undeniable that we need research tools and materials. We need, first of all, to know what primary and secondary sources exist and where they can be inspected. The compilers of bibliographies, the discoverers and preservers of accounting records of all periods and kinds will continue to merit our blessings. The records need not be old or written in dead languages. The Scottish Committee on Accounting History has, for example, started a modest collection of 19th and 20th century company annual reports. A welcome innovation also is the oral histories of recent U. S. experience collected in Thomas J. Burns (ed), *Accounting in Transition* (1974).

Accounting historians need to pose more explicitly the questions that they are trying to answer and the hypotheses they are trying to test. Sombart's hypothesis concerning the influence of double entry bookkeeping on the development of capitalism has stimulated important research by Yamey, Winjum, Most, and others. We need an equivalent hypothesis about the influence of the economic environment on the development of accounting. I suggest as recommended and contrasted reading, chapter 11 of Littleton and Zimmerman's *Accounting Theory: Continuity and Change* (1962) and chapter 14 of Chambers' *Accounting, Evaluation and Economic Behavior* (1966). Littleton and Zimmerman (p. 254) find in accounting evolution a discernible pattern of continuity in the midst of change, a tendency for the ideas that persist to be rational ones and a demonstrated capacity of accounting to make substantial contributions to society. Chambers, I believe, would agree with none of these: "in accounting," he writes, "the tendency has been towards diffuseness of ideas and diversity of practices" (p. 359).

In a recent article (item 30 [a]) Murray Wells has suggested that financial accounting *thought* is undergoing a revolution. Following T. S. Kuhn's *The Structure of Scientific Revolutions* he sets out the identifiable steps of such a revolution:

1. Recognition of anomalies
2. A period of insecurity
3. Development of alternative sets of ideas
4. Identification of schools of thought
5. Domination of the new practices or ideas.

Given the political difficulties of initiating change in accounting practices he feels that the latter may well be an *evolutionary* rather than a revolutionary process.

Whether or not Wells is right, there are a number of points arising which are well worth exploration by accounting historians. For example: are Kuhn's ideas relevant to accounting? (historians of economic thought have been discussing a similar problem for some time);[2] what has been the role of authority (statutory and otherwise) in the development of thought and practice?

One hypothesis that is worth looking at is that accounting *practice* only changes as a result of very strong external pressures such as a stock market crash, a major scandal or a major inflation and that even then its capacity to change is limited by lack of available accounting *theories* (or by the unsuitability of existing theories). American accounting was certainly changed by the events of 1929 onwards but it has never settled down because of the lack of any more satisfactory conceptual underpinning than attempts to rationalise the jumble of practices which grew up out of the auditors' desires to combine objectivity with conservatism. British accounting in the past few years has been transformed by the combined impact of scandals and inflation. It remains to be seen whether "value to the business" will provide a satisfactory conceptual base in the post-Sandilands era.

We need more research into the diffusion of accounting innovations through time and space. Tritschler's article of 1970 (item 351[a]) deals with this problem but does not seem to have influenced accounting historians. Let me note here in passing the close links between accounting history and comparative accounting.[3] Accounting practices and ideas move through several dimensions!

Curiously enough, there has been very little quantiative accounting history. More work is needed of the kind being done by Benston and Deakin (item 271 [b]) investigating the effect on the capital market of the 1934 Securities Acts in the USA.

Accounting historians should concentrate on accountants as well as on accounting: partly because accounting thought and practice are clearly not independent of *who* thought and *who* practiced; partly because accounting history is part of social history not just the history of a technique. We need to know a lot more about who the early professional accountants were and where they came from. Accountancy has produced a few men worthy of individual biographies (see especially the recent monographs published by the Georgia State University; items 319 (a), 326 (a), 326 (c)). Also required are *collective* biographies. The Scottish Committee on Accounting History has such a project in hand, in relation to Scottish chartered accountants (item 328 [a]). It would be of interest to find out who exactly the early leaders of the American profession were and to what extent they were immigrants (from Scotland? from England?) and to what extent they were native-born.

The most striking thing about the present structure of the accountancy profession compared with that of other professions is the existence of large international firms which are, by most definitions, in fact multinational corporations. Some have produced house histories but we need to know a lot more about their development. Why have some grown and some not? What has been their role in the diffusion of accounting innovations?

Finally, let us not forget ourselves! Have academics played any important role at all in the development of accounting? What are the reasons for the differing rates of growth of academic accounting in say, the USA, the UK and Australia?

These are, in my view, just some of the matters into which accounting historians should be researching. I have not tried to be comprehensive. Clearly there is plenty of work to be done!

FOOTNOTES

[1]For suggestions made by other writers see *Report of the Committee on Accounting History*, Supplement to The Accounting Review 1970 and O. ten Have, *The History of Accountancy* (English translation, 1976), p. 109.

[2]See, for example, M. Blaug, "Kuhn versus Lakatos, or paradigms versus research programmes in the history of economics", *History of Political Economy*, VII (1975) 399-433.

[3]For an example see R. H. Parker, "Explaining National Differences in Consolidated Accounts", *Accounting and Business Research* (Summer, 1977).

APPENDIX

Select Bibliography of Works on the History of Accounting 1969 - 1977

This bibliography is a continuation of the one published in R. H. Parker, *Management Accounting: An Historical Perspective* (London, Macmillan, 1969), pp 75-126. It has been drawn up upon the same principles and the arrangement is the same, viz.:

A. General
B. Ancient Accounting
C. Early Italian Accounting
D. Early Netherlands Accounting
E. Early French Accounting
F. Early English and Scottish Accounting
  (i) Manorial, Household and Parochial Accounts
  (ii) Mercantile Accounts
  (iii) Government Accounts
G. Early Irish Accounting
H. Early German and Austrian Accounting
I. Early American Accounting
J. Early Australian Accounting
K. Early Japanese Accounting
L. Early Indian Accounting
M. Professional Accountancy
N. Cost and Management Accounting
P. Corporate Accounting
Q. Mechanised Accounting and Computers
R. Executorship Accounting
S. Financial Accounting Theory
T. Education
U. Terminology
V. Bibliographies, Biographies and Chronologies
W. Bank Accounting
X. Miscellaneous
Index of Authors

A. GENERAL

3(a) CHATFIELD, M., *A History of Accounting Thought* (Hinsdale, Ill., The Dryden Press, 1974) vi + 314 pp.
In three parts: development of basic accounting methods; accounting analysis in the industrial era; a history of accounting theory. Strong on recent, especially American, developments. Good end of chapter bibliographies.

3(b) CHATFIELD, M., *Contemporary Studies in the Evolution of Accounting Thought* (Belmont, Calif., Dickenson Publishing Co., 1968) viii + 423 pp.
Thirty-one important articles, all previously published except 'English Medieval Bookkeeping, Exchequer and Manor' by the editor.

3(c) COMMITTEE ON ACCOUNTING HISTORY, Report of the Committee on Accounting History [of the American Accounting Association], *Accounting Review, Supplement to Vol. XLV* (1970) 52-64.
Defines accounting history, claiming that its ends are both intellectual and utilitarian; sets out nine topics deserving attention; includes an appendix, Sources of Accounting History, by R. M. Homburger.

5(a) ETOR, J. R., 'Some Problems in Accounting History, 1830-1900', *Business Archives*, XXVIII (1973) 38-46.
Argues *inter alia* that accountants "had human faces . . . we cannot fully understand their thinking and achievements without some appreciation of their personalities and the way they earned their living".

6(a) FRISHKOFF, P., 'Capitalism and the Development of Bookkeeping: a Reconsideration', *International Journal of Accounting*, V (1970) 29-37.
Discusses the influence of capitalism on bookkeeping.

7(a) GLAUTIER, M. W. E., 'The Idea of Accounting: A Historical Perspective', *Accountant's Magazine*, LXXVII (1973) 437-442.
Suggests that the aim of a study of accounting history should be to seek to trace the continuous thread of accounting developments.

7(b) GOLDBERG, L., 'The Development of Accounting', *Australian Accountancy Student*, II (1949) 3-8, 51-9, 99-107, 146-54, reprinted in Gibson, C. J., Meredith, G. G. and Peterson, R. *Accounting Concepts. Readings* (Melbourne, Cassell Australia, 1972) pp. 4-37.
A concise survey.

7(c) GOLDBERG, L., 'The Future of the Past in Accounting', *Accountant's Magazine*, LXXVIII (1974) 405-410.
Accounting history helps us to understand the past, gives us an appreciation of how current practices and problems came into being and helps to put them into perspective.

9(a) GRANDELL, A., *Redovisningens utvecklingshistoria fran bildskrit tii dator* (in Swedish) (Abo, 1972) 121 pp.
Development of accounting from hieroglyphs to the computer. Reviewed in *The Accounting Historian*, Winter 1975.

12(a) TEN HAVE, O., *De Geschiedenis van het Boekhouden* (Wassenaar, Delwel, 1973) 122 pp. Translated by A. van Seventer as *The History of Accountancy* (Palo Alto, Calif., Bay Books, 1976) 113 pp.
A general history of bookkeeping and accounting. The English translation has a foreword by B. S. Yamey.

14(a) JOHNSON, H. T., 'The Role of Accounting History in the Study of Modern Business Enterprise', *Accounting Review*, L (1975) 444-50.
Argues that accounting historians can contribute significantly to the understanding of the development of big business.

17(a) KOJIMA, O., *Historical Studies of Double-Entry Bookkeeping* (Kyoto, Daigakudo Shoten Ltd., 1975) 305 pp. (250 pp. Japanese, 55 pp. English summary).
Includes contributions by Wasaburo Kimura, Katsuji Yamashita, Katsumi Izutani, Etsuzo Kishi, Sadao Takatera (see item 146[a]) and Chōzo Muto. Thirteen plates.

22(a) LYON, B. and VERHULST, A., *Mediaeval Finance. A Comparison of Financial Institutions in Northwestern Europe* (Bruges, De Tempel, 1967) 101 pp.
Includes a description of the comital system of accounting and a comparison of the financial records of Flanders and England. See also Verhulst, A. and Gysseling, M., *Le Compte Général de 1187, connu sous le nom de "Gros Brief", et les institutions financières du comté de Flandre au XII[e] siècle* (Brussels, Palais des Académies, 1962) 238 pp.

23(a) MOST, K. S., 'Sombart's Propositions Revisited', *Accounting Review*, XLVII (1972) 722-34.
An outline of Sombart's position and Yamey's criticisms (items 32, 33) with Most's own interpretation of the evidence.

24(a) ODDY, D. J., 'Ealing Business History Seminar: Accounting in the Nineteenth Century', *Business History*, XVI (1974) 175-182.
Includes a lengthy summary of a paper by G. A. Lee (item 298(b)).

24(b) O'KEEFFE, B., *Development of accounting ideas: genesis — 1932. A collection of articles ....* (Footscray, Victoria: Footscray Institute of Technology, 1973) [Photographic reproductions].
Includes articles by de Roover, Kats, Peragallo, Yamey and others.

27(a) PREVITS, G. J., 'In Pursuit of Historical Knowledge — A View from America', *Indian Journal of Accounting*, III (1973) 36-45.
Argues the importance of 'was' as well as 'is' and 'ought to be' in accounting education.

28(a) STEVELINCK, E. (ed.), *La comptabilité à travers les âges* (Brussels, Bibliothèque Royale Albert I[er], 1970) 240 pp. + 6 plates.
Catalogue of the exhibition organised on the occasion of the first international conference of accounting historians. Nine page introduction by Raymond De Roover. Very detailed annotations by the editor with excellent bibliographic references.

30(a) WELLS, M. C., 'A Revolution in Accounting Thought?', *Accounting Review*, LI (1976) 471-82.
The implications for accounting of Kuhn's theory of scientific revolutions.

36(b) YAMEY, B. S., 'Notes on Double-Entry Bookkeeping and Economic Progress', *Journal of European Economic History*, IV (1975) 717-723.
Casts doubt on the conclusions of Lane, Kellenbenz and others on the economic significance of the double entry system.

B. ANCIENT ACCOUNTING

37(a) COSTOUROS, G. J., 'Development of Banking and Related Bookkeeping Techniques in Ancient Greece (400-300 B.C.)', *International Journal of Accounting*, VIII (1973) 75-81.

38(a) FU, P., "Governmental Accounting in China during the Chou Dynasty (1122 B.C.-256 B.C.)", *Journal of Accounting Research*, IX (1971) 40-51.
The philosophy and pattern of accounting in China was largely determined during the Chou dynasty.

38(b) GLAUTIER, M. W. E., 'Roman Accounting: the Influence of Socioeconomic Factors on the Development of Accounting Concepts', *International Journal of Accounting*, VIII (1973) 59-74.
Concludes that the Roman contribution to the progress made towards the development of modern accounting techniques was not significant.

43(a) KEISTER, O. R., 'The Influence of Mesopotamian Record-keeping', *Abacus*, VI (1970) 169-181.
A discussion of the earliest commercial record-keeping developments.

C. EARLY ITALIAN ACCOUNTING

50(a) ANTONI, T., *Il Libro dei Bilanci di una Azienda Mercantile del Trecento (il libro della Ragione di Biagio e Guido Delle Broche, dal 1326 al 1356)* (Pisa, Colombo Cursi, 1967) 280 pp.
Accounting in 14th century Pisa; on pp. 137-275 the accounting documents are reproduced, transcribed and discussed.

50(b) ANTONI, T., *Fabio Besta. Contributo alla Conoscenza degli Studi Aziendali* (Pisa, Colombo Cursi, 1970) 179 pp.
The life, works and thought of a leading accountant and accounting historian. A list of Besta's principal works is given on pp. 58-60.

50(c) ANTONI, T., 'Costi e Prezzi del Ferro in Pisa alla Fine del Trecento', *Bollettino Storico Pisano,* XL-XLI (1971-72) 75-105.

50(d) ANTONI, T., 'Le scuole di abaco a Pisa nel secolo XIV', *Economia e Storia*, (1973) 333-338.

50(e) ANTONI, T., 'Tre precursori nella storia della ragioneria: Leonardo Fibonacci, Luca Pacioli, Fabio Besta', *Revista Italiana di Ragioneria e di Economia Azendale*, (1974) 148-166.

50(f) CLARKE, D. A., 'The first edition of Pacioli's "Summa de arithmetica" (Venice, Paganinus de Paganinis, 1494)', *Gutenberg - Jahrbuch*, (1974) 90-92.
A discussion of the printing dates of the three settings.

55(a) DE ROOVER, R., *Business, Banking, and Economic Thought in Late Medieval and Early Modern Europe* (ed. J. Kirshner) (Chicago: University of Chicago Press, 1974) viii + 833 pp.
Includes reprints of articles on accounting history in *Business History Review* (1958) (item 65), *Speculum* (1941) (item 246) and Littleton and Yamey (1956) (item 20); also a bibliography of De Roover's writings.

62(a) LEE, G. A., 'The Oldest European Account Book: a Florentine Bank Ledger of 1211', *Nottingham Mediaeval Studies*, XVI (1972) 28-60.
A translation with introduction and notes followed by a discussion of the place of the ledger in the history of accounting.

62(b) LEE, G. A., 'The Florentine Bank Ledger Fragments of 1211: Some New Insights', *Journal of Accounting Research*, XI (1973) 47-61.
A review of the main findings from the fragments translated in item 62(a).

62(c) LEE, G. A., 'The Development of Italian Bookkeeping 1211-1300', *Abacus*, IX (1973) 137-155.
Traces the lines of evolution from the ledger of 1211 to the emergence of double entry, or approximations thereto, about 1300.

63(a) MELIS, F., *Documenti per la storia economica dei secoli XIII-XIV, con una nota di Paleografia Commerciale e cura di Elena Cecchi* (Florence, Leo Olschki, 1972) 628 pp.
Includes many documents (reproduced and transcribed) of interest to accounting historians.

67(a) VIGANÓ, E., *La Tecnica del Bilancio di Verificazione nell'Opera dei Primi Trattatisti* (ed. Amodeo, D.) (Naples, Francesco Giannini & Figli, 1968).
Discussed in Peragallo, E., "A Commentary on Viganó's Historical Development of Ledger Balancing Procedures, Adjustments and Financial Statements During the Fifteenth, Sixteenth, and Seventeenth Centuries, *Accounting Review*, XLVI (1971) 529-534.

67(b) YAMEY, B. S., 'Luca Pacioli's "Scuola Perfetta": A bibliographical puzzle', *Gutenberg - Jahrbuch*, (1974) 110-116.
A discussion of Pacioli's supposed book of 1504.

67(c) YAMEY, B. S., 'Two Typographical Ambiguities in Pacioli's "Summa" and the Difficulties of its Translators', *Gutenberg - Jahrbuch*, (1976) 156-161.

E. EARLY FRENCH ACCOUNTING

88(a) HARRIS, R. D., 'Necker's *Compte Rendu* of 1781: A Reconsideration', *Journal of Modern History*, XLII (1970) 161-183.
A discussion of the first public accounting of the royal finances of the French monarchy.

89(a) JENNINGS, R. M., and TROUT, A. P., 'Internal Control — Public Finance in 17th Century France', *Journal of European Economic History*, I (1972) 647-660.

91(a) MOUREAUX, P., *Les comptes d'une société charbonnière à la fin de l' Ancien Régime. (La société à Haine-St-Pierre - La Hestre)* (Brussels, Palais des Académies, 1969) 249 pp.
Late 18th century coal mining accounts from Hainaut.

91(b) PIERARD, C. (ed.), *Les plus anciens comptes de la ville de Mons (1279-1356)* Tome 1 (Brussels, Palais des Académies, 1971) xlvi + 785 pp. Tome 2 (Brussels, Palais des Académies, 1973) 213 pp (indexes) + 5 pp of plates.
A reproduction and brief discussion of the accounts of the *comptes de la massarderie* and *comptes échevinaux.*

F. EARLY ENGLISH AND SCOTTISH ACCOUNTING

(i) Manorial, Household and Parochial Accounts

95(b) DAVIES, R. R., 'Baronial Accounts, Incomes and Arrears in the Later Middle Ages', *Economic History Review*, 2nd ser. XXI (1968) 211-229.
Stresses the importance of the account of arrears and the "valor" (digest of accounts). For an example of the latter see Jack R. I. (ed.), *The Grey of Ruthin Valor* (Sydney University Press, 1965) ix + 158 pp.

99(a) HARVEY, P. D. A., 'Agricultural Treatises and Manorial Accounting in Medieval England', *Agricultural History Review*, XX (1972) 170-182.
A detailed review of Oschinsky (item 111(b)).

99(b) HARVEY, P. D. A., 'The Pipe Rolls and the Adoption of Demesne Farming in England', *Economic History Review*, 2nd ser. XXVII (1974) 345-359.
Some problems in interpreting medieval accounts.

100(a) HOCKEY, S. F. (editor), *The Account-Book of Beaulieu Abbey* (London, Royal Historical Society, Camden Fourth Series, vol 16, 1975) vi + 348 pp. HOCKEY, S. F. (editor) (with an introduction by HARVEY, P. D. A. and HOCKEY, S. F.), *The Beaulieu Cartulary* (Southampton University Press, Southampton Records Series, vol 17, 1974) lxix + 276 pp.

The 13th century account-book is described by Harvey as "perhaps the most extraordinary monument to survive of the early history of accounting in England: a volume containing a specimen annual account not only for each of the abbeys, manors and granges, but also for every officer or servant who had funds entrusted to his care, some fifty different accounts in all, interspersed with rules and tables for checking the accuracy of the accounts and the honesty of the officials" (*Cartulary*, p. xvi) but in his opinion that there is no doubt that these are "real, not artificial, accounts" (*Account-Book*, p.9).

107(a) MOST, K. S., 'New Light on Mediaeval Manorial Accounts', *Accountant*, CLX (1969) 119-21.
Some 'modern' aspects of manorial accounting.

111(b) OSCHINSKY, D., *Walter of Henley and other Treatises on Estate Management and Accounting* (Oxford, Clarendon Press, 1971) xxiv + 504 pp.
Includes a valuable chapter on Treatises on Accounting and an appendix containing extracts (in Latin) from such manuscript treatises.

111(c) OSCHINSKY, D., 'Notes on the Editing and Interpretation of Estate Accounts: Part I', *Archives* IX, (1969) 84-89, Part II, IX (1970) 142-152.
A clear and authoritative discussion with useful footnote references. Points out the need for a national catalogue of extant estate accounts.

113(a) ROSS, R., 'The Accounts of the Stewards of the Talbot Household at Blakemere: an Example of Medieval Accounting Practice', *Abacus*, IV (1968) 51-72.
An illuminating article; the footnotes contain many useful references.

114(a) SEARLE, E. and ROSS, R., *Accounts of the Cellarers of Battle Abbey 1275-1513* (Sydney University Press, 1967) 199 pp.
Contains a bibliography of printed monastic domestic accounts.

(ii) Mercantile Accounts

124(b) CROSSLEY, D. W. (ed.), *Sydney Ironworks Accounts 1541-1573* (London, Royal Historical Society, Camden Fourth Series, vol. 15, 1975) 269 pp.
The accounts were kept on the charge and discharge system and include stock accounts and calculations of 'clear gain'.

128(a) HANHAM, A., ' "Make a Careful Examination" — Some Fraudulent Accounts in the Cely Papers', *Speculum*, XCVIII (1973) 313-324.
Fraud in the accounts of a 15th century English wool merchant.

138(a) KOJIMA, O. and YAMEY, B. S. (eds.), *"A notable and very excellente woorke"* (Kyoto, Daigakudo Shoten, 1975) 73 pp. + unpaged reproduction and illustrations.
A reproduction of the English edition of Ympyn's book followed by appendices by Yamey and Kojima: a translation of extracts from the model set of books in the French edition missing from the only surviving copy of the English edition (Yamey); Ympyn and his works (Kojima); the authorship and sources of the *Nieuwe Instructie* (Yamey).

139(a) McKENZIE, D. F. and ROSS, J. C. (eds.), *A Ledger of Charles Ackers, Printer of the London Magazine*, (Oxford University Press for Oxford Bibliographical Society, 1968) ix + 331 pp.

140(a) MEE, G., *Aristocratic Enterprise. The Fitzwilliam Industrial Undertakings 1795-1857* (Glasgow, Blackie, 1975) 222 pp.
Pages 87-93 and 194-205 are of interest to accounting historians.

141(a) MEPHAM, M. J. and STONE, W. E., 'John Mair, M. A.: Author of the First Classic Book-keeping Series', *Accounting and Business Research* (Spring 1977) 128-134.

141(b) PALMER, F. A., *The Blacksmith's Ledgers of the Hedges Family of Bucklebury. Berks., 1736-73* (University of Reading, Institute of Agricultural History Research Paper, No. 2, 1970) 12 pp.

141(c) PARKER, R. H., 'The First Scottish Book on Accounting: Robert Colinson's Idea Rationaria (1683)', *Accountant's Magazine*, LXXVIII (1974) 358-61.
Includes a reproduction of the title page; also published as pp. 72-78 of item 325(a).

144(a) RAYBOULD, T. J., 'Systems of Management and Administration on the Dudley Estates 1774-1833', *Business History* X (1968) 1-11.
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146(a) TAKATERA, S., 'Early Experiences of the British Balance Sheet', *Kyoto University Economic Review*, XXXVII (1967) 34-47.
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The text of the ledger (which was kept in double entry) is on pp. 30-317. The introduction includes a section on "accountancy as shown in the ledger". See also item 147.

148(a) WINJUM, J. O., 'The Journal of Thomas Gresham', *Accounting Review*, XLVI (1971) 149-155.
Gresham's journal is the earliest surviving example of double entry practice in England.

148(b) WINJUM, J. O., 'Accounting in its Age of Stagnation', *Accounting Review*, XLV (1970) 743-761.
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148(c) WINJUM, J. O., 'Accounting and the Rise of Capitalism: An Accountant's View', *Journal of Accounting Research*, IX (1971) 333-50.
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148(d) WINJUM, J. O., *The Role of Accounting in the Economic Development of England: 1500-1750* (Urbana, Ill., Center for International Education and Research in Accounting, 1972) 252 pp.
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157(a) YAMEY, B. S., 'Closing the Ledger', *Accounting and Business Research*, I (1970) 71-77.
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(iii) Government Accounts

159(a) COLVIN, H. M. (ed.), *Building Accounts of King Henry III* (Oxford, Clarendon Press, 1971) xvi + 472 pp.
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166(a) McINNES, C. T. (ed.), *Accounts of the Treasurer of Scotland v.12 1566-1574* (Edinburgh, H.M.S.O., 1970) 529 pp.
The first 11 volumes were published 1877-1916 as *Accounts of the Lord High Treasurer of Scotland.*

166(b) MURRAY, A. L., 'The pre-Union Records of the Scottish Exchequer', pp. 169-183 of Ranger, F., (ed.), *Prisca Munimenta* (University of London Press, 1973).
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166(c) MURRAY, A. L., 'The Comptroller, 1425-1488', *Scottish Historical Review*, LII (1973) 1-29.
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171(a) STONE, W. E., 'The Tally: An Ancient Accounting Instrument', *Abacus*, XI (1975), 49-57.
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H. EARLY GERMAN AND AUSTRIAN ACCOUNTING

177(a) KELLENBENZ, H., 'Der Stand der Buchhaltung in Oberdeutschland zur Zeit der Fugger und Welser', *Die Wirschaftprufüng*, XXII (1970) 621-6.
Translated by R. H. Homburger as "The State of Bookkeeping in Upper Germany at the time of the Fuggers and Welsers," *Academy of Accounting Historians Working Paper no. 7.*

177(b) KORZENDORFER, A., and WERNER, Th. G., 'Fragment des Schuldbuches der Augsburger Welser von 1554 bis 1560', *Scripta Mercaturae* (I/2, 1969) 109-151.
The text covers pp. 132-149. There is an introduction by Th. G. Werner and an English summary. The 'Schuldbuch' has survived in an incomplete form; it was kept in double entry.

179(a) ROSSMANN, K., 'Bruchstücke aus Handlungsbüchern von 1508 der Welser-Vöhlinschen Handelsgesellschaft in Augsburg, *Scripta Mercaturae* (I/1967) 48-56.
Fragments of an early 16th century account book.

