The Genesis of Double Entry Bookkeeping
Alan Sangster, Griffith University, Australia

ABSTRACT
This study investigates the emergence in Italy early in the 13th century, if not before, of a new form of single entry bookkeeping which, thereafter, gave rise to the variant form we know as double entry bookkeeping. In doing so, it considers both primary and secondary sources and the language of bookkeeping at that time, along with its suitability for the purpose to which it was being put; and compares the new form of single entry to that of double entry, pinpointing the single factor necessary to convert the former into the latter. Contrary to the findings of previous investigations and the assumptions made in the literature concerning its origins linked to trade, both of which indicate that double entry was an invention of merchants, this paper concludes that the most likely form of enterprise where bookkeeping of this form would have started is a bank. And, as the one form of business for which knowing your debtors and creditors is fundamental to survival, it is the obvious and by far the most likely activity from which detailed single and then double entry bookkeeping emerged.

Key words: single entry bookkeeping; double entry bookkeeping; bank accounts; merchant accounts; medieval accounting practice.

BACKGROUND
This study was prompted by the recent publication of a best-selling book which has popularized the history of double entry bookkeeping (Gleeson-White, 2011). In its title – Double Entry: How the Merchants of Venice Shaped the Modern World and How their Invention could Make or Break the Planet – the author tells us that merchants invented double entry bookkeeping. If asked, most accounting historians would concede that before publication of this book they assumed that merchants did invent double entry. Now, many more from all walks of life believe that they did but, did they? That is what this study seeks to investigate.

In doing so, it sets aside the methodology of previous studies which sought confirmation of actual instances of double entry in use across an entire and, at a minimum, required (a) two opposing entries for every transaction; (b) complete accounts where all the relevant details are included; and, (c) an income statement and balance sheet. When you are looking at records from the 13th and 14th centuries, finding any that have survived in their entirety is unlikely at best. Can it be any wonder that the earliest confirmed instance of double entry on this basis is from the final year of the 13th century rather than before (Lee, 1977)? Consequently, the focus in this study is not upon complete systems of double entry but, rather, it is upon how the concept of double entry originated. Which professional group had the idea first?

To that end, it seeks instances of use of double entry to record items of a similar nature in a consistent form. This, surely, is the genesis of double entry bookkeeping. A clearer indicator of who conceived it and of why it was first used, and so became perceived as a useful device, is difficult to perceive. In terms of the history of trade and commerce, that seems a much more interesting question.
INTRODUCTION

Over the past 150 years, various scholars have speculated upon the origin of double entry bookkeeping. Some have focused on matching practice to a checklist of features which were ‘necessary’ in order for double entry bookkeeping to have emerged (e.g. Littleton, 1927; 1933). Others have prepared checklists of features that must be present in a set of account books if use of double entry is to be confirmed (e.g. Melis, 1950; Zerbi, 1952; de Roover, 1963; Lee, 1972, 1977). Some have largely eschewed a checklist and speculated on whether fragments of records might represent double entry bookkeeping in use (e.g. Lee, 1971, 1973a, 1973b; Scorgie, 1994). Edward Peragallo chartered the use of double entry bookkeeping from its earliest known beginnings (1938) as, in a different way, did A.C. Littleton (1933). Federigo Melis (1950) and Tomasso Zerbi (1952) devoted many years to the pursuit of the origins of and development of double entry bookkeeping; and both A.C. Littleton in the 1920s and Raymond de Roover, particularly in a 30 or so year period from the mid-1930s until the late 1960s, charted what they believed to have been the roots of the practice of double entry bookkeeping. But, there was no universal agreement and nothing but a selection of partial extant records on which these scholars based their enquiries. In all these cases, only the format mattered. In virtually all cases, the focus was upon whether a full accounting system based on double entry existed.

This study adopts a different perspective. In so doing, it considers some of the material others have analyzed in both similar and different ways, and some primary sources which have not previously been used for this purpose. However, unlike those earlier studies which sought the origins of double entry bookkeeping by seeking to identify all-embracing enterprise-wide accounting systems based on double entry (e.g. Melis 1950; Zerbi 1952; Lee 1977), this study does not seek such extensive implementations of the technology. Rather, it restricts its focus to the identification of what would have led to the first instance of a double entry-based system at the level of key elements of an enterprise rather than the enterprise as a whole, for that is when the recording technique was first likely to have been used.

As will be shown later in this paper, as a result of analysis of the terminology used in early bookkeeping records, it can be deduced that the genesis of double entry occurred when transfers were recorded between accounts for debtors and creditors in both the affected accounts. The benefits of making entries in this way was first recognized when someone realized he could maintain real-time (or, as real-time as was possible) records of two elements of commerce – the accounts of debtors and creditors – in records which were capable of swiftly indicating the balance on each account, and of being used to demonstrate that the balances were correct.
Initially, such bookkeeping was maintained in single entry in a *libro de cassa*, or cash book, which contained only accounts for debtors and creditors and, paradoxically to the modern eye, no account for cash (Goldthwaite, 2009, p. 443). When transferences between these accounts were added, the system became double entry. Specific mention of the account used for the contra entry and then, some time later, cross-references indicating the location of the contra entry completing the process. Subsequently, a cash account was added, resulting in *libri di banchieri* Pietra (1586, f. 1v), or bankers’ books.

It was the addition of a separate cash account to the *libro de cassa* that transformed it into a *libro di banchieri* and so completed the move to a complete and closed system of double entry within one book, a book which by its very name indicates that it was used by bankers. Yet, as will be demonstrated later in this paper, the principle of double entry had been discovered well before the first *libri di banchieri* were maintained in, probably, the late 15th century. As indicated above, the genesis of the system of double entry can be linked to the detailed form of single entry bookkeeping which was developed, most certainly by bankers, in early 13th century Florence.

**THE BANKERS OF FLORENCE**

The background to this study lies, therefore, in Florence, where the banker’s guild (*L’Arte del Cambio*) was formed in the last years of the 12th century (Staley, 1906). Only bankers belonging to the Guild were recognized by the State and, to ensure that appropriate standards were maintained, the Guild required that bankers maintained accurate account records and ensured that this was done through a system of unannounced audits. When an audit was conducted, neatness and legibility were considered key characteristics, along with accuracy and an absence of fraud (Staley, 1906, p. 177). In return, unlike the rest of Italy, where bankers had to have their books notarized or maintained by notaries, the Florentine bankers benefited by virtue of their account books being accorded the status of notarized records, which were recognized as reliable evidence in resolving disputes (Goldthwaite, 2009, p. 23).

