

4-1929

## Early History of Bookkeeping by Double entry (Concluded)

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### Recommended Citation

Kats, P. (1929) "Early History of Bookkeeping by Double entry (Concluded)," *Journal of Accountancy*. Vol. 47 : Iss. 4 , Article 3.

Available at: <https://egrove.olemiss.edu/jofa/vol47/iss4/3>

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# Early History of Bookkeeping by Double Entry

(Concluded)

BY P. KATS

## SIMON STEVIN (1548-1620)

Simon Stevin, a mathematician of renown, also made a name for himself by his treatise on *Bookkeeping for Princes*, etc., in the Italian manner, which was preceded by one on merchants' bookkeeping.

For our purpose all that need be said of both is that they are representative of owners' accounts but, though use is made of a capital account, it contains no more than cash and debts receivable and payable, together with marketable commodities at their appraised or purchase value. Other assets, such as jewels, furniture, household goods, houses, land and the like are, as in Collins's bookkeeping, excluded, although Stevin, too, makes a note of them.

Accounts of marketable goods contain a quantity column; when the accounts are closed, the gain or loss is transferred to the account of profit and loss, the balance of which is thereupon passed to capital account.

For the assets and liabilities remaining at the end of the accounting period Stevin did not use a balance account but, unlike Collins, transferred them direct to capital account.

The journal contains many instances of composite entries, i. e. several debtors stand against one creditor or vice versa, as exemplified by Mennher in 1550, and the form of the entries resembles that of the same Mennher in 1565, who distinctly stated it as his intention to demonstrate servant's bookkeeping. This, however, was not based on any known Venetian examples and was very much unlike them.

Example of Stevin's journal entries

	21	Aug.	(1600)			
			Sundry Accounts debit per Arnold Jacobs for £1000 taken from him on loan at the rate of 12 per cent interest p. a. for one month; the accounts coming into question are:			
18	—	—	Cash for receiving the principal.....£	1000	0	0
18	—	—	Profit and Loss Account for interest on the above principal.....	12	0	0
15			Total.....	1012	0	0

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fol. Capital account debit. Year 1600.				fol. Capital account credit. Year 1600.				
2			£	s.	d.	3		
1	0	Jan.	Per sundry accounts...	514	6	0	1	0
	31	Dec.	Per Nutmegs, fol. 7, because, at the making up of my Estate, I found in stock 173 lb. 5. oz. worth 7s. a lb. amounts to . . . .		60	13	2	
	31	Dec.	Per Pepper, fol. 7, because at the making up of my Estate I found in stock 120 lb. worth 40 d. the pound, amounts to &c. &c.	20	0	0		
	31	Dec.	Per Cash, fol. 19. . . . .	1944	7	5		
			Total . . . . .	3706	3	1		
							1	0
							2667	9
								8
							51	8
							987	5
							3706	3
								1

**BARTOLOMÉ SALVADOR DE SOLÓRZANO, 1590**

The next important treatise for our present purpose is a work entitled *Libro de Caja y Manual de Cuentas de Mercaderes* by Bartolomé Salvador de Solórzano, 1590, because, obviously compiled with no knowledge of the Venetian masters' writings, it was apparently an adaptation of factor's to proprietor's accounts. Accordingly, there is a capital account—"La hacienda que tengo"—but no profit-and-loss account.

On September 1, 1589, at the opening of the books, the capital account starts with no other assets than 11 quentos (millions) 250,000 maravedis in cash.

In course of trading several accounts are raised for cargoes (cargazones) of commodities bought for disposal abroad, as also for sundry wares (mercaderias) bought elsewhere for sale at the proprietor's or his correspondent's residence, and the gain or deficit on each is immediately transferred to capital account. When all cargoes have been disposed of, a balance account is raised, entitled "La Salida deste Libro" to distinguish it from its counterpart, "La Entrada del Libro nuevo de Caja," but these two accounts record no other items than "cash, various Debtors and Capital that I possess."