184(a) WINKEL, H., 'Die Entwicklung des Kassen - und Rechnungswesens im Fürstlichen Hause Thurn und Taxis im 19. Jahrhundert, *Scripta Mercaturae,* (I/1973) 3-19.
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I. EARLY AMERICAN ACCOUNTING

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Shows how a prominent early 19th century American merchant kept his books and the uses to which he put the information derived from them.

188(b) COLEMAN, A. R., SHENKIR, W. G., and STONE, W. E., 'Accounting in Colonial Virginia', *Journal of Accountancy*, CXXXVIII (July 1974) 32-43.
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188(c) GAMBINO, A. J. and PALMER, J. R., 'American Accounting Practices — Circa 1776', *Management Accounting* (U.S.A.), LVII (June 1976) 53-56.
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190(a) JOHNSON, H. V., 'Merchant-Accountants', *Management Accounting (USA),* LVIII (October 1976) 57-61.
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190(b) KELLEY, E. M., 'Financial accounting and reporting: from simple bookkeeping to being awash in a sea of disclosure', *Financial Executive* (July 1976) 12-22.

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190(c) KISTLER, L. H. and JENNINGS, R. M., 'An Accounting Primer Circa 1831', *Accounting Review*, XLIV (1969) 168-173.

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190(d) KREISER, L., 'Early American Accounting', *Journal of Accountancy*, CXLII (July 1976) 77-80.

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190(e) MERINO, B. D., 'Development of American Accounting from 1876 to 1976', *C.P.A. Journal*, XLVI (June 1976) 31-36.

A continuation of Previts' article (item 190[g]).

190(f) NATIONAL ASSOCIATION OF ACCOUNTANTS, *Management Accounting in Colonial America* (New York, National Association of Accountants, 1976).

190(g) PREVITS, G. J., 'Origins of American Accounting', *C.P.A. Journal*, XLVI (May 1976) 13-17.

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190(h) PREVITS, G. J., 'The Accountant in our History: a Bicentennial Overview', *Journal of Accountancy*, CXLII (July 1976) 45-51.

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190(i) RILEY, E. M., 'Business Success in Eighteenth Century Williamsburg', *Financial Executive*, XXXVI (1968) 35-8, 40-1.

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190(j) SHENKIR, W. G., WELSCH, G. A., and BEAR, J. A., Jr., 'Thomas Jefferson: Management Accountant', *Journal of Accountancy*, CXXXIII (April 1972) 33-47.

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190(k) STONE, W. E., 'Accounting Records reveal History: the Virginia Cobbler', *Journal of Accountancy*, CXLII (July 1976) 60-66.

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J. EARLY AUSTRALIAN ACCOUNTING

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K. EARLY JAPANESE ACCOUNTING

199(a) NISHIKAWA, K., *Stories of the History of Book-keeping in Japan (Nihon Boki Shidan)* (Tokyo, Dobunkan Publishing Company, 1971) 427 pp. [in Japanese].

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200(a) TAKATERA, S., 'Introduction and Diffusion of Depreciation Accounting in Japan, 1875-1903', *Kyoto University Economic Review*, XLV (1975) 14-22.

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M. PROFESSIONAL ACCOUNTANCY

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An example of a history of an American accountancy firm.

204(a) BIRKETT, W. P. and WALKER, R. G., 'Professional Ideas on Research in Accounting: Australia, 1930-49', *Abacus*, VIII (1972) 35-60.
Concludes that because of confused ideas about the nature of research the product of professional investment in research in Australia was minimal.

204(b) BYRD, K. F., 'A Century of Professional Development', *Accountant*, CLXXI (1974) 431-434.
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204(c) CAREY, J. L., *The Rise of the Accounting Profession. Vol. I. From Technician to Professional 1896-1936, Vol. II To Responsibility and Authority 1937-1969* (New York, American Institute of Certified Public Accountants, 1969 and 1970) xviii + 387 pp; xvi + 545 pp.
In effect, a house history of the A.I.C.P.A. and its predecessor bodies. Contains much information not available elsewhere. See also Carey's The C.P.A.'s Professional Heritage', Parts I and II, *Academy of Accounting Historians Working Papers,* Nos 1 and 5; and Previts, G. J., 'A Chronological Index for John L. Carey's *The Rise of the Accounting Profession*', ibid, nos. 6 and 8, and the latter's "A Chronology of Professional Accounting in America", *Kaikei*, CVI (1974).

204(d) CAREY, J. L., 'Origins of Modern Financial Reporting', *Journal of Accountancy*, CXXVIII (September 1969) 35-48.
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216(b) KAPADIA, G. P., *History of the Accountancy Profession in India* (New Delhi, The Institute of Chartered Accountants of India, 1973) xv + 472 pp.
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227(b) SULLIVAN, J. P., 'Accountant as Consultant: a Historical Review', *Journal of Accountancy*, CXXXVIII (1974) 92-5.
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227(c) WINSBURY, R., *Thomson McLintock & Co. — The First Hundred Years* (London, Thomson McLintock & Co., 1977) xi + 164 pp.
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233(b) LEE, T. A., 'The Historical Development of Internal Control from the Earliest Times to the End of the Seventeenth Century', *Journal of Accounting Research*, IX (1971) 150-7.
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237(a) TYSON, R. E., 'The Failure of the City of Glasgow Bank and the Rise of Independent Auditing', *Accountant's Magazine*, LXXVIII (1974) 126-131.
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O. COST AND MANAGEMENT ACCOUNTING

240(a) BERGSTROM, K. H., 'Looking Back', *Management Accounting* (U.S.A.), LV (March 1974) 47-50.
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241(a) CHANNON, G., 'A Nineteenth Century Investment Decision: the Midland Railway's London Extension', *Economic History Review*, 2nd ser. XXV (1972) 448-470.
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242(a) CHATFIELD, M., 'The Origins of Cost Accounting', *Management Accounting* (U.S.A.), LII (June 1971) 11-14.
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248(a) ELNICKI, R. A., 'The Genesis of Management Accounting', *Management Accounting* (U.S.A.), LII (April 1971) 15-17.
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248(b) FELLER, R. E., 'Early Contributions to Cost Accounting', *Management Accounting* (U.S.A.), LV (December 1973) 12-16, 27.
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248(c) FREEAR, J., 'Robert Loder, Jacobean Management Accountant', *Abacus,* VI (1970) 25-38.
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249(a) GOULD, J. R., 'Opportunity Cost: The London Tradition', pp. 91-107 of Edey, H. and Yamey, B. S. (eds.), *Debits, Credits, Finance and Profits* (London, Sweet & Maxwell, 1974).
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250(b) HUME, L. J., 'The Development of Industrial Accounting: The Benthams' Contribution', *Journal of Accounting Research*, VIII (1970) 21-33.
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251(b) JOHNSON, H. T., 'Management Accounting in an Early Integrated Industrial: E. I. du Pont de Nemours Powder Company, 1903-1912, *Business History Review*, XLIX (1975) 184-204.
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252(a) McKENDRICK, N., 'Josiah Wedgewood and Cost Accounting in the Industrial Revolution', *Economic History Review*, 2nd ser., XXIII (1970) 45-67.
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252(b) McANLY, H. T., 'How Lifo Began', *Management Accounting* (U.S.A.), LVI (1975) 24-26.
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255(a) NATIONAL ASSOCIATION OF ACCOUNTANTS, *50 years, 1919-1969* (New York, National Association of Accountants, 1969).

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256(b) PARKER, R. H., 'Discounted Cash Flow in Historical Perspective', *Journal of Accounting Research*, VI (1968) 58-71.
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261(a) SOWELL, E. M., *The Evolution of the Theories and Techniques of Standard Costs* (University of Alabama Press, 1973) X + 540 pp.
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261(b) STEVELINCK, E., 'La comptabilité industrielle au xviii^{e} siècle', *La vie au bureau* (1976) 254-265.
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262(a) STONE, W. E., 'An Early English Cotton Mill Cost Accounting System: Charlton Mills, 1810-1889', *Accounting and Business Research*, IV (1973) 71-8.
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266(a) WELLS, M. C., *Accounting for Common Costs* (Urbana, Ill.: International Center for Education and Research in Accounting, forthcoming).

P. CORPORATE ACCOUNTING

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269(b) BENSON, H., 'The Story of International Accounting Standards', *Accountancy*, LXXXVII (July 1976) 34-39.
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269(d) BROWN, C. D., *The Emergence of Income Reporting: An Historical Study* (Michigan State University Business Studies, 1971) 93 pp.
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269(e) BURNS, T. J. (ed.), *Accounting in Transition: Oral Histories of Recent U.S. Experience* (Columbus, Ohio, College of Administrative Science, The Ohio State University, 1974) 305 pp.
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270(a) CHATOV, R., *Corporate Financial Reporting — Public or Private Control?* (New York, The Free Press, 1975) 363 pp.
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271(a) DAVIES, P. N. and BOURN, A. M., 'Lord Kylsant and the Royal Mail', *Business History*, XIV (1972) 102-23.
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273(a) GIBSON, R. W., *Disclosure by Australian Companies* (Melbourne University Press, 1971) xii + 354 pp.
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273(b) EDWARDS, J. R., 'The Accounting Profession and Disclosure in Published Reports, 1925-1935', *Accounting and Business Research,* VI (1976) 289-303.

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275(a) HODGKINS, P., 'Unilever — The First 21 Years', *Coopers Journal*, no. 22 (September 1973) 15-19.
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277(a) KATANO, I., *Nihon Zaimushohyo Seido no Tenkai* [in Japanese] (Tokyo, Dobun-Kan, 1968) 269 pp.
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277(d) MANLEY, P. S., 'Gerard Lee Bevan and the City Equitable Companies', *Abacus*, IX (1973) 107-115.
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277(e) PARRISH, M. E., *Securities Regulation and the New Deal* (New Haven, Yale University Press, 1970) 270 pp.
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277(f) ROSEN, L. S. and DE COSTER, D. T., '"Funds Statements": A Historical Perspective', *Accounting Review*, XLIV (1969) 124-136.
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277(g) PREVITS, G. J., 'American Accountancy, An Overview, 1900-1925', *Business and Economic History*, 2nd ser. IV (1975) 109-119.

277(h) ROBERTS, A. R., 'American Accountancy, An Overview, 1875-1900', *Business and Economic History*, 2nd ser. IV (1975) 98-108.

278(a) WATZLAFF, R. H., 'The Bubble Act of 1720', *Abacus*, VII (1971) 8-28.
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S. FINANCIAL ACCOUNTING THEORY

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293(c) BRIEF, R. P. (ed.), *The Late Nineteenth Century Debate over Depreciation, Capital and Income* (New York, Arno Press, 1976).
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293(d) BRIEF, R. P., *Nineteenth Century Capital Accounting and Business Investment* (New York, Arno Press, 1976).
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293(e) BRIEF, R. P., 'Depreciation Theory in Historical Perspective', *Accountant*, CLXIII (1970) 737-39.
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295(a) CLARKE, F. L., 'A Closer Look at Sweeney's Stabilised Accounting Proposals', *Accounting and Business Research* (Autumn, 1976) 264-275.

296(a) ELVIK, K. O., 'Acquisition Cost Versus Revaluation: a Historical Perspective', *International Journal of Accounting*, IX (1974) 155-167.
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297(a) HORN, C. A., 'Changing Attitudes to Obsolescence and Depreciation', *Accountant*, CLVIII (1968) 619-622.
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298(a) KITCHEN, J., 'Lawrence Dicksee, Depreciation, and the Double-Account System', pp. 109-130 of Edey, H. and Yamey, B. S. (eds.), *Debits, Credits, Finance and Profits* (London, Sweet & Maxwell, 1974).
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298(b) LEE, G. A., 'The Concept of Profit in British Accounting, 1760-1900', *Business History Review*, XLIX (1975) 6-36.
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INDEX OF AUTHORS

To item numbers in the Bibliography

*Thomas Jones**
NEW YORK CITY

ANALYSIS OF BOOKKEEPING AS A BRANCH OF GENERAL EDUCATION (1842)

Abstract: These thoughts of an early American accounting author reflect the frustrations encountered in attempting to establish the process of teaching account keeping within the general scheme of education. This item by Jones first appeared in 1842 as an article in a New York business periodical. It represents one of the first and most complete examples of ante-bellum American accounting thought as depicted in the financial press of that era.

There is perhaps no department of commercial education that claims so urgently the serious attention of the mercantile community as that of bookkeeping. We enter upon the subject with a full knowledge of the obstinate prejudice that has hitherto withstood all efforts towards promoting a general system of school instruction in the arrangement of accounts. Wherever the subject has been advanced, we have, until within a short period, uniformly heard the one reply, "Bookkeeping can only be acquired by practice; you may teach a little theory, but the practice is so different, that we have more trouble with a beginner, who has been taught in school, than with one who has never studied it." Are we then to adopt the conclusions to which these premises must inevitably drive us? Of the number of clerks employed in business, perhaps about one in ten has opportunity of practice; are we to conclude that the other nine tenths have no remedy for ignorance with regard to a subject which so deeply concerns their interests? Are that portion who are to become merchants to despair of attaining the necessary knowledge of

*Thomas Jones (1804-1889) was a pioneer American accounting teacher and text writer. He has been noted for being an early advocate of the need to view the accounting process as directed toward the production of financial reports — an emphasis which has caused him to be identified as the first "modern" American accounting writer.

This article appeared in *Hunt's Merchant's Magazine*, (December, 1842, pp. 513-526) a monthly business periodical published in New York City. It is one of the earliest known accounting articles found in American business literature. For a study of Jones' works see "The Contributions of Thomas Jones and Benjamin Franklin Foster" by H. P. Hughes, in the *Bicentennial Edition of Collected Papers*, American Accounting Association Southeast-Regional Group, 1976, pp. 93-98.

supervising their own affairs? And so long as these opinions prevail, are we to wonder if wholesale frauds are practiced, — are allowed to pass undetected for years, and that too in public institutions? While every other subject, in the whole range of science, is universally admitted to be beyond comparison most successfully acquired through having its elements carefully laid down and settled in language selected with the most scrupulous care, shall we conclude that bookkeeping is incapable of explanation? Or shall we not rather adopt the alternative of inquiring what more can be done in the analysis and arrangement of its elementary principles? — whether in the various systems that have been tried, the instruction has been built on a sure foundation; that is, whether the mind has been directed in the outset to those features of the subject which are at once seen to be conformable to some general and self-evident truths?

It is not our purpose, however, to enter upon any extended or abstract discussion involving the more general principles of the philosophy of teaching. We propose to give no less than a practical demonstration that the principles of double-entry can be made as familiar to schoolboys as the first rules of arithmetic. In order to effect this, and to show beyond dispute what constitutes true elementary principles of the subject, we must give a brief example of Day-book, Journal, and Ledger, and then proceed with our analysis.

DAY BOOK.

New York, November 1st, 1842.

Commenced business this day with a capital of		8,000.00
Of which we have in Cash	3,000.00	
In notes and accept'ces of various individuals, (Bills Receiv.)	4,000.00	
James Brown owes us on account	1,000.00	
2		
Bought Merchandise amounting per Invoice to	2,000.00	
For which we have paid in Cash		2,000.00
3		
Bought Merchandise amounting per Invoice to	1,800.00	
For which we are indebted to John Thompson		1,800.00
4		
Bought Merchandise amounting per Invoice to	2,500.00	
For which we issued our note in payment		2,500.00
5		
Bought Merchandise amounting per Invoice to	1,500.00	
In payment for which we gave our note for		750.00
And paid the balance in Cash		750.00

DAY BOOK.

New York, November 10, 1842.—*Continued.*

6		
Sold Merchandise amounting per Invoice to		3,000.00
For which we received in Cash	3,000.00	
7		
Sold Merchandise amounting per invoice to	2,500.00	
For which we received the buyer's note for	1,800.00	
And the balance in Cash	700.00	
8		
Sold Merchandise amounting to		1,300.00
For which the buyer, John Thompson, owes us	1,300.00	
9		
Bought the schooner Wave for	4,000.00	
For which we gave in payment our note for		4,000.00
10		
Bought Merchandise amounting to	3,000.00	
In payment for which we gave as follows:—		
John King's note for 2,000		
William Harris's for 1,000		3,000.00
The discount allowed on the above notes was	35.00	
Which discount was paid in Cash		35.00
11		
The schooner Wave has cost for repairs	350.00	
Which he have paid in Cash		350.00
12		
We have negotiated (or disposed of) Henry Pell's note for		1,000.00
And allowed a discount (which is a loss of)	15.00	
We received in Cash	985.00	
13		
Sundry acc'ts rendered to us for store expenses,		
viz:—Coal bill	15.00	
" " Carpenter's bill,	25.00	
" " Painter's bill,	10.00	
All of which we have paid in Cash,		50.00
14		
The schooner Wave has produced for freight		200.00
Which we have received in Cash	200.00	
15		
We have redeemed our note of 4th instant for	2,500.00	
On which we are allowed a discount		
for the time it has to run		15.00
We paid for said note in Cash		2,485.00
16		
Bought Merchandise amounting to	2,800.00	
For which we are indebted to John Thompson		2,800.00
17		
We have given our note to John Thompson for		2,800.00
For which he is accountable to us	2,800.00	
18		
Sold Merchandise for		1,500.00
For which we received the buyer's note	1,500.00	

DAY BOOK.
New York, November 10, 1842.—*Continued.*

——— 19 ———			
An account is rendered us for Blank Books, &c		57.00	
Which we have paid in Cash			57.00
——— 20 ———			
We have this day taken an account of Stock, and value Merchandise unsold at	8,500.00		
We value the schooner Wave at	4,300.00		

N. B.—Should some of our readers be disposed to object to the language of the above entries as not being sufficiently mercantile, we beg to observe that they are not given as such. We think it best that the pupil should be told in the fullest and plainest way possible what has taken place. When he understands the theory of debit and credit, he will soon acquire the best forms of expression.

JOURNAL.
New York, November 1st, 1842.

	Debits.	*Credits.*
Cash	3,000.00	
Bills Receivable	4,000.00	
James Brown	1,000.00	
Stock		8,000.00
Reasons for the above Entries.—The debit of the Cash account must contain the Cash on hand beginning, and all receipts.		
2.—The debit of Bills Receivable account must contain all such paper on hand beginning, and all received since.		
3.—Each person's account must be charged with all that he is indebted.		
4.—Stock account must be credited with the capital, (see Ledger.)		
Merchandise	2,000.00	
Cash		2,000.00
Reasons.—Merchandise account must be debited with all it costs.		
Cash account must be credited with all payments.		

The above examples will be sufficient to show that as the reason for each Journal entry is drawn from the account in the Ledger to which it relates, it would be useless for the learner to attempt to understand the Journal until he is made fully acquainted with all the accounts in the Ledger: he will then see the reasons for each entry, as fully as he could desire, without explanation.

The Journal then, is merely an expedient to convey the proper entries for every transaction, to the Ledger, each item being assigned to its respective account, whether debit or credit. We therefore proceed to the Ledger:—

LEDGER.

CASH.

Received.				Paid.			
1842				1842			
Nov.	1	On hand commencing ...	3,000.00	Nov.	2	Paid	2,000.00
"	6	Received	3,000.00	"	5	"	750.00
"	7	"	700.00	"	10	"	350.00
"	12	"	985.00	"	11	"	35.00
"	14	"	200.00	"	13	"	50.00
				"	15	"	2,485.00
				"	19	"	57.00
		Total received $7,885				Total paid $5,727	

BILLS RECEIVABLE.

Received.				Disposed of.			
Nov.	1	On hand commencing ...	4,000.00	Nov.	11	Disposed of 2 notes	3,000.00
"	7	Received	1,800.00	"	12	" "	1,000.00
"	18	"	1,500.00				
		Total received $7,300				Tot. dispos'd of $4,000	

BILLS PAYABLE.

Redeemed.				Issued.			
Nov.	15	Redeemed	2,500.00	Nov.	4	Issued	2,500.00
				"	5	"	750.00
				"	9	"	4,000.00
				"	17	"	2,800.00
						Total issued $10,050	

JOHN THOMPSON.

Dr.				Cr.			
Nov.	8	....	1,300.00	Nov.	3	....	1,800.00
"	17	....	2,800.00	"	16	....	2,800.00
		Total $4,100				Total $4,600	

JAMES BROWN.

Dr.				Cr.			
Nov.	1	....	1,000.00				

RESOURCES.		LIABILITIES.	
Merchandise, valued at	8,500.00	Bills Payable unredeemed ..	7,550.00
Schooner Wave	4,300.00	John Thompson, owing to him	500.00
Cash on hand	2,158.00	Total	8,050.00
Bills Receivable on hand	3,300.00	$19,258.00	
James Brown owes us	1,000.00	8,050.00	
Total	19,258.00	Present Worth $11,208.00	

LEDGER.

STOCK.

			1842		
			Nov. 1	Capital commencing	8,000.00

MERCHANDISE.

Outlay.					*Returns.*
1842			1842		
Nov. 2	....	2,000.00	Nov. 6	....	3,000.00
" 3	....	1,800.00	" 7	....	2,500.00
" 4	....	2,500.00	" 8	....	1,300.00
" 5	....	1,500.00	" 18	....	1,500.00
" 10	....	3,000.00	" 20	Value of goods unsold	8,500.00
" 16	....	2,800.00		Total returns ..	16,800.00
	Total cost	13,600.00		$16,800.00	
				13,600.00	
				Profit $3,200.00	

SCHOONER WAVE.

Outlay.					*Returns.*
1842			1842		
Nov. 9	....	4,000.00	Nov. 14	....	200.00
" 11	....	350.00	" 20	Unsold, and valued at	4,300.00
	Total cost	4,350.00		Total returns ..	4,500.00

STORE EXPENSES.

Outlay.					
1842					
Nov. 13	....	50.00			
" 19	....	57.00			
	Total expenses.	107.00			

PROFIT AND LOSS.

Losses.					*Gains.*
1842			1842		
Nov. 10	....	35.00	Nov. 15		15.00
" 12	....	15.00		By merchandise ..	3,200.00
	To store expenses.	107.00		" schooner Wave	150.00
	Total loss	157.00		Total gain	3,365.00
				$3,365	
				157	
				3,208	
				Capital 8,000	
				Pres. Worth $11,208	

EXPLANATION OF THE LEDGER

The grand business of bookkeeping is to dispose of the matter of the Day-book in the form of accounts, which accounts collectively constitute a Ledger.

The Ledger is designed to show the financial position of the owner, either as regards his whole business or its several parts, each part having its own particular account.

Accounts are of two kinds, having two distinct objects; the one kind we denominate *Primary,* the other *Secondary accounts.*

The primary accounts constitute a single-entry Ledger.

The primary and secondary together constitute a double-entry ledger.

So if we had arranged the preceding day-book by single-entry, you would have had none of the secondary accounts in the ledger. Each account in the ledger may occupy a distinct folio; but we have arranged those of the same kind under each other, in order that you may see their analogy: and be careful not to confound the two kinds, for you will soon see that secondary accounts are duplicates of the primary, only the items are not placed in the same order of succession; so if you confound the two together, you may as well make two accounts against one person, and charge him with both.

The *primary accounts* are the *Cash Account, Bills Receivable, Bills Payable,* and the *accounts of individuals.*

All other accounts are *secondary.* This distincton is very easily remembered, therefore let it be carefully noticed.

Now before we proceed to describe the operations in the preceding ledger, let us consider what it is we desire to accomplish.

We have in the day-book a correct history of every transaction that has made the minutest change in the property or financial position of the concern, and we now wish to find out, after all these changes have taken place, what is our present worth.

A very little reflection will enable you to see that this can be accomplished in two different ways:—

1st. If we can find out what are our Resources and what our Liabilities, our present worth must be the difference between the two.

The primary accounts enable us to find out our Resources and Liabilities.

2d. If we can ascertain what we were worth when we commenced, and what we gained since, the sum will be our present worth, or if we lost, their difference.

The secondary accounts enable us to fulfil these latter conditions; and having our present worth derived from two distinct sources, we have presumptive evidence that all is right, and our books are said to balance.

We now proceed to show how we obtained the requisite results by the primary accounts.

In the debit or left hand column of the Cash account, you will find that we have set down every sum of cash received from the beginning. And in the right hand or credit column, we have set down every payment since that time.

We find the whole amount received, to be..........	7,885
And the whole amount paid......................	5,727
Hence we must now have on hand as Resources...	$2,158

In the debit column of the Bills Receivable account we have entered, as you will find by referring to the respective dates in the day-book, every note we received from the beginning, and in the credit column we have placed every one we disposed of.

The amount of notes we received, is..............	7,300
And the amount disposed of......................	4,000
Consequently we must have on hand as Resources—	$3,300

In the *credit* column of the Bills Payable account we have entered the amount of every note we issued from the beginning, and in the debit column we entered the amount of every one we redeemed or took up.

We find the total amount issued, to be...........	10,050
And the total amount redeemed.................	2,500
Consequently, we still have to redeem, which is an item of our Liabilities....................	$7,550

In the debit column of John Thompson's account we have entered every sum for which he became accountable to us, and in the credit column every sum for which we became accountable to him.

We find we are now accountable to him..........	4,600
And he is accountable to us.....................	4,100
Consequently we owe him, which is another item of our Liabilities..........................	$0,500
James Brown's account, being arranged on the same principle, shows that he is accountable to us, which is an item of our Resources........	$1,000

But the primary accounts do not show our whole Resources, unless all our property be sold; now, in this case, we find we have a ship and merchandise, which we set down as Resources according to present valuation.

Here, then, we have shown how you may under any circumstances get at your Resources and Liabilities by making these few accounts according to the above principles. Is there any difficulty to apprehend? Look at each account singly, and see if it is not the plainest way of telling the story that could be devised. Be assured that when the plan of these four accounts is familiar to you, there is no difficulty whatever; but if you attempt to make them before you know how they ought to be made, or for what purpose you are making them, you deserve to be defeated, and that you most undoubtedly will be.