Consequently, while for the purposes of their business, the bankers in Florence needed to devise an appropriate system by which to record their transactions, it also had to be to a standard that would enable checks to be undertaken by auditors who were not involved in the day-to-day activities of the bankers whose books they audited. Clearly, such records had to be more organized than simple notations on scraps of paper. The more standardized the system adopted, the easier it would be for them to be audited and verified as accurate. The motivation for the Florentine bankers to devise a structured system of bookkeeping is indisputable and, as will be demonstrated later in this paper, all the available evidence suggests that they did.

The nature of banking in 12th century Florence was very different from today. Instead of solid buildings and safes to hold the funds, while some were

---

1 ‘Closed’ in the sense that all the debits and their related credits, and vice versa, were entered into accounts maintained in this book, the sole purpose of which was control of debtors, creditors, and cash.
authorized to operate out of their own properties, they mainly operated out of market stalls.

“[They] were assigned positions in one or other of the markets, generally in the Mercato Nuovo and along the Via de’ Tavolini. This privilege gave the right to a table and a chair, which were placed conveniently for the transaction of business. The table bore a cover of green cloth, and upon it were placed the Day Book\(^2\) and a layer of clean parchment, for entries of the day’s business. On one side was the "Bank," which consisted of a pouch or bag of gold, and a wooden, or metal, bowl, full of small coins for change.” (Staley, 1906, p. 176)

As a result of the Guild requirements, rather than the simple paragraph descriptions of the form to be found in personal ricordanze and notarial records of that period, a formal structure to these records was developed embracing accounts for debtors and creditors and the entries within them. This is not to say that bankers were alone in the maintenance of records for debtors and creditors: “the statutes of many of the artisan guilds, including those of the [apothecaries], the grocers, the tailors, the wine merchants, the smiths, and the dealers in furs and skins, required that their members keep an accounting record of their affairs” (Goldthwaite, 2009, p. 354). However, comparing the narrow range of activities and elements of key importance to banks against the broad range of both which are relevant to merchants, it is not the latter who were the likely developers of either a formalized system of single entry or a system of double entry.

Three circumstances in particular point towards the bankers as the group in most need of a sound system of bookkeeping:

- Between the mid-12\(^{th}\) and mid-13\(^{th}\) centuries, where previously a formal banking system had not existed, extensive banking entities and innumerable smaller ones emerged. The expansion was such that, according to estimates, there were between 80 (Spufford, 1989, pp. 256-257) and 130 (Goldthwaite, 2009, p. 413) banks in Florence at the beginning of the 14th century.
- The expanding nature of commerce in 12\(^{th}\) and 13\(^{th}\) century Italy relied heavily upon the bankers and their creation and maintenance of a ‘bank money’-based cashless economy for its survival and growth.
- The strictures of the banker’s guild.

Further support for the view that the logical focus for a study which considers the genesis of double entry bookkeeping as defined here must be upon the bankers rather than the merchants, is to be found in the terminology of accounting which originated at that time in the banker’s guild of Florence, including: cassa (cash), banco (bank), bancarotta (bankruptcy), giornale (journal), debito (debt), debitore (debtor), credito (credit), and creditore (creditor) (Staley, 1906, pp. 178-179).

The cashless economy developed and maintained by the bankers was a necessary consequence of the complexity of ‘cash’ at that time. Specie was scarce, variable in quality, and immensely varied in form; and its complexity was

---

\(^{2}\)This most certainly was a libro de cassa, not a ‘day book’.
something with which the bankers not only dealt, it was how they made or lost their fortune.

**The nature and treatment of cash and ‘bank money’**

In 12th and 13th century Italy, apart from coins being inconsistent in value and of a multitude of varieties (Spufford, 1989), there was no such thing as banknotes in the modern sense. Promissory notes were used as evidence of a debt but were difficult to enforce, the only form which required settlement was a notarial act of agency. Some of these notes were raised and/or settled at the fairs which were held across Northern Europe at that time but they were as often linked to loans and transfers of funds as they were to commercial transactions. The most common reason for their being created were the needs of “pilgrimages, crusades, movements of clerical funds, and transfers of money to meet the expenses of students studying in distant towns” (Usher, 1914, pp. 568). Letters of credit existed, but were mainly used by Kings, princes and Popes. It was not until the second half of the 13th century that the forerunner of the modern Bill of Exchange was developed by the merchant banking houses to facilitate transfer of funds between themselves and their agents and, as a result, enabled those engaged in mercantile activity to make a payment in one place and receive reimbursement in another. (Usher, 1914, pp. 567-571)

The 12th and 13th century merchants in the larger cities, lacking specie and any sound paper-based alternative, endeavored not to use coinage in their trade. Business was conducted in the ‘currency of account’, but that currency did not exist in a physical sense. Rather, the value of whatever was exchanged was converted into the ‘currency of account’ so that the value in that currency could be entered in the accounting records and any debts due or receivable were consequently recorded in that form. In order to facilitate settlement of amounts due, merchants deposited coinage with a bank where it was evaluated and the amount of the currency of account it represented was credited to an account for the depositor. This account was, in effect, what is now called a ‘current account’. Banks also maintained deposit accounts but these were for savings, not for settlement of amounts due. If a merchant wished to pay a creditor, he would ask his bank to use the funds in his current account to pay the creditor on his behalf. His account would be debited and an account would be credited in the name of the creditor. Such requests could be made orally or in writing and, once cash was deposited in a bank, it circulated between customers and between banks without ever needing to be converted back into cash. The result had a multiplier effect on the economy as the ‘bank money’ circulated and, because actual cash was rarely paid out by a bank, they could invest the majority of the deposited funds, and benefit from the results. (Mueller, 1979)

It is for this reason, the dominant use of ‘bank money’ in commerce that, despite its name, the *libro de cassa* was a ledger for debtors and creditors, not ‘cash’. It was only when coinage was deposited, either to open an account, maintain an account, or settle an account, that bankers would have found the inclusion of a cash account in that book useful, but they did not include one within it. Instead, they worked around the absence of records of cash movements by counting their cash when it was necessary to do so, such as when
they wished to draw up a balance sheet or simply confirm the balance of cash held (Goldthwaite, 1985, pp. 15-16).

