

Accounting Historians Journal

Volume 9
Issue 1 *Spring 1982*

Article 3

1982

Threefold bookkeeping by Matthaus Schwarz

Kiyoshi Inoue

Follow this and additional works at: https://egrove.olemiss.edu/aah_journal

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

Recommended Citation

Inoue, Kiyoshi (1982) "Threefold bookkeeping by Matthaus Schwarz," *Accounting Historians Journal*: Vol. 9 : Iss. 1 , Article 3.
Available at: https://egrove.olemiss.edu/aah_journal/vol9/iss1/3

This Article is brought to you for free and open access by the Archival Digital Accounting Collection at eGrove. It has been accepted for inclusion in Accounting Historians Journal by an authorized editor of eGrove. For more information, please contact egrove@olemiss.edu.

The Accounting Historians Journal
Vol. 9, No. 1
Spring 1982

Kiyoshi Inoue
SAITAMA UNIVERSITY

"THREEFOLD BOOKKEEPING" BY MATTHÄUS SCHWARZ

Abstract: In 1518, when nothing but Paciolo's "Summa" had been printed in the world of bookkeeping, Matthäus Schwarz, who was a bookkeeper of the Fuggers, wrote a manuscript on bookkeeping known as "Threefold Bookkeeping." This manuscript showed an illustration of three kinds of bookkeeping methods, of which the first and second methods aroused the most interest and research in ways of comparison with one another. This paper will attempt to show how the first and second methods are an integrated part of and incorporated into the third method of "Threefold Bookkeeping" system as a whole; and to exemplify the superiority that "bookkeeping in practice" has to "bookkeeping in text."

Introduction

The earliest text on bookkeeping, "Summa," was published in 1494 in Venice by Paciolo. Twenty-four years later in Vienna, Grammateus, second only to Paciolo, wrote a draft of a bookkeeping text which supposedly was not published until 1521 in Nuremberg.¹

During the same year, 1518, Matthäus Schwarz,² a bookkeeper of the Fuggers, completed his manuscript known as "Dreierlay Buchhaltung" (herein referred to as "Threefold Bookkeeping"). Until the completion of Schwarz's manuscript, Paciolo's text had been recognized throughout the world as the only printed book on bookkeeping.

There are several reasons why Schwarz's manuscript is now regarded as a valuable document written during the infancy of bookkeeping texts. The fact that the manuscript was written nearly 464 years ago is only of secondary importance historically. Of primary importance is that Schwarz's manuscript gives clear examples of the character of practical bookkeeping during that period in comparison with the methods of Paciolo and Grammateus, because it holds some characteristics of practical bookkeeping attained by a practitioner who had an advantage over scholars.

It is also noteworthy that the Fuggers, who employed Schwarz, had wielded such great economic powers that the period became known as the "Era of the Fuggers."³ This era still remains as a mile-

stone in the history of the German economy. It is suggested that the Fuggers' power had influenced even the election of the Holy Roman Emperor;⁴ however, the accounting data that would exhibit such powers of the Fuggers at that time have only survived in fragments.⁵ Inasmuch as Schwarz's manuscript was written during his employment by the Fuggers, one is able to ascertain the Fuggers' level of accounting to some extent, and it is for this reason that systematic and comprehensive research on his manuscript in the field of book-keeping history has been urged in the field of business and economic history.