THE LEDGER.

Secondary Accounts.—Having proceeded so far with our subject, without encountering any difficulty to discourage the student, let us examine one remaining part.

The secondary accounts, it will be remembered, were to show what we were worth at the outset, and how much we gained or lost since.

The remaining secondary accounts are titles we have fixed upon to describe the different portions of our business.

In the debit columns we have put all we laid out under each head, and if we expended any sum for which we had provided no particular head, we entered it under Profit and Loss. Thus we had no head for discount, and we entered it as loss. Hence the secondary accounts are made to show on the debit side all we expended or lost in the business or its parts, and the credit column shows the whole returns of the business or its parts; and after all the transactions have been recorded, we enter, as returns, the valuations of each part unsold, (see Merchandise and Ship;) we then take the gain or loss on each account, separately, and place all gain on the credit side of Profit and Loss, and all losses on the debit side.

Here then we find the total gain	3,365
And the total losses	0,157
The net gain is therefore	3,208
Which added to original capital	8,000
Makes our present worth	11,208

We have now shown all the accounts that are necessary to enable us to elicit from any transactions a statement of Resources and Liabilities, and also of the Gains, Losses, and Original Capital; hence in assigning debits and credits to the different accounts, that is, in forming a journal, we have only to consider what accounts are affected by a transaction: for example, — "Bought merchandise amounting to $2,000; for which we paid in cash." Required the journal entry.

Now look at the Merchandise account and you will see that the debit side must contain all it cost you, and therefore you will debit Merchandise.

And if you turn to the Cash account you will be reminded of the necessity of entering all payments in the credit column of cash account; hence your entry will be to debit Merchandise and credit Cash.

It would be useless to multiply examples. It is easy to see that you are to be guided entirely in your journal entries by your knowledge of the ledger accounts; and therefore, if you would avoid continued reference, you must, as soon as possible, get the whole plan of the ledger accounts well impressed on your mind. Its outline may be thus briefly stated.

We have shown that all financial transactions whatever, are to be separated into Cash receipts — Cash payments — Other men's notes received — Other men's notes disposed of — Our own notes issued — Our own notes redeemed — What we are indebted to others — What others are indebted to us — Expenditures in the business, or losses — Returns of the business, or Gains. There is a proper place in the ledger provided for each of these classes, and you have only to inform yourself of these places and enter accordingly.

The double entries that you perceive each single transaction requires is only a necessary consequence of your double set of accounts, the debt side of one set being the credit side of the other set: thus what sums you enter in the debit side of the secondary accounts, as expenditures or outlay, you are also required to enter in the credit columns of some of the primary accounts, to show how you made your payments or to whom you are indebted, for you could not make any investment in your business or its parts, but you must either pay cash, give notes, or become indebted to some one; and any of these cases require credits in your primary accounts. And all you enter as returns of the business or its parts, must either be received in cash or notes, or be owing by some one, any of which must be debits of the primary accounts; consequently every thing is recorded twice in double-entry, and you cannot make a debit without being required to enter a corresponding credit.

We now arrive at the most important point in the position we proposed to sustain. We have pointed out certain features as characteristic of, and inseparable from, double-entry, under every form in which it ever has been or can be practised. We also insist that no matter what plan of teaching may be pursued, unless it result in giving all the separate ideas of the several accounts we have adverted to, the subject cannot be understood with sufficient clearness for any practical purpose; which is no more than saying you cannot practise bookkeeping until you understand its principles: for that the features we have adverted to, are the only principles that logically explain the subject, we hold to be indisputable; they have existed in the subject unchanged and unchangeable from its first promulgation; they have constituted the guidance of all who ever mastered double-entry, — they afford the exact picture the subject presents to every experienced practical accountant, with the exception, that he has not been at the pains to arrange his ideas in the logical order that is necessary for elementary instruction. Unfortunately for learners, no attempt has until recently been made to fix their attention on these principles as the ground-work of the study. If we had no written grammars in which language was analyzed, and the several parts of speech defined and carefully urged on the attention of the student, could we reasonably expect to make grammarians by requiring each pupil to take a paragraph and separate the words into different classes for himself? Why then should we expect a student to begin for himself the analysis of transactions in business — to distinguish the several collections that will be required in a ledger, when he is entirely uninformed of any ultimate purpose? We marvel why bookkeeping has been so imperfectly taught; but the true marvel is, that we should have continued so long in the attempt to convey practical knowledge without affording even a glimpse of its elementary principles.

Having defined what constitutes the governing features or principles of the subject, we proceed to give an example of the kind of exercise by which these principles will be most speedily appreciated.

We first lay down the following as the governing rules for the primary accounts, viz.: The Cash Account, Bills Receivable, Bills Payable, and the accounts of persons. (See ledger.)

1st. Debit Cash account with all cash on hand commencing, and subsequent receipts of cash.

2d. Credit Cash account with all payments of cash.

3d. Debit Bills Receivable account with all other men's notes you held commencing, and all subsequently received.

4th. Credit Bills Receivable account with all other men's notes you dispose of.

5th. Credit Bills Payable account with all your own notes outstanding when you commence, and all you subsequently issue.

6th. Debit Bills Payable account with all your own notes you redeem or take up.

7th. Debit each person's account with all he has become indebted to you.

8th. Credit each person's account with all you have become indebted to him.

EXERCISE.

I have extracted from my books of account the following information. My whole receipts of cash, including what I had commencing, amount to $32,280, (see rule 1.) Total amount of other men's Notes received $16,500, (3.) Total amount of my own Notes issued $7,000, (5.) Total amount of Cash paid $13,575, (2.) John Wilson has become indebted $3,000, (7.) Total amount of my own Notes redeemed $2,000, (5.) Total amount of other men's Notes I disposed of $7,500, (4.) I have become indebted to John Wilson $3,500, (8.) William Farmer has become indebted to me $1,000, (8.) Merchandise is all sold. Required my Resources and Liabilities and what I am worth.

The manner of performing the exercise is as follows. Make on a slate or waste paper the necessary headings, thus:—

CASH.

Receipts. .... Payments.

BILLS RECEIVABLE.

Received. .... Disposed of.

BILLS PAYABLE.

Redeemed. .... Issued.

JOHN WILSON.

Dr. .... Cr.

WILLIAM FARMER.

Dr. .... Cr.

Enter each item in its proper account on the proper side, according to the rules referred to; thus (2) refers to rule 2.

When all are entered, the following will be the result:—

Resources.		*Liabilities.*	
Cash on hand	$18,705	Bills Payable	$5,000
Bills Receivable ...	9,000	John Wilson	500
W. Farmer owes ...	1,000		
			$5,500
	$28,705	28,705	
		5,500	
Present worth		$23,205	

RULES FOR SECONDARY ACCOUNTS.

1st. Credit Stock account with what you are worth beginning.

2d. Debit the various parts of your business under such titles as you may choose to select, with all you lay out, invest, or lose.

3d. Credit the respective titles with whatever the several departments produce you.

4th. When you expend or receive any sum, for which you have provided no particular account, carry it to Profit and Loss.

5th. In all secondary accounts, expenditures or losses are debits; and receipts or gains, credits.

We have no particular predilection for rhyming rules; indeed, where they are not founded on something already known, we consider them highly objectionable, but as a means of keeping together in the mind the several principles the student has already seen established, the following may be considered of some utility:—

CASH ACCOUNT.

Debit your Cash Account for cash received,
And credit Cash for ev'ry item paid.

BILLS RECEIVABLE.

When bills, or notes of other men, you take,
To Bills Receivable a debit make;
When of the notes of others you dispose,
Take care that Bills Receivable a credit shows.

BILLS PAYABLE.

For notes you issue promising to pay,
Bills Payable a *credit* must display;

If your own roles notes you cancel or redeem,
Bills Payable a debit then will claim.

PERSONS' ACCOUNTS.

Debit each person when he takes from you,
And credit items to another due.

SECONDARY ACCOUNTS.

Choose such accounts as best describe your trade,
To debit cost of all investments made;
Expense incurred, or loss, must debit be,
That you your whole expenditure may see.
If at the end, your profits you would know,
Let Merchandise, each sale, a credit show;
All income claims a credit—try to find
The best account to designate its kind.

It will now be evident, that we can give similar exercises to teach the secondary accounts; and thus by about eight or ten exercises, the student is made completely master of all his subsequent operations.

Here, then, after securing to our pupil a complete knowledge of all accounts that can be required, which can be accomplished in three or four days, we are prepared to place him to the journal; and now let us contrast his position with one who is introduced to the journal as his first task:—

Transaction 1st.

Commenced business with a cash capital of . . . $10,000.00
Required the journal entries?

Our pupil will see at once the necessity of debiting the Cash account, and crediting the Stock account.

But how is it with one who has no knowledge of the subject? His teacher, perhaps, has made him commit to memory the following lines:—

"By journal laws, what you receive
Is debtor made to what you give;
Stock for your debts must debtor be,
And creditor by property."

But will these lines enable him to make the entry? No, the teacher must tell what the entries are; and if he can by any effort of his ingenuity make the rule apply, even after he has told the entries, we confess he is more sharp-witted than ourselves. But of what use is a rule, if it can only be made to apply when the entry is known? If you give me some mark, by which I am to know the thing you send me in search of, your description will be useless, if the mark is concealed; your discovering it to me when the difficulty is over, will be of no avail: but so it is with these rules. When the teacher has shown what entries are required, he proceeds by some ingenious argument to make it appear that the rule applies.

Transaction 2d.

"Sold hardware to S. H. Lovell, $250; and for cash to sundry persons, $160."

To this, we will try another rule, which its author pronounces infallible:—

"Whatever owes us is Debtor,
Whatever we owe is Creditor."

This rule is an attempt to make good the very first impression experienced by all who open a book of accounts; for they naturally conceive, that what is called Dr. must be owing to us, and vice versa. But who does not, after a few trials, abandon this idea, from finding his efforts to make sense of it fruitless? In fairness however to the author, we give, in his own words, his application of his rule to the above transaction.

"*Elucidation.*—The Sundries are debtor, because they owe us for the amount of value that the hardware has produced; for *the production consists in Lovell and Cash.*

"Hardware is creditor, because we owe that article for the production it has caused."

How enlightened the student must be by such elucidation! Let us now ask our own student to explain the entries required. His answer will be—

Debit Cash with $160, because we received that amount in cash.
Debit Lovell. . . . $250, because he is indebted for his purchase.
Credit hardware $410, because the whole is returns from hardware.

But how, we would ask, are either of these rules to help the student to a knowledge of the principles which we have already shown to be indispensable to the practice? The student goes on experimenting upon transaction after transaction, patiently trying to apply the rule, and when he finds himself puzzled, he is only taught the more admiration of his teacher's sagacity, when he listens to his ingenious "elucidation;" and without inquiring whether he has gained any general information, he good-naturedly sets down all difficulties to the debit of his own capacity. His very first attempt to penetrate the object of what he is about, causes him to form a wrong impression, and proceed to the very end under the delusion. He says to himself, all things received are Dr., and all things given, Cr.; therefore, when all is compared, the difference must be what I have left. Or, all that owes me is Dr., and all that I owe Cr., and consequently the difference must show how I stand. Great is his perplexity when he discovers at last, that Drs. and Crs.—things received and given—are equal. He is told, that things received are Dr., and yet if he receives a sum of interest or charges, he must credit them. How this would be explained by teachers, we know not; but in most books, the accounts have been prudently omitted.

Now we are not contending, that from instruction such as this, the student acquires no ideas of bookkeeping; but we contend, that he will be apt in all cases greatly to overrate his acquirements, and that he will have formed such very inadequate ideas of all that regards the details of a counting-room, that it may be questioned whether he will have derived any substantial benefit. It is well known, that attempts to introduce the details of practical bookkeeping into schools, have failed for want of a proper exposition of principles, and the books abandoned. Mr. B. F. Foster published, perhaps, the best exemplification of practical bookkeeping that had then appeared in this country, but what was the result? He explained it as other authors had explained it, and then went on from where they left off to the practice of monthly journalizing; but pupils could not comprehend this stage: they were in fact taken from the school to the counting-room by a change in the details, and found totally incapable of proceeding. Mr. Foster has since altered his whole elementary part to conform to the views here given, which he is now publishing in England.

But in journalizing by such rules, the student only acquires knowledge on the subject in proportion as he happens to remark and form a governing principle by repetition; and this process is slow and tedious. Thus, having journalized many receipts of cash, he at last unconsciously becomes impressed with the principle of debiting Cash with all receipts, but not perhaps until he has first determined that he must debit it when he receives it for merchandise; and next when he receives it on account, and then when he receives it for a note, until at last he shakes off all other circumstances which encumbered the true principle, and he finds he must debit cash whenever he receives it, no matter for what; and so he accumulates a few principles slowly and imperfectly. But to acquire the whole subject in this way, would occupy years instead of weeks. It is so in the counting-room, and must be so in the school, unless the teacher expedite the process of generalization by disclosing the principles that are in reality the object of pursuit.

Hence, the student has no leisure to attend to details, he consumes his whole time in endeavoring to learn the theory of debit and credit by making a journal, without accomplishing even that object. But how is it with the pupil who has learnt the principles? It is true he spends a few days in acquiring the knowledge that is considered the necessary substitute for a rule, but mark the result; he makes his journal entries without any necessity of help from his teacher, he knows what must be done in order to get at his result, and he perfectly understands how each step bears upon it, for in no other case can he proceed. He is supplied with a month's business, and required to bring a balance sheet; and when he finds he can accomplish this, he gains more confidence for the next; and if the practice be judiciously selected for him by his teacher, he will always succeed. In this way he can accomplish at least five times as much practice, and may be required to adopt every variety of process; for it makes no difference to him, whether he is to make his journal from a daybook alone, or from all the variety of subsidiary books that can be used; so that more than nine-tenths of his time is occupied in real practice, where he is thrown entirely on his previously acquired knowledge, instead of groping along in doubt and difficulty. Instead of balancing once or twice, he will balance at least twenty or thirty times in a few weeks. And all these advantages are gained, by spending a few days in learning the principles, instead of beginning to work by a rule. But what is it we contend for in teaching this subject?

In all books of elementary knowledge in other branches, the first object is to search for those general and self-evident truths or principles that form the basis of the subject, and then to select any exercise by which those principles will be most clearly and frequently brought into operation, until the mind not only appreciates their truth, but becomes so saturated with them that their applicaion is instantly perceived; and in attaining this object, it is of very slight importance whether the operations selected, are such as are commonly wanted in practice or not; it is sufficient if they enable us to insist upon the value and importance of the principles we design to employ in our subject.

If we would place a check upon wild speculation—diminish the number of bankruptcies—afford a timely warning against extravagant expenditure—and throw light into the obscure recesses, where fraud and embezzlement are wont to lurk undetected, we know no better way of beginning, than by urging a complete and effectual reform in this department of commercial education. Nay, not only do we consider the interests of the mercantile community deeply involved in the issue of this movement, we contend further that no youth, for whatever occupation he may be destined, should be considered to have completed even a common or tolerable education, until he can commence his intercourse with the world, provided with that knowledge which is so essential—so indispensable to the protection of his rights; which, in truth, will alone enable him to prove or maintain the distinction of *meum* and *tuum.* The subject is now reduced to a simple arithmetical problem, and we have shown, that to any mass of financial data, how complicated soever it may be, two uniform and simple methods of solution apply, so as to determine the owner's position; and this being once taught, the principles of double-entry are mastered. Is a knowledge of this, less necessary than that of any other part of arithmetic, merely because the sum is longer? In this form the subject is placed as completely under the management of the schoolmaster, as any other branch of knowledge. Let it then, we say, be taught in every common school throughout the Union. The object is not to make every man a bookkeeper, but to make him competent to understand whatever accounts may come under his notice, and to detect and expose erroneous results, however ingeniously they may have been drawn.

It is not disputed, that however well the principles of bookkeeping may be taught, each student in applying it to practice, will exhibit some peculiarity in the disposition of the details; some will choose one set of subsidiary books and some another: but if two men were to write on the same subject with the same sentiments, would they not construct their sentences differently; and should we not consider this very difference as the surest evidence we could have of originality? Both may write grammatically, yet one may greatly excel the other; but because each has a way of his own, this can surely be no argument that the study of grammar is useless.

What we would insist upon then, as regards accounts, is, that every one should be competent, at least to state his financial affairs correctly, and as regards the minor details of practice, those who are ambitious of attaining perfection, will find ample latitude for the exercise of their ingenuity, and much to be gathered from the experience of others.*

*Our readers are referred for a full development of this system of teaching the subject, to "Jones's Principles and Practice of Bookkeeping."

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SOME INFLUENCES ON THE DEVELOPMENT OF COST ACCOUNTING

Abstract: The influence of engineers on the development of cost accounting in the closing decades of last century has been well recognized. The influence of economists, the retarding effects of an obsession with industrial secrecy, and some curious effects of competition and the lack of it have not been fully explored. These matters are examined in this paper, together with some of the consequences of the efficiency movement, as seen in the costing system developed by Alexander Hamilton Church. The strengths and weaknesses of present-day cost accounting are related to this early period of development.

Attempts to calculate the cost of production before the Industrial Revolution have ben well documented and illustrated.[1] Of course, they are not generally regarded as being "cost accounting". That title is normally reserved for integrated cost and financial accounting systems which involve the allocation of indirect and fixed expenses. It is therefore assumed to be applicable only after the Industrial Revolution when those expenses were of such a magnitude that they could no longer be ignored. We cannot, however, claim that cost accounting arose as a direct consequence of the Industrial Revolution. That is too simple an explanation. Extensive organizations (and therefore indirect expenses) were a feature of the putting-out system, and large factories (and therefore fixed costs) were not uncommon before 1800.[2] The problem of calculating the cost of production, including the allocation of indirect and fixed expenses, therefore existed well before the Industrial Revolution but, curiously, little interest was taken in it by manufacturers and businessmen until well after the revolution was complete.[3] More curious, perhaps, was the lack of interest shown by accountans. There is nothing in the literature of accounting to indicate any deep or continuing interest in cost accounting as we now know it prior to 1970,[4] and even into this century the nature and effects of fixed costs were not widely recognized.[5]

This article is adapted from a paper given at the Second World Congress of Accounting Historians, Atlanta, 1976.

That various ways of allocating overhead and other fixed costs to products were in use by the 1870's is evidenced by a book which contains a detailed list and criticism of six methods "seen in use by the author", Thomas Battersby, a Manchester public accountant. But Battersby's book appears to have aroused no interest. It is not mentioned in any of the professional journals of the day. Ten years later, although they covered the same subject matter, the books of Garcke and Fells and A. J. Liversedge were both said by their authors to be the first book to deal with factory or engineers' cost records.

Although the methods described by Battersby were relevant only after a substantial increase in the amount and extent of fixed costs had occurred, those methods were not widely advocated or discussed until well after the rise in the level of fixed costs had taken place.[6] The existence of fixed costs, does not, therefore, by itself explain the interest taken in cost accounts only towards the close of last century. Conversely the lack of any public discussion of the advantages to manufacturers of maintaining detailed cost records may be explained quite easily.

INDUSTRIAL SECRECY

The reason most frequently given for the lack of expositions dealing with cost accounting prior to 1870 is the attitude of British industrialists to their financial records. Edwards' reference to the "tradition in the British business world that as little as possible should be disclosed" is typical.[7] Pollard disagrees:

> It is sometimes suggested that secrecy was deliberate to avoid giving away advantages in accounting practice or in the business practice it described, but, with the possible exception of the chemical industries, such secrecy was not observed in the technical field itself, where it might have been more to the point.[8]

Pollard's view appears to be questionable. He had referred previously to the secrecy which allowed wide variations in salary and conditions of employment of managers to exist even within narrow geographical areas, and to the variations in the speed with which firms adopted new accounting procedures.[9] The views of writers of the time confirm that, irrespective of the manufacturers' attitudes to technical matters, financial affairs were closely guarded secrets. In 1785, for example, the secrecy "to which every manufacturer has a natural right" was claimed as a good reason for opposing Pitt's scheme to introduce an excise tax on coal.[10] The attitude towards secrecy obviously persisted until the end of the nineteenth century:

> . . . we all know that to the producer nothing is more sacred than his cost sheet, and it is not easy for an outsider to get frank and accurate statements of this class.[11]

One contributor to the *Engineering Magazine* in 1900 saw secrecy to be relatively less common in America than in England. In an article entitled "The Policy of Secretiveness in Industrial Works" he stressed the conventional view:

> . . . is it not true that secrecy is, according to the generally accepted European idea, the key to success in manufacturing?[12]

Some manufacturing firms appear to have gone to extraordinary lengths to maintain secrecy:

> . . . it is the custom to add a further percentage to the actual oncost, which amount is known only to the management, so that the office staff may not see the profit made on each job.[13]

British accountants, it seems, were well aware of the effects of such an obsessive concern with secrecy. Mann cited it as the reason for rival firms refusing to disclose details of their systems.[14] The editor of *The Accountant* considered it to be the cause of the 'backward state of Cost Accounts,'[15]

Whatever the cause, the systems in use in English factories were seldom described in the literature prior to 1914 (or since). In fact, in an extensive search of the literature I found only four examples in which the firm was actually identified.

COMPETITION

> The boom from 1866 to 1873 not only doubled railway mileage but initiated new services, new machinery, new forms of business organization, opened up new areas, and sucked in a vast amount of new capital into the American economy.[16]
>
> The period 1873-96 is usually known as the Great Depression. It was marked by more severe fluctuations in economic activity than had occurred during the previous quarter of a century and by an intensification of industrial competition.[17]

The reason most commonly given for the upsurge in publications on cost accounting after 1870 is that the demand for information on cost systems was in response to the increased level of competition which affected both Britain and America. Littleton, Solomons, Garner and Pollard all make reference to the effects of competition, and they are well supported by the literature of that time and later.[18]

There can be little doubt that a period of intense competition was experienced, particulary in Britain, in the closing decades of the nineteenth century. For the engineering trades, it was a relatively new experience. Many American engineering methods had, for the first time, overhauled and surpassed those used in Britain.[19] Whereas previous periods of depressed economic conditions had not led to any drastic slackening in demand for engineering products or machines, the "Great Depression" was so prolonged, and its effects so widespread, that all branches of trade were affected.[20]

If costing systems could be seen to aid manufacturers in setting prices and in improving the efficiency of their operations, then the intensely competitive conditions existing just prior to 1900 may well have provided a climate in which proposals for the introduction of those systems would have been more readily accepted. The claim of a cause and effect relationship between increased competition and the introduction of costing is, therefore, intuitively appealing. It does not, however, explain why the principal developments occurred in America and not in Britain; nor why the main advocates of costing were mechanical engineers and not civil engineers, builders, or process manufacturers; nor why the total cost per unit of product was advocated in preference or in addition to departmental costs and to the exclusion of direct or marginal costs.

The American Mechanical Engineers

The contribution of engineers to the development of cost accounting has been widely recognized. Edwards, Solomons, Garner and Chatfield have all paid tribute, in general terms, to engineers for the interest they took in developing costing techniques. Barton, Chapin, Parker and others have described the derivation of cost-volume-profit charts and their relationship to engineers' cost and output graphs. But none of those authors has explained the role of the American Mechanical Engineers in particular in advocating and publicizing the need for cost records. To understand the interests of the American Mechanical Engineers, it is necessary to go back to the origins of the New York based society.

The inaugural meeting of The American Society of Mechanical Engineers (ASME) was held in New York on April 7, 1880. Almost immediately its members took an interest in commercial as well as engineering affairs. Thurston, later to become Director of Cornell University's Sibley College, demonstrated this awareness when he delivered a paper to the Society in 1882 on the costs of operating engines of various sizes. Other papers on costing followed in 1885, 1886 and 1888 which in 1893 comments were invited under the heading of "Cost of Manufacture", and several members responded.

Another feature of the interest in commercial matters was the close association between the mechanical engineers and the journals *American Machinist* and *Engineering Magazine.* The formation of the A.S.M.E. was actually first proposed by Jackson Bailey, editor of the *American Machinist,* in 1879.[21] The first volume of *Engineering Magazine* was published in 1891. The 5th number included an article on bookkeeping, and nearly one hundred articles on cost and related subjects appeared over the years to 1914. In 1901 an entire issue (Volume 20, Number 4) was devoted to "shop management". These journals, more than any other publications, fostered an interest in cost accounting and machine shop efficiency, and together with the small group of engineers based in and around New York were the first to take a close interest in cost recording systems.

Calvert has described the unique collection of men who gathered in New York in the 1880's under the auspices of the A.S.M.E.[22] They were the "elite" of the mechanical engineers. They were, primarily, profit oriented. They measured "all things by the test, will it pay?"[23] Their particular interests and commercial environment provided the setting in which the advocacy of costing was to flourish.

Contrary to the common view that competition provided the stimulus to the introduction of costing systems, a notable feature of the American mechanical engineers' in the mid and late eighteen-hundreds was the lack of competition. The owners of machine shops were said to have had "close business and social relationships with their customers". The association was, therefore, a personal one based on the "customers" faith in a particular shop's ability to solve their mechanical problems.[24] There was not, accordingly, any overt competition between mechanical engineers. On the contrary, a "shop culture" developed which had all the hallmarks of a "gentlemen's club".[25] Within the club, information was freely shared. The result was "a vast, mutually owned store of knowledge and experience closely akin to a body of scientific knowledge".[26]

Calvert's description of the origins of the elitist A.S.M.E. is borne out by the nature of the papers and discussion at its meetings. Papers dealing with costing invariably described a system actually in use. One of the early papers delivered to the society described the system installed at the U.S. Naval Ordinance Department by Captain Henry Metcalfe (1886). Frederick Taylor, later to become famous for his advocacy of "scientific management", was particularly interested as he had "had experience during the past ten years, of organizing a system very similar" at the Midvale Steel Company's works.[27] Subsequent papers, and articles in contemporary American journals followed the same format. They provided intimate detail of the systems installed in well-known machine shops. Of the companies whose systems were described in the literature between 1880 and 1914, thirty-nine were American, only four were English. With few exceptions, the American descriptions were by members of the A.S.M.E.