**The motivation for bookkeeping of the form used in the libro de cassa**

The raison d’être of the bookkeeping described in this study is control and monitoring of debtors and creditors. Not only does it not extend to the control and monitoring of cash, it does not extend to the identification of financial position nor to the identification of profit or loss. For this reason, the treatment of bookkeeping adjustments, such as bad debts, although simple to deal with while still maintaining the integrity of both the libro de cassa and the libro di banchieri, is not considered here.3

Another element of lending practice which, today, would require a contra entry in another account is also not considered at this stage: interest. It was charged on loans and granted on savings deposits but no entries were recorded for it in the books of the bankers. Instead, the interest was hidden in a variety of ways, including overstating the loan when recorded (Sapori, 1955; Lee, 1977; Goldthwaite, 1985; Marshall, 1999), something which will be returned to later in this paper.

Thus, while there can be little doubt that the existence of such things as adjustments for bad debts along with operating expenses, like wages and rent, gave momentum to the extension of the libro de cassa and libro di banchieri into a libro nobile, or ledger for all aspects of the enterprise (Pietra, 1586, f. 2r), that step is beyond the scope of this study. Rather, this study is concerned with the beginning of the use of the presentation of records in the style that gave rise to the emergence of double entry. As will be shown, this form of presentation was born from a desire to maintain control over the accounts of debtors and creditors; and it had the benefit of providing an audit trail on receipts and payments linked to the accounts those of debtors and creditors. It was an arrangement of information which ensured that, not only could a balance be found on a particular account with ease, it could also be verified by the entry made in the other account, be it that of another debtor or another creditor or, if it were included in the system, cash.

The next section considers the literature on the emergence of double entry bookkeeping. This is followed by analysis of four sources, one new and three of which prior scholars have been aware but which they have not utilized in the manner adopted in this study. The language of the terminology of the bookkeeping that emerged in Italy in the 12th and 13th centuries is then considered in the light of the uses to which it was being put. The particular nature of the entries made in libri de cassa are then considered. Finally, conclusions are presented and discussed.

---

3When, for example, a debt is determined to be uncollectable, an entry may be made in the debtor’s account with the contra account located outside the libro de cassa or the libro di banchieri. That contra account may be maintained in any form, memorandum, single, or double entry. It does not matter, it is not an active element in the double entry system intended to control and monitor debtors, creditors, and cash. The entry in the debtor’s account has achieved the desired purpose. The banker can see from a glance at the account that it has been closed, and why.
WRITERS ON THE EMERGENCE OF DOUBLE ENTRY

In 1927, A.C. Littleton set down for the first time his list of the six antecedents of double entry bookkeeping: writing, arithmetic, private property, money, credit, and wealth (which he called, ‘capital’). When it appeared in book form in 1933, this resulted in one of the most cited English language sources of accounting history scholarship that has ever been published. It is widely cited but it does not explain how double entry emerged, only that certain features had to be in place for it to have done so. Littleton acknowledges this, stating that the mere existence of all these antecedents could not have been the catalyst for the emergence of double entry bookkeeping, or it would have emerged much earlier than it did. Littleton believed (1927, p. 140) that you also needed to identify the surrounding conditions which were necessary to give vitality to these antecedent elements.

In Littleton’s opinion, the necessary conditions for the emergence of double entry bookkeeping were:

- the granting of large loans by merchants to their government in 12th century Italy which led to the creation of banking houses that by 1230 had spread across Europe (p. 146);
- the circumstances surrounding commerce and capital; and,
- the adoption by merchants of Hindu-Arabic numerals for calculation.

He supports this firstly by reference to the fragments from a Florentine bank ledger which include cross-postings between the accounts of its clients in 1211 (p. 147), a time relatively soon after these three factors were in place, but he does not explore this further. Complementing this article, in two articles published in the years either side of 1927, he shifted his focus to the evolution of the double entry ledger and journal from their earliest use to his present day. He next developed his thoughts on the beginnings of double entry in a short article published in 1931, in which he considered the nature of 15th and 16th century ledger entries, noting how entries used verbs in the future tense: “The entries were definitely stated as memoranda of expected future occurrences, not of present happenings” (p. 181). Almost as an aside, he speculated that bankers may have been the first to maintain personal accounts and, in the course of reflecting upon who first embraced double entry, suggested that they may have performed double entries when debts were transferred between clients. But, he did not suggest they were the first to do so. He then reverted to a focus upon the adoption of double entry across an entire mercantile business. In considering the bankers, he was looking in the direction of what was undoubtedly the genesis of double entry bookkeeping, but he neither pursued this line of enquiry nor extended what he had already done, and nor has anyone else, though Lee (1972, p. 57) came close.

In these three articles, Littleton (1926, 1928, and 1931) focused upon the language used, something virtually overlooked by other scholars in this field. He noted it, drew attention to it, but did not explore its origins. As will also be shown later in this paper, the language used does reveal the heart of the genesis of double entry bookkeeping, a genesis that had everything to do with the
The language of bookkeeping

In the earliest of these three articles, Littleton considers the development of the manner in which entries are made in the ledger using, as his sources, examples from old ledgers and others from textbooks, most taken from the latter. In his first example, one from a mercantile ledger of 1396, he notes the paragraph form of entry and use of ‘debet dare’ and ‘debet habere’ which, he states (1926, p. 14), when used in the ledger, represent respectively, ‘debit’ and ‘credit’. In the same paragraph, he points out that for the equivalent entry in the journal, ‘debit’ and ‘credit’ are represented by the terms, ‘Per’ and ‘A’. He notes that ledger entries end with an indication of where the corresponding debit or credit entry is made on the other side of a different account and, in doing so, use the terms, ‘debito’ and ‘credito’, respectively, rather than the verb forms used for the labeling of the other side of the transaction earlier in the entry. In his next example, taken from a ledger prepared in 1436, he demonstrates the shift from Latin to Italian in the terms used, with ‘de dare’ and ‘den avere’ replacing ‘debe dare’ and ‘debe habere’ respectively (p. 15); and continues to refer to other variants of these Italian terms which used ‘dee’ and ‘die’ to replace the Latin ‘debet’.

He then shifts to Pacioli’s treatise of 1494, pointing to the manner in which the contra entry in the ledger account is now mentioned much earlier in the entry, though the folio on which it is to be found continues to be indicated at the end of the narrative. Littleton’s view was that this was a simplification of the previous form which resulted in a more technical representation of the details. That is, he believed that the technical terminology was beginning to crystallize and distinguish itself from everyday speech though, as will be discussed later, it had already been so for almost 200 years. From this point, he proceeds to note small changes in presentation in an Italian textbook from 1586, an English textbook from 1588, and a Dutch textbook from 1604 before moving forward in time reflecting upon further changes in an English textbook of 1660 and in accounting practice in the 19th and the beginning of the 20th century.