The Structure of Schwarz's Manuscript

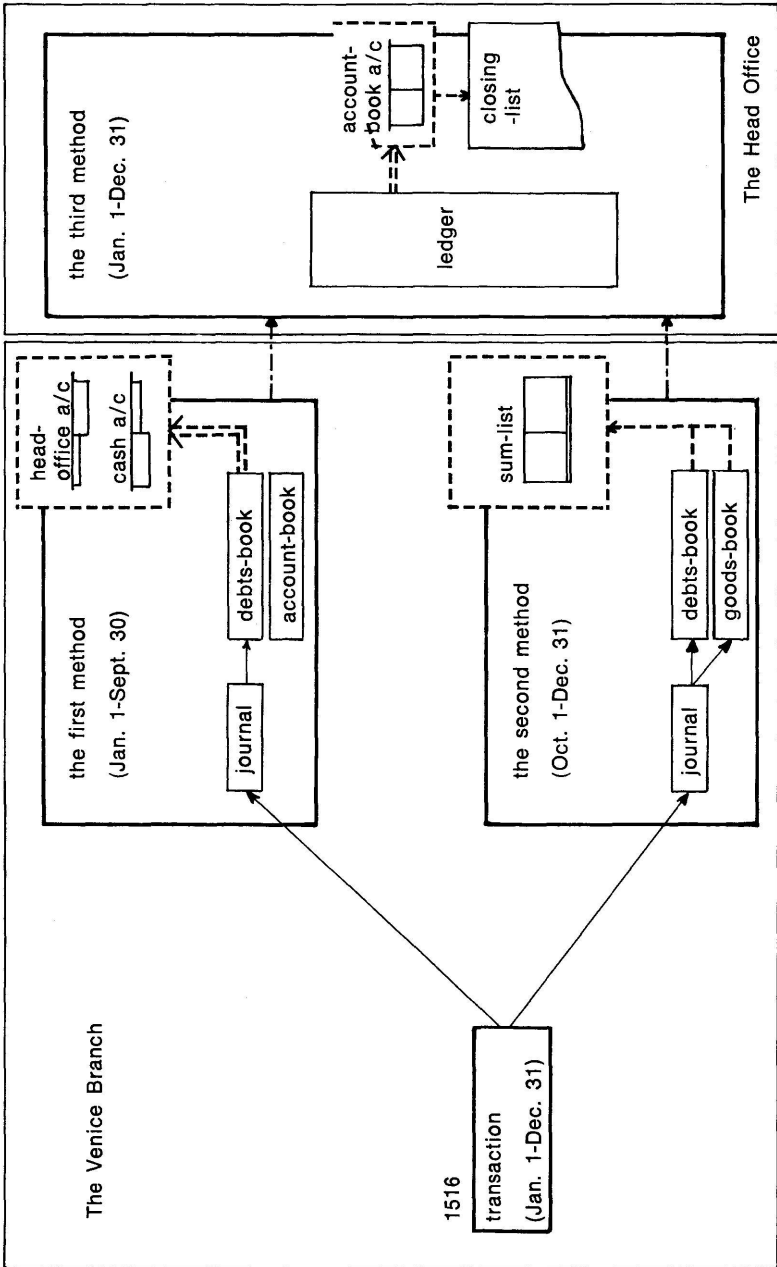
Since Schwarz's first manuscript⁶ put considerable emphasis on illustrations as opposed to explanations of his "Threefold Book-keeping" system, there have been various interpretations of his manuscript.

According to previous researchers' interpretations, as shown in Figure 1, Schwarz selected the Venice Branch of the Fuggers as the place to keep original books, and divided the year 1516 into two periods. The first period was from January 1 to September 30 while the second was from October 1 to December 31. Schwarz illustrated "the Italian system" as the first method for the first period, and "the German system" as the second method for the second period.

The first method began with an investment by the Fugger Head Office in Augsburg in the Venice Branch. It consisted of a "Zornal" (journal) and a single ledger named "Schuldbuch" (debts-book), which kept the transaction on those books with a personified debit-credit concept consistently similar to current bookkeeping procedures. On September 30, all account balances were transferred, with the exception of the cash account balance, to the head office account on the debts-book. The settlement was closed by verification of the credit balance in the head office account with the debit balance on the cash account. Within the first method, there was one more book used called "Rechnung" (account-book), the function of which has been little mentioned by previous writers.⁷ It is said that this account-book is "a detailed capital account"⁸ and "seems redundant."⁹