The Efficiency Movement

The particular circumstances of the American Mechanical Engineers had another consequence. In the first decade of this century the drive for efficiency swept through American industry. Like the earlier descriptions of cost records, it emanated primarily from the A.S.M.E.

At first the movement was directed solely at physical efficiency. Its origins are clearly discernible in various wage schemes designed to provide some control over the activities of workers and to provide some incentive for them to increase their output. Once again, the methods used in the U.S. made the later adoption of cost records easier than was the case in Britain. The difference lay in the piece-rate and gain-sharing schemes compared with the form of profit-sharing commonly found in Britain. The former required detailed records of the physical output of each worker, whereas the latter related only to some general calculation of total profits.[28]

In line with the emphasis on the physical output of workers, the efficiency movement was originally directed at physical efficiency. The best known advocate of the system was Frederick Taylor. (The system was, in fact, frequently referred to as the "Taylor System"). His basic proposal was that each workman be given a set task each day. If the workman completed the task in the specified time, he received an "addition of from 30 per cent to 100 per cent to his ordinary wages".[28a] The transition from physical to monetary standards followed, somewhat naturally, when the workers with monetary responsibilities were brought within the scheme. Thereafter the two ideas — efficiency and cost records — became so closely associated that they were commonly regarded as being part of the same system.[29] The transition was further hastened when the drive for physical efficiency gave way to a drive for economic efficiency:

> . . . The progress of last century was almost wholly in the direction of promoting technical development, leaving to us of the present day, the almost equally interesting task of increasing economic efficiency.[30]

Alexander Hamilton Church was recognized as one of the early experts in cost records and is widely recognized as one of the pioneers of modern cost or management accounting.[31] It is instructive to consider the system developed by him in more detail.

The Church System

The system described by Church was dependent upon a carefully designed organization structure. His aim was to facilitate managerial control of the organization by dividing the factory into a series of "little shops". The foreman of each "shop" was charged with all the direct costs for which he was responsible, plus a fair proportion of the general factory overhead. The allocation was to be based on the average or normal running time of the machine or the normal time worked by the direct labour of the "shop".

The system described by Church had some additional features including a "supplementary" rate and the allocation of office and selling expenses. We will concentrate, however, on the main features of the system as described above. The features were common to virtually all of the systems described or proposed prior to World War 1, and Church was, in that sense, representative of his contemporaries.

American engineers, concerned as they were with job ordering, had a particular interest in unit costs not common to the process manufacturers. Each unit of output of the mechanical engineer was unique. It was manufactured according to specifications to fulfill a particular function in a particular setting. Each job had to be quoted for separately. Expected total costs were therefore spread over the expected output in the hope that the charge-out rate so established would allow all the costs of the establishment to be recovered during the forthcoming period. Here, clearly, are the origins of what is now commonly referred to as "absorption costing".

None of the circumstances of the American mechanical engineer was, by itself, unique. But together, those circumstances—the concentration in, or near to New York of a group with a common interest and background; the lack of secrecy and competition; and the presumed need to calculate unit costs—provided the environment in which descriptions and discussions of costing methods were to become widespread.

It is also important to note that, initially at least, the American engineers lay outside the three streams of accounting which Pollard considers preceded cost accounting.[32] The engineers were not, in fact, concerned with accounts at all. Their references were all to "cost records". Those records were not necessarily double entry, or connected with the firm's general accounting system. They were seen, rather, as something designed and maintained by the engineer. They could not be left to" "business men" or clerks and accountants only".[33]

Notably, Church and his contemporaries were extremely vague about the purposes to be achieved by their costing systems. It was evident that the mechanical engineers had been interested primarily in developing a system which would enable them to set prices which would, in the aggregate, cover their costs.[34] Hence the proposal to allocate *all* costs to production.

With the advent of the efficiency experts, the emphasis shifted to control.[35] But the basic system remained unchanged. Herein lies the reason for the defects still found in cost accounting systems in use today. They are basically incapable of achieving the purposes claimed for them. I have argued elsewhere that any system which requires that overhead costs be allocated to products and/or departments cannot provide a basis for judging which product is most profitable, whether the production process is being operated efficiently, whether there has been "preventable waste", or what the income for the period has been. The arguments in support of these claims need not be repeated here. What is interesting, however, is that the purposes just described were taken directly from one of Church's most widely known publications.[36] They correspond closely with the purposes listed by Horngren in his widely used textbook.[37] The connection between modern cost accounting systems and those developed by engineers around the turn of the century is clear and direct.

The Economists

Less influential were the economists who wrote during or prior to the period in which cost recording systems were being developed. References to economists by accounting or engineering authors are sparse indeed.[38] This omission is curious in view of the fact that the few references by accounting authors of the time suggest that they were not entirely ignorant of the economic literature.

Despite the lack of any direct association between cost accounting and economic doctrine, an indirect influence is clearly discernible. The classical economists of the eighteenth and early nineteenth centuries developed a labour theory of value which was based on the notion that wages paid to labour became embodied in the goods produced.[39] Ricardo extended the theory from that of strictly a labour theory to a "cost of production" theory.[40] In that guise it bears a remarkable resemblance to the "costs-attach" notion which is the basis of the costing systems developed towards the end of last century, and still common today.[41]

Another consequence of the lack of contact between accountants and economists appears to have been that accountants generally remained ignorant of the marginalist school of economics. As a result, the accountants proceeded to embrace the "costs-attach" notion at the very time it was being brought into question and rejected by some prominent economists.[42] Even those accountants who can not have been ignorant of the changing tide in economics chose, apparently, to ignore it. Garcke and Fells provide a classic example. They referred to *The Economics of Industry* by A. and M. P. Marshall on some peripheral matters. They ignored a passage in which the Marshalls describe a decision-process involving costs of production. In that passage, the Marshalls make clear the view that prices are not dependent upon costs and that total, not unit, costs are relevant for decision-making. The analysis in Garcke and Fells directly contradicts that of the Marshalls. Garcke and Fells argue that all costs other than establishment expenses and interest on capital should be allocated to units of production for the purposes of controlling employees and setting prices.

The Problem of Railway Rates

Similar to the general ignorance referred to above, was the lack of interest shown by accountants in the debate over how railway rates should be set. As early as 1850, Lardner had separated the two problems—of reviewing progress and of setting rates. For the latter he suggested identifying the costs of each class of traffic, recognizing that in some cases an arbitrary allocation would be necessary. Towards the end of the century, however, railway economists were almost unanimous in the view that is was impossible to ascertain the full costs of different classes of traffic and therefore impossible to use costs as the basis of rates:

> . . . it is impossible to determine the cost of each [class of traffic], and therefore manifestly impossible to predicate schedules of rates upon cost.[43]

Not surprisingly, those concerned with the economics of railway operations accepted readily the notion of marginal costs and a contribution margin. In 1888 Mordecai argued that as the general expenses were "indivisible per unit", the difference between receipts and the cost of working went "towards paying the fixed charges".[44] In 1891 Acworth, a prominent writer on railway affairs, placed the discussion in its proper context:

> A further practical point may also be noticed. Rates must be fixed in advance. It is only afterwards that cost can be even approximately known.[45]

We cannot claim that the railway rate debate had any direct bearing on the development of cost accounting. Yet it seems inconceivable that accountants, particularly in the U.S., were unaware of the debate which culminated in the Interstate Commerce Commission being given the power to set rates through the effects of the Commerce Court Act of 1910. But whether accountants were aware of it or not, it received no publicity in accounting journals of the time. Similarly, the fact that the problem was the same as that found in relation to manufacturing activities generally was not recognized by accountants until much later, despite some pointed reminders:

> We learned first that a railroad is not like a soap factory; the next step was to learn that a soap factory is more or less like a railroad, and that the things we thought peculiar to railroads are, in fact, wellnigh universal.[46]

Belated Recognition

There is good reason to suppose that the concern to maintain secrecy of the accounting records hampered the development and dissemination of cost accounting ideas and practices in Britain. Conversely, the openness of the American mechanical engineers provided the environment in which those ideas and practices flourished. It is also interesting to note that, contrary to the view most commonly held, it was the lack of competition amongst the

American engineers that, initially, encouraged them to discuss costing methods. Only later did competitive pressures lead to the almost obsessive concern with efficiency and to the development of uniform systems of accounting. A highly developed example of the resulting system was described by Church. It was probably well ahead of its time, and there is no evidence to suggest it enjoyed widespread adoption at the time. Nevertheless, all of the ideas presented by Church and other efficiency experts, as well as those of economists, are now commonplace in the literature of accounting. Just what role the various groups played in getting their ideas accepted, or at least considered, by accountants, we cannot say. Nor can we explain the extraordinary lags which appear to have occurred between an idea appearing in the engineering or economics literature and its adoption by accountants.

Also of direct relevance to accounting practices were the arguments of the economists in the railways rate debate. It is to be regretted that accountants did not follow, and adopt, the proposals presented there. That accountants failed to do so should not, however, be surprising. The economists did not win that debate either.

FOOTNOTES

[1]See, for example, Edwards [22] pp.225-31; Garner [25] pp.1-26; Solomons [51] pp.6-8; de Roover [48] pp.50-68.

[2]Pollard, pp.9, 24.

[3]The Industrial Revolution cannot be given precise dates, nor, in a sense, can it be said to have been completed — it is still going on. However, in the sense that the switch to powered machinery and the advent of large factories was well established the period 1770-1820 can be identified as that of the revolution. Edwards [22] p.193-4; Pollard [45] pp.61-103.

[4]Edwards [22], commented that the notable feature of the literature after 1870 was the attention given to overhead and other fixed costs (p.343), whereas prior to that time such publications were conspicuous by their rarity (p.225).

[5]One correspondent in *The Accountant* ([46] p.566) in 1907 even suggested that the term 'fixed' should not be used because it implied that those costs could not be averaged!

[6]Ricardo [47] commented in 1821 on the use of improved machinery and its effect on capital employed (p.271). Deane and Cole [20] p.191 give some statistics on the increase in capital employed, while Hicks [26] pp.142-3 emphasizes the increase in the '*range and variety* of the fixed capital goods in which investment was embodied'.

[7]Edwards, p.283.

[8]Pollard, fn.1, p.215.

[9]Pollard, pp.139, 215.

[10]Ashton, p.165.

[11]Kirchhoff, p.353.

[12]Outerbridge, p.862.

[13]Jenkinson, p.323.

[14]Mann, p.260.

[15] *The Accountant*, August 27, 1904, p.214.
[16] Armytage, p.171.
[17] Barker and Harris, p.433.
[18] Littleton, p.321; Solomons, p.18; Garner, pp.28-29; Pollard, p.245.
[19] Burn, p.292; Calvert, p.108.
[20] Checkland notes that earlier in the century: 'The millowners, having involved themselves in costly plant and equipment, could not afford in a competitive situation, to contract output in order to keep prices up. Indeed, capacity actually increased, for spinners, in the attempt to improve their individual positions, built weaving sheds and installed power looms' ([14] p.17). These effects are clearly evident in tables of prices of the nineteenth century. Whereas depressions appear to have affected only limited sections of the economy (for example agricultural products, or textile products) earlier in the century, all prices suffered drastic declines in the depression of 1873-1896. See Mitchell [41] pp.472-473.
[21] Calvert, p.110.
[22] Calvert pp.114-122.
[23] Coleman Sellers, President of A.S.M.E., 1887. Quoted by Calvert [11].
[24] Calvert, p.6.
[25] Calvert, p.111.
[26] Calvert, p.7.
[27] Taylor, p.475.
[28] This is not to suggest that piece-rates were unknown in Britain. The putting-out system frequently operated on piece-rate payments, and the system was also carried over into factories (Ashton [4] p.283).
[28a] Taylor, p.39.
[29] Hence books with titles such as *Cost Keeping and Scientific Management*, Evans [23]; *Science and Practice of Management*, Church [17]; wherein the authors make clear the direct association, as they see it, between 'costing keeping' and 'scientific management'.
[30] Church, 1911, p.991.
[31] Both Garner [25] and Solomons [51] acknowledge Church's contribution. Solomons also quotes Roland Dunkerly 'a former President of the Institute of Cost and Works Accountants' who said of Church that he 'probably did more than anyone, both directly and indirectly, to promote costing as it is now known, chiefly because he promoted thought' (Solomons [51] p.24).
[32] These were described as 'the master and steward system . . .; the mercantile system . . .; and the accounting developed by manufacturers operating the putting-out system'. Pollard [45] p.209.
[33] Towne, 1885, p.429.
[34] Papers delivered at meetings of the A.S.M.E. in 1896 [31] and 1897 [32] by Lane are typical. Both were entitled, in part, 'A Method of Determining Selling Price' and emphasized that as the object of cost records.
[35] In a few words, the purpose of costs is twofold: The first is to furnish cost of the products so that the selling price can be fixed, or if the selling price is fixed by competition, to determine if the product can be manufactured at a profit. The second is for the benefit of the manager, to show him where economies may be affected (Evans [23] p.23).
[36] Church, 1909, p.185.
[37] Horngren, p.xvii.
[38] I have found only nine instances up to 1914. See for example Garcke & Fells [24], Branford [9], Mann [36], and Cowan [19].
[39] See for example, Smith [50] Vol. 1, p.351, and Marx [39] pp.199 & 410.
[40] See Ricardo [47] p.30 and Senior [49] p.98.

[41]The point was made clearly by an anonymous author in *The Author* in 1905: Labour goes directly or indirectly into the product in the factory. There appears to be no good reason why it should not follow the same course on the books in the office ([2] p.232).

[42]For a description of the influence of the marginalist school, see Parker [44] pp.17-18.

[43]Kirkman, Vol. 1, p.306.

[44]Mordecai, pp.65-6.

[45]Acworth, p.52.

[46]Clark, 1914, p.749.

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Litany from 1810 Ledger

"He who refuseth instruction despiseth his own soul.
Give instruction to a wise man and he will be yet wiser.
Love as brethren—bear ye one anothers burdens.
Be at peace among yourselves shewing all meekness.
As much as lieth in you live peaceably with all men.
Study to be quiet and to do your own business
Be not slothful in business
If a man will not work neither should he eat.
If any provide not for those in his own house he hath denied the faith and is worse than an infidel.
Let everyone lay bye in store as God shall prosper him—let him be rich in good works—ready to distribunte—let him be an example in word in conversation in charity in spirit in faith in purity.
Blessed are the pure in heart."

From the 1810 ledger of Charlton Mills of Manchester, England. See W. E. Stone, "An Early English Cotton Mill Cost Accounting System: Charlton Mills, 1810-1889", *Accounting And Business Research,* Winter 1973.

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AN EMERGING CONCEPT OF INCOME PRESENTATION

Abstract: This article reviews the development of income presentation found in the authoritative accounting pronouncements since 1941. During this period, within the historical cost reporting model for presentation of income, emphasis has shifted from the all-inclusive concept of net income and the current operating performance concept to a hybrid approach which substantially incorporates the two concepts.

Income measurement presents an imprecise evaluation of the results of business activity. Despite its limitations, the importance of income measurement is well established in the financial accounting literature.[1] Two extreme positions are apparent in a study of the alternative methods of determining and presenting income within the historical cost model. These are commonly identified as the all-inclusive and the current operating performance concepts.

Advocates of the all-inclusive approach to income determination and presentation have defined net income

> . . . according to a strict proprietary concept by which it is presumed to be determined by the inclusion of all items affecting net increase in proprietorship during the period except dividend distributions and capital transactions[2]

On the other hand, advocates of the current operating performance concept of income placed

> . . . principal emphasis upon the relationship of items to the operations, and to the year, excluding from determination of net income any material extraordinary items which are not so related or which, if included, would impair the significance of net income so that misleading inferences might be drawn therefrom.[3]

The purpose of this article is to review the development of income presentation through the authoritative pronouncements since 1941. In a period of about 35 years an evolution has occurred from a position of the all-inclusive concept to the extreme opposite position of current operating performance and then back to a hybrid concept, near the all-inclusive concept.

The heart of the controversy was whether special items such as extraordinary items and prior period adjustments should be given different treatment from normal operating items. An awareness of the evolution of these approaches is helpful in understanding the currently-accepted position on income presentation. This history also shows the way in which generally accepted accounting principles can change over time in the United States. Furthermore, a study of the evolution of these approaches to income determination should shed some light on the "income smoothing" controversy.

THE PERIOD OF THE ALL-INCLUSIVE INCOME STATEMENT

In Accounting Research Bulletin (ARB) No. 8, issued in 1941, the Committee on Accounting Procedures (CAP) demonstrated a definite preference for the all-inclusive income concept:

> . . . Over the years it is plainly desirable that all costs, expenses, and losses of a business, other than those arising directly from its capital stock transactions, be charged against income. If this principle could in practice be carried out perfectly, there should be no charges against earned surplus, except for distributions and appropriations of final net income. This is a theoretical ideal upon which all may agree, but because of conditions impossible to foresee, it often fails of attainment. From time to time charges are made against surplus which clearly affect the cumulative total of income for a series of years, even if their exclusion from the income statement of the current year is justifiable. . . . The committee recognizes the great importance of distinguishing between charges against income and charges against earned surplus. It does not here undertake to define proper charges against earned surplus. For purposes of this statement it simply takes cognizance of the fact that such charges are from time to time found to be a necessary though perhaps debatable feature of accounts. It approves the current tendency to discourage such charges whenever possible.[4]

The CAP, however, failed to address the basic issues of specifying the nature of profit and loss items and defining charges which might properly be made to retained earnings.[5] This lack of distinction contributed to the emergence of the combined statement of income and retained earnings which was sanctioned by the CAP in ARB No. 8. Littleton appears to reflect the feelings of the CAP when he commented on the combined statement, stating that its purpose was ". . . to avoid the conclusion that recurring income is the only element that matters."[6] Littleton went on to indicate that by the issuance of a combined statement, all the modifications to retained earnings would appear on one statement despite the fact that in accounting practice substantial differences existed as to what was placed on the income statement and what was placed on the retained earnings statement.

During the next several years, statements were issued by the CAP which reduced variety in the measurement and reporting of net income. ARB No. 23 provided that income tax should be related to the items giving rise to it. Hence, income tax related to items not included on the income statement would not enter into a determination of net income. ARB No. 28 defined contingency reserve and recommended that provisions to such reserves not be made from net income. ARB No. 31 dealt with "Reserves for Future Declines in Inventory Prices" and concluded that inventory reserves are of such a nature that charges or credits relating to such reserves should not enter into the determination of net income. In financial circles the terms "operating" and "non-operating" income and charges emerged without an official distinction having been made between the two.

In ARB No. 32, issued in 1947, the CAP reiterated the position of ARB No. 8 that all items of profit and loss recognized during the period should be used in determining the figure reported as net income. However, items which in the aggregate were material in relation to net income and were clearly not identifiable with usual or typical business operations were to be excluded from net income. Net income was to be clearly designated and special items were either to follow that amount on the income statement or were to be presented in the statement of retained earnings. No preference was expressed for either method.

Acceptance of charging or crediting special items directly to retained earnings as well as presenting them in the income statement indicates a tolerance for both the current operating performance and all-inclusive approaches to income. In the event such items were placed on the income statement, however, they were to *follow* the amount labeled as net income. Thus, the item net income was a figure resulting from an application of the current operating approach to income.

The three dissents to ARB No. 32 argued ". . . that the so-called 'all-inclusive' concept provides the proper measure of net income and best serves the public interest because it is least subject to reader misinterpretation."[7] These three members of the 21-member committee viewed the position of ARB No. 32 as being such a radical change from the preferred all-inclusive position of the past that they dissented to its issuance.

These developments point toward the desire to include all items of profit and loss in income determination but at the same time to present an indication of the results of "normal" business activities. This struggle was to continue, as indicated in the next section.

THE PERIOD OF THE CURRENT OPERATING PERFORMANCE INCOME STATEMENT

Corporate profits reached a new high in 1947 but to a substantial extent the profits were a result of inflation.[8] A large number of companies recognized the impact of inflation on profits and decided to reduce profits by appropriations for possible future price declines or inventories, for increased replacement costs of fixed assets, and for losses of a contingent and indefinite nature which might be expected to follow a period of price advances. Substantial deductions were made directly on the income statement in determining 1947 profits. Income reduced by the provision was most frequently reported in the financial media and was sometimes labeled net income and other times not labeled net income. Amounts of the appropriations were so substantial that serious concern was expressed both within and outside the profession.

ARB No. 35, issued in 1948, reflected the CAP's acceptance of a current operating performance philosophy. Net income was to be presented without deductions or additions resulting from (a) general purpose contingency reserves, (b) inventory reserves, (c) extraordinary items, and (d) excessive costs of fixed assets and annual appropriations in contemplation of replacement of production facilities at high price levels. The last and most prominent figure on the income statement was to be the number reflecting the results of the year's operating performance.

ARB No. 41, which was issued in 1951 as a supplement to ARB No. 35, was somewhat of a softening of the strong current operating performance position of the earlier bulletin. Between the times of issuance of ARB No. 35 and ARB No. 41, the Securities and Exchange Commission (SEC) issued a regulation providing for the inclusion at the bottom of the income statement of items of profit and loss recognized for the period but not included in net income. The CAP subsequently altered its position to make this method acceptable but at the same time stated a preference for the current operating performance presentation whereby special items were carried directly to retained earnings. If special items were to be included on the income statement, net income was to be designated so as not to be confused with the final figure on the statement. Representations of earnings for the year or earnings per share were to be based on net income. Thus, the number labeled as net income continued to be that resulting from the application of the current operating approach to income.

In the 1953 restatement of former Accounting Research Bulletins, ARB No. 43, Ch. 8 reemphasized the position taken in ARB Nos. 35 and 41. A slight change in wording indicates a greater tolerance than before for the presentation of special items in the income statement although the CAP strongly preferred their inclusion in the statement of retained earnings.

The period of 1948 to 1953 was clearly a time when the current operating approach to income determination found support by the AICPA. Whether or not special items were included in the income statement, the number labeled as net income was to be that resulting from their exclusion. It is apparent that there was concern over users placing undue reliance on a single income figure, and the idea of a dual income presentation emerged during this period.

THE EVOLUTION TOWARD A HYBRID INCOME PRESENTATION

After the restatement of former Accounting Research Bulletins in 1953, no significant statement on income presentation was issued until 1966 when the Accounting Principles Board (APB) issued its Opinion (APBO) No. 9. The period of 1953 to 1966 was one in which there developed a multiplicity of income presentations.

An examination of reporting practices for these years in *Accounting Trends and Techniques* reveals a greater number of alternative presentations than might be implied by the dual concepts of all-inclusive and current operating performance. Tables I, II, and II summarize the various ways in which special items were presented during the period and depict the great variation in financial statement presentation.

The majority of special items were presented in the income statement with the manner of presentation varying considerably. Special items were found in three places: (a) among other income and cost items but separately disclosed, (b) aggregated with other income and cost items but reported through footnotes and other descriptive disclosures such as the president's letter, and (c) in separate income statement sections. A further difference in presentation existed among those items included in a separate statement section in that in some instances this section appeared before net income and in others after net income. Data on the location of this section within the income statement are not available prior to 1960. It is important to recognize that special items given these treatments were still not precisely defined.

A review of the location of items in the income statement and the retained earnings statement for the period 1953 to 1966 is presented in Table 1. During this period both the number of companies re-

TABLE I

FREQUENCY OF SPECIAL ITEMS

Year	Number of Companies Reporting	Number of Special Items Reported	Location of Special Items	
			% in Income Statement	% in Retained Earnings Statement
1966	119	162	70%	30%
1965	174	250	78	22
1964	187	252	76	24
1963	203	264	76	24
1962	234	369	74	26
1961	222	312	79	21
1960	230	324	81	19
1959	213	280	88	12
1958	232	322	86	14
1957	184	257	88	12
1956	240	289	88	12
1955	327	398	77	23
1954	315	324	79	21
1953	345	391	80	20

Source: Based on *Accounting Trends and Techniques* for the years 1954 through 1967.

porting special items and the number of those items declined significantly. There was a strong tendency to present special items in the income statement.

Table II reviews the disclosure of special items in the income statement. A very definite trend existed toward the presentation of items in a separate statement section and away from the two alternatives of footnote and other descriptive disclosure and inclusion among other income and cost items. One may speculate that the drastic change in 1966 resulted from the exposure of APBO No. 9 in 1966 and the anticipation of its publication which occurred in December of that year. It became effective for periods beginning *after* December 31, 1966, and required the separate section disclosure following "Net Income Before Extraordinary Items" and preceding "Net Income."

For the period 1960 to 1966 information is available on the location within the income statement of the separate section for special

TABLE II

PRESENTATION OF SPECIAL ITEMS IN INCOME STATEMENT

Year	Total Number of Items Presented in Income Statement	Disclosure in Income Statement: % Among Other Income and Cost Items	% in Separate Section	% in Footnotes or Other Description
1966	114	21%	72%	7%
1965	196	47	46	7
1964	192	51	41	8
1963	201	44	50	6
1962	273	44	37	19
1961	246	46	41	13
1960	263	46	36	18
1959	246	47	32	21
1958	277	42	39	19
1957	226	47	36	17
1956	254	58	32	10
1955	306	56	24	20
1954	257	64	27	9
1953	314	59	18	23

Source: Based on *Accounting Trends and Techniques* for the years 1954 through 1967.

items (Table III). While the percentages vary considerably, more special items were presented before rather than after net income.

At least two conclusions may be drawn from this review of reporting practices of the period 1953 to 1966. There appears to have been a strong preference for the all-inclusive income presentation, and reporting practices varied significantly from that recommended by the AICPA. An approximation of the relative use of the two concepts of all-inclusive and current operating performance is presented in Table IV. This analysis relates only to the latter part of this period since data on the location of a separate income statement section (before and after "net income") is not available prior to 1960. Also, 1966 data were not included in the analysis since reporting practices of that year may reflect an anticipation of APBO No. 9. During this period (1960-1965) some 65% of special items appeared to have been presented under an all-inclusive concept of income and 35% under a current operating performance concept.