Through his analysis, Littleton highlights the shift from detailed narrative paragraph towards a virtual absence of detail by the beginning of the 20th century, with only the name of the contra account preceded by the equivalent of

---

4 In his analysis of these changes, Littleton implies some trends that were not as clear-cut as he implies. Latin was used in some accounting records, such as the one he mentions from 1396, but this was relatively rare by that time. The switch from Latin generally occurred a long time earlier, partly as a result of the limited extent to which Latin formed part of the education of a merchant – see Grendler (1989) but, more so, as a consequence of all oral communication, particularly in trade, having been, for some time, in the vernacular (Sosnowski, 2006, pp. 20, 42).

5 The other account.

6 In his analysis of these changes, Littleton makes some assumptions concerning consistency in approach across Italy that did not exist (and in other countries as well), something criticized by de Roover (1955, p. 413) in his critique of Zerbi’s work, which has the same tendency to imply that accounting everywhere was the same; the criticism was further clarified in detail by Antinori (2004).
‘credit’ or ‘debit’ surviving where, previously, there was an abundance of detail about the transaction being recorded. It is, however, with Littleton’s analysis of the terminology used for ‘debit’ and ‘credit’ in his earliest examples that the present study is concerned. It is also concerned with the topic of Littleton’s 1928 paper on the evolution of the journal, as knowing which book ‘came first’ ensures that the focus of this study is upon the correct sources.

In 1928, Littleton makes the point that the ledger preceded the journal in its emergence: ‘[the journal] was added to the structure after double entry was quite well worked out’ (p. 383). This statement, made with great certainly, has gone unnoticed by those who have written elsewhere on this subject, but it is the key to seeing the simplicity of the transition that led to the emergence of double, as opposed to single entry bookkeeping. He justified this statement on two grounds.

Firstly, he focused upon the form taken by a journal entry compared with the form of an entry in the ledger and concludes that the journal entry was an abbreviated version of the ledger entry; and that it had been developed in order to systemize the entries made in the book of original entry in a manner that facilitated transference from there to the ledger (p. 386). In doing so, he supports his argument by drawing attention to the fact that, in addition to the introduction of the terms ‘Per’ (debit) and ‘A’ (credit), the two phrases, ‘de dare’ and ‘den avere’ (or their equivalents) were retained despite their serving no practical purpose in that book.

After Littleton, Raymond de Roover published a number of articles on early double entry. These culminated in a seminal work, Aux origines d’une technique intellectuelle: la formation et expansion de la comptabilité à partie double (1937), in which he summarizes the emergence of double entry bookkeeping. Using primary archival sources and secondary sources, he discusses and identifies early uses of many of the aspects of a double entry accounting system – where terms such as ‘the Venetian method’ were first used, when depreciation was first applied, and so on. However, he does not look at the structure of entries, nor does he consider the surrounding conditions which were necessary – the catalyst – for the emergence of the system of double entry. The following year, 1938, he published an article which did. In it he states that he believes three factors gave rise to the development of accounting: credit, partnership, and agency (p. 145) and he describes how these led ultimately to the emergence of double entry with the inclusion of accounts for goods and expenses.

Two Italian scholars, Federigo Melis (1950) and Tommaso Zerbi (1952), then contributed to the debate with large texts analyzing the origins of double entry. Both were of the view that double entry emerged out of necessity, not accident, a point highlighted by de Roover (1955, p. 420). Zerbi believed that what finally led to the emergence of double entry was the addition of cash, merchandise, and expenses to the personal accounts which originally were the only form of accounts in the ledger. De Roover, in reviewing the books by both authors, concludes that there was no single catalyst for the emergence of double entry and that it emerged for different reasons in different places (1955, p. 413),
and there the debate effectively ended. Despite the vast amount of research that went into those two large volumes by Melis and Zerbi, in reviewing these books de Roover made it clear that they brought us no closer to identifying what gave rise to the emergence of double entry than he had identified in 1938 when he wrote:

“There is, however, still one dark spot in the history of accounting. Although we can perceive fairly well how the double-entry system developed, once the basic principle of duality and equilibrium was laid down, it is hard to understand how it came into being. As a matter of fact, the specialists of the history of bookkeeping have all tried to solve the problem and to offer some satisfactory explanation. Owing to a lack of source material, these solutions, however, are based mainly on conjectural reasoning rather than on factual evidence.” (p. 144)

Yet, one item of evidence of which de Roover was apparently unaware together with one he wrote about and two of which he would have been aware but which, in all probability, he did not recognize for what they were, may shed some insight into this subject. Together, it could be argued, they present support for a proposition that double entry was first understood and would have first emerged in the form we know it in bank ledgers in the early-13th century, had the surrounding conditions made it prudent for it to have done so.

**SUPPORTING EVIDENCE**

These four items comprise of fragments from a Florentine bank ledger from 1211, which reveal how ledger entries for debtors and creditors were prepared at the beginning of the 13th century; instructions in how to record single entries for creditors from 1270 Pisa; textbook instructions in how to maintain a single entry Venetian libro de cassa from 1525; and instructions in how to maintain a double entry Venetian libro de banchieri from 1494. Considering these four pieces of evidence together, we can infer the development of accounting for debtors and creditors from rough notations on parchment, to carefully presented entries in a ledger, to an established form for single entry and, some brief time later, an established form for double entry.

**Banks and banking fragments from 1211**

Taking these four items in turn, the banking fragments comprise of two parchment folios which have survived because they were used as padding in the cover of a later bound book (Usher, 1934). These are the first known examples of the vernacular, the day-to-day language of the period (Sosnowski, 2006). They were first translated into Italian and described by Santini (1867). Lee (1972, 1973a, 1973b) subsequently translated all the entries into English, and then considered the terms used and the existence of any contra entries. The entries related to loans and their repayment. They included some where transfers from one account were being made to another. Accounts were indicated as closed with a diagonal line. The entries include:

- transferences between a customer's own accounts and from one customer's
account to the account of another;
- deposits;
- withdrawals;
- loans;
- repayments;
- entries in which a guarantor is named, transactions are witnessed; and,
- entries where interest is charged, both explicitly and by manipulating the settlement date in the entry to enable a penalty for late payment, i.e. the disguised addition to the account of the interest on the loan.

It was a hybrid system, neither entirely single entry nor double entry, but somewhere in-between (Usher, 1934). The single entries are very detailed, providing the necessary information to know what they related to. Where double entry was apparent, its existence was implied rather than formally evidenced by any mention of a posting to another account. As such, it represents an example of a bank in the early stages of adding the detail to entries that could ultimately lead to a shift from single entry towards double entry.