The form of the journal entries is somewhat as follows:

En 20 de Marzo (1590)

9 | *Mercaderias compradas por mi cuenta por mano de Antonio Rodriguez de*  
 — | *Cismeros, vezino de Medina del Campo, deven por el dicho Antonio*  
 8 | *Rodriguez cuenta corriente (and so forth)*

whereupon the specification of the various kinds of commodities follows, their separate costs being extended in Arabic figures in an inner column, and their total cost, in Roman numerals, in

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an outer column. Over the Roman number an arc is drawn of which the first half, from left to center, indicates the posting to the debit of the ledger and the second half, from center to right, is indicative of a corresponding entry in the credit of that book (Libro de Caja).

The index (Abecedario) to the ledger is single and not double as taught by Venetian authors.

The form of the accounts in the ledger is somewhat like this:

(fol.)

9	Mercaderias compradas en Medina del Campo por mano de Antonio Rodriguez de Cisneros, deven en 20. de Marzo, 800 mil maravedis, que lo costaron 14 tercios de paños, que me embio, parece en el Manual (= Journal) a . . . . .	8	8	Dccc—U—
—	En dicho 151 mil 660 maravedis, que pague de derechos, y trayda de los dichos 14 tercios de paños, a . . . . .	9	1	cLj—U—Dclx

It will be noticed that no contra accounts are mentioned by name—they are referred to only by their ledger folios—and that a reference is also made to the journal, to wit by the insertion of the journal folio in the narrow column before the Roman numerals. Further, neither journal entries nor accounts in the ledger are ruled out by the slanting lines of which the Venetians thought so much.

PIERRE DE SAVONNE

Pierre de Savonne, whose *Instruction et maniere de tenir livres de raison ou de comptes par parties doubles*, Anvers, 1567, will now be discussed, is the first French author of whom any treatise on bookkeeping is known. It is his oldest work still extant, though it may be inferred from his words that he had published before on the subject of bookkeeping.

To judge by the present volume, as its compiler owed nothing to Italian, German or Dutch authors, he does not mention any of them. On the other hand he appears to have followed closely a kind of bookkeeping that was practised in Italy, probably so because the writer's name suggests that his parents hailed from Savona, a seaport of Genoa, Italy.

Though illustrating proprietor's bookkeeping and raising an account, "Pierre de Savonne compte de Capital", the author nevertheless acts sometimes as agent for others. In such cases an account is started like this: "Marchandise du compte de

Iehan Sattes demeurant a Lyon," in which are recorded the expenses incurred on receipt of the goods and proceeds realized for them. The balance, or excess of one side over the other, is carried to the consignor's "account for time." The analogy with Collins's factors' accounts is therefore clear.

As regards the form of Savonne's journal entries, it resembles that of Collins, Mainardi and Mennher (1550).

The 15th September, 1566

1	Cash of Ready Money in the hands of Pierre Savonne owes 12450£.10s.6d. which he puts up as his Capital.	12450	10	6
2	Creditor the said Savonne . . . . .	12450	10	6

It will be noticed that this is not the form advocated by the Venetians and that neither slanting lines nor Roman numerals are used.

The index or alphabet is single and not double. The items in the ledger accounts are not started by "By" or "To," and the contra account is not, as in Venetian examples, mentioned immediately after the date following the name of the first account, but comes right at the end of the narration with such words as: Creditor Cash at fol. In short, there is nothing Venetian about Pierre de Savonne's bookkeeping by double entry.

#### JAMES PEELE

James Peele, an English author, was responsible for two treatises of which only the second—his *Pathe Way to Perfectnes in th'accomptes of Debitour and Creditour*" (1569), and of that only a small part, the "Retail-bookkeeping"—need occupy us here. However, it is worthy of mention that, in the main part of the work, Peele makes a clear distinction between bookkeeping concerned with an "Inventory for Traffic, containing divers particulars committed to the order of a *Servant* to be employed in traffic of merchandise," and an "Inventory for Goods General . . ." which ". . . has in particulars the owner's lands, rents, annuities, plate, jewels and ready money reserved in his own proper keeping, with the net rest of the Stock for Traffic, which is called the 'Private account.'" So here again servant's accounts are clearly defined.

Peele's journal entries are not exactly of the Venetian type; in many instances, moreover, they are collective and combine two or more debtors against one creditor or vice versa.

The "retail" bookkeeping is that of a haberdasher who raises no accounts other than for money, for several persons (for money due by or to them), for stock of "me, Peter Parmeter", for expenses of household and a general account for wares, which is debited for all commodities owned and purchased, and credited for the sales.