ARB No. 43, issued in 1953, expressed strong preference for the current operating performance presentation and required in cases where special items were included on the income statement, that the amount labeled as net income be that computed before special items. To a great extent, however, companies did not follow this recommendation as the majority of special items appeared in the income statement either merged with other costs and expenses,

TABLE III

PRESENTATION OF SPECIAL ITEMS IN SEPARATE INCOME STATEMENT SECTION

Year	Number of Items Reported in Separate Section	Location of Separate Section: % of Items Presented Before "Net Income"	Location of Separate Section: % of Items Presented After "Net Income"
1966	82	57%	43%
1965	90	41	59
1964	79	49	51
1963	100	53	47
1962	102	66	34
1961	102	68	32
1960	94	87	13

Source: Based on *Accounting Trends and Techniques* for the years 1961 through 1967.

TABLE IV

USE OF ALL-INCLUSIVE AND CURRENT OPERATING PERFORMANCE CONCEPT 1960-1965

	% of All Special Items Presented (Average)
All-Inclusive Concept:	
Income Statement Presentation—Among other income and cost items	36%
Income Statement Presentation—Footnote or other descriptive disclosure	10
Income Statement Presentation—Separate section before "net income"	19
	65
Current Operating Performance Concept:	
Income Statement Presentation—Separate section after "net income"	12
Retained Earnings Statement Presentation	23
	35
	100%

Source: Based on *Accounting Trends and Techniques* for the years 1961 through 1966.

separately disclosed by footnote or other descriptive disclosure, or in separate sections *before* the number labeled as net income.

The increasing importance placed on net income, coupled with the widespread dissemination of financial information in the 1950's and early 1960's prompted the APB to reexamine the multiple methods of income presentation extant at that time. A major element of concern, in addition to the statement location of special items, was the lack of definitive descriptions of extraordinary items and prior-period adjustments in light of the significant impact these two factors had on income under the various reporting practices being followed.

The basic position of the APB was that income should reflect all items of profit and loss recognized during the period except prior period adjustments. As to statement form, two income figures were to be placed on the statement, "Income Before Extraordinary

Items," and "Net Income," with extraordinary items (less the applicable tax effect) coming between them.

In describing extraordinary items, the dual criteria of unusual and non-recurring were combined with materiality as follows:

> Such events and transactions are identified *primarily* by the nature of the underlying occurrence. They will be of a character significantly different from the typical or customary business activities of the entity. Accordingly, they will be events and transactions of material effect which would not be expected to recur frequently and which would not be considered as recurring factors in any evaluation of the ordinary operating processes of the business. (Emphasis added.)[9]

In describing prior-period adjustments four criteria were established, all of which must exist for an event to qualify for exclusion from the income statement: (a) The event can be specifically identified with and directly related to the business activities of particular prior periods; (b) The event is not attributable to economic events occurring subsequent to the date of the financial statements for the prior period; (c) The event depends primarily on determinations by persons other than management; and (d) The event was not susceptible to reasonable estimation prior to its determination.

These conclusions in APBO No. 9 follow from the concern that users may place undue reliance on a single income number and the desire to state income on the basis of normal business operations. It also indicates a clarification on the difference between an extraordinary item and a prior period adjustment, the first time such a specification had been made.

The concept of a prior period adjustment was extended in post-APBO No. 9 pronouncements. In APBO No. 20, *Accounting Changes,* the proper reporting of a correction of an error in previously issued financial statements is that of a prior period adjustment.[10] The same concept has been evident in recent Financial Accounting Standards Board Statements which require retroactive application of newly adopted accounting standards.[11]

APBO No. 9 illustrates a definite movement toward an all-inclusive concept of income. First, extraordinary items were made a necessary part of income determination and presentation by the requirement that they be placed on the income statement. Second, the amount on the income statement labeled "net income" was defined as the number resulting from the addition or deduction of extraordinary items from operating income. Thus, "net income" was the result of an application of the all-inclusive concept of income (with the exception of prior period adjustments) rather than the current operating performance concept as had been required under the former Accounting Research Bulletins. Third, while prior period adjustments were excluded from income statement presentation (an application of the current operating performance concept), they were defined so specifically that the APB concluded that ". . . such adjustments are rare in modern accounting."[12]

Because of differences in interpretation, various problems arose in the application of APBO No. 9.[13] First, the lack of a definition of materiality for extraordinary items led to a difference among firms as to what constituted an item large enough to warrant separate disclosure as an extraordinary item. Second, the terms "unusual or customary activity" and "non-recurring" were too general to encourage uniform application in practice. Third, size appeared to have been a major consideration in evaluating the extraordinary status of an item without due regard for the nature and recurrance of an item. Fourth, companies provided separate disclosure of "unusual" transactions although the transactions did not fit the criteria for extraordinary. Such presentation led, in some cases, to the inclusion of an additional income figure, such as "net income before unusual items" which appeared before both of the income figures described in APBO No. 9. Fifth, the practice of offsetting extraordinary gains of a period with provisions for future losses, thereby relieving future periods of charges which ordinarily would be made against them, existed.

Public discontent with the variety in practice of reporting extraordinary items expressed itself in several ways. The New York Stock Exchange was considering reporting guidelines whereby "extraordinary" items would be included as a part of current operating income and their extraordinary nature explained in footnotes to the financial statements. The SEC expressed concern over the large increase of extraordinary items in annual reports, particularly large charges to current income which may have been costs accumulated over prior years. Reporting practices of the years 1967 to 1972 and reaction to these practices led to a further refinement of income presentation by the APB in 1973.

In APBO No. 30 the APB further refined the concepts underlying income presentation. The resulting net income figure was based primarily on the all-inclusive concept. However, prior-period adjustments are excluded from the statement and an additional income figure, based on the current operating performance concept, is included in the presentation. In addition, a more specific definition of extraordinary items was posited, and items which are unusual in nature or not frequently recurring but not both were made part of the net income before extraordinary items figure.

APBO No. 30 requires the presentation of discontinued operations as a component of net income before extraordinary items. This is in contrast to APBO No. 9 which indicated that the sale or abandonment of a plant or a significant segment of the business was a legitimate extraordinary item.

The new figure of "net income from continuing operations" is based on the concepts of current operating performance income and going concern. To stress the importance of this measure of income, the opinion requires computations of earnings per share on income from continuing operations in the same manner as for net income before extraordinary items and net income.

In defining extraordinary items in APBO No. 30, the Board was very specific in stating that *both* the criteria of unusual nature and infrequency of occurrence must be met. The requirement that the "unusual" and "infrequency" criteria be evaluated in light of the environment in which the entity operates further restricts the number of events which may qualify as extraordinary. An additional listing of items which ordinarily should not be classified as extraordinary items restricted the application of the concept of extraordinary items from that of APBO No. 9 (e.g., gains or losses from exchange or translation of foreign currencies, including those relating to major devaluations and revaluations, and other gains or losses from sale or abandonment of property, plant, or equipment used in the business).

At least two notable exceptions remain to the above generalizations concerning the proper classification of items are found in the cases of tax loss carry-forwards and gains and losses from extinguishment of debt. APBO No. 11 specifies that loss carryforwards should not be recognized until they are actually realized except in unusual circumstances. When the tax benefits of loss carryforwards are not recognized until realized in full or in part in subsequent periods, the tax benefits should be reported as an extraordinary item in the results of operations of the period in which realized.[15]

A second exception from the criteria of APBO No. 30 results from action of the FASB Statement of Financial Accounting Standard No. 4. According to this pronouncement, material gains and losses from extinguishment of debt that are to be included in the determination of net income should be aggregated and classified as extraordinary.

They are to be shown net of applicable tax and per share amounts of the aggregate net gain or loss should be disclosed.[16]

The final step to the current position of income presentation came in 1977 when the FASB issued its statement No. 16, *Prior Period Adjustments*. The position taken eliminates prior period adjustments as described in APBO No. 9, indicating that all items of profit and loss recognized during the period should be included in the determination of net income for the period.[17] The only exceptions to this general principle are corrections in errors in previously-issued financial statements and adjustments resulting from realization of income tax benefits of pre-acquisition loss carryforwards of purchased subsidiaries. The change in presentation required by this statement represents another significant step toward the all-inclusive income presentation.

CONCLUSION

As accounting practices have been refined over the past 35 years, within the historical cost reporting model for presentation of income, emphasis has shifted from the all-inclusive concept of net income and the current operating performance concept to a hybrid approach which substantially incorporates the two concepts. Each pronouncement's contribution to this hybrid concept of presentation is summarized in Table V.

Numerous influences have brought income presentation to its present hybrid form. One influence was a concern that the user would place undue reliance on a single income figure. This resulted in a number of labels for income being included in the income statement over time with a major question being the location of extraordinary items among those income figures. Another influence was the desire to display a figure related to "normal operations" while still holding to the all-inclusive concept. A third influence was the need to define special items which eventually led to the sharp distinction between prior period adjustments and extraordinary items and the further delineation of the disposal of a segment.

The all inclusive concept of ARB 8 proved to be unacceptable because of the lack of definition of the special items and a vehicle for disclosing them. On the other hand, the current operating concept proved to be unacceptable for a similar reason. Abuses in the designation of items to exclude from the determination of net income led to refinement in definition of these items and their presentation in the statements in a manner such that users can make predictions

TABLE V

PROVISIONS OF ACCOUNTING RESEARCH BULLETINS AND ACCOUNTING PRINCIPLES BOARD OPINIONS

	ACCOUNTING RESEARCH BULLETINS					APB OPINIONS	
	8 (1941)	32 (1947)	35 (1948)	41 (1951)	43 (1953)	9 (1966)	30 (1973)
1. Discourages adjustments to retained earnings	YES	NO	NO	NO	NO	YES	YES
2. Recognizes a distinction between ordinary and extraordinary items on the income statement	NO	YES	NO	YES	YES	YES	YES
3. Recognizes a distinction between extraordinary items and prior period adjustments	NO	NO	NO	NO	NO	YES	YES
4. States that extraordinary items must appear on the income statement rather than on retained earnings statement	NO	NO	NO	NO	NO	YES	YES
5. Includes extraordinary items in item labeled "net income"	YES	NO	NO	NO	NO	YES	YES
6. Excludes a current operating income figure from the income statement	YES	YES	NO	YES	YES	NO	NO

about future net income. The current model provides for inclusion of virtually all items in the income statement yet appropriate disclosures that enable a statement user to appreciate the current performance of operations.

FOOTNOTES

[1]APB Statement No. 4, p.70; *Objectives of Financial Statements*, pp.24, 26, 34, 36-39.

[2]ARB No. 32, 1947, p.260.

[3]ARB No. 32, 1947, p.260.

[4]ARB No. 8, 1941, p.64.

[5]In 1941 the CAP recommended discontinuance of the use of the term surplus in favor of the term retained earnings or some other descriptive title. Throughout this paper the term retained earnings is used except in direct quotes where the CAP used the term earned surplus.

[6]Littleton, p.36.

[7]ARB, No. 32, p.265.

[8]Broad, p.378.
[9]APB Opinion No. 9, pp.114-115.
[10]APB Opinion No. 20, pp.398-399.
[11]FASB Statements No. 8, No. 11, No. 12.
[12]APB Opinion No. 9, p.116.
[13]Berstein, pp.57-61.
[14]Lipay, pp.21-22.
[15]APB Opinion No. 11, pp.173, 179.
[16]FASB Statement No. 4, pp.3-4.
[17]FASB Statement No. 16, p.5.

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Ledger Dedications

Francesco di Marco Datini in late 14th century Italy opened a new ledger with the dedication:

> "In the name of God and of the Virgin Mary and all the Saints of Paradise, that they may give us grace to do right both for body and soul."

His factor, Monte d'Andrea, followed this with the ten commandments—"not always to be observed, perhaps—but there at the head of the ledger they stood."

Origo, Iris, *The Merchant of Prato: Francesco Di Marco Datini*, Penguin Books, Alfred A. Knopf, Inc., 1963, p. 279.

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THE COMING OF AGE OF DOUBLE ENTRY: THE GIOVANNI FAROLFI LEDGER OF 1299-1300

Abstract: This article examines the branch ledger of a Florentine firm in 13th century Provence, and its relationship to contemporaneous Tuscan account books. It is concluded that the ledger was part of a sophisticated accounting system, with a debit and credit for every item and a serious attempt at annual balancing, thus constituting the earliest known example of commercial double entry.

In previous published papers the author dealt with the earliest evidence of business bookkeeping in Florence—the bank ledger fragments of 1211, transcribed in 1887 by Pietro Santini—and with the development of accounting in Tuscany during the 13th century, as evidenced in the account-books, or extracts therefrom, which constitute the bulk of Arrigo Castellani's *Nuovi testi fiorentini del Dugento e dei primi del Trecento* (1952). There were traced the gradual standardization of techniques, and incorporation of elements of double entry, within the framework of the "narrative" or "paragraph" type of accounting record *(a sezioni sovrapposte),* perhaps derived from the "charge and discharge" format used in public accounts. The survey ended with the emergence of double entry itself, in the ledgers of Renieri (or Rinieri) Fini & Brothers (1296-1305) and Giovanni Farolfi & Company (1299-1300). The latter's records are better preserved and more completely transcribed than the other's, and display somewhat more advanced techniques; hence they constitute the main subject of this paper.

The Ledger of Giovanni Farolfi & Company

This document is preserved in Archivio di Stato, Florence, and filed under *Carte Strozziane, 2ª serie, n. 84 bis.* It consists of 56 leaves of paper, about 33 x 24 cm., consequently numbered. The first 47 leaves are lost; the extant ones run from 48 to 110, with numbers 66, 74, 87, 93, 105, 106 and 109 missing. Leaves 92, 94 and 103 are damaged in their lower halves, and 92 and 110 are out of sequence—92 bound after 96, and 110 at the beginning. In this article reference is made to the leaves, recto (r.) and verso (v.), as in Castellani. The bookkeeper, however, numbered only the recto of each pair of facing pages, and counted them as one folio; thus, a cross-reference to an entry *nel lxiii carte* meant that the counterpart appeared on either 62v. or 63r. Some references extend beyond the extant pages, mentioning folio numbers as high as 129, and it therefore seems that less than half the book has survived.

The ledger is entirely in one hand, that of Amatino (or Matino) Manucci, one of the partners who acted as bookkeeper. The writing is neat, legible and well-preserved for the most part; but occasionally two pages have stuck together and some of the surface of one has adhered to the other, forcing Castellani to use a mirror to read the text, or to leave a lacuna where the facing page is lost. The entries are set out in lines, going close to the left-hand edge but leaving a wide right-hand margin, into which are extended the sums of money, in Roman numerals and neatly ranged in a column. In the first section of the ledger, up to page 92v., the upper half of each account contains the debits, and the lower half the credits; in the second section, from 94n., the sequence is reversed. The debits and credits are each totaled in the middle of the page, and (normally) demonstrated to be equal. As in other old Italian ledgers, all accounts are struck through with slanting lines, denoting settlement. The arithmetic, performed on the abacus or with counters, is in general very accurate. The money of account is the *livre tournois* of France, divided into 20 *sols*, and each *sol* into 12 *deniers*. The language is the Tuscan vernacular of Dante's time, recognizably like modern Italian and spelt much as today, with some abbreviation of common words. A few Provençal expressions are also found, mainly weights and measures.

The Business of Giovanni Farolfi & Company

Giovanno Farolfi & Company, as appears from their ledger, were a firm of Florentine merchants whose head office was at Nîmes in Languedoc, in the kingdom of France. The ledger, however, relates exclusively to the branch at Salon, a town in the independent county of Provence, about 45 miles from Nimes and 25 east of Arles, with a population in 1300 of some 2,000 to 3,000. It was dominated by the Archbishop of Arles, Rostang de Capre, who held the see from 1286-1303,[1] and was one of the Count of Provence's principal vassals. He resided often at his Château de l'Empéri, crowning the hill on which Salon stands, and appears in the Farolfi accounts as their most important customer, and largest supplier of agricultural produce. His patronage must also have shielded the Florentines from any trouble over the Church's official ban on "usury", which in any case was not seriously enforced, provided the rate of interest was not extortionate; the Archbishop himself borrowed from the Farolfi at 15 per cent per annum. Rostang de Capre was also friendly with another powerful magnate, Bertrand des Baux, Count of Avellino, who held the limestone hills of the Alpilles to the north of Arles. He is mentioned more than once, in accounts with the Archbishop, and his goodwill, if not his custom, was doubtless important to the Farolfi.

Salon's economic significance lay in its position as the chief market town between Arles and Aix, the capital of Provence. Situated in the plain north of the Etang de Berre, with its salt-pans (a monopoly of the Count's), close to the arid, pebbly wastes of La Crau with its flocks of sheep, the town was, and is, a centre of the olive oil industry, and formed an ideal collecting-point for the other bulk commodities in which the Farolfi dealt — wheat, barley, oats, wine, and wool. It was also well situated for the company's other main trade, in cloth, yarn, and dyeing materials; most of the goods were locally produced, but the finer cloths mentioned must have been imported through Marseilles. The company additionally engaged in moneylending and moneychanging, as a sideline and mainly for the accommodation of their trade customers. On one occasion the Salon branch consigned 220 quintals of merchandise (evidently bulk grain and/or oil) to Florentine in the care of the partner Ughetto Buonaguida, and paid freight of 68*l*. 8*s*. 0*d*., presumably from Marseilles.

The senior partner was Giovanni Farolfi, otherwise Giovanni Filippi or (in one place) Giovanni, son of Ubaldino; next to him ranked (it seems) Compagno (or Pagno) Franchi. Amatino (Matino) Manucci kept the books. Bacchera Baldovini was apparently in charge of the Salon branch, and was its chief buyer. Other partners were Borrino (Burrino) Marsoppi, Vitale Marsoppi, Ughetto Buonaguida, and Francesco Cavalcante. Tommasino Farolfi and Giometto Verdiglione may also have been partners, but the evidence is equivocal.[2] Such partnerships in medieval Italy were normally constituted for only a few years at a time, and it is not known how long the Farolfi firm lasted. The ledger shows balances brought forward from a previous one, and ending balances in 1300 closed off to the firm's account; but this may have been because the ledger was full, or because the firm kept a separate volume for each year.

Besides the Archbishop of Arles, major customers included Guillaume de Lambesc, perhaps a merchant in a little town 8 miles to the east; Gilles Vacquier, a draper in Salon; three Italian merchants, Ghiberto Doni, Tano (Gaetano) da Figliano, and Ischiatta della Fiorentina[3] from L'Isle-sur-la-Sorgue in the Comtat Venaissin (the Papal territory north of Provence); and Giovanni Giuserani or Jean Jusserand — he may have been either Italian or Provensal. The main suppliers were, again, the Archbishop, Tano da Figliano and Giuserani/Jusserand, together with Tommasino Farolfi of Mondragon (north of the Comtat) and Astruc Durand Loncantaire, a Jew of Salon. Other Jews are mentioned, some as Astruc's partners; Provence and the Comtat were more tolerant of their race than was France, and they formed communities, with synagogues, in several towns. Nothing appears to be known otherwise of any of these persons.[4]

Structure of the Farolfi Accounting System

From the surviving ledger it is evident that it was only one account-book among several. The first half contained the debtors' and expenditure accounts, and the debit side of the head office account, which on closure of the ledger became the balance account. In the second half were the creditors' and profit accounts, and the credit side of the balance account. The total of the latter was carried to page 92v. and compared with the total of the debit half; theoretically they should have been equal, but were not, for reasons given later.

In both halves of the General Ledger (as it may conveniently be called) the earlier accounts show balances transferred from a "White Ledger" *(quaderno bianco),* with cross-references to numbered folios therein, ranging from 23 to 99. The folios up to 69 refer to debit balances, those from 70 upwards to credit ones. This White Ledger must therefore have been an earlier volume of the General Ledger, divided similarly into two halves, rather than (as Castellani thought) "a waste-book of prime entry" *(uno scartafaccio di prima nota).* Since the balances were transferred directly from the old personal accounts to the new, it seems clear that the old ledger had no closing balance account; nor was there an opening one in the new volume, such as is found in the Peruzzi ledger of 1335-43.

From numerous references it is apparent that the main merchandise accounts — for wheat, barley, oats, olive oil, wine, wool, and yarn — were contained in a separate "Red Book" *(libro rosso);* folio numbers from 14 to 141 are mentioned. These accounts were debited with purchases (in the front of the ledger) and credited with sales (in the rear half), and closing inventory balances were transferred to the debit of the balance account in the General Ledger. The Profits Account *(avanzi)* was in the last pages (127-129) of the

General Ledger, which are lost; it would seem that any excess of credits over debits in the Red Book accounts was transferred at intervals to the credit of Profits, and any contrary excess to the debit of Current Expenses *(spese corse).* Indeed, the latter account is debited on 20 June 1300 with 95*l.* 4*s.* 5*d.* "which we lost on wheat that we purchased", cross-referenced to Red Book, folio 22. In many General Ledger accounts, though, a debit for goods sold to a customer is followed by a statement that "we have a bill made by the hand of Maître Bertand Arnaud *(maestro Bertrano Arnaldi),* notary of Salon". There is usually no cross-reference to any other account or book. The account is balanced, then follows the statement: "It shows that for us there is a profit of (so much): we added to Profits, further on at folio 129". This sum appears to stand outside the debtor's account, which balances without it, and thus to constitute a mere memorandum in that place. The credit to Profits cannot now be followed through, and the question arises: where was the corresponding debit? The most likely hypothesis, on the whole, is that it was made in (say) the Wheat Account in the Red Book, as representing the gross margin on the sale; the bill of exchange was used as the posting medium — hence the lack of a reference to the credit for the sale in the Red Book. This belief is strengthened by consideration of the order of amounts involved, and by a curious piece of evidence on page 77r. Beside an account showing a sale of 15*l.* 0*s.* 0*d.*, with a profit noted as 3*l.* 5*s.* 0*d.*, there appear in the left margin the *Arabic* figures 11 and 15, vertically. These look like a note of the cost price, 11*l.* 15*s.* 0*d.*, taken from the Red Book on the debit side.

A third book is referred to once — the Cloth Ledger *(quaderno dei panni).* This obviously contained merchandise accounts (as in the Red Book) for various kinds of cloth. The references (to folio 4 and 16) occur in an account for Druggets *(sargie)* at page 63v., the beginning of which is mutilated; the debit and credit totals from the Cloth Ledger have been transferred here, and further sales entered, with a profit figure (credited to Profits) which appears arithmetically wrong. The balance account in the General Ledger shows no debits for ending inventories of cloth; presumably there were none left. Apart from the Druggets Account, moreover, there are several debits to customers for cloth sales, without cross-references; bills have been drawn up by Maître Arnaud, as described above.

A fourth book was the Expenses Ledger *(quaderno delle spese);* there are references to folios from 6 to 37. It seems to have contained accounts relative to fixtures *(masserizie)* and current expenses *(spese corse)*, and possibly other items. Corresponding entries appear in the General Ledger; then the closing totals of the Expenses Ledger accounts have been transferred to Fixtures, and Current Expenses, Accounts, and further entries made therein, as with the Cloth Ledger.

Last among the main books of account was the Cash Book *(libro dell'entrata e dell'escita)*. This is never mentioned in the text, and no folio references to it are given for the numerous debits and credits relating to cash paid and received, or for the sum of 1*l.* 10*s.* 0*d.* transferred at 16 August 1300 to the debit of the balance account. This item is described as moneys, "which we gave them in cash in Nîmes: Matino counted it out." It must be the final cash balance, as it follows a series of debits for ending inventories of various goods, from the Red Book. The Cash Book was probably in the form then standard in Italy, with receipts in the front half, payments in the rear half, and periodical balancing of the two totals. The absence of folio references in the General Ledger is explained by the relative ease of referring back to the Cash Book by dates alone; there would, for obvious reasons, have been ledger references in the Cash Book.

These five books — general ledger, two merchandise ledgers, expenses ledger, and cash book (with the White Ledger as a sixth) — constituted what looks very like a true double entry system, though for the Salon branch only. In addition there were at least two subsidiary books, occasionally referred to in the General Ledger. The first was the *libro piloso*, a term which, curiously, occurs also in the contemporary Fini ledger, in what seems to be the same sense. The best translation, in the author's judgment, is "Plush Book", taking *pelo (pilo)* to mean (as in Edler) the nap or "pile" on cloth. It was kept by the partner Borrino Marsoppi, evidently as a memorandum book of business expenses out of pocket; folio numbers from 5 to 55 are mentioned. It was periodically summarized, and the total debited to Expenses and credited to Borrino's account. The second subsidiary book was the "Memorandum Ledger" *(quaderno memoriale)*, for which no folio references are given. There are only three entries from it in the General Ledger; they concern out-of-pocket expenses of partners other than Borrino Marsoppi, and the Memorandum was presumably a generalized form of his Plush Book.

All these records add up to a bookkeeping system of uncommon sophistication, even by contemporary Italian standards. Wonder grows when one remembers that these were the books of one branch only of a sizeable mercantile enterprise, and they arouse in the inquirer a strong, but fruitless, desire to know what elaborate arrangements must have been in force at the Nîmes head office of the company.

The Farolfi Ledger and the Evolution of Double Entry Bookkeeping

It has long been recognized by accounting historians that double entry bookkeeping did not suddenly appear in Genoa in 1340, and is most unlikely to have had any single inventor. Examination of Tuscan account-books, business and private, of the 13th century by Federigo Melis and Raymond de Roover, as well as by Arrigo Castellani, has revealed considerable sophistication and increasing systematization in the "paragraph" format, and done much to correct the view of earlier historians, such as Edward Peragallo, that there was little systematic business accounting before the rise of the great Florentine banking houses and cloth manufacturers of the 14th century. The present author has entered into his great predecessors' labours, and in a previous study traced the emergence, between 1211 and 1296, of the main components of double entry.