The second method began with the transferring of the account balances from the last period to this period, and consisted of a "Zornal" (journal), and "divided ledgers" peculiar to the German system. The German system divided the ledger into two separate books, the "Schuldbuch" (debts-book) and the "Capus" (goods-

Figure 1
The Framework of Schwarz's "Threefold Bookkeeping"



book). These books used in the second method were not entered with a personified debit-credit concept as consistently as in the first method, which was called "the Italian system." All transactions were recognized and entered as an increase or decrease in their elements. For example, this method involved not the debit-side but "Einnemen/Empfahung" (incoming/receiving) side of an account when a commodity was purchased. On December 31, all open accounts were not balanced, but summarized and verified in a statement; the left-hand side heading as "Summa Einnemen" (sum of incomings) while the right-hand side heading as "Summa Ausgeben" (sum of outgoings). For future reference, this will be referred to as a "sum-list."

Besides the books found in the first and second methods, there was one more method in which another "Hauptbuch" (ledger) was maintained. This ledger was kept at the Fugger Head Office in Augsburg. "No day-book is necessary here, as Schwarz says, since the balances supply about the same information as the day-book."¹⁰ In this ledger, all accounts combined the information in the above two methods, and were "summarized in a main account"¹¹ headed "Rechnung" (account-book). Based upon these accounts in the ledger, one more statement named "Beschluss des Hauptbuchs auf ein general rechnung" (closing the ledger on a general accounting) was prepared. This statement will be referred to as a "closing-list" in this paper. Such procedures constituted the third method, which existed for the whole year 1516. As for this third method, the "discussion is brief; Schwarz says that it is difficult to explain the procedures in writing."¹²

Because of the three methods employed, Schwarz's "Threefold Bookkeeping" has been apt to be individually or separately interpreted. Therefore, the first method, "the Italian system," used in the first period and the second method, "the German system," which was used in the second period, have received more attention by researchers. This paper¹³ will attempt to show a mutual relationship among the three kinds of bookkeeping methods as an integrated system and its historical meanings which have been lost.

The Special Function of the Account-Book in the First Method

In the first method, as mentioned before, a journal and a single ledger (or debts-book) were prepared, and the transactions were journalized and posted in them in a manner similar to current methods. On September 30, after all account balances, except the

cash account balance, had been transferred to the head office account, the settlement was closed in the debts-book by verifying a credit balance on the head office account with an equal debit balance on the cash account.

As previously mentioned, one more book, the account-book was kept in this first method. As a result of analyzing the entries, it became evident that this book was based upon the journal. With that in mind, this account-book seems to have been similar to a ledger named the debts-book, and seems to have been "redundant." It was also noticed, however, that there is a decisive difference between the account-book and the debts-book. To understand this difference, an actual example of entries from the manuscript will be highlighted.

Example I

In the Debts-Book (summarized)

Herr Jacob Fugger Soll vns

1516 Sept. 30, Cassa, 85. --
 Sept. 30, Cassa, 156.12.-

In the Account-Book (summarized)

Vns Soll herr Jacob Fugger

Augsburg. Sept. 30, 85. --
 Vnkost. Sept. 30, 156.12.-

business expenses and the cost of the Venice Branch was directly burdened to the head office. Both of these journal entries were posted to the debit-side of the head office account and to the credit-side of the cash account in the debts-book, or ledger. On the posted account-book, however, instructions were additionally given, that business expenses should be applied to the head office in Augsburg as journalized, but living expenses were to be treated as a "Vnkost" (cost) of the Venice Branch (see Example I).

In the first method, the debts-book, or a ledger, was posted from the journal formally or mechanically, and the account-book was entered in respect of items¹⁴ equivalent to present-day adjustments, although it was based upon the journal.