At the end of the year, Peele tells us, "you shall write into the Journal all the wares remaining in the house particularly (i.e. in detail) and make the total sum thereof, which parcel you shall enter into a new account of Wares and . . . make creditor in the last account of Wares. Now, to finish, you shall close up the account of expenses and all other charges and bring the same to the debtor side of the late account of Wares and the rest, being the clear gains, . . . you shall bear that . . . to the Stock on the creditor side, to increase the same."

Here, again, is the omission of the profit-and-loss account in a type of bookkeeping that was apparently a simple conversion of servant's to proprietor's accounting.

VALENTIN MENNHER DE KEMPTEN

Valentin Mennher, who was in his time a greatly esteemed German teacher of mathematics, on which he published a number of books, was also responsible for some treatises on bookkeeping. Two of them, in French, are excellent examples of servant's accounting such as their author purported to demonstrate.

The older booklet: *Practique brifue pour tenir liures de compte à la guise et maniere Italiana* (Antwerp, 1550) is at once the most simple and best of its type. No author, previous to Mennher, had produced so excellent an example.

Italian bookkeeping, in the Mennher style, required three principal books: (1) a journal, (2) a debt book and (3) a goods, i. e. warehouse, book.

The first contained entries like the following:

✠ Laus Deo; Anno 1550 on the first of January at Antwerp.

1	Cash is debtor today . . . . . £987.13.4			
—	I, Peter Dumont, have received from my master			
2	Nicolas de Reo in ready money £987.13.4 with which to serve him in his merchandising. God grant me grace to serve my master well.			
	Nicolas de Reo is Creditor . . . . . £	987	13	4
3	John Fris of Mons is debtor on the same day £289.12.4 which he owes me for a letter of credit on the 25th of the current month £289.12.4			
—				
2	Nicolas de Reo is Creditor . . . . . £	289	12	4

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	On the same day I have received from my master the following merchandise: 3 sacks of pepper weighing net lb. 860 and worth at 27 d. the pound £96.15.— which commodity I enter in debit until it is sold, when the proceeds will be placed to the credit of Nicolas de Reo.			
1	Pepper is debtor sacks 3 lb. 860.— . . . . .£	—	—	—
—	Cash is debtor on the 10th of June £112.11.4 I have sold to John Mas 3 sacks of pepper weighing gross lb. 288 tare lb. 2; lb. 248 tare lb. 2; lb. 319 tare lb. 3 make gross lb. 855 tare lb. 7, leaving net lb. 848 at 32 d. the lb. make £112.11.4 which I have received in ready money.			
1	Pepper is Creditor, sacks 3, lb. 848			
2	Nicolas de Reo is Creditor . . . . .£	112	11	4
—	Cash is debtor on the 31st July . . . . .£229.— Nicolas de Reo is debtor on the same date . . . £1.—			
7				
—	John Fris has paid the £230 he owed me on the 15th August next, subject to a rebate of one £ for paying me in ready money before the due date £229.—			
7				
—	John Fris is Creditor . . . . .£	230	—	—
3				

The index, *Registre du Liure de Debtes*, is single. The debt book contains, in addition to separate accounts for all debtors and creditors and cash, another for Nicolas de Reo, the master, of which an abstract may follow:

1      ✠ Laus Deo. An. 1550 on the first of January at Antwerp

Nicolas de Reo is debtor on this date per John Mas by assignation . . . . .fol.	1£	326	13	4	Nicolas de Reo is creditor on this date for Cash . . . . .fol.	1£	987	13	4	
do 26 March per Velvet purchased from John Mas . . . . ."		3	181	16	9	do the same for assignation . . . . ."	1	289	12	4
do 10 July per bankruptcy of John Mas . . . . ."		8	50	10		do 17 June for pepper sold to John Mas . . . . ."	6	112	11	4
do 31 per interest to John Fris . . . . ."		9	1							
do idem per various trade expenses . . . . ."		10	57	13	4	do 15 July for interest Peter Mor . . . . ."	9	4		
do idem per myself Peter Dumont . . . . ."		10	10			do 31 per L. Gall for balance . . . . ."	10	103		
do idem per Lyons for Balance . . . . ."		10	200			idem per London for balance . . . . ."	10	200		
do idem per Cash for balance . . . . ."		10	1499	6	4					
&c. &c. Sum £1768.5.8						&c. &c. Sum £1768.5.8				

Furthermore, there is a goods or warehouse book with a corresponding single index. Accounts are raised therein for kerseys, English cloth, German fustians, pepper, saffron, and velvet—a heterogeneous assortment—both by pieces and by weights or lengths, but not by money values. Finally, there is a book or statement of expenses of all kinds, including the cost of the servant's maintenance. Throughout the books only Arabic numerals and no slanting or other canceling lines are used.