These may be identified, in descending order of obviousness, as:

(1) the concept of the individual proprietor or (more clearly) the business partnership as an *accounting entity,* whose books record its financial relationships with other economic agents;
(2) the concept of *algebraic opposition,* firstly between increases and decreases in a physical holding of cash or goods, secondly between increases and decreases in the level of indebtedness by or to another economic agent or entity, thirdly between indebtedness by, and to, other entities in general, and fourthly, and least obviously, between assets and liabilities of the entity accounted for;
(3) the concept of a *single monetary unit,* to which amounts in other currencies are converted, thus making the entries additive overall;
(4) the concept of *proprietors' equity,* as the algebraic sum of assets and liabilities;
(5) the concept of *profit or loss,* as the net increment or decrement to equity resulting from one or more acts of exchange between the entity and its economic environment (excluding the proprietors); and
(6) the concept of an *accounting period,* over which profit or loss may be measured.

It would be flying in the face of the evidence to suggest that these ideas were all considered of equal importance, or that there was any steady and consistent progress in adopting them, among the businessmen of 13th century Florence. No-one had any theory as to what an accounting system ought to be, or if he had it was never put into writing, as far as anyone knows. Each man of substance kept whatever records he needed for his own purposes, with little regard for overall coherence or consistency. He was concerned mainly to keep track of his current position with respect to cash, debtors and creditors, and sometimes his investment in the family firm. There are no nominal or equity accounts in early private ledgers, and no means of ascertaining either the wealth of the owner at any time, or his income or expenditure over any period. The only basic concepts followed with any consistency are those of the accounting entity (the proprietor himself), and of algebraic opposition between increments and decrements to the balances of individual debtors' and creditors' accounts (including interest receivable and payable), and presumably to cash balances, though no private cash books have survived. Not all account-books adhere closely to the concept of a single monetary unit. Some use the silver florin as the unit, and convert gold florins at the rate (from 1277) of 1 gold florin = 29 silver *soldi;* but others, such as that of Gentile de' Sassetti and his sons (1274-1310), use a mixture of currencies — gold florins, silver florins, and Pisan silver *piccioli* — with little attempt to unify them, though the same unit is normally used for all entries in a given account. Some loan accounts are balanced at the same date each year (as in the first ledger of Bene Bencivenni, 1262-75), but only, it seems, in order to compute interest.

Remains of 13th century Italian business accounts are very fragmentary, and have survived only by various accidents. Banking and mercantile partnerships were formed for only a few years at a time, and when the firm was wound up and partners' shares paid out to them, no-one was concerned to preserve the books. Indeed there was an incentive, owing to the dearness of parchment, to scrape or wash the pages and reuse them — as in the case of the 1211 bank ledger pages, utilized as flyleaves to a 14th century legal MS. About the only other first-hand documents of the period are fragments of the Detacommando ledger at Poppi (1241-72), of a creditors' journal at Imola (1260-62) (both very crude), and a memorandum book of the Ugolini Company of Siena (1255-62), together with two cash books — of an unknown Sienese firm of 1277-82, and of Pope Nicholas III's treasurer in the Marches, 1279-80 — and inventories of stock, cash and book debts of the Lucca and Pisa branches of a Florentine cloth-merchants' firm, 1278-79. (The two last have been transcribed by Castellani). At second hand, we have 13th century transcripts of two bankers' ledger extracts, for use in lawsuits — a deposit account from the ledger of the Borghesi Company (1259-67), and a loan account from that of the Peruzzi Company (1292-93). At one further remove, there are "mirror images" in private ledgers, of a partner's drawings account, 1285-96 (Bene Bencivenni's second ledger, 1277-96), and of his capital account (Gentile de' Sassetti and his sons, 1274-1310).

From this scanty testimony it would be hazardous to form any dogmatic conclusions as to the evolution of accounting at this period. Yet evidence emerges of the gradual acceptance and application by entrepreneurs and their bookkeepers — often one and the same person — whether consciously or not, of the six concepts formulated above, and of their progressive convergence to form a coherent system, approximating to double entry. The first three are already present in the 1211 ledger: (1) the firm is clearly distinguished from outsiders; (2) there is offsetting, not only of increments and decrements to the same account balance but as between loan and deposit account balances, and there are even quite complex transfers between different customers' accounts in settlement of liabilities to third parties; and (3) all entries are in Pisan currency, with many intricate conversions of sums in Bolognese, Veronese, German Imperial, French, English and Arabian coin. The tightly-knit *Arte di Cambio* of Florence was unlikely to have let such knowledge remain the preserve of any one firm, nor yet to have allowed it to perish. What little we know of later 13th century business accounts shows building on these foundations, and the addition of the other three basic ideas.

All are exemplified in the private ledger counterpart of Gentile de' Sassetti's capital account with Sassetti Azzi & Company. It started at 1 January 1278-79 (the year then began officially on 25 March) with a balance, in silver florins, of 2,583 *libbre,* 12 *soldi,* 0 *denari,* which grew to 4,926*l.* 14*s.* 0*d.* at 6 May 1284, when it was paid out in cash. On 8 May 1284 Gentile invested 4,000*l.* 0*s.* 0*d.* in a new partnership with the same firm, and on 1 January 1289-90 this, too, was liquidated, with a payment to him of 4,012*l.* 17*s.* 0*d.* The account is consistently balanced at 1 January in each year (except 1281-82), when it is debited (credited, in the firm's books) with interest at 8 per cent per annum on the opening balance. To this is added, up to 1 January 1282-83, a share of profit, in a round sum plus a supplementary broken amount after the first year; after 1283 there is only interest. Drawings for the year are credited at 1 January (debited in the firm's books). The total gain to Gentile from the first partnership was 4,295*l.* 8*s.* 0*d.*, and from the second 1,810*l.* 11*s.* 0*d.* (subject to three small arithmetical errors) — altogether, 6,105*l.* 19*s.* 0*d.* From this record one may deduce that Sassetti Azzi & Company's accounting system not only incorporated concepts (1) to (3) above, but also included: (4) a capital account for each partner; (5) regular ascertainment and division of profit and loss; and (6) annual balancing of the partners' accounts, if not of the books as a whole. What cannot be proved is that the firm used double entry. More probably, the partners at the year-end totaled the assets and liabilities, deducted the latter from the former, then subtracted the opening balances on the capital accounts, and added back the partners' drawings, less any capital contributed during the year. The result was a sufficient approximation to the annual profit or loss, which was then divided, and credited or debited to the capital accounts (which were debited with drawings). Such was the common practice in Florence in the first half of the 14th century, as shown in the *libro segreto* of the Alberto del Guidice Company, 1302-29.

None of this, however, precludes the use in such books of nominal accounts, debited with expenditure and losses *(disavanzo)* and credited with revenue and profits *(avanzo)*. Theoretically, the excess of the latter over the former should have been equal to the excess of closing net assets over opening capital, plus contributions, minus drawings, for the year; but this happy result could seldom, if ever, have been achieved in medieval Italy, owing to the bookkeeper's propensity for making one-sided adjustments, and to human error. Hence there was almost always a difference between total debits and total credits; if it was not too large the bookkeeper was satisfied, and adjusted the profit total to fit. In the Sassetti Azzi ledger there may have been a preliminary computation of profits as *avanzo* less *disavanzo*, with round-number "dividends" transferred to capital accounts, followed by a more precise calculation, and adjusting entries; but without the books there is no way of settling the question.

Of nominal accounts there is no direct evidence before the Peruzzi ledger extract of 1292-93. This includes a debit to Giovanni Gianfigliazzi's loan account in respect of interest, 27*l.* 10*s.* 0*d.*, stated to be added "to profit *(avanzo)* in the small ledger *(quadernetto)* at (folio) 3". The first extant ledger to include such accounts comes, though, not from Italy but from France; it is nevertheless in Italian, and preserved in Archivio di Stato, Florence, under *Capitani d' Orsammichele, n. 220.* It has been partly transcribed by Arrigo Castellani.

The ledger is that of Renieri (Rinieri) Fini de' Benzi & Brothers, and extends from 1296 to 1305. The three brothers, Baldo, Renieri (who wrote most of the ledger) and Schiattino, were the sons of Fino de' Benzi, from Figline in Val d'Arno. The two elder sons had been factors to Biccio and Musciatto Franzesi, financiers to Philip IV of France (1285-1314), and all three brothers were merchants and moneylenders at the Fairs of Champagne. Unfortunately the MS., of some 91 leaves of paper, is in poor condition; also, Castellani transcribed only the entries up to 1300 — about one-fifth of the whole.

Accounts with debit balances appear in the first half, those with credit balances in the second. In both halves are accounts for Renieri Fini, who was cashier as well as bookkeeper; they seem to be the two sides of the Cash Account. The debtors' accounts relate mainly to loans at the Fairs of Champagne, but include a loan of 16,000 *livres tournois* to the King of France in 1299. The second half of the ledger has an account for "Baldo Fini and his brothers"; credits include five years' "salary" at 200 *livres* per annum, paid to Renieri by "Biccio Franzesi and his Franzesi partners". More significantly, nominal accounts are found for the first time — in the first half, for Interest (payable) and for Expenses of Clothing and Footwear, and in the second half for Profit *(avanzo),* mainly interest receivable. All the entries, so far as can be traced, have counterparts in personal accounts, or in Renieri Fini's cash account. The ledger thus exhibits a combination of accounting *a sezioni sovrapposte* with double entry, in the sense that every debit has its credit and vice versa, at least in intention, and that impersonal, as well as personal, aspects of transactions are dealt with. What is missing is any evidence that the ledger was ever balanced. The accounts, as far as they have been transcribed, appear to run on from year to year, with no general closing off, no striking of annual or other balances of profit or loss, and no transfers of nominal account balances to capital; nor does there seem to be any partitioning of equity between the partners. Perhaps these matters were settled when the ledger was full or the firm was wound up, and judgment must be suspended until a complete transcript of the surviving entries is to hand.

With the doubtful exception of the Fini ledger, then, evidence for full double entry before 1299 is tenuous to say the least. The lack of accounting periods of fixed length is not, however, a fundamental objection to the classification of an accounting system as double entry; the Florentines made use of them from the 14th century, but the Venetians, for example, did not, and Luca Pacioli (1494) did not prescribe them. What matters is that *at some stage* all balances on a ledger shall be brought together in one view, debits against credits, and some genuine attempt be made to prove the two totals equal. If that is done, even without complete success in the last point, then the system complies with concept (6) above, and shows an accounting period over which profit or loss can be measured — even if that period is merely the time from opening, to closing, of a volume of the ledger. This process one cannot find in the Fini accounts and, pending further research, must refuse to certify them as true double entry. It will now be demonstrated that the Farolfi ledger exhibits all six of the basic concepts, including final balancing, and that the system therefore qualifies as the earliest proven example now extant of commercial double entry bookkeeping.

The Giovanni Farolfi Accounts As a Double Entry System

Like the Fini ledger, the Farolfi one includes "real" and "nominal", as well as "personal", accounts. The goods accounts now accessible comprise the Druggets Account (for purchases and sales of coarse woollen cloth), and several accounts for purchase and resale of individual packhorses. Both are stated, rather quaintly, to be "due to give" their purchase prices, and to "have given" their sale proceeds — a sign that the conventional bookkeeping formulae were losing their literal meanings and becoming purely indicators of the difference between debit and credit. The nominal accounts are more interesting than in the Fini ledger. There are separate ones for Fixtures (debited with purchases and credited with proceeds of sale — both items brought forward from the Expenses Ledger), Expenses of Eating and Drinking, and Current Expenses, the two latter being more conventional.

Most extraordinary for so early a date is the presence of four accounts for prepaid rent on various premises. In the case of a warehouse rented from Pierre Guillaume, for example, 16 *livres* were paid on 17 May 1299, for four years in advance; this sum was transferred from the old White Ledger to the debit of the rent account. At 17 May 1300 one year's rent, 4 *livres,* was credited to the account and debited to Current Expenses. At the closing of the ledger the remaining 12 *livres* were transferred, as an open balance, to the debit of the balance account. Similar treatment was accorded to advance rent of a shop (12 *livres* for four years — 3 *livres* written off); of a second warehouse, 1*l.* 10*s.* 0*d.* for one year (all written off);

and, more subtly still, to the balance of 4 *livres* (out of 12 *livres* paid in advance for three years on 6 October 1297) for a second shop. Such a grasp of the principles of revenue/cost matching in relation to time-based expenditure would have been creditable four or five centuries later; in 1300 it seems to border on the miraculous.

Posterity has been less fortunate as regards the total loss of the Profits Account, which was credited separately on folios 127 to 129. The author has listed all the extant debits cross-referenced to it, totalling 127*l.* 8*s.* 8*d.*; but there must also have been gross profit figures transferred from the now-lost Red Book and Cloth Ledger.

Finally comes the acid test of any alleged double entry system — the balancing process. Amatino Manucci does not disappoint. On page 88r. begins an account headed *Giovanni Farolfi e' compangni n(ost)ri di Nimmisi.* To its debit side are transferred almost all the debit balances open on the General Ledger to that point, including some on missing folios (2 to 7) at the beginning, after which there is an abrupt jump to the extant part of the ledger, from folio 48 onwards. The account continues to the bottom of page 90v., with each page separately totalled; on page 91r. comes a summary of open debit balances on the Red Book — ending inventories of produce — followed by what is clearly the ending balance of cash in hand, from the Cash Book. (Balances on the Cloth Ledger and Expenses Ledger have already been taken up into the General Ledger.) Page 91v. sweeps up a few debit balances previously overlooked, or added after the balancing began, then summarizes the totals of pages 88r. to 91r., making a grand total of 2,745*l.* 6*s.* 1*d. tournois.*

The credit side of this balance account is, exasperatingly, lost; it occupied folios 111 to 114, tantalisingly just beyond where the MS. ends. It is clear that it summarized all the open credit balances in the second half of the General Ledger, for there are many cross-references to it. The extant ones total to 2,846*l.* 9*s.* 5*d.*, and there must have been others, yet the credit balance brought forward to page 92v. (the grand summary) is only 2,762*l.* 19*s.* 0*d.* There is no obvious explanation for the discrepancy of 83*l.* 10*s.* 5*d.*; inclusion of the missing Profits Account credit balance would increase, not diminish, it. If the total is right, then folios 115 to 129 must have contained debits, and there is at first sight nowhere whence they could legitimately have come. On the other hand there are no references to any folios from 115 through 126, and there may have been adjustments here — perhaps partners' drawings in cash, debited to personal accounts and transferred to the debit of the balance account on folios 111 to 114, either directly or via the Profits Account.

The grand summary on page 92v., then, begins with a credit total of 2,762*l.* 19*s.* 0*d.*, dated 4 August 1300. Against it is set the debit total from page 91v., 2,745*l.* 6*s.* 1*d.*, dated 27 June 1300. To this is added an unreferenced debit of 42*l.* 6*s.* 0*d.*, described as interest on the preceding sum at 15 per cent per annum up to 4 August; it does, in fact, work out very closely as 15 per cent per annum on 2,745*l.* 6*s.* 1*d.* from 27 June to 4 August. This interest was evidently designed to bring both totals to a common basis as at 4 August, and to offset interest at the same rate already debited to Current Expenses and credited to Giovanni Farolfi & Company, up to 1 September 1300; 15 per cent was presumably an estimate of a fair rate of return on the capital invested in the branch, and one which had to be earned before a net profit was recognized. The somewhat muddled adjustment of 42*l.* 6*s.* 0*d.* ranks in double-entry terms as a one-sided entry; it should also have been credited to Profits, and seemingly has not been. Hence, if it is ignored, the apparent difference on the books is 17*l.* 12*s.* 11*d.* excess of credit over debit.

Close scrutiny of the General Ledger, with translation into modern two-sided accounts and careful checking of casts and postings, has revealed to the author several errors, of arithmetic and of principle, which would in any case have vitiated the balance. There are also a large number of entries on both sides that seem at first sight to have no counterparts. From these one can at once eliminate the cash items — they must have gone through the Cash Book. There are likewise many unreferenced purchases and sales of goods, especially where a bill of exchange was accepted in payment; again, there must have been corresponding entries in the Red Book or Cloth Ledger, otherwise the inventory balances would not have agreed with the physical stocks.

If the obvious bookkeeping errors are first adjusted, the apparent difference on the General Ledger is reduced as follows:

Page 92v. Credit total brought forward, 4/8/1300		2,762*l.* 19*s.* 0*d.*
Less Page 62r. Credit entered twice, only one debit	40*l.* 2*s.* 10*d.*	
Pages 75v., 96r., 96v. and 102v. Four small arithmetical errors	2*l.* 11*s.* 2*d.*	
		42*l.* 14*s.* 0*d.*

Revised credit total				2,720*l.* 5*s.* 0*d.*
Page 92v. Debit total brought forward, 27/6/1300				2,745*l.* 6*s.* 1*d.*
Less Page 84r. Debit entered twice, only one credit	40*l.*	0*s.*	0*d.*	
Pages 63r. and 88v. Two small arithmetical errors		1*s.*	1*d.*	
				40*l.* 1*s.* 1*d.*
Revised debit total				2,705*l.* 5*s.* 0*d.*
Revised apparent difference (credit exceeds debit)				15*l.* 0*s.* 0*d.*

Now, as it happens, there is one credit of exactly 15*l.* 0*s.* 0*d.* with no cross-reference to a corresponding debit. It occurs on the very first extant page, 48r., in the account of the Archbishop of Arles, and is described as an allowance to him "for harvesting the wheat at Miramas and Saint-Chamas", as at 10 June 1299. If this credit is indeed one-sided, *and there are no further errors,* then after debiting Current Expenses 15*l.* 0*s.* 0*d.* one can balance the books of Giovanni Farolfi & Company to the exact *denier* as at 4 August 1300!

It is only fair to point out that there are several small items which may or may not be errors vitiating the balance. In the account of Tommasino Farolfi on page 63r., the debits as given add up to 10*l.* 0*s.* 0*d.* more than the given total; the latter agrees with the (correct) credit total. Among the debits, though, are two largeish cash payments, and either may have been transcribed or printed with one *x* too many in the *livres* — only a sight of the MS. would confirm or deny this. Similar errors, of 10*s.* 0*d.* and of 1*s.* 0*d.*, occur in the Druggets Account (page 65v.); again, without seeing the Ms. one does not know whose errors they are.[5] Also there are two entries which seem to be one-sided, but may not be — a credit to Gilles Vacquier (page 65r.) of 10*s.* 0*d.* for an allowance on a horse, referenced to Current Expenses and probably debited in the Expenses Ledger; and a credit to Expenses of Eating and Drinking (page 83r.) of 1*l.* 12*s.* 0*d.* for flour and salt meat on hand at the balancing date and not, it seems, transferred elsewhere. With these doubtful exceptions, then, the ledger as we have it can be balanced precisely; even if they are errors, there must have been others exactly offsetting them in total, which cannot now be investigated.

Conclusion

On any showing, the bookkeeping system of Giovanni Farolfi & Company for the Salon branch in 1299-1300 is a most remarkable achievement for its time. Within the conventions of the traditional Tuscan paragraph format of accounts, long favoured as being more economical of writing material than the Venetian-Genoese two-sided presentation *(a sezioni contrapposte),* Amatino Manucci has managed to construct a comprehensive and fully-articulated set of double-entry records, with a regular balancing procedure on closure of the General Ledger, marred only by a few human errors. Nor was the aspect of financial control neglected. The books were logically subdivided, with segregation of cash and goods accounts from the main ledger, a perpetual inventory of each line of agricultural produce and each grade of cloth or yarn dealt in, and full records of debtors and creditors, expenses, profits, interest and partners' drawings, as well as the state of account with the head office at Nîmes, and an estimate (15 per cent per annum) of the expected rate of return on capital employed. Perhaps it was these aspects that most concerned the partners, and the balance of the ledger was of secondary importance; if it agreed within a reasonable tolerance, it was accepted.

To the author's mind, the doubts expressed by Melis, Castellani, Raymond de Roover, and Vlaemminck have been cleared up, and double entry bookkeeping stands revealed as a product of 1300 at latest, rather than 1340. The mystery remains as to how, and on what models, Amatino evolved his system, and as to why it was not adopted in full rigour by other Florentine firms before the second half of the 14th century. Yet it is clear, on the evidence, that the Farolfi ledger stands in the line of succession that leads on from the untidy, but surprisingly sophisticated, bank ledger of 1211, and that the basic ideas of rational accounting, painfully worked out in the 13th century, came together and were fully integrated into that matrix of information which we know as double entry. In short, the books of Giovanni Farolfi & Company are established as one of the major monuments of early accounting history, and Amatino Manucci as surely a strong candidate for any future International Accounting Hall of Fame.

FOOTNOTES

[1]*Dictionnaire d'histoire et de géographie ecclésiastiques: Tome 4,* art. *Arles* (Paris, 1930). No particulars are given beyond the name and dates.

[2]Only Pagno and Bacchera are otherwise known, from the books of the Gianfigliazzi Company in Dauphiné and Provence, 1320-25 (see bibliography, items 1 and 5).

[3]"Son of the Florentine woman"—perhaps illegitimate.

[4]Letters to the author from Mm. G. Giordanengo, editor of *Provence historique,* and R. H. Bautier, author (with J. Sornay) of *Les sources de l'histoire économique et sociale du moyen âge* (Paris, from 1968). Tome 1: *Provence, etc.* refers to the Farolfi ledger, but gives no additional information. The archives of Salon do not go back to 1300.

[5]The author has discovered a similar error (*libbre ii* printed as *libbre li*) in P. Santini's transcript of the 1211 bank ledger fragments (see refs. 2, 8 and 9). It had been unnoticed by two later editors of the Italian text.

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2. Pietro Santini, "Frammenti di un libro di banchieri fiorentini scritto in volgare nel 1211", *Giornale storico della litteratura italiana*, Vol. X (1887), pp. 161-177.
3. Federigo Melis, *Storia della ragioneria* (Bologna, 1950).
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14. C. Battisti and G. Alessio, *Dizionario etimologico italiano (5 tomi*, Firenze, 1950).
15. A. J. Greimas, *Dictionnaire de l'ancien français* (Paris, 1968).
16. Emil Lévy, *Petit dictionnaire provençal-français* (Heidelberg, 1909).

God's Account

Italian merchants' accounts of the late 14th century often contained a special account for the allotment of a portion of the profits for charity. Francesco di Marco Datini's ledger contained such an account in which he recorded his gifts, both in money and in goods to "Christ's Poor." The account was called "God's Account" *("il conto di Messer Domeneddio").*

"In some companies, such as that of the Peruzzi, a special proportion of the original capital was assigned, at the company's foundation, to charity. And in the books of the Compagnia dei Bardi the accounts of 'the share of *Messer Domeneddio*' were kept in precisely the same manner as those of 'the share of Messer Ridolfo', or any other member sharing in the general profits and losses. At the end of the year, when dividends were paid, God's account received an amount equivalent to two shares."

Origo, Iris, *The Merchant of Prato: Francesco Di Marco Datini*, Penguin Books, Alfred A. Knopf, Inc., 1963, p. 67.

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THE ACCOUNTANT'S RESPONSIBILITY FOR DISCLOSING BRIBERY: AN HISTORICAL NOTE

Abstract: In the late nineteenth century *The Accountant* reported on a case where the auditors looked at the mattery of bribery "straight in the face" and disclosed the illegal payments in the audit certificate. However, subsequent discussion of the accountant's responsibility for disclosing bribery in an 1899 lecture, "Secret Profits," showed that there was no unanimity of opinion on the accountant's responsibility in this area. The problem is obviously a continuing one.

Recent scandals involving political payoffs and international bribery have raised questions concerning the accountant's responsibility for disclosing illegal payments. These questions are not a recent phenomena. Since the dawn of civilization, accountants have been confronted with this fundamental problem of human nature.

Long ago Aristophanes (450-385 B.C.), in his comedy "The Clouds," attacked Pericles for financial statements in which an item of ten talents was shown as "expended for necessary purposes." Apparently, the payment "had been allowed by the auditors because the sum was known to have been used for a bribe to a person with connections in high places."[1]

Skipping quickly through several thousand years of history, to the early industrial age, a less passive approach was taken by the auditors of Bell's Asbestos Company, Limited, in 1890. Their action was reported in a note on "Tips" that appeared in the March 8, 1890 issue of *The Accountant.*

> A limited company has obtained great notoriety recently in connection with its reprehensible practice of tipping. The auditors looked the matter straight in the face, when, after passing the accounts, they appended to them the following certificate. "We have examined the above balance sheet with the books, accounts, and vouchers of the company, and certify the same to be correct, *subject to the non-*

> *production of vouchers for gratuitous payments.*" The company referred to is, of course, "Bell's Asbestos Company, Limited." It will be remembered that at the recent meeting of the company, a motion was passed "That this meeting disapproves of the system of giving money or making presents to the servants of the customers of this company, *unless with the sanction of the employers*, and requests that the practice may be discontinued." Our contemporary, "*Money*," referring to the *italicized* portion says, this would be tantamount to a burglar asking a policeman to hold his bull's-eye for him while he "cracked his crib."

The subject also was discussed by a correspondent in the March 14, 1891 issue of *The Accountant* under the heading, "What is Bribery?" Again, Bell's Asbestos was under attack.

> The Chairman then went on to refer at great length to the serious question of "tipping" foremen and other members of the concerns with which they did business. It will be remembered that, as we mentioned last year, upon the systematic observance of this custom being made public, much unfavourable criticism was evoked, and the Admiralty in consequence removed the name of one Company from its list of contractors. The Chairman waxed righteously indignant over the remarks which had been made upon this custom, which he called "backsheesh," and asseverated that they had never given a penny to any man to cover defect of quality, short weight, or measurement, and distinguished between "bribery and corruption" and what he called mere "gratuity-giving."

Several years later a lecture, "Secret Profits," was reprinted in the *Lectures and Transactions of the Incorporated Accountants' Students' Society of London for the Year 1899*. The speaker was A. E. Woodington, who had a sense of history about this basic human condition.

> It must remain, I suppose, for ever a matter of speculation as to whom was first given or who first received a secret commission, or who was the first agent who abused his fiduciary relationship to his principal. To follow this train of thought would take us too far back into the world's history and might involve us even into theological controversy which I prefer to spare both my hearers and myself.