The ledger in the third method was kept by the instructions found in the first method's account-book. As for the example above, in the third method business expenses were posted to the debit-side of the head office account and living expenses were posted to the debit-side of the cost account in the ledger. The account titles as

On September 30, a journal entry such as the debit to the head office (Herr Jacob Fugger) account and the credit to the cash (Cassa) account was made twice. According to the journal description, one entry (85.—.—) was made for the transaction in which business expenses were paid in cash, and another entry (156.12.—) was made for living expenses. In these two journal entries living expenses were put in the same category as busi-

well as the account contents in the ledger in the third method became different from those found in the debts-book, or ledger, in the first method.

On September 30, accounts in the ledger in the third method were all summarized in the special account headed "an account-book No. 1," and each account balance in the debts-book from the first method was in principle posted to the head office account. According to today's bookkeeping terms, therefore, the head office account in the debts-book of the first method corresponds to a trial balance before adjusting entries; the account-book in the first method corresponds to an adjusting entry book; and the account-book No. 1 account in the ledger of the third method corresponds to a trial balance after adjusting entries.

It is therefore evident that the account-book is an indispensable part which assumes an important role in the connection of the first method with the third method. Neither can the account-book's function of adjusting entries be ignored.

The Dual Function of Divided Ledgers in the Second Method

In the preceding section, the relation between the first and the third methods was described; however, there is also a connection between the second and the third methods.

In the second method, as noted, one journal and two ledgers were prepared. Accounts in the debts-book from the first method were divided into two separate books in the second method. Cash account and personal accounts, etc., were contained in the debts-book (first ledger); goods accounts and accounts for the head office and branches were found in the goods-book (second ledger). Since accounts on these books were posted from the journal and summarized in a sum-list at the end of the second period, a book such as the account-book found in the first method was not prepared in the second method. If this was so, for the second period beginning October 1, would not the second method have made such an adjusting entry as the first method had done to connect the second method with the third?

The second method did make such an adjusting entry, and connection with the third method. In the first method, an account-book was prepared and entered in parallel with a debts-book posted from a journal. After posting, in order to eliminate unnecessary steps, accounts in the two separate ledgers were again verified with the journal entries and adjusting entries were added directly to the accounts.¹⁵

For example, on November 10, the Venice Branch received silver from another branch of the Fuggers and paid cash (15.—.—) for silver handling expenses. The transaction was then journalized as a debit to the head office (Herr Jacob Fugger) account and a credit to the cash (Cassa) account. According to this journal entry, it also debited the head office account in the goods-book, or second ledger, and credited the cash account in the debts-book, or first ledger. The Venice Branch treated the silver handling expenses as a deduction from silver sales, so as not to burden the head office. The Venice Branch also made an additional entry on the debit side of the head office account later, by adding onto the November 10 posting so that the amount of the silver handling expenses was transferred to the debit side of the silver sales account (see Example II).

Example II

In the Goods-Book (summarized)