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To sum up, here we have the accounts of a factor or servant who credits his master for all moneys received from or for him or due from buyers—mostly on account of goods sold. On the other hand, the master is debited for all moneys spent on his behalf in purchasing commodities and sundry other expenses. As there are no accounts for goods other than by quantities, they show neither profit nor loss in terms of money. Hence, there is no profit-and-loss account.

The accounts in the debt book (ledger)—cash, debtors and creditors—are closed simply by transferring their balances to the master's account.

Mennher's work was original in that it was in no way an imitation of any Venetian treatise extant in his time.

The kind of bookkeeping expounded in Valentin Mennher's *Pratique pour brievement Apprendre à Ciffrer, et Tenir Liure de Comptes avec la Regle de Coss* (Antwerp, 1565) differs in many respects from that previously discussed, for example in that the author intended it to be an instruction, not only in factor's but also in proprietor's accounting. All the same, the capital account still appears under the principal's name. It is not a complete statement—it does not record all his assets—but is confined to marketable commodities, cash and receivable debts. Such other assets as land, buildings, furniture, office equipment, household utensils, jewelry and garments are omitted, probably because they would remain in their owner's possession, and, as to the factor, they or their appraised values did not concern him.

The old warehouse or goods ledger has disappeared. Merchandise of all kinds finds its place in the common ledger (debt book) where special space is provided to record quantities of goods obtained or disposed of, and since the goods were entered at cost or at the owner's valuation it became possible to ascertain the difference between this and the selling price and to pass it to a profit-and-loss account raised for the purpose. The balance of this account is thereupon transferred to the principal's account, which also takes the remainders of all other accounts, as goods left in stock, cash, debtors and creditors.

Journal entries take this form:

<table style="border-collapse: collapse; width: 100%;"> <tr> <td style="border-right: 1px solid black; padding: 5px; text-align: center;">5</td> <td style="padding: 5px;">French Wine is debtor on March 3rd <i>per</i> Cash £50. I</td> <td style="border-right: 1px solid black; padding: 5px;"></td> <td style="padding: 5px;"></td> <td style="border-right: 1px solid black; padding: 5px;"></td> <td style="padding: 5px;"></td> </tr> <tr> <td style="border-right: 1px solid black; padding: 5px;"></td> <td style="padding: 5px;">have bought from Leonard Gal 10 tuns of wine at £5 the</td> <td style="border-right: 1px solid black; padding: 5px;"></td> <td style="padding: 5px;"></td> <td style="border-right: 1px solid black; padding: 5px;"></td> <td style="padding: 5px;"></td> </tr> <tr> <td style="border-right: 1px solid black; padding: 5px; text-align: center;">1</td> <td style="padding: 5px;">tun; this amounts to £50, which I have paid with ready</td> <td style="border-right: 1px solid black; padding: 5px;"></td> <td style="padding: 5px;"></td> <td style="border-right: 1px solid black; padding: 5px;"></td> <td style="padding: 5px;"></td> </tr> <tr> <td style="border-right: 1px solid black; padding: 5px;"></td> <td style="padding: 5px;">money . . . . . £</td> <td style="border-right: 1px solid black; padding: 5px;"></td> <td style="padding: 5px;"></td> <td style="border-right: 1px solid black; padding: 5px; text-align: center;">50</td> <td style="padding: 5px; text-align: center;">— —</td> </tr> </table>	5	French Wine is debtor on March 3rd <i>per</i> Cash £50. I						have bought from Leonard Gal 10 tuns of wine at £5 the					1	tun; this amounts to £50, which I have paid with ready						money . . . . . £			50	— —					
5	French Wine is debtor on March 3rd <i>per</i> Cash £50. I																												
	have bought from Leonard Gal 10 tuns of wine at £5 the																												
1	tun; this amounts to £50, which I have paid with ready																												
	money . . . . . £			50	— —																								



In the ledger the chief difference is that now the contra account is also indicated by name and preceded by "per" or "for."