These entries did not relate to an occasional banking firm, it was a fully-fledged banking venture operating in three distinct locations, though, as Lee points out, the amounts involved were not large (1972, p. 56). Each of the accounts was entered in a space set aside to accommodate the entries for the original loan and its settlement. The loan was entered first and the entry or entries relating to its repayment were recorded below. This vertical paragraph form representing the entries for outflows and inflows was notable in that the two aspects were not maintained in different parts of the book, but together in the same place. However, there was no sense of ‘debit’ and ‘credit’ in the entries, other than in the terminology used: both ‘die dare’ (should give) and ‘die avire’ (should have), and their plural forms – ‘dino dare’ and ‘dino avire’ – were used. The terminology, was applied in its natural sense, consistently, with the past tense used instead of the conditional, e.g. ‘die dato’ (has given) to indicate that an amount had been repaid by the debtor in cash. In contrast, and still using the language in its natural form, ‘die avire’ (should have) was used when a loan was repaid by transferring funds from an account of someone else.

The terminology was developing – the verbs to use had clearly been established – but it had not yet become specific to bookkeeping. It is the form it took when it ceased to develop, i.e. ‘deve dare’ and ‘deve avere’, that holds the key to this study because that indicates the most probable circumstances in which these bookkeeping terms were first used. Confirming the natural language roots of these terms and indicating that the choice of verbs were recognized as appropriate beyond the banks that used them, this form of wording is also evident in an instructional text of 1270, though the manner in which the entries are presented in the latter is very different.

**Instructions in single entry for loan repayments from 1270**

The example of how to record entries for loan repayments is contained in
a teaching manual written by an abbaco master\textsuperscript{7} working in Pisa. It relates to how a merchant should record the repayment terms of a loan made in four installments. The loan is for 900 Lire and is from someone called Donato. The dates entered are the dates when payment is due, not the date of the original loan, which is consistent with Lee’s analysis of the bank fragment accounts from 1211. The amount of the loan is recorded above the four entries for the repayment installments, which are presented in sequence, within a space dedicated to them:

![Figure 1. A single entry record for installment repayments of a loan from 1270. Source: Anonymous (c. 1270-1316).\textsuperscript{8,9}]

Surrounding the entries are many lines of text and diagrams providing instruction in the calculation of interest on the loan. Together these represent the earliest indication we have of instruction in how to calculate and make such entries. It is a style of presentation clearly designed to maintain all information relating to the loan and these calculations in one place. The calculations were complex and it is not unreasonable to consider that this style of presentation may represent the beginnings from which ledgers containing only the entries themselves had been developed. The only other similar example in this text used exactly the same form of wording. Most relevant to this study, repetitive tuition of how to record these repayments would have encouraged the transition of this terminology based on common language into specialist terms with their own unique meanings in a bookkeeping context when the students later became merchants and bankers.

While the examples of detailed single entry from 1211 were replete with information, they were in no sense minimalist nor highly structured. An example which illustrates how this form of bookkeeping also developed can be found in a printed textbook from 1525.

**The matured form of detailed single entry from 1525**

\textsuperscript{7} A teacher of applied mathematics for business and business practice.
\textsuperscript{8} The year-end in Pisa at that time was at the end of February.
\textsuperscript{9} Donato dee avere Lire 90 a di uno di sottombre nel 1270
  Ancho dee avere Lire 210 a di 10 di febbraio nel 1270
  Ancho dee avere Lire 255 a di 15 di maggio nel 1271
  Ancho dee avere Lire 345 a di 1 da gusto nel 1271
In 1525, a Venetian school teacher, Giovanni Antonio Tagliente, published a book of instructions for maintaining a single entry ledger for debtors. It shows, not surprisingly, that the single entry ledger had become far more structured than it was in 1211. As to how it had survived to the extent that demand for instruction merited publication of a textbook dedicated to that subject is shrouded in mystery, especially when double entry, a form from which it differs very little, had been in use for over 200 years (Pacioli, 1494). But, it was clearly an approach to recording entries for debtors and creditors – the entries to be made for debtors could simply be reversed were a creditor involved – that was still current at that time.

The standard format for the entries it presents was used for all transactions and, also, for all settlements of accounts, not just some, as had been the case with the example from 1211. The debit and credit sides of each account are shown, and not in vertical paragraph form or in different sections of the book, but on facing pages, with the left page for the debit entries and the right facing page for the credit entries. When a balance was settled, the means by which this had been done was stated, but single entry was preserved by the absence of any indication of another account having been used to record the contra posting. That is, if a debt was paid in cash, the credit entry into the debtor’s account would say that it had been paid in cash but no indication was given that the payment was also recorded in a cash account, hence Tagliente’s own description of the system as ‘single entry’.

A comparison between the single entry bookkeeping in Tagliente’s text and that of a textbook on double entry bookkeeping from the same period reveals just how little actually needed to be done to convert a single entry system into double entry.

Banking double entry from 1494

In 1494, Luca Pacioli included a set of entries relating to banking activities on the final page of his bookkeeping treatise, De Scripturis. Tagliente wrote that you record the payment of a debt in this way (1525, f2r):

“Ser Marcantonio al incontro die aver a di 20 mazo contanti da lui per pagamento deli conrascritti panni lire 72 soldi 0 val…”

“(The account of) Ser Marc Antonio in response (to his debt) has received on 20 March cash of his in payment for the aforementioned cloth of 72 lire and 0 soldi worth…”

As mentioned above, there is no indication of the existence of a contra account in this or any of the other entries. Pacioli’s example entries from a libro di banchieri for debtors and creditors all included details concerning the contra account. In addition, each entry indicated that a contra entry had been made and where that other account could be found. The fact that the identity of the contra account was unambiguous and that an entry was made in it each time confirmed that this was a double entry ledger.
The addition of Pacioli’s final element, a signpost to where the contra entry was located, completed the transformation into what we would now recognize as ‘double entry’, but it was not a necessary feature for the principle of double entry to be identified. However, it did mean that the audit trail of each double entry was clearly visible. The Florentine bankers of the 13th century and the guild inspectors would all have benefited, and it would have made it more straightforward to verify the accuracy of the entries in hearings of the Mercanzia (the court where disputes over accounts were heard10). Unfortunately, we have insufficient evidence to know when this final step of adding the location of the contra entry was taken but it was, for example, in use in Pisan bank records in 1373 (see, Melis, 1952, pp. 468-9).