Herr Jacob Fugger or Augsburg*

Silver. Nov. 10, we paid, 15.-.-

~~~~~  
\*rewritten in the conventional format.

Based upon the divided ledgers found in the second method which were so adjusted, the ledger in the third method was entered. For example, the silver handling expenses were posted to the debit side, not of the head office account, but of the silver sales account in the ledger for the third method. Therefore, the divided ledgers of the second method were also charged with the same function as the account-book in the first method had been charged.

Accounts in the third method's ledger for the second period were summarized on December 31 in a special account headed "an account-book No. 2." As a result, the sum-list was simply based on the not yet adjusted ledgers from the second method. The account-book No. 2 account in the third method's ledger differed in respect to the account titles and account contents. The relation between the sum-list and the account-book No. 2 account corresponds to that between two trial balances before adjustments and after adjustments. If the second method is seen as an integral part of the third method, the dual function woven into the second method's divided ledgers must be realized then. Namely, one is the function of a mere ledger for the journal, while the other is that of the function of the account-book found in the first method.



### *The Relation Between the Ledger and the Closing List in the Third Method*

Thus, the account-book No. 1 account in the third method became the trial balance after adjustments for the first period of 1516, and the account-book No. 2 account for the second period. If both accounts are combined, the trial balance after adjustments may be made for 1516 for the whole year, which may be connected to the closing list which Schwarz illustrated at the end of his manuscript. In seeking the relation between two account-book accounts and the closing list in the third method, it was noticed that adjustments were made again.

The Venice Branch carried out transactions in three kinds of commodities: textiles, copper, and silver. The Venice Branch received copper and silver from another branch of the Fuggers and sent them to the other branches relatively often. In the first method (January 1 - September 30), values were assigned to such inter-branch movements of commodities. In the second method (October 1 - December 31), however, values were omitted and only a quantity entry was made for the inter-branch transactions. It is said that the "consequence is that no profit calculation(s) can be shown in the accounting system."<sup>16</sup>

As Schwarz explains, this procedure is one of differences between the two methods. Consequently, values have to be assigned in respect of items for which they were omitted in the second method. Such adjustments<sup>17</sup> are made here. An example of this case will herein be cited.

#### **Example III**

(a) In the Goods-Book of the Second Method (summarized)

| Silver empfangen                      |  |
|---------------------------------------|--|
| Hall, 3508 marks 4 lots, Oct. 20, --- |  |
| Hall, 810 marks - lots, Nov. 10, ---  |  |

(b) In the Ledger of the Third Method (summarized)

| Hall Sollen wir |                                                                                 |
|-----------------|---------------------------------------------------------------------------------|
|                 | 4318 marks 4 lots, Oct. 20 and Nov. 10,<br>empfangen, angeschlagen,<br>31310.-- |

entry on the silver account itself was that of the weight, 810 marks.

(a) On November 10, as shown in the preceding section, the Venice Branch received from "the Hall," another branch, silver weighing 810 marks. The transaction for silver handling expenses was journalized and posted, but the