Indian numerals are used once more throughout the books and there is no cancellation of entries or accounts by such means as slanting lines, etc.

It stands to reason that if Mennher, like Collins, had preferred not to appraise the merchandise at the start, he might still have raised the various goods accounts, but they would have been mere subsidiaries to that raised for the principal. They would have recorded nothing but the expenses incurred and the proceeds obtained during the period of the account—in fact they would have been so many statements of receipt and expenditure. This difference will be apparent in reviewing a Milanese author later on.

#### THE GERMAN AUTHORS

There is no need to say much of the German authors preceding Wolfgang Schweicker and his *Zwifach Buchhalten* (1549) which, by the author's own admission, was of the Venetian type. It reminds one strongly of Domenico Manzoni's *Quaderno Doppio* and, like this, teaches the use of a capital account as a statement of the whole of a merchant's assets and liabilities. It contains, besides, a profit-and-loss account.

Heinrich Schreiber's *Ayn New Kunstlich Buech*, etc. (1518) may be passed over, for it does not appear to have been compiled in an Italian manner at all. Schreiber had not acquired a knowledge of the Italian tongue.

Mathäus Schwarz, in a manuscript of the year 1516, Johann Gottlieb (1531 and 1546), Erhart von Ellenbogen (1537) and Johann Neudörfer (?) (1552) wrote treatises which, though admittedly Italian in origin, were nevertheless nearly all specimens of factor's bookkeeping. Accordingly, their authors did not teach the inclusion of any other than liquid assets in the master's, or corresponding capital, account, and no profit-and-loss account is used.

#### GIROLAMO CARDANO (1539)

The *Practica Arithmeticae* of the Milanese author, Girolamo Cardano, who wrote in Latin, contains a 60th chapter "De Ratione Librorum Tractandorum" (On the Method of Keeping Books) that deserves particular consideration.

The *Practica Arithmeticae* has done much to establish European renown for its author, who was one of the ablest writers of his time on mathematical subjects. As he displayed no carelessness or lack of clearness in expounding mathematics, it is amazing that this chapter on bookkeeping is enigmatical to a degree, so much so that he is suspected of having penned it without really knowing what he was writing about.

Yet, our author knew Fra Luca's "tractatus" on bookkeeping very well and appears to have utilized it to a certain extent, so that one is driven to the conclusion that either Cardano—despite his brilliant intellect—failed to understand the older work, or that he had in mind a different type of bookkeeping. Anyhow, so much is certain—that his remarks do not tally with those of the Venetian writers and that he himself lived all his life among people who, as a rule, did not practise Venetian bookkeeping.

In the belief that the reason for this author's incomprehensibility is because he (1) furnished no examples and (2) had in mind retailer's accounting as a modification or adaptation of factor's bookkeeping, an endeavor will be made to explain his method in what was, presumably, its historical setting.

If, contrary to the case of John Collins, the stock of merchandise is not in a factor's charge but permanently under the proprietor's own eyes, as it was in the case of James Peele, one general account, "wares," sufficed for the owner's purposes and, to accord with Cardano, could be styled "apotheca" or "shop." \* Second, under the pure factor's system this account would be a simple statement of moneys payable or receivable (or paid and received) by the factor for his principal during the accounting period and be closed by passing the excess of the one over the other to the principal's or proprietor's account. Thus, the owner's account would show: in the credit—cash, debts receivable and the excess of proceeds of merchandise over charges, the latter occasionally including cost; in the debit—debts payable and expenses or other items not properly chargeable to the shop account. All the same, it would not show at the start the value of the merchandise or assets other than those mentioned. It would be closed by simply transferring the remainders of cash,

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\* Vide also: Gerard Malynes, *Consuetudo vel Lex Mercatoria* (1622), chapter XX: "The great merchants . . . will keep or frame an account for themselves, and make their warehouse or magazine debtor, because the warehouse is trusted with the wares or commodities; others will make the commodities debtor, and their own Capital or Stock creditor".

debts receivable and payable to it, after which this and any other account would be equalized as in Mennher's *Practique brifue* of 1550.