Woodington's paper dealt with legal and economic aspects of the subject and his remarks provide an interesting background for studying the attitude towards bribery in those days. The lecture also made reference to Macaulay's oft-quoted remark that he knew of "nothing more ridiculous than the spectacle of the British public in one of its fits of periodic morality" (p. 49).

As was the custom at meetings of the Society, the paper was commented on by its members and one discussant described a particularly notorious example of a bribe.

> A rather gruesome secret commission which I read of the other day, was that which an undertaker paid to a doctor, where, in consideration of the doctor introducing business to him, the undertaker lent the doctor a brougham to take him on his rounds (p. 55).

Aside from containing "humorous" examples of this sort, the discussion indicated an agreement among the membership that accountants should not receive or pay "private commissions" except, possibly, "in connection with the promotion of companies" (p. 53). But there *was* disagreement over the question of the accountant's responsibility for disclosing bribery.

At one extreme, E. W. E. Blanford said flatly that "As accountants we have nothing to do with the principle of the items we find in the books, but we cannot help recognising the fact that they are not always described very explicitly" (p. 51). However, Woodington took the opposite position.

> As to the duty of an auditor who finds that a secret commission has been paid to the servants of his clients, I think he should disclose it to the client. If he finds secret commissions have been paid to the servants of a company he should disclose it to the directors, and if (not) to the directors, then I think he ought to bring it under the notice of the shareholders (p. 55).

On the other hand, another member, H. de Rusett, was less certain about the auditor's duty.

> . . . an auditor would be placed in an awkward position if he became aware that a secret commission had been paid, and I should like to know what would be the duty of an auditor in such circumstances (pp. 54-55).

A similar question was asked more recently (*The New York Times*, May 3, 1977): "What happens when a certified public accounting firm disagrees with its clients over the need for disclosing the results of an investigation into questionable payments?" In this case the accountants seem to have upheld Woodington's position because they

> insisted over management's objections that the company's financial statements could not be given a "clean," or unqualified, opinion unless this payment information was revealed, or . . . outside legal counsel concluded that disclosure was unnecessary. The latter condition was not met. . . .

Several months after the payment information was made public, the auditors were replaced and the firm's managing partner was quoted by *The New York Times* as saying, "We were not aunaware (sic) that this might happen."

We can look at this glimpse into the past as partly anecdotal and partly instructive. In any event, it is clear that the debate over the accountant's responsibility for disclosing bribery is a continuing one.

FOOTNOTES

[1]H. P. Hain, *The Ausralian Accountant* (April 1965), p. 202. The author thanks Professor Gary Previts for this reference.

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O. TEN HAVE (1899-1974)

Abstract: Onko ten Have's contribution to the literature on accounting history is especially important because of the otherwise scant coverage of the accounting development in the Low Countries during the 17th and 18th centuries. Other writings of this little-known Dutch author include a study of the life and work of Stevin and essays on general history of accounting. Ten Have's writings reflect his strong interests in economics, statistics, and related fields. He deserves to be ranked with the leading Continental accounting historians of his time.

In the opening chapter of his doctoral dissertation, Onko ten Have quoted the British historian Rogers to describe the leading role played by Holland in the 17th century in world commerce, the arts, and the sciences:

> The debt which modern civilization owed to the Dutch cannot be too overrated. They taught Europe the art of agriculture; for it is to their example that the new agriculture, which we adopted tardily in the eighteenth century, was due. They instructed Europe in the mystery of commercial credit, and the Bank of Amsterdam supplied what were virtually the earliest practical lessons of mercantile finance. They taught the world the whole of the scientific navigation which it knew for centuries. They were pioneers of international law, of physics, of mechanical science, of a rational medicine, of scholarship, of jurisprudence. The geographical discoveries of Holland were the basis of the first real maps.

The 17th century was the golden age of Holland. The following century saw the gradual weakening of the dominant Dutch position, as other European countries accelerated their economic growth. Nevertheless, the development of Dutch bookkeeping and accountancy which had paralleled their 17th century economic expansion, remained strong. A highly important phase in the development of accounting principles and bookkeeping practices, spanning 200 years, was strongly influenced by the Dutch.

Ten Have's dissertation presents a scholarly analysis of these 200 years of accounting history; he examines the writings of some fifty authors in the Low Countries and their importance in the history of accounting. For this epoch in accounting history, ten Have's research is unrivaled: his work is he only existing history that offers a comprehensive treatment of the Dutch contribution to bookkeeping and accountancy in the 17th and 18th centuries.

Onko ten Have was born in Winterswijk, a small town in the Eastern part of the Netherlands, close to the German border, on March 4, 1899. It is not difficult to guess who may have been one of the motivating forces that made him choose accounting history as his major life interest: his father was a professor of history and economic geography.

After graduating from the "Lyceum" in the Hague, ten Have entered the "Economic Academy," now the Erasmus University, in Rotterdam, and completed his studies in economics and business administration in 1925. In the following year he received an accountant's diploma at the same institution. His dissertation for the doctoral degree in economics, dated 1933, is entitled *De Leer van het Boekhouden in de Nederlanden tijdens de Zeventiende en Achttiende Eeuw* [*The History of Accountancy in the Netherlands during the 17th and 18th Centuries*]. It was published in Delft, Holland; a number of university libraries in foreign countries received a copy, including eleven universities in the United States.

Throughout his life, ten Have gave much credit to one of his major professors, Dr. J. G. Ch. Volmer, for his strong support. His gratitude is expressed in the foreword of the dissertation, and Volmer's name is found time and again in the research notes used by ten Have for his publications.

Professor Volmer was one of the leaders in the small group of Dutch accountants active in the fields of accounting theory and history. He was co-author of a translation of Pacioli's treatise, and he had established an enviable reputation in the academic world. Volmer had also served as the major accounting professor for Dr. P. G. A. de Waal, who, only six years before, had published a doctoral dissertation on the development of accountancy in the 16th century. Thus, ten Have completed a 300 year coverage by publications in the Low Countries by important authors, providing a wealth of detailed historical information never previously researched.

Ten Have's publication did not remain unnoticed. Penndorf wrote a review of the work in "Die Betriebswirtschaft," in which he noted the thoroughness and scholarship of its author. Nor was Professor Volmer forgotten: Penndorf complimented him for having inspired his student. And in Japan Professor Tanaka published his comments in the March-April 1936 issue of *Kaikei.*[1]

After leaving Rotterdam, ten Have was active in various areas of economics and business administration; he held a number of posts in these areas, both in the Netherlands and abroad, during his career, including several accounting positions in London. In 1926 he became the secretary of the National Credit Insurance Company, and in 1931 secretary of the Dutch Institute of Documentation and Registration. He was especially interested in the decimal classification system, and assisted with the introduction of the system in Holland, a project of the Institute.

In 1939 ten Have became head of the Department of Social and Economic Statistics at the Central Bureau of Statistics in the Netherlands. He was to remain in this position until his retirement. His government status brought him in frequent contact with economists and statisticians on the international scene. Several times he attended meetings of the International Labor Office in Geneva, as the delegate of the Dutch government; in 1949 he was the official government representative at the Seventh Conference on Labor Statistics in Geneva. He was also a participant in a long series of international meetings of the *E.E.G.* and *Benelux*; these visits to Paris, Brussels, and Luxembourg continued until his retirement from government service.

But ten Have remained occupied with accounting history. His next publication, *De Geschiedenis van het Boekhouden in Vogelvlucht* [*A Bird's-eye View of the History of Bookkeeping*] was principally designed for use by students preparing for examinations for teaching certificates in accounting. It was not intended to be a report on some specialized research; it dealt with many accounting subjects. Nonetheless, ten Have succeeded in avoiding superficiality, providing an excellent and interesting introduction to the historical development of accounting. In view of the limited size of this small volume — eighty pages — it was a notable achievement.

Of greater importance to English speaking historians was ten Have's study, "Simon Stevin of Bruges," a contribution to the well known *Studies in the History of Accounting* (1956), edited by A. C. Littleton and Basil S. Yamey.

In 1968 ten Have took advantage of an opportunity to expand the material of his earlier introductory volume, when his publisher, the Delwel Publishing Co., requested him to write a series of articles presenting a comprehensive introduction to the history of accounting, from its beginning to modern times. The occasion was the 75th anniversary of the monthly periodical *Maandblad voor Bedrijfsad-*

ministratie en Organisatie [*Business Administration and Organization Monthly*]. Publication of the series commenced with the January 1971 issue and continued through July.

Some of the chapters were based on material published in the Littleton and Yamey book of 1956, but in other chapters are many sections in which ten Have displays his thoughts and original points of view. He no longer emphasizes generalizations to present an overview, as he had done in the *Bird's-eye View*, taking full advantage of the opportunity to discuss some topics in detail. His complete mastery of the material is evident throughout.

Ten Have's files containing the original draft for the series include many handwritten paragraphs and pages which unfortunately had to be deleted because of space limitations. This preliminary material is carefully assembled, and the notations are systematically arranged. Clearly, the author aimed at a polished product. There is also an indication of his intellectual honesty: in one case he readily admits having been in error in the *Birdseye View,* and draws attention to his error in a footnote.

But, above all, the evidence points to his efforts to provide some interesting, lessor known information, including some anecdotes selected from his personal experience.

As an example, he relates a most fortunate experience on one of his trips to Belgium, when he was ready to examine an old set of account books of the *de Wael* art shop in Antwerp. After a superficial examination of the documents that were placed before him, his suspicions were aroused. And indeed, the account books proved to be a student's copy of the early 17th century work of Jan Coutereels, an author of the Low Countries whose material was used for instructional purposes.

The favorable reception given the magazine series was fully deserved. Before the end of 1971, ten Have and his publisher decided to republish the manuscript in book form. In 1974 it appeared, under the title *De Geschiedenis van het Boekhouden.* An English translation published in 1976 is now available.[2]

The numerous small notations and newspaper clippings in ten Have's publication files reveal his wide interests in social history and the social sciences; many of these items are hardly related to accounting history and economics. There is a short memorandum on the political conscience of the British worker in 1780. There are clippings about book reviews, a newspaper story covering the first train ride Amsterdam - Haarlem, the wheat exchange in the city of Groningen; a newspaper report on the fall of New York Stock Exchange quotations in 1970, believed to have resulted from the strong growth of large American corporations; an item on the theology of Martin Luther King; and a number of other notations and clippings. In the files was also a newspaper story published June 26, 1971, commenting on a Congress and Exhibition in the City of Middleburg. The story included a description of archeological finds, reclaimed from the sea in southwest Holland, of some 50 altars dedicated to the Goddess of Nehalennia.

Ten Have was not a prolific author. In addition to the 1933 monograph, without question his major work, his publications were limited to the study on Stevin and to the two volumes on the general history of accountancy. But his death in 1974 will long be felt as a severe loss by the small community of leading international scholars in the field of accounting history. Few have had the perception, the dedication, and the enthusiasm ten Have displayed in his books. The following observation may attest to this evaluation.

When ten Have analyzes the economic and social phenomena accompanying economic expansion in the earlier years of the 20th century, he expresses an interesting thought. In referring to the problem of attracting the required capital investments, he notes the manipulation of financial reporting, and the deceptive practice of deliberately raising false hopes for future solvency and profits. This development led to extensive litigation, much new legislation in the field of corporate management and financial reporting, and an enormous amount of literature concerning these matters, especially with respect to the financial problems of the English railroads.

Here is his quotation — translated from the Dutch — worthy of special attention; it appears in the original draft for Chapter VII of his book on the history of accountancy, but was deleted because of publishing limitations.

> For the historian all this is quite fortunate, because in these legislative processes and court trials, the origin and growth process of the corporation, the development of the problem of what constitutes profit, and the question of how to value assets are more or less enacted publicly.

A little later the text reads:

> . . . the entire development of the English legislation on corporations [is] a fascinating history of the [corporation] problem, as it relates to the origin of the large industrial concerns.

At the risk of reading too much in these lines, one may see in them a striking example of ten Have's deep interest in relating the reports of court proceedings, punishment meted out to dishonest directors, and controversies in the literature preceding the adoption of new corporate legislation, with the emergence of the new accounting problems.

Ten Have has done more than simply sketch the social and economic background of accounting analysis. The historian now has the opportunity to understand how the economic pressures, the social problems, and the thinking about the establishment of legal frameworks were integrated with the development of accounting thought during this phase of capitalism in the Western world.

If ten Have believed it to be "fortunate" that in view of the availability of the material it is possible to reach this higher level of understanding, then he must have felt a strong personal involvement and commitment.

This is the dedication of an accounting historian who truly had the taste of history.

FOOTNOTES

[1]Tanaka, *Kaikei*, Vol. No. 38, No. 3 (March, 1936) and No. 4 (April, 1936).

[2]Dr. O. ten Have, *The History of Accountancy* (Palo Alto, Calif., 94301, 2335 Waverly Street — Bay Books).

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A 13TH CENTURY AUDIT CASE

Abstract: The author uses records from 13th Century English archives to demonstrate the role of auditors to settle disputes between merchants before the Courts.

Once a week, during my lunch hour, I like to walk up Beacon Street in Boston to the Atheneum and spend half an hour on the top floors gleaning the histories stored there for undiscovered fragments of early American accounting. During the fall of 1976, the top floors were being renovated so I decided to investigate the basement. There I stumbled almost by accident on the publications of the Seldon Society, founded in 1887 "To Encourage the Study and Advance the Knowledge of the History of English Law." The Society publishes annually a volume dealing with a particular aspect of legal history derived from early English archives. The volume published in 1930 was entitled "Select Cases Concerning the Law Merchant A.D. 1239-1633, Volume II, Central Courts," which seemed to offer possibilities to an accounting researcher. I borrowed the volume and spent several interesting evenings back in the middle-ages.

The cases discussed included several involving accounts and auditing but the prize must belong to the case of *Honesti vs. Chartres* in the year A.D. 1291, involving as it does, international finance and accounting, with diplomatic overtones, and a fascinating glimpse of early auditors at work in the commercial area. Of particular interest was the use of other merchants — who most likely understood accounts — to audit the accounts of merchants involved in a dispute, following closely the practice found in force in Massachusetts in the middle of the 17th century. The legal archives at the State House contain a number of similar examples, although played out on a smaller stage and before less prestigious judges.

The Case of Honesti vs. Chartres

In the year 1291 A.D., Gettus Honesti, a merchant of Lucca, appealed to King Edward of England for redress against Pelegrin, son of Gerardin of Chartres. Gettus claimed Pelegrin had been his duly appointed agent in England for 12 years and had refused to render an account of his agency transactions during that period. Pelegrin, said Gettus,

> "having the care and administration of all his things and goods . . ., his account of the above not liquidated, seeking subterfuges, runs about and wanders everywhere, retaining for himself a great sum of money which he had before received for the use of the same Gettus from the goods and merchandises of the same Gettus, to the no small loss and grievance of him, Gettus."

The King ordered the Treasurer and Barons of the Exchequer to hear the case in the Court of the Exchequer, and Pelegrin to render his account "aforesaid, to the same Gettus, according to the custom of the Exchequer aforesaid . . . Gettus shall be able reasonably and according to law merchant to expound what Pelegrin ought to render to him." The amount involved was "to the value of fifty thousand marcs" or about £33,000 — a lot of money for the times.

Pelegrin duly appeared before the court and his first line of defense was to deny the agency connection and the right of Gettus to any sort of account.

The Court then called on the sheriff of London to appoint "twelve lawful merchants of the greater societies of merchants as a jury to hear the case." The twelve chosen, agreeable to both parties, ruled that "Pelegrin was the receiver of the moneys of the aforesaid Gettus and cashier and administrator of the proper goods of him, Gettus. So that he is bound to render an account thereof to the aforesaid Gettus."

Pelegrin was asked to find sureties for his rendering the account and named "Hugh of Vienne, Hubert Dogy, John de Montibus, Pinus Bernardini, Walter of Florence, and Dyvus Bare. Also,

> "auditors are given to hear the aforesaid account, namely Iterus de Angouleme, Master Robert of Tadcaster, Barouncinus of Lucca and James Betollii."

The auditors could reach no conclusion on the matter because when Gettus produced his "books and papers" to charge Pelegrin with "devious receipts of money contained in some books and papers," Pelegrin objected on the grounds that the money he got didn't belong only to Gettus but "from the common stock of the fellows of the same society of which Gettus and Pelegrin were fellows" and that accordingly he didn't have to account to Gettus. They took the case back to the Treasurer and Barons of the Exchequer. The Court told the sheriffs of London to summon the jury of merchants again to consider the rights of the matter. The jury ruled it was Gettus' money and that Pelegrin must render an account.

Gettus then charged Pelegrin with "2800 marcs of the arrears of his account formerly rendered in the year of Grace 1279." Pelegrin said he already rendered that account and that Gettus' books would show this. The case then gets interesting from the accounting viewpoint.

> "And because the idiom written in the same books was unknown to the Barons, and also because the laws and customs used between merchants are similarly unknown to the Barons, the same Barons . . . made the said sworn merchants come before them with Barouncinus son of Walter and Richard of Lucca as their associates, enjoining them upon their oath that they would diligently inspect and examine the books of the said Pelegrin . . . to know what they should find on this matter."

The said merchants "diligently inspected those books and examined them with all deliberation "and ruled (with the sole exception of Barouncinus) that Pelegrin was bound to render an account. It didn't matter that he might have rendered a former account because,

> "according to the custom used between merchants themselves, the said Gettus is well able to exact, to re-audit and to re-examine the account aforesaid as often as he shall wish."

The merchants ruled Pelegrin must render an account or go to prison. He was duly lodged in the King's "prison of the Fleet." However, for diplomatic reasons the King ordered him liberated on the grounds the Court had been remiss on some legal technicalities. The King ordered a rehearing of the case before the Court of the Exchequer.

At the rehearing Gettus and Pelegrin mutually agreed to elect Henry of Chartres, Gerard de Sabolino and Brache Geraud "as auditors to hear and determine between themselves that account within a month of Michaelmas next to come" and to accept the ruling of two out of the three auditors. The three auditors apparently found the job beyond their comprehension and asked the court for further assistance. Brache Geraud withdrew from the assignment but the court ruled that three additional merchants be added to the audit team, one to be chosen by Gettus, one by Pelegrin and the third to be agreeable to both.

The decision of a majority of the five auditors was to rule and their findings to be reported back to the Court of the Exchequer for final judgment. Pelegrin as before had to find sureties.

In due course the auditors completed the examination, appeared before the Court "and proferred a certain schedule wherein is contained their verdict." The Court was on the point of rising for the end of term so the aforesaid schedule was "placed in a certain box, marked, . . . (and) delivered to John de Kirkeby, remembrancer of the aforesaid Exchequer, for custody." A day was appointed in the Quindisme of S. Hilary to hear the verdict.

On the day appointed the Court asked Gettus and Pelegrin "if the aforesaid arbitrators with good diligence absorbed their reckonings and answers which they put forward for themselves before them and treated them well and faithfully upon the same account and if the same upon the audit of the aforesaid account in any degree omitted to admit or allow any reckonings put forward on one side or the other."

Both parties indicated they were satisfied. The schedule was then unrolled and read before the parties, as follows:

> "We, Henry of Chartres, Burnet Angelin, Gerard Sabolin, James Janian and Dardan of the Council, say and set forth our true and faithful statement, pronouncing truthfully that we find the aforesaid Pelegrin in arrears of his account towards the aforesaid Gettus by the books and quaternions of him, Pelegrin, in £174. 12s. 8d. sterling. And also we, Burnet, Gerard, James and Dardan, say that the same Pelegrin is yet in arrears for the gains which the same Pelegrin made and obtained in the parts of Ireland with Scot de Wekes and Tegge de Compoille, merchants of Florence, in respect of £233. 6s. 8d. sterling, with which the same Pelegrin never charged himself in his account."

The schedule set forth in considerable detail, other items included in the judgment as follows:

a) Gettus had the right to take over a yearly life rent of £300 which Pelegrin negotiated with the Duke of Brabant for 4,000 marcs sterling "if he shall wish";
b) Gettus is to be allowed £100 for his expenses in coming to England to have the account audited; and,
c) Other miscellaneous debts totalling £33-19-1.

The total amount of the judgment was £541-18-5 and the verdict was delivered as follows:

"Therefore it is awarded that the aforesaid Pelegrin be convicted of the aforesaid (debts) and that he do satisfy the aforesaid Gettus thereof. And it is said to the same Pelegrin by the aforesaid Barons that he is to deliver to the before-mentioned Gettus all writings and instruments which he has in his possession concerning the aforesaid rent which the aforesaid Duke of Brabant owes to the before-mentioned Pelegrin yearly. And hereupon the aforesaid Pelegrin, asked if he has in hand wherewith he can satisfy the same Gettus concerning the aforesaid money, he says that he has not. Therefore let him be committed to prison at the Fleet until, etc."

CONCLUSION

The case brings out some interesting points. I find the international business flavor fascinating. Pelegrin, in addition to his English agency business, was doing business in Ireland with two merchants of Italy (one of whom appears to have been Scottish), and writing lease agreements in France.

The apparent ease with which the Court was able to find Italian and French merchants to serve in the trial is also surprising.

The other volumes of the Selden Society publications obviously warrant some additional scrutiny by Accounting Historians.

Robert Haulotte & Ernest Stevelinck
ORDER BELGE DES EXPERT
COMPTABLES BREVETES

A BIT OF ACCOUNTING HISTORY ADDING THE PAGES IN THE JOURNAL*

Abstract: The evolution of the procedure of comparing the column total of additions (footings) of the journal with the debit and credit totals of the same time period in the ledger is discussed as it reflects the contributions of E. T. Jones of England.

Martin Bataille, bookkeeper and professor of commercial arithmetic in his treatise on the new commercial and financial accounting published in Brussels in 1834, wrote as follows:

> Jones of Bristol the First, in a work full of impractical ideas, instructs us to balance the journal by debits and credits, a conspicuous rule from which Gaspard Domenget of Lyon proceeded to take considerable advantage.

This statement is partly correct: If one examines the two illustrations on pages XVI and XVII of the 13th edition of Jones' *English System of Book-keeping,*[1] one finds that the "Italian Journal" is not balanced while the "English Journal" shows this innovation.

Edward Thomas Jones was a controversial English accounting author who was widely read in the early 19th century. It is our personal belief that modern accountancy is really indebted to him. In any case, the vast majority of authors who followed him copied from him either openly, using him as a model while correcting certain minor points not properly substantiated by him, or ridiculing certain minor imperfections which he had allowed to remain in his earlier editions, or, more dishonestly, plagiarizing his work without giving credit and making the public believe that they had invented a system which they could never have discovered by themselves. The entire accounting literature of the 19th century bears the imprint of Jones' thinking. Since then, accountancy has definitely ceased to be called "book-keeping under the Italian method."

*(Translated by Richard Homburger from the *Journal de la Comptabilite*, Brussels, December, 1958)

In 1796, Jones himself, labeled his method the *English System of Book-keeping* and his successors have used all possible designations to indicate that they were dealing with a new system. In this regard there is a need for an analytical bibliography to be written on the accounting works of the 19th century as all were more or less inspired by Jones. The following are some examples selected at random:

Joseph Gabriel (1803), (who translated Jones into French) named his edition *Simplified Method of Bookkeeping.*
Martin Bataille (1804) *New System of Bookkeeping.*
Gaspard Domenget (1809) *New Method of Bookkeeping.*
Isler (1810) *New Swiss Method of Bookkeeping.*
J. S. Quincy (1817) *New Method of Theory and Practice.*
Bouchain (1819 *Practical Treatise of Simplified Double Entry Bookkeeping.*
E. Cadres Marmet (1833) *Bookkeeping Greatly Simplified.*
Selme Davenay (1838) *Short Treatise Simplified.*
A. Besson and Ch. Raspail (1849) *New Method of Double Entry Bookkeeping or Journal Control.*

We end here only because the list would become repetitive, in view of the multitude of similar treatises published since the beginning of the 19th century.

Despite the influence Jones had upon his successors we must admit that he was not the first to advocate the footing (addition) of journal pages and, in our opinion, never claimed to be. He used this practice for the purpose of control; but others had recommended the journal before him. A. Mendes, in his book *Examination of a work entitled: Simplified Method of Single or Double Entry Book-keeping by E. T. Jones*—translated from the English by J. Gabriel, published in 1803, said among other things:

> The procedure of totaling debits and credits of the journal to compare it with the debit or credit totals of the ledger for the same time period is not new. For a very long time this method has been used in some commercial establishments of moderate size with the sole difference that the additions of the journal as well as of the ledger were made in a separate book and, I believe, for a good reason. In this manner you did not overburden the book with a mass of figures which, in an establishment of some size, would become enormous by the end of the year..

Edmond Degranges, in his *Supplement to: Book-keeping Made Easy or New Method of Entry Book-keeping* published in 1804 stated specifically:

> I shall note first of all that the method of totaling the journal in order to compare it to the ledger is not new. I have taught this method to merchant seamen for over 15 years and I took it over from my father who, in turn, took it over from the old seamen. However, that's not of great importance by itself, so that Mr. Jones could have concluded that in this manner one could give a clear, simple, and satisfactory account of the affairs of a business.

Moreover, Degranges concludes his book with these words:

> By totaling the items in a double entry journal, one avoids the trouble of checking the books in the case where no omission has occurred. Thus, an accurate bookkeeper, of which there are many, can adopt this method to advantage.

It is understandable then that certain accountants had already recognized the usefulness of totaling the journal. However, the absence of adding machines hindered the development of this proofing procedure. The labor of adding columns of figures to obtain these sums was debated in that by themselves, the totals have no other value than to serve as a means of proof which was not absolute; for while it was useful in the case of omission of a posting, it was useless where someone had made an entry in an incorrect account. Adding columns of figures was a boring task, even if certain accountants of the past century had become very proficient in this exercise.[2] Generally this system, though well known, would be practical only in a small enterprise with but a few entries to post. It is apparent, for instance, that the crew of a merchant freighter might have some busy moments at arrival in each port; but between two ports of call, the official in charge had all the time necessary to add up the debits and credits for the few operations carried out on land.