(On October 20, the Venice Branch had also received silver from the Hall Branch and made only a quantity entry.) (b) Therefore, in accomplishing the final settlement, the cost had to be entered in monetary terms in the ledger as a debit to the silver account and a credit to the Hall Branch account.

Such an entry illustrates the contents of the adjustments in the third method; such an adjusting entry was made to accounts in the ledger of the third method (see Example III).

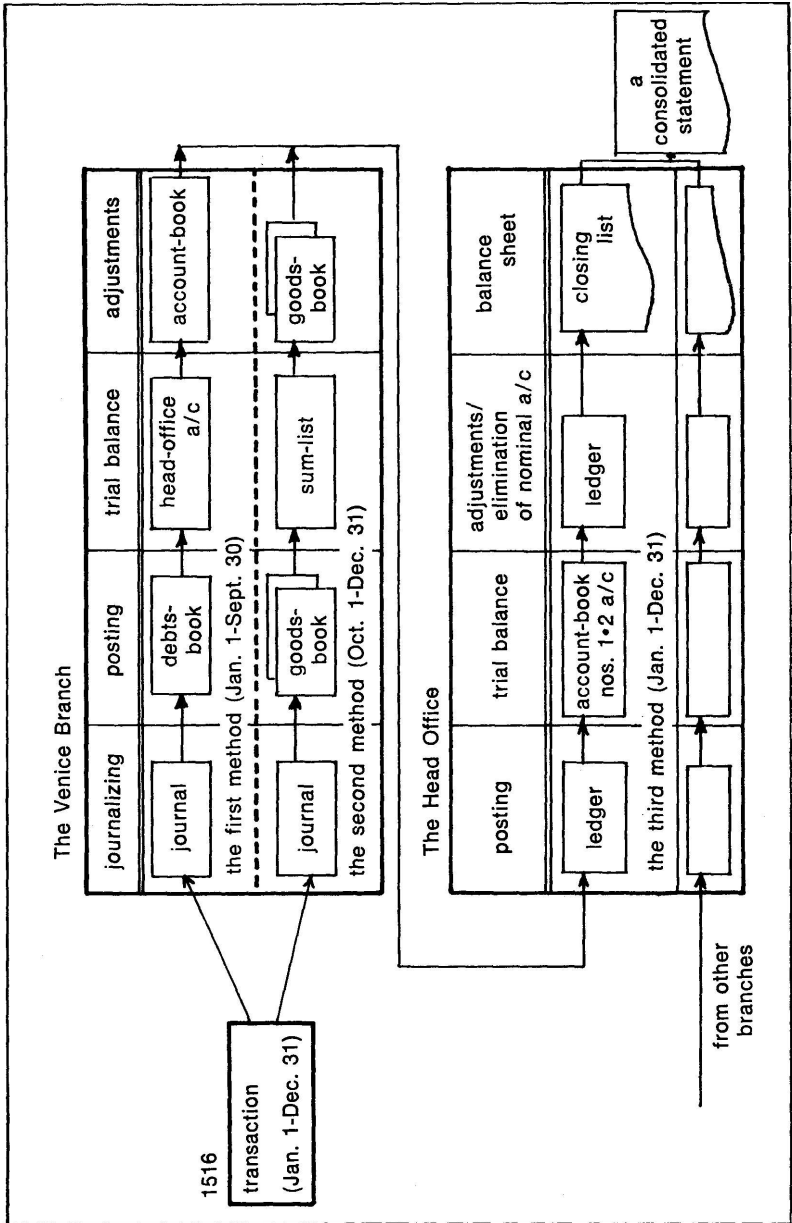
After these adjustments were entered and nominal accounts of revenues and expenses were, in principle, eliminated, a closing list remained, which Schwarz illustrated at the end of his manuscript. This list corresponds to today's balance sheet from the viewpoint of bookkeeping mechanism. The item "mer einzunemen weder zuzaln" (more incomings than payments) on the list means that, for the period from January 1 to December 31, 1516, the Venice Branch of the Fuggers made a profit.

### *Conclusions*

Following the illustration in Schwarz's "Threefold Bookkeeping," his manuscript explains how a consolidated settlement could be accomplished at the head office in Augsburg, based upon statements made by branches. As indicated by Professor Penndorf<sup>18</sup> these settlement procedures at the head office were very similar to real ones<sup>19</sup> carried out in 1527 at Jakob's death.

By studying Schwarz's illustrations and explanations and summarizing the bookkeeping systems of the head office and branches, one could come to the following conclusion as shown in Figure 2; the first and second methods heretofore favored for research would have been located at the starting point of Schwarz's bookkeeping system. The reason is not clear why Schwarz gave two alternative methods for keeping the accounts of one branch. He might expect this manuscript was used for instructional purposes, because two methods were put in contrast as follows.

Figure 2  
The Functional Aspects of Schwarz's "Threefold Bookkeeping"

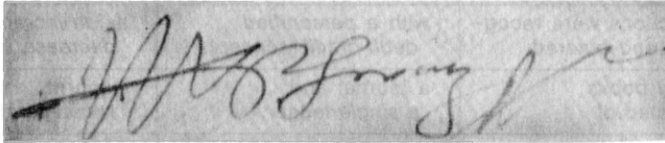


|                                            | the first method                                                                                                                                                           | the second method                                                                                                                            |
|--------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|
| transactions were recognized and entered   | with a <i>personified debit-credit concept</i> .                                                                                                                           | as an <i>increase or decrease in elements</i> .                                                                                              |
| general books consisted of                 | a journal and a <i>single ledger</i> .                                                                                                                                     | a journal and <i>two separate ledgers</i> .                                                                                                  |
| to inter-branch movements of goods, values | were <i>assigned</i> .                                                                                                                                                     | were <i>omitted</i> .                                                                                                                        |
| at the end of accounting period            | with the exception of the cash account balance, all account <i>balances</i> were transferred to the <i>head office account</i> and verified. Accounts were <i>closed</i> . | the <i>totals</i> of debits and credits in each account were summarized and verified in a <i>statement</i> . Accounts remained <i>open</i> . |