If this is a plausible explanation, the author's statement that capital and cash should always equal each other will also become comprehensible, especially if it is borne in mind that in the middle ages, even more so than at present, capital and cash were interchangeable terms.\* It was then usual to speak of capital which one had in the bank, meaning thereby money and nothing else. On the other hand, money due by others may have been counted as money of which they had merely the custody, or as loans made to them, just as nowadays we speak of cash in bank, although we have no actual money there, or occasionally include in the balance-sheet as cash in hand money due to us by our agents and, eventually, by reliable customers. Furthermore, how often do we not, especially in retail trade, count I. O. U.'s, promissory notes and customers' cheques as cash? Can we blame Cardano if he, too, should have comprised under the appellation "cash" all similar debts?

Let us now look at the debatable clauses.

Clause 1. "The Inventory is the book in which the merchant enumerates all his possessions in order—first his Cash, and then his jewellery, goods, furniture, houses and buildings and land."

Like Fra Luca's inventory this merely purported to be an enumeration without appraisal.

"In the Memorial is kept a detailed record from day to day of all transactions—sales purchases, loans made, leases &c. All that appears in full detail but without due order in the Memorial is carefully entered in the Journal in a concise and orderly manner."

It should be noted that there is no indication that the journal, which was designed for transactions only, should contain also an appraisal of the assets enumerated in the inventory.

Clause 3. "The Ledger . . . must show on one side Capital, as a credit, but Cash, whether in the Chest or in the purse, as a debit . . . Cash must be debited for exactly the same amount as credited to Capital, so that they may always be equal" . . .

In Cardano's inventory no mention was made of any outstanding debts, either receivable or payable—compare the Spanish

\*For example: according to B. S. de Solórzano (1590) the ledger, though containing the whole of the capital invested in the business, was nevertheless referred to in Spain as "Libro de Caxa" (cashbook).

author de Solórzano. Cash was all that had to figure in the capital account at the start; other assets were purposely excluded, just as most of them were excluded by Stevin, Collins and other authors previously discussed.

Clause 4. "Another consideration to be followed is that an amount receivable (creditum) must be placed on the left, and an amount payable (debitum) opposite, on the right."

If "creditum" is taken to mean "credit" and "debitum" to mean "debit," one would be inclined to think that Cardano made a ridiculous mistake, but it is more likely that he meant a "loan made" and a "debt owing" to his business friends. Even in modern times the Italians still speak of accounts receivable as "i crediti" and of accounts payable as "i debiti."

"Whatever articles you take out of your Shop or Store, you will credit Capital or Store for that sum, while you will debit your Cash when it receives money. On the other hand, whatever you spend in buying goods you must credit to your Cash and debit to your Shop."

Goods taken out of the shop, i. e. when sold, should be credited either to capital or master in the Mennher way, or to the particular, or general, goods account, as was done by James Peele and John Collins. As to goods bought, both Peele and Collins would have debited their cost to the goods account coming into question.

Clause 9. "There are two useful purposes served by balancing: firstly . . . secondly, to find out how much profit or loss there has been. Whatever differences you find between receipts and expenditure is loss in the case where the expenditure is more, and gain in the other event. If . . . these differences are either deducted or added on . . . there should be the same amount standing to your credit as you have paid and to your debit as you have received."

This may mean that, if profit is made, it is added, but should there be a loss, it is deducted from the same side of the account.

"It is a good thing, after balancing your first book, to add the profit and loss at the end of your Inventarium (Read: Capital account)."

Thus the shop account would be equalized by transferring its excess to capital account, the balance of which would then indicate the total amount of money in the cashbox and due from buyers, less any sums due to sellers.

In Italian practice frequently a capital account—"patrimonio finanziario"—is raised only for cash and debts receivable and payable. All other assets are excluded. If these are bought or sold—land, for example—the cost is debited and on the other hand the proceeds are credited to that particular account "patrimonio," or to a provisional account, "variazioni patrimoniali"—the equivalent of Cardano's shop account—the balance of which, in due course, is transferred to "patrimonio finanziario."

Seen from this point of view, Cardano's chapter on bookkeeping becomes understandable.