Returning briefly to the absence of a cash account from the libri de cassa, when cash was recorded, either in a separate cash book or in a cash account in the ledger (making it a libro de banchieri), the double entry system was complete and closed. However, the absence of cash from the ledger did not invalidate the libri de cassa being described as one of the three forms of double entry ledger by Pietra in 1587. In his opinion, a ledger maintained in double entry was one in which all the entries between the accounts it contained were recorded in both the accounts involved and this is the basis for the identification of a system of double entry adopted in this study.

THE LIBRI DE CASSA AND THE GENESIS OF DOUBLE ENTRY

The nature of the libri de cassa leaves little doubt that it was in banks that the concept of the double entry system was born. They contained two opposing types of accounts – debtors and creditors – and entries were routinely made within them which involved one debtor account and one creditor account. Even where a transaction involved transferring a credit balance or a debit balance from one account to another of a similar type, there was always one credit entry and one debit entry in the book because the accounts were all maintained in one place. The process of double entry was born when the decision was taken by a banker to allow transferences between the accounts of his customers without involving movement of cash, a process facilitated by including the accounts for all debtors and all creditors in one book.

These cross postings would have occurred relatively often, and more often than we would expect today because, in addition to the forms of settlement we are accustomed to, at that time another form of settlement was also used: the cessione. There were three types: when a debt was set-off against a credit; when a debt was transferred to another party; and, when a debt was transferred to a bank from another party.11 For all cessione, the entry in the libro de cassa involved either a debtor and a creditor or two debtors or two creditors, not cash.

The description within each entry in the libri de cassa necessarily

---

10 See Staley (1906, p. 85)
11 This was done either with the voluntary agreement of the parties, or when it is made forcibly by judicial order involving seizure of the amount due to you or, when it is you who owed the debt, by transferring a debt you are owed to the creditor.
indicated the other party involved. It had to, or the Guild could not have verified the correctness of the entry. And, in order that the banker knew the state of each customer's account, both the debit and the credit entries had to be made, otherwise only the account of one of the two parties would have been up-to-date.

The verbs that came to be recognized as representing ‘debit’ and ‘credit’, ‘dare’ and ‘avere’ were virtually the only ones that would have been used in banks which focused on operating the current accounts of their clients. When a deposit was made, the customer's account would be credited using the verb, ‘deve avere’ (‘should have’). When a payment was made by the customer to another customer's account, the verb, ‘deve dare’ (should give) would be used in a debit entry to the payer's account and ‘deve avere’ would be used in the credit entry in the payee’s account. These would have been the most common entries in these accounts. There would have been some loans and there would have been some entries for their repayment in cash but, in an economy where merchants avoided using cash wherever possible, they are most likely to have been repaid by transfers from the accounts of other customers in most cases.

These circumstances were the genesis of double entry. The bankers would have been aware from the start that making both the debit and the credit entries was vital if amounts due were to be known. Awareness of other benefits of doing so would have come later. The sheer repetitiveness of the entries of dare avere, dare avere, dare avere... would have planted a seed in the mind of the bankers that these two aspects of each entry were opposites in every case, and that this was useful for verifying the accuracy, in the sense of completeness, of the entries made. But it may have been the Guild auditors, tasked with checking for accuracy, who realized this first, and that they did so very soon after they began auditing the bankers’ records.

It seems inconceivable that the benefits of this recording process were not recognized by both the bankers and the Guild within a short period of the bankers first making double entries in their libri de cassa.

Of course, bankers were not the only medieval businessmen to use libri di cassa. They were also used by merchants once credit became a significant part of their business. However, the timing of the first known examples of double entry from 1211 deny the possibility that merchants were the first to develop the method. It was the banks which created the cashless mercantile economy. For merchants, until credit became a dominant element of business, and it could not have done so until sufficient banks were established to support it, the focus of their business was not upon debtors and creditors. Many, if not the majority of transactions were settled at the time, and for a considerable period thereafter, by barter (Smith, 2008, p. 144). There was no need for them to go beyond the level of charge and discharge accounting plus a memorandum note of debtors and creditors. In addition, unlike banks, merchants had far less need of a sophisticated approach to maintaining control of their small number of debtors and creditors. Their businesses would not fail if a creditor demanded payment at a time when insufficient cash was held. They could offer goods instead, transfer a debt owing to them to the creditor, or request more time to pay. They could even go to a banker and request a loan. Sound control over the core aspects of the
business using accounting was essential to survival for the banker, but optional for the merchant.

Some of the bankers, particularly those with the larger banking firms, also operated as merchants, and they would have seen at first hand the benefits to the efficiency of their banking practices of operating this system. If they perceived that there was a need to know how much they had invested in their other assets, they may have started to include accounts for land, buildings, and equipment in their ledgers. Yet, there was very little need for them to do so. Ownership was sufficient. Knowing what something cost was not required in order to maintain control over it. It was only with the need to identify wealth or profit that double entry added value to single entry systems, because it introduced a control mechanism that, effectively, enabled the recording of each transaction to be checked and profit or, perhaps more opportunely, changes in wealth to be determined with some ease. That is what probably led to the initial adoption of double entry by merchants, but they only did so some time after the bankers had been using the system.

Further support for the proposition that double entry was first used in banks and only later embraced by merchants can be found from consideration of the terminology used in those records.

**TERMINOLOGY**

The terminology reveals far more insights than even Littleton deduced, for the language not only confirms what he proposed concerning which of the two books, the ledger or the journal came first, it also confirms what caused these books to be maintained in the first place.

As highlighted by Littleton (1931), the future tense was used in the terminology that emerged in double entry with, for example, 'die avere' used to indicate a credit entry. This worked well when it was the only entry in an account but, when details of payments of debts were recorded rather than simply noted by scoring out the original debt, the meaning of the term 'die avere' (literally, 'should have' or 'should receive') was not the sense of the entry at all. When possessions and expenses and forms of income had to be recorded, confusion arises if these phrases are interpreted literally. These were not accounts of persons: how could they give and receive?

Merchants would not have invented an accounting system that used terminology unsuited to its task. The terminology used in entries in the ledger is derived from the nature of transaction made with debtors and creditors. They were the raisons d’être of the detailed single entry bookkeeping practices which developed in Italy during the late 12th and early 13th century and then transformed into double entry. Had anything other than credit been the catalyst

---

32 Taxation in that period was typically based on wealth. Also, joint ventures were very short-term and they split their combined wealth (or worth) at the end of their existence, not just their profits. The same applied to partnerships, which would typically exist for a maximum of 3 years (de Roover, 1937).
for bookkeeping of this form, these terms of ‘die dare’ and ‘die avere’ would not have been used.