If the system was known before Jones, it was some time before authors acknowledged its use. For we had to search for a long time before finding a totaled journal in an 18th century textbook. By chance we came upon a copy of Miteau de Blainville's *Instruction of Double Entry Book-keeping and Foreign Exchange* (Printed by Lemaire, rue de la Magdalaine, near the Hotel d'Angleterre, Brussels, 1784) containing the principles upon which this practice was founded and their application. This work, unknown to Reymondin who did not list in his bibliography, is of only minor interest and contains some incredible errors.[3] However, the journal pages given as illustrations are totaled and for this reason the book becomes valuable to us.

If "A prophet is without honor in his own land" so Miteau de Blainville left no significant trace in Belgium. On the other hand, his book was translated into Spanish by Joseph de Cabredo: *Introduction para la teneduria de libros por partida doble. En la Imprenta de la Viuda de Ibarra,* Madrid,, 1800 80 pages.[4] Assuming that the errors discovered by us in the French text are typographical and not attributable to the author, the translator cannot be excused for not correcting them.[5] Be that as it may, and lacking further information, the Belgian author Miteau de Blainville appears to be the first to give a textbook example of a totaled journal. This does not mean, however, that he invented it; for the exposition of his theory is too weak to recognize this author as a true innovator. He was probably content to pick up a procedure whose use he had observed in practice.

In addition to this, we recall that, as early as 1610, the Italian author Giovanni Antonio Moschetti in his *Universal trattato dei libri doppi Venetia MDCS* opposed the addition of journal pages.[6] We must, therefore, conclude that, in that time period, certain accountants already knew and used this means of proof.

FOOTNOTES

[1]The first edition was published by R. Edwards in Bristol in 1796; the 13th edition, quoted here, probably in London in 1831.

[2]We found reference to a 20th century English accountant who by means of letting three fingers slide through the three columns of sums, added mentally in one single operation all the items on the different pages of his journal; these column items were expressed in pounds, shillings and pence.

[3]For example, page 86: General merchandise owes Joseph de Gand fl 1440 for a balance of 90 shrubs at 8 fl each. (as we see it: $90 \times 8 = 720$). Same page: Said general merchandise owes Joseph de Gand fl 27 for various expenses composed as follows: 7.10 + 9. + 3. (This, in our humble opinion, adds up to 19.10 fl.)

[4]Biblioteca Nacional Madrid 2/23995.

[5]In fact we find an error carried over in the translation: *Mercaderias Generales deben a Josef de Vera pesos 1440 por un fardo de pano 90 varas a 8 pesos* (=720 pesos).

[6]Quoted by Leon Gomberg: L'economologique, 1912, page 45.

Kenneth O. Elvik, Editor
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BOOK REVIEWS

Raymond de Roover, *Business, Banking, and Economic Thought in Late Medievel and Early Modern Europe,* Selected Studies of Raymond de Roover. Edited by Julius Kirshner with an introduction by Richard A. Goldthwaite. (Chicago: The University of Chicago Press, 1974, pp. viii, 383, paper $4.95).

Reviewed by Edwin Bartenstein
California State University, Northridge

There are many who agree that Professor de Roover was one of the finest historians of business in the late Middle Ages and the Renaissance. His sources were usually pure, direct from the originals; and when he used a secondary source he documented thoroughly and often with an evaluation. He was the ultimate researcher. His writing is clear and interesting, full of commentary and explanation that takes the reader back to the problems of the thirteenth to fifteenth century businessman. As a reader you experience the development of manipulative techniques of foreign language, which were designed to circumvent the existing usury laws which held all interest to be illegal. You are introduced to the people involved and their philosophies. A sample includes Saint Thomas Aquinas, the Alberti family of merchants, the Medici Banking family, and many popes, scholars, entrepreneurs, business failures, economists and piece work laborers.

The book begins with lengthy introductions to de Roover's work by Goldthwaite and Kirshner. Professor Goldthwaite discusses de Roover's development as a businessman, scholar and writer. He traces the history of his research pointing out the major works.

Kirshner's introductory article concentrates more on de Roover's analyses and attitudes toward the economic teachings and doctrines of the Scholastics, that group of churchmen who articulated so many of the ideas that eventually developed into modern economic theory.

Ten of the eleven articles by de Roover are reprints of selections to fit the theme of the book. The other article, previously unpublished, is "Gerard de Malynes as an Economic Writer: From Scholasticism to Mercantilism." The dates of publication of the articles range 1941 through 1965. The contents of the book are divided into four sections: Introduction, Business History and History of Accounting, History of Banking and Foreign Exchange, and History of Economic Thought.

The two articles on business history are clever reconstructions of the activities of and scenarios surrounding two Florentine firms, taken from their account books of the fourteenth and fifteenth centuries. "The Development of Accounting Prior to Luca Pacioli" is a classic that investigates the development of double entry bookkeeping prior to the fourteenth century.

The four articles on banking and exchange are interesting as detailed histories taken from original business records. They show how money lending, interest, exchange rates between different national currencies, the time value of money, religion and banking were intertwined and eventually led to the development of banking and foreign exchange as we know them today.

The last four articles discuss monopoly theory prior to Adam Smith, Scholastic Economics, and the writings of de Malynes. These articles seem at times to be an almost nostalgic defense of the logic of the Schoolmen. De Roover explains the development of economic thought as well as the historical presentation of it.

The last paragraph of "A Florentine Firm of Cloth Manufacturers" is a nice summing up of some of de Roover's thinking: "The Medici account books show that in the sixteenth century business enterprise rested on the same basic principles as today. Technical and other conditions determined the form of organization which secured optimum efficiency at the lowest cost. The importance of management was already great and success depended largely upon the ability of the managing partner." (p. 112)

There are also included a bibliography and index. The bibliography lists chronologically from 1928 to 1976 no less than 175 publications of Raymond de Roover, written in several languages. For anyone not yet familiar with his work, and who has an interest in business and economic history, this book provides an effective sample.

O. ten Have (translated by A. van Seventer), *The History of Accountancy* (Palo Alto: Bay Books, 1976, 113 pp., $12.75).

Reviewed by Kathryn C. Buckner
Georgia State University

Basil Yamey's foreword sets the background framework to this extension of ten Have's earlier *Survey of the History of Accountancy*

(1933). Yamey lauds ten Have's ability to recognize originality and high merit in previously obscure publications — reading the text confirms this assessment. The book is replete with quotations, documentation and enlightening footnotes.

The introduction, an overview, contains a general interpretation of (1) the past and (2) the development of accounting. The origin of "double entry" and the overestimation of its importance are stressed.

In interpreting the development of bookkeeping, the relationship to economic history is emphasized. Bookkeeping in its various forms, at various times, is a reflection of business organization(s). The needs of business in each economic age created the structure of the bookkeeping system.

In the late 19th century, the first period of research in accounting history, writing was oriented to bookkeeping technique; the analyses did not extend to explanation. Discussion of causal relationships between economic and bookkeeping histories did not appear in Dutch literature until 1927 in de Waal's *From Pacioli to Stevin.*

Ten Have asserts that the accounting history literature is filled with examples of the urge to "force upon" the merchants of past centuries the ideas of our modern times.

The question of where double entry originated has not been resolved to ten Have's satisfaction. Egyptians, Romans, Arabs, and Banians of India have all been credited.

Concerning sources of history, he notes that there never was any era in which merely one form of bookkeeping existed. There are too many diversities in the extent and types of economic activity.

The Ancient World, subject to conflicting views based upon fragmentary information, is treated in a short chapter. Ten Have concludes that the Roman system was the best developed of the era, yet it was extremely primitive. Consistent with his basic approach, he concludes that public administration and real estate management activity of Egypt and Rome provided no stimulus to development. The *need* was not there.

Chapter III contains an exposition of the development of accountancy in Italy up to Pacioli. It is clear to ten Have that the early balance sheets and profit and loss statements were not "tools of management" but accounts of stewardship. The development of accountancy to 1500 outside Italy is described in Chapter IV. It covers the development of factor bookkeeping in South and North Germany where it was preferred over double entry. Some authors conclude that this inferior bookkeeping was the cause of the slow commercial development in North Germany. Ten Have's comment:

"Whether or not people have reversed the relationship of cause and effect is a big question, and difficult to answer."

The transition from European trade to world commerce constitutes the background for post 1500 development of bookkeeping in Chapter V. A comprehensive discussion of French, Flemish, English, and Northern Dutch authors on accountancy from the 16th to the 19th century is found in Chapter VI. The development of accountancy in the 19th and in the first half of the 20th century, as influenced by the industrial revolution and its attendant requirement of capital for investment, is covered in the final chapter.

The accounting historian will find this book a worthy addition to the library shelf as a notable reference. Dr. ten Have's emphasis upon environmental influences and the needs of business as prime factors in the use and development of accounting method is convincing. His admonition of caution in the interpretation of earlier date should be observed and remembered.

John Michael Cudd, *The Chicopee Manufacturing Company 1823-1915* (Wilmington, Delaware: Scholarly Resources, Inc., 1974, pp. xix, 325, $8.95).

Reviewed by Richard V. Calvasina
Clemson University

This book is a case study of a textile manufacturing firm from its inception in 1823 to its absorption by the Johnson and Johnson Company in 1915. The purpose of the study is to show that company growth and prosperity was a consequence of managerial skills. The author has gathered together an enormous amount of financial data about the company, the textile industry, and the United States economy in order to prove his main conclusion. In addition, Cudd also describes the changing makeup of the work force throughout this period, as well as the increasing militancy of it.

To present this data, the book is divided into three main sections. In the first, the pre-civil war era from 1823 to 1860, the main focus is on the leading figures in the firm, their backgrounds and their efforts in forming the company and helping it to survive, and the organization of the firm. Data concerning the Chicopee Company's purchases, production, sales and profits were not available for this time period, but industry and national economic data were presented.

Section two centers on the years 1860 to 1885, and unlike the prior period much more data about the operations of the business are presented in addition to that of the industry and the nation. Sales, production, price, profits, and purchase data for Chicopee are analyzed in light of industry wide data and general economic conditions. Part three, covering the years from 1880 to 1915, is similar to section two.

Although the amount of data presented is voluminous and much of it describes the conditions within which the company management operated, the study would have been greatly enhanced by a discussion on the information system, reports, and accounting policies and procedures that were in force and used by management throughout the period studied. On occasion, the author does mention some of the accounting policies and procedures, or lack of them, that were used in the preparation of profit figures and production costs. For example, on page 83 he states that irregular depreciation policies and inventory valuation methods were used by various companies during this period. Because of these different depreciation and inventory valuation techniques, the comparison of the Chicopee Company production and profit data to the industry or other companies must be suspect. In addition, the times series data showing the trends in profits and production costs must also be questioned for the same reason.

If the book had been written from an accountant's viewpoint, the major hypothesis — good management was the main reason for the growth and success of the company — would have been more easily proved. As it stands now, there are only brief glimpses at the internal reporting system and accounting policies of the firm; and these tend to undermine rather than support the conclusions stated in the text. The information, accounting and otherwise, used in the decision making process is hardly mentioned. And as a result, a direct evaluation of sound decision making by management is not made. In addition, Cudd gives the impression that he considers owner equity to be an asset. He refers to retained earnings as a proportion of company assets.

Overall, the book appears to be of value, if only because of the great deal of economic data collected and presented concerning the Chicopee Manufacturing Company and the textile industry during this period. As far as a basis for showing which managerial skills and efforts result in prosperity, it does not do this directly. Rather than show the management process, and the reports and information used in decision making and the reasons for each, Cudd tries to indirectly substantiate his conclusion. He concludes that the Company prospered because of the efforts of management; however, he never removes the doubt that quite possibly the firm prospered in spite of its managers.

Benedetto Cotrugli; *Della mercatura e del mercante perfetto (On Commerce and on the Perfect Merchant),* Venice, 1573, Reprint by the Association of Accounting and Financial Workers of Zagreb. 1975. 106 pp.

Reviewed by Ivan Turk
University of Ljubljana

Reprinted in the original old Italian version to honor the memory of the first medieval writer on the subject who lived in Dubrovnik, Cotrugli (Kotruljic), was a member of a respected family belonging to the merchant guild. He studied in Italy traveling for business through the Mediterranean countries. When he wrote this work he was employed by Ferdinand, King of Naples. The writing was completed in approximately 1458, however only a few printshops existed in Europe. Hence, handwritten copies of it circulated at that time, and 115 years later, in 1573, it was printed for the first time. Because of its importance, a French translation appeared in 1582 (Lyon) *(Traicte de la marchandise et du parfaict marchant)* and a second Italian edition was printed in 1602 (Brescia).

The book consists of four parts. Part I has 19 chapters which deal with the origin and the definition of commerce, the properties of the merchant, trade by barter, sales for cash and on credit, how to collect accounts receivable and to pay debts, general rules and order of doing business, bills of exchange, pawnage, keeping business records, insurance, goldsmiths, notion merchants, manufacturers and other tradesmen, what the merchant may not do, his duty to close the books every seven years and to strike a balance.

Part II contains 4 chapters on the relation of the merchant with religion; what religion permits and does not permit.

In Part III there are 18 chapters. Herein the author discusses the merchant's reputation, his prudence, knowledge, confidence, fortune, honor, endeavor, resourcefulness and cleverness, his honesty, self-control, dignity, generosity, judiciousness, modesty, laudable behavior and moderation.

In the 10 chapters of Part IV, Kotruljic's views on the merchant's home and family are expounded.

Kotruljic obviously wished to share his business knowledge with Dubrovnik's medieval merchants. He presents his material in an abstract and theoretical way referring to a broad domain other than commercial activity.

The author describes bookkeeping as a significant device for successful business operations. His comments on business finance and especially on bookkeeping are of special interest. In addition to its being important for the individual, accounts are the basis of security in business in general. Hence, business records have to be kept conscientiously. From his way of describing the keeping of business records, one concludes that he means double entry bookkeeping. Hence, Kotruljic is the first known writer to call our attention to double entry in a business text, while Luca Pacioli is the first to describe it theoretically in some detail in his book on applied mathematics which appeared in 1494. Neither the former nor the latter may be considered as initiators of double entry however, for research has shown that in Geneva, and elsewhere double entry bookkeeping was used as early as the 14th century. Thus the origins of double entry remain in darkness.

Harvey Mann, *The Evolution of Accounting in Canada* (Montreal; Chag Company, 1976, pp. vii, 201, $6.95).

Reviewed by George J. Murphy
University of Saskatchewan

This 1976 publication of the author's 1972 Ph.D. thesis is a very interesting attempt "to ascertain which forces and which pressures resulted in changes in practices over time" in Canada. To that end, and amongst other data used, various incorporating statutes and a series of Annual Reports of six Canadian companies — some going back over 100 years — are examined. Chapter headings identify the areas of attention: The companies, The Law — Tax, Companies, Bank and Railway Acts, The Form and Format of Financial Statements, Depreciation, and The Auditor's Report. There is also some very useful material on the evolution of the various professional bodies in particular that relating to the formation of the earliest accounting association in North America, the Association of Accountants in Montreal, 1879.

This is a very interesting, emminently readable, book — the main conclusion of which seems to be that "virtually no major changes have been initiated by the accounting profession; that all substantial changes have been due to exogenous factors" (p. 142). To provide additional support for the external factors it would have been useful for the author to have examined what many view as the prime mover of change, the instances of corporate scandals that either generated or smoothed the path for legislation — the bank insolvencies in the early 1900's, the English RMSP case that so influenced the 1933-34 Canadian legislation and the Atlantic Acceptance scandal of the mid '60's. Of equal importance is the need to trace through and explain the rich interrelationships of the English, Canadian and Ontario legislation relating to financial statements — the importance of the well-known "Model Articles" of the English Act of 1856, the fact that the disclosure provisions of the 1907 Ontario Act were far in advance of the Canadian federal, the English and the American legislation of the time, and the fact that the Ontario Act was the virtual word-for-word model for the Canadian federal Act of 1917. The same parent-child relationship holds true as between the 1953 Ontario Act and the 1964-65 Canada Corporations Act.

Similarly, it is simply unfair to state that the profession has not initiated substantial change. T. Mulvey, the Under Secretary of State (Canadian) and the former Assistant Provincial Secretary of Ontario asserts that the disclosure provisions of the 1917 Act were "first suggested by the Board of the Institute of Chartered Accountants of Ontario in the drafting of the Ontario Companies Act of 1907 and were taken with a few verbal alterations from the Act." (See T. Mulvey, *Dominion Company Law,* 1920, p. 54.) And again, the Canadian Institute's 1946 Bulletin #1, for which the Ontario Institute did the initial work, together with the recommendations of an Ontario Institute Committee under George Keeping became the basis for the 1953 Ontario Act — such that Grant Glassco was able to assert that the provisions of the Act were virtually written by the accountants. Unfortunately from this book, one is unaware that in the first two decades of the century the endeavours of the Ontario and Canadian Institutes and the legislation they prompted led the Atlantic English-speaking world.

The author cites references to the Institute journal (commenced in 1911) only four times in the whole book and it may be due to the lack of greater reference to this source that the formative influences of both the federal and Ontario Institutes were not noted. Similarly, the sample of six companies could have easily been enlarged by reference to an anthology of Canadian corporate financial statements published annually for forty years since 1902 by Houston's Standard Publications and to *Financial Reporting in Canada,* a bi-annual Institute analysis of current Annual Report practices available since the mid 1950's. The literature on the evolution of accounting in Canada is not as spare as the author suggests; nor the available documentary evidence as narrow as the author has used. The Canadian story is more rich, varied and important than herein portrayed.

Richard P. Brief, editor, The *Late Nineteenth Century Debate over Depreciation, Capital, and Income* (New York: Arno Press, 1976, 150 pp., $15.00).

Reviewed by Michael Chatfield
California State University, Hayward

The Accountant, founded in 1874, offers us the best surviving picture of late nineteenth century accounting. Today's accounting methods and thought cannot be understood without reference to the developments of this period, which very largely comprise the tradition on which modern capital-income accounting is based.

No one is better qualified than Richard Brief to make a selection of articles from this source. Others have surveyed *The Accountant;* Dr. Brief has studied it systematically. This readings book is a well chosen sampler of the source materials from which most of his earlier writings were drawn.

The present collection is introduced by Brief's 1970 article, "Depreciation Theory in Historical Perspective." It includes three trial transcripts from the *Law Journal Reports: Dent v. The London Tramways Company* (1880); *Lee v. Neuchatel Asphalte Company* (1889); and *Verner v. The General and Commercial Investment Trust* (1894). The remaining fifteen articles, on depreciation, income, capital accounting, dividends, and asset valuation, appeared in *The Accountant* between 1876 and 1894.

The interest for us of these articles is not only that they influenced accounting thought during one of its most formative periods, but that they take a very different approach than our own to certain perennial accounting issues. Ernest Cooper, Edwin Guthrie, O. G. Ladelle, and the other authors in this collection were practitioners, not academics. Few of them wrote primarily for publication. Most of these articles were first read as papers at accounting society meetings, and only later printed. They were essentially discussions of questions encountered by chartered accountants in daily practice. Court decisions and the companies acts provided legal referents for some of these issues. But the main burden of justifying arguments was borne by the speakers themselves in verbal confrontations with their peers. The matters considered were practical:

What is depreciation? How is it related to wear and tear of assets? How should it be calculated? What are the components of income? How should corporate assets be valued? What effect have depletion and depreciation on the amount of profits available for dividend payments? Answers to these and other questions were hammered out in sometimes violent debates nearly a hundred years ago. The men who first confronted these issues in their modern context permanently affected the viewpoint of later generations of accountants. They deserve to be called our earliest contemporaries.

Hans Johnson, Editor
UNIVERSITY OF TEXAS AT SAN ANTONIO

DOCTORAL DISSERTATION ABSTRACTS

The Development of Accounting Principles for Business Combinations, 1932-1973 (U. of North Carolina, 1976, 342 pp.; 38/2, p. 863-A*) by Wesley Andrews has as one of its three objectives the addition to the accounting literature of a "concise, critical description of the evolution of present thought regarding accounting for business combinations." The dissertation "is arranged chronologically into time periods" which are "separated by significant pronouncements of the accounting profession regarding (a) the purchase versus pooling of interests dichotomy and (b) goodwill in consolidation." Further, "for each time period, the following subjects are discussed: (a) the economic and political environment of the period, (b) the thrust of the general development of accounting principles during the period, (c) specific writings during the period bearing upon the issues of accounting regarding the purchase versus pooling of interests question, and (d) specific writings during the period bearing upon issues of accounting for goodwill in business combinations." Finally, "the basic conclusion of the study is that present generally accepted accounting principles for business combinations and goodwill have developed largely along deductive lines, characterized by a tendency to *borrow* traditional, general principles from accounting theory and the law, applying these principles to business combination situations specifically."

Government Regulations and Professional Pronouncements: A Study of the Securities and Exchange Commission and the American Institute of Certified Public Accountants from 1934 Through 1974 (NYU, 1976, 282 pp.; 38/2, p. 865-A) by William Coffey has as its purpose the determination and assessment of "the contributions of the two groups to the establishment of accounting standards addressed to revenue recognition." He notes that, "uniformity was the criterion used to assess respective financial reporting practices . . . ." Source material for the SEC portion consisted of

*Volume/Number and page in *Dissertation Abstracts International.*

"167 *Accounting Series Releases* . . ., SEC *Decisions and Reports* and Rules established under *Regulation S-X* . . ." Source material for the AICPA "contributions to the profession" include "the Institute's early Rules, established in 1934 . . ., fifty-one *Accounting Research Bulletins,* thirty-one *Accounting Principles Board Opinions,* and three *Statements of Financial Accounting Standards* published between 1939 through 1974." Among his conclusions, Coffey states that "the SEC's Chief Accountants were shown to have alternated between aggressiveness and timidity in formulating Commission accounting policies."

The Rise of An Independent Major: The Sun Oil Company, 1876-1945 (U. of Delaware, 1977, 544 pp.; 37/9, p. 5972-A) by August Giebelhaus examines the history of the Company "with particular reference to the thesis of consensus and cooperation." According to the author, "in some respects Sun was an anachronism in an era of giant enterprise and business-government cooperation." And, "conservatively managed and financially controlled by the Pew (family), Sun resembled more a nineteenth century family enterprise than a twentieth-century modern corporation." The study concludes "that the firm steered a surprisingly independent course as evidenced by its competitive stance within the industry, and its consistent opposition to government regulation."

An Analysis of The Professional Aspects of Public Accountancy (U. of Illinois, 1977, 292 pp.; 38/1, p. 343-A) by Michael Groner "attempts to explain the functioning of public accounting within the framework of a profession." Groner states that "public accountancy's social service orientation differs from that of the classical profession in that it serves two client groups—an employing-client and a user-client." Empirical evidence for the study was gathered from the *New York Times* from 1950 to 1971 "in an attempt to determine societal interest in various aspects (attitude objects)" of the profession such as: "accounting principles, accountants, ethics, auditing, accounting firms, financial reports, public accounting profession, financial accounting policy board, SEC, and miscellaneous." After dividing the 22 years into three time periods, the evidence obtained was catergorized and subjected to various statistical tests. Five hypotheses were tested in the study. As an example, the "first hypothesis attempted to determine whether the three time periods contained statistically significant differences between the frequency of attitude object occurrences." And, "a Chi-Square Test indicated that the mix of attitude objects changed over the three time periods." Groner's overall conclusion was that "the theory of professionalism presented a framework that was useful in helping focus attention upon critical areas within public accountancy."

An Historical Analysis of the Events Leading to the Establishment of the Cost Accounting Standards Board (Oklahoma State University, 1976, 314 pp.) by Owen Moseley covers "events that occurred in the late 1950's and ends with the signing of the law creating the CASB in 1970." Moseley's study "uses, but is not limited to, a combination of features common to the genetic methodology, the Hempelian methodology, the Collingwood methodology, and Hexter's historical storytelling method." Hexter's method "plays a prominent role in this study and is used to provide a credible explanation and to allow the reader to form his own conclusion on why the CASB came into being." Research sources include "Congressional hearings, Congressional reports, the *GAO Feasibility Study*, and the *Congressional Record*" plus "biographical and socio/economic/political information . . . from appropriate sources." Findings of the study indicate that creation of the CASB was due to such factors as "the mood of Congress" at the time, the unsuccessful efforts of the opponents with apparent vested interests in blocking the legislation, and the individual contributions of Admiral Rickover, Senator Proxmire, Representative Patman, and the Comptroller General.

An Analysis of the Evolution of Municipal Accounting to 1935 With Primary Emphasis on Developments in The United States (U. of Alabama, 1976, 258 pp.; 37/12, p. 7819-A) by James Potts is the "first comprehensive and analytical examination of the evolution of municipal accounting in the United States, and it recognizes the men and institutions whose significant contributions enabled municipal accounting to attain its level of development." The evolution "appears to have undergone three distinct cycles which correspond approximately to the following time period delineation: antiquity to 1900, 1900 to 1920, and 1920 to 1935." The "three cycles were marked respectively by: the inherent necessity of recording receipts and disbursements; an over-emphasis on the similarities between commercial enterprises and governmental operations; and a reaction to this over-emphasis, resulting in the formulation of accounting principles applicable strictly to municipalities."

The Origin of Modern Industry in the United States: The Mechanization of Shoe and Sewing Machine Production (Yale University, 1976, 476 pp.; 38/1, p. 402-A) by Ross Thomson. These two industries were chosen for study because "separately and in combination, they both illustrate a process occurring across all industries and present two important cases of this process, since the shoe industry was one of the largest in the mid-19th century United States and the sewing machine industry was central to the mechanization of many other commodities." Distinct from earlier craft production, "changes in industrial production, generally embodied in new machinery, resulted from an interaction of capitalists in many industries, not only those making and using the new machinery." Thus "a dynamic of production emerged which was internal only to the whole capitalistic economy." Thomson comments that his "dissertation conceives the dynamic of craft production and the origin and development of industrial production in the shoe, sewing machinery and clothing industries as these industries formed interrelated parts of an emerging industrial capitalism." Finally, "changes in the production process also transformed the interaction of capitalists by changing the relation of industries and, within each industry, giving some capitalists competitive advantages over others."

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