ALVISE CASANOVA

Among a number of other things the Venetian author Alvise Casanova demonstrated in his *Specchio Lucidissimo* (1558) factor's bookkeeping, and had the peculiarity of debiting the accounts of the goods received on consignment with both the quantity arrived and 1 picciolo ( $\frac{1}{7680}$ th of a lira di grosso) cost, and crediting the sender with the picciolo. For the rest, he followed the usual course of crediting the goods accounts for proceeds realized and debiting them for expenses incurred. Finally the balance—less factor's commission—was transferred to the consignor's credit.

BENEDETTO COTRUGLI, OF RAGUSA

Benedetto Cotrugli was the author of a manuscript dated 1458, which was printed in the year 1573 under the title *Della Mercatura et del Mercato Perfetto* (Of Trading and the Perfect Trader). In the 13th chapter of the first part the author speaks of bookkeeping but he supplies no examples, and from his text it is by no means clear whether he had bookkeeping by double entry or any other kind in mind. Though he speaks of a "balance" (bilancione) and of a "capital" account, we can not be certain that he understood these terms as we would understand them now, and it is possible, for example, that he had only money-capital (patrimonio finanziario) in mind. On closing the books, the profit or loss on all accounts was ascertained and transferred directly to the capital account; in other words, there was no profit-and-loss account.

JACOPO BADOER

Jacopo Badoer was a Venetian merchant who, in the year 1436, made a voyage to Constantinople with goods to sell, both on commission and his own account. His ledger contains no inven-

tory or corresponding statement of account. As soon as expenses were incurred on any of the goods, accounts were raised, which were in due course credited with the proceeds realized. In each case the balance was transferred to the credit of the respective consignor's account or, in the case of his own goods, to one under his own name. There was no profit-and-loss account. In short, in keeping this ledger, Badoer considered himself his own factor and applied factor's to proprietor's accounting.

THE GENOESE COMMUNAL STEWARDS' CARTULARIES OF THE  
YEAR 1340

Looking once more into the past of accountancy, the Genoese communal stewards' Cartularies, the oldest document extant of the beginnings of bookkeeping by double entry, arouse particular interest, and, therefore, a few words regarding this ledger—for that it was—will probably be welcome to the reader of this article.

Though the Cartulary of 1340 is the only one that has been preserved, obviously it was not the first of its kind; previous ledgers may have been of the same pattern, but they were stolen or burnt in a riot in the year 1339 on the occasion of Simon Boccanegra's election as doge for life.

The Cartulary in question contains 239 leaves or 478 pages. The first are damaged by water or torn, but despite this it may be gathered from a kind of index that the accounts were classified in such a way that stewards, tax collectors and notaries came first. Then, to begin with page lxx, are found the accounts for goods—pepper, silk, wax and sugar—together with an account for damages and losses (page lxxiiij). The accounts of the various debtors start from page cxxx, of the men at arms at clxx; those of the castellan and other inmates of the castle come last.

According to Dr. Cornelio Desimone there are also found in the ledger accounts for cash, utensils and the two stewards (massaria).

The debits and credits of the accounts are found on the left and right halves of the same pages. The title appears only in the first debit entry and is not repeated thereafter, or in the credit. The entries are in a mediaeval Latin hard to understand. All notation is in Roman numerals. In debit the formula "debe(n)t nobis pro," or "debet nobis in" is used. In the credit is found the formula "recepimus" (we have recovered) even

if there was no previous debit. The extensions in the money margin are preceded by the words "unde nobis in (isto)," followed by the reference to the page of the contra account.

Judged by any criterion, this ledger testifies to the existence of fully developed bookkeeping by double entry as far back as the year 1340, but as this is not proprietor's bookkeeping there are no accounts for assets other than those mentioned, so that, whatever else the commune of Genoa possessed in alienable and inalienable property, the steward was not concerned in the value of such other assets, or in their substance either.

It should be noted that this Cartulary was not kept "alla veneziana," i. e., with the debits and credits on different pages facing each other, nor did every entry occupy only one or two lines but, both sides being on the same page, most entries were crabbed into narrow spaces, thus comparing anything but favorably with the so much neater look of Venetian ledger postings.