There can be no doubt that double entry was fully formed before merchants embraced it, and that this must have occurred at some point before the last decade of the 13th century when the use of these terms can be seen in expense accounts of a company of Florentine merchants (see, Melis, 1952, pp. 384-5). By that point: “The two expressions had been customized, they had lost their relationship with the context, the words were no longer of the common language, but had become conventional terms of a specialist language” (Sosnowski, 2006, p. 45).

Merchants had embraced a bookkeeping system developed by bankers who had slowly shifted from using everyday language to make entries in their accounts to using specialist terms derived from elements of that language they used most repetitively in their bookkeeping, the verbs. The use of a singular form of these verbs did not stabilize until many years later, but the use of the conditional future tense of the verbs ‘deve dare’ and ‘deve avere’ to represent ‘debit’ and ‘credit’ had occurred within less than 90 years of their first known use in making account entries in the spoken language of the day.

One further issue remains and it concerns the mysterious, to modern eyes, absence of a cash account from medieval bank ledgers. Despite the fact that either including a cash account or indicating that contra entries for cash were in a separate book would have enabled a banker to demonstrate and verify what had been recorded from either side of an entry, no surviving Florentine libro de cassa from the 12th or 13th centuries contains an account for cash. Nor do they contain any reference to a separate cashbook being used to record cash (Goldthwaite 1985). The bankers made double entries for transactions between debtors and creditors but, when cash was involved, the entries were all single entry in form. The explanation for this relates to the nature of and attitudes towards interest.

INTEREST

In the Middle Ages and beyond, the charging of interest was considered usurious by the Catholic Church (Baldwin, 1959). While this clearly did not cause major problems for the bankers whose records have survived from 1211 – they included details of the interest rate charged on some of their loans, though not on others (Lee, 1977, p. 35) – it certainly became so once the Church introduced compulsory annual confession in 1215 (Woods and Copeland, 1999, p. 376), something which pious merchants of the day could not avoid. Anyone found to have engaged in usury through the confession would be obliged to serve a penance, and the penance exacted could be severe, including imprisonment (Brucker, 2005, p. 165). It was certainly not something any merchant would have ignored. Of all forms of enterprise, it was the bankers who needed to be the most careful in how they arranged loans and repayments and they sought to do so, firstly, by masking these arrangements in the recording of these transaction and, later, by devising ways to hide the existence of interest behind the mechanics of new forms of settlement. Bankers hid interest charges on loans by a variety of
devices including:

- inflating the amount recorded to include the interest charged;
- recording the date of settlement as the date of granting of a loan and inserting a clause that late payment would incur a penalty;
- using semantics, describing interest as the “cost of the money” lent or borrowed; and,
- recording a gift paid to a depositor of funds in gratitude for a loan rather than recording a payment of interest (Goldthwaite, 1985, pp. 32-37).

It has been suggested that double entry bookkeeping was developed in response to the views of the Catholic Church concerning usury (e.g. Aho, 1985, 2005). Nothing can be further from the facts. It was usury that delayed the emergence of double entry. As most assiduously summarized by Goldthwaite (1985, pp. 37): “for fear of discovery of their usurious activities, bankers preferred not to adopt the most advanced accounting techniques.”

This, then, is why we have no evidence of Florentine bank records from the 12th and 13th century maintained in double entry using a libro di banchieri. They did not even complete the double entries involving cash in libri segreto, where the private aspects of the business were recorded. The bankers knew what the system would entail, they took their bookkeeping to the brink, but they could not risk embracing double entry further by including a cash account or using a cash book which would have revealed the lies of some of their entries and exposed them to censure and punishment for engaging in usurious activities.

It was only with the opening in 1464 of the first Monte di Pietà, a Church sponsored bank in all but name, which was allowed to charge interest on loans (Goldthwaite, 2009, p. 411), that the charging of interest became a transparent, rather than a hidden activity. Banks could finally adopt double entry without fear of reprisals; and, in 1515, the legitimacy of charging a justifiable level of interest was confirmed in a papal bull issued by Pope Leo X, putting an end to the problem of usury for European bankers once and for all.

CONCLUSION

The distinction which scholars have made which prescribes that only when an enterprise-wide bookkeeping system based upon double entry is in use does it represent use of double entry, is misleading and nothing more than an artificial device used to avoid a broader debate. The raison d’être of double entry bookkeeping is not the preparation of balance sheets and income statements. It is accuracy, completeness, and control. Businesses which adopted it for some of their activities, but not all, did so because they perceived that those activities required greater administrative control and/or a higher level of completeness and accuracy in how they were recorded.

Based on the preceding analysis, some conclusions can be drawn concerning the genesis of double entry bookkeeping. Firstly, A.C. Littleton was correct in 1927, when he identified the emergence of banks as a major form of business in 12th century Italy as a catalyst for the discovery and use of double
entry bookkeeping. He was also correct in 1931, when he suggested that banks may have been the first to develop the structure of personal accounts and that they would have performed double entry when transferring one person’s debt to another. However, he did not develop this line of reasoning and did not identify how this emerged from a detailed form of single entry which then transformed into double entry. Consistent with the real-time information needs of banks, once banking emerged as a recognizable specialist form of enterprise in the 12th century, it was the obvious center for the development of fundamental accounting practice, particularly in the Guild-monitored banks of Florence.

The needs of the banks for quality control over their accounting records were far greater than those of other forms of business. They had to develop a sound financial recording system or risk extinction, and did so by first developing the detailed single entry system, a process evident in the banking fragments from 1211. This enabled them to identify the amount owed and owing between themselves and any of their customers whenever they needed to know it. When it became evident that they also needed to be aware of (or verify) their cash position, double entry embracing cash was the logical next step but, because of the Church’s stance on usury, they could not take it and did not until many years after merchants had done so. Even 100 years after the first confirmed instance of an entity-wide adoption of double entry in 1299, the renowned Merchant of Prato, Francesco di Marco Datini, a man who introduced double entry into his merchandising activities in 1383 (de Roover, 1937), failed to adopt it when he opened a bank in 1398 (Goldthwaite, 1985).

Zerbi’s seminal work of 1952 devotes much if its content to an analysis of extant Milanese banking records and he did express the view that double entry emerged from the ‘scrittura tabulari’ of the banks in that region. However, his was a lone voice and he was criticized for considering the wrong period of time, the 14th and 15th centuries, rather than the 13th. Melis, in his later writings, dismissed the opinion of Zerbi and maintained that double entry emerged much earlier, and did so in Tuscany, not Lombardy.

Probably due, at least in part, to their long-term pursuit of physical evidence, despite their both examining Tuscan bank records in considerable detail, Melis and de Roover both failed to identify banks as the form of enterprise most suited to being the focal point for the genesis of double entry. They failed to stand back and consider separately the most likely type of activity to have made the connection that led to double entry. Even when they found old examples of bookkeeping in the archives, they were not swayed by it being from banks. Even when they could see that the meanings of the specialist terms used in bookkeeping must have originated from recording amounts owed and owing, they failed to appreciate what this may imply concerning the genesis of a form of single entry bookkeeping which lent itself to transformation into double entry in a manner that charge and discharge accounting did not.

Instead, they side-stepped and virtually ignored the importance of the emergence of that form of single entry bookkeeping as illustrated in embryonic rather than fully-formed fashion by the banking fragments from 1211, of which they were all aware and, instead, focused upon discovering when double entry
was first used across an enterprise. In doing so, they abandoned context (i.e. Littleton’s surrounding conditions) in pursuit of evidence of process; and devoted many years of effort to finding examples that could pass a series of hurdles and be accepted as definite instances of double entry, something that in the end, despite all their efforts, they could not agree upon (de Roover, 1955).

They all agreed that double entry had been in use in Genoa in 1340 but, while de Roover was sympathetic to Melis’s opinion that double entry originated in Tuscany in the preceding century, he did not express an opinion of his own; and neither Melis nor de Roover could agree with Zerbi’s view that it originated in Lombardy. Unfortunately, a debate never materialized and it was left to Geoffrey Lee in 1977 to identify which of the extant records represented the first confirmed use of double entry bookkeeping: the 1299 records of the Salon, France branch of the Florentine merchants, Giovanni Farolfi and Company. Interestingly, he did so despite cash transactions not containing any cross-references to the contra account (de Roover, 1955, p. 411).

In the course of their studies, all three, and particularly Melis and de Roover, identified the Datini archives as a major source for analysis of the emergence of double entry and, in doing so, contributed greatly to our knowledge and understanding of how accounting practice developed in that period, successfully charting Datini’s transition to double entry in the late 14th century. However, they failed to note that, as revealed in recent examination by this author of a single entry account book in that archive from 1363, Datini’s single entry bookkeeping at that time was no more sophisticated than that illustrated in the banking fragments of 1211. Yet, Datini made the transition to double entry by 1383 (de Roover, 1937, pp. 274-5), a period of only two decades. Why should we not consider it possible that a bank, with its far narrower range of items which it needed to record, could have done so much more swiftly?

That they all and, in particular, Melis, devoted a great deal of time to the Datini archive even though they knew it would not enable them to identify the genesis of double entry is understandable – as de Roover indicated in 1938, they knew there was insufficient evidence available for them to find. But, sometimes, you do not need to rely on hard facts to develop a hypothesis that makes sense, and that is what this paper has sought to do.

One thing identified in this study that the facts, were they available, could not refute, is that the terminology adopted in those early attempts at a systematic detailed bookkeeping record were originally developed for the recording of debtors and creditors, not commercial transactions. It is infeasible that this system was not first developed in banks. But, both Melis (1950) and de Roover (1955), presumably unable to shake off the shackles of what accounting is used to record today, believed it to have been the commercial transaction that was the catalyst. The reason we can be sure that it was not lies in the terminology used in the entries from the earliest known examples in single entry form. It denies the possibility that it was the transaction that was being recorded. As noted by Littleton (1931), the verbs used in early bookkeeping entries describe the result of a transaction, not the transaction itself.
There are some clear limitations to this study. As de Roover (1938) declared, there is a scarcity of identified archival accounting information relating to the 13th century and, in the main, studies of this sort attempt to use the available facts to deduce what a likely scenario was, rather than anything more definite. We cannot be certain about the past, no matter how much information we gather, but we can identify signals that aid us in interpreting what we find and that is what this study has sought to do, even though the available information is limited. The analysis of terminology is, however, one aspect of this investigation that is firmly supported by the evidence, as is the existence of bank ledgers dedicated solely to debtor and creditor accounts which only lacked the addition of a cash account for them to be maintained in a manner we would recognise today as ‘double entry’. Yet they were recognized as being examples of double entry ledgers by Pietra in 1587, and they certainly contained many examples of double entry in practice.

This would not satisfy those who believe double entry can only be acknowledged as existing when it extends to accounts for capital, the closure and balancing of the books and the preparation of a balance sheet and income statement (see, Hunt, 1994, p. 103) but, the fact is, you do not need these accounting features for the mechanics of a double entry system to be in place. You do not even need an indication of where an entry was made to a contra account, or even that it was made. The fact you indicate a second party or item is involved, and that your account system includes the making of an entry for it, is sufficient to provide a means of confirming completion of entries and the identifying of account balances. That is ‘double entry’: for every transaction, entries are made in two different accounts.

That cash was recorded as a single entry and never in the cash account does not deny the fact that double entries were being conducted in libro de cassa whenever transactions involved solely debtors and/or creditors. This was the genesis of double entry, initially done simply because it was necessary to know the amounts owed and owing and motivated by the Guild requirement for accuracy and the resultant status of their account books as evidential documents should any disputes arise.

It is those mechanics of double entry, built upon the revolving algebraic relationship between debits and credits which brings the benefits of monitoring of debt and credit which established the practice. It was credit, not requiring to prepare a balance sheet or calculate profit, which caused double entry bookkeeping to emerge. The bankers discovered the system but could not use it in a complete form, but merchants could and did, but only many decades after its benefits with respect to ensuring completeness of recording and swift identification of account balances were well recognized by those whose business revolved around debtors and creditors.

Finally, the surrounding conditions which first give vitality to Littleton’s antecedent elements were those embodied in the business needs and survival needs of banks, and the use of bankers of their libri de cassa enabled and supported the expansion of local and international economic activity, creating a financial environment in which business and trade flourished. Their
serendipitous discovery of a sound system of bookkeeping formed the basis for the system of double entry bookkeeping credited with facilitating the expansion of and control over business activity in Northern Italy throughout its period of dominance in international trade, which lasted until at least the beginning of the 16th century. That it is still in use today in much the same form is a testimony to the merits of this system which bankers, not merchants devised, and it is to the former that any dues are owed.

REFERENCES

Primary Sources
Tagliente, A. (1525), Considerando ... diversi Mercanti et multi Artesani li quali sanno le sue mercantile ne le loro botege ... . Venetia: no publisher.

Secondary Sources