#### THE ACCOUNTING OF THE CURATOR CALENDARIUM IN THE WESTERN ROMAN EMPIRE

According to popular belief, when Rome fell in 476 A.D. and Italy became a prey to Vandals, Ostrogoths, Huns, Franks, Normans and Saracens, Roman civilization also disappeared and with it Roman administration and systems of accounting.

That is certainly true as far as the administration and accountancy of the state were concerned. All the same, despite many catastrophes, chaos can not reign for long and an orderly state of affairs must soon be resumed. Thus, men carried on and again took up their old occupations, wherein they were encouraged by the victorious Goths and Lombards, who even allowed them to remain under the municipal administration to which they had always been accustomed.

In the old days, the practice of keeping records of account was very common with the Roman citizen because of the taxation laws which required him to arrange for an inventory (*libellus familiae*) of all his worldly possessions, according to which he was assessed. However, as there was never anything permanent about inventories, the *paterfamilias* soon found himself compelled to write down in sets of books what happened to his worldly goods and for that purpose used a waste-book (*adversaria*), cashbook (*codex accepti et expensi*) and ledger (*codex mensae; rationum*) and sometimes, in addition to these, a "codex" or "tabulae

rationum domesticarum," which contained accounts for game, fodder, cattle, corn, oil, wine, etc.

It does not appear that money values or any particulars other than quantities and dates were stated in these domestic accounts.

In course of time, with the enormous increase of wealth, Roman patricians thought it beneath their dignity as free-born men to administer their own enormous fortunes and the revenues derived from them; so they appointed other persons, mostly their own slaves, to invest those receipts in profitable ways, as, for example, in loans producing interest, which became payable on the first day of each month (calends). Special books of account (calendaria; liber or ratio calendarii) were arranged for this purpose.

In the calendarium the administrator (curator calendarii) credited his master for funds received by the former for investment, and borrowers for the repaid loans for which they had previously been debited. The accounts in the calendarium were kept by debit (acceptilatio) and credit (expensilatio), but besides this book the curator had his codex accepti et expensi and, occasionally, also his codex rationum domesticarum.

Municipal accounting of special funds donated by munificent aristocrats was on much the same lines; they were administered separately from other municipal property and called "cura calendarii." The whole calendarium consisted of:

- (1) pecunia calendarii, or fund.
- (2) calendarii liber, or calendarium-book.
- (3) cautiones debitorum, or borrowers' bonds and
- (4) arca, loculi, sacculus or crumena, i. e. the money chest or treasury.

The actual bookkeeping was usually entrusted to a slave assisted by "scribae" under the supervision of a "procurator."

So this form of stewardship and its system of accounting was a regular institution in ancient Rome. Its subject was exclusively money capital (patrimonio finanziario) and accounting was achieved by means of balanced books in which the master's or municipality's account was the counterpart and summary of all others.

This practice of administration of the family fortune by qualified persons has survived in Romanized countries even to the present day; it is quite usual to confide to public notaries or banks the administration of private fortunes, and there appears



sufficient reason to believe that to it is due the invention of a type of bookkeeping by double entry which survived in Italy through the middle ages and found in Valentin Mennher (1550) its best early exponent.

We can not go back any further, for there are neither fragments of accounts nor references in literature suggestive of the existence of a system of bookkeeping by double entry in remoter days, but there is abundant and positive evidence that, wherever stewardship of material wealth existed, it was always coupled with some sort of account keeping, however crude.

To steward's accountability then, existing long before commerce other than by barter was known, one must look for the genesis of all bookkeeping. Double-entry accounting began when for the first time the claims of the master and the borrower's obligations were balanced against each other in the books of a Roman slave.

Let no one be ashamed if the origin of this method of accounting were humble. Under whatever social conditions its originator may have been born, he was nevertheless a citizen of a mighty empire, the Empire of the Intellect; in this he was one of the great and kindled a light that will shine and remain for ever one of civilization's most precious boons.

Here the writer will conclude this article. Whether or not he has succeeded in demonstrating that bookkeeping by double entry is of greater antiquity than the *Summa de Arithmetica* (1494); that it has manifested itself in various forms, particularly in what is styled in this article factor's or steward's accounting, and that this can boast venerable age and tenacity of life, he must leave the reader to decide, but he trusts that, since his material is at present little known, it will receive further attention from those best qualified to add new chapters to the history of accountancy.