| in connection with the third method,       | a <i>special book</i> was prepared.                                                                                                                                        | a <i>general book</i> was diverted.                                                                                                          |

Schwarz's bookkeeping system may not have been noteworthy in comparison with present technical levels. It was, however, highly developed and had good features when compared with those of scholars 460 years ago. The most outstanding feature was the weaving of adjustments, such as the separation of business expenses from living expenses, into the system.

When analyzing the contents of new adjustments, one notices that the adjustments were concentrated exclusively on the transactions among the head office and branches. The concept of controlling entries on the transactions among the head office and branches had been used well before the adjustments were woven into the system in Schwarz's manuscript. His methods led to the idea of present profit-center accounting.

Schwarz states that his manuscript was made "zu ainer gedechtnus meiner jugendt" (as a memory of my youth).<sup>20</sup> What the author could feel there, however, was not sentimental memory, but rather professional ability. Thus, when Schwarz's "Threefold Bookkeeping" is distinguished as an integrated bookkeeping system, one can picture Schwarz as a bookkeeper, faithful to the Fuggers' particular business activities through more than 80 branches, an enterprise which in its golden age spread over Europe like a spider web.



The Signature (1534) of M. Schwarz; in the Fuggers' Archives at Dillingen a.D., Germany

#### FOOTNOTES

<sup>1</sup>Inoue, "The Oldest German Bookkeeping Text," p. 52.

<sup>2</sup>Reichard and Fink detail Schwarz's biography.

<sup>3</sup>Ehrenberg named it and analyzed its business activities.

<sup>4</sup>Reinhardt (pp. 21-22) reproduced the letter from Jakob Fugger to the Emperor.

<sup>5</sup>Pölnitz, p. 658 and Kellenbenz, p. 623.

<sup>6</sup>Schwarz wrote two manuscripts; the first in 1518, the second, a secret book in 1550. See Inoue, "The Secret Book by Matthäus Schwarz," pp. 62-65 for the latter.

<sup>7</sup>Hartsough, p. 546.

<sup>8</sup>Penndorf, p. 53.

<sup>9</sup>Yamey, p. 55.

<sup>10</sup>Hartsough, p. 546.

<sup>11</sup>Penndorf, p. 55.

<sup>12</sup>Yamey, p. 57.

<sup>13</sup>Schwarz's original manuscript is said to have disappeared earlier, and some of the three copies which had survived until the 1930s cannot be confirmed at present. In 1931, Dr. Weitnauer referred to all copies and converted the handwriting into modern spelling in his own book. In this paper the author as well as other researchers, except Professor Penndorf (1913), have relied upon Weitnauer's work (1931, pp. 174-272) for reference.

<sup>14</sup>All of these items are explained in Inoue, *A History of Bookkeeping and Accounting in Germany*, pp. 86-88.

<sup>15</sup>See Inoue, *A History of Bookkeeping and Accounting in Germany*, pp. 92-94 for a comment on all adjustments.

<sup>16</sup>Yamey, p. 55.

<sup>17</sup>Inoue, *A History of Bookkeeping and Accounting in Germany*, pp. 97-101 detail all of these.

<sup>18</sup>Penndorf, pp. 56-61.

<sup>19</sup>Strieder, pp. 57-114 reproduced all of the original statements of 1527 in modern spelling.

<sup>20</sup>See Weitnauer, p. 184 for detail.

#### BIBLIOGRAPHY

Ehrenberg, R. *Das Zeitalter der Fugger*, Vol. 1. Jena, Gustav Fischer, 1922.

Fink, A. *Die Schwarzschen Trachtenbücher*. Berlin, Dt. Verein f. Kunstwissenschaft, 1963.

Hartsough, M. L. "A New Treatise on Bookkeeping under the Fuggers," *Journal of Economic and Business History* (1931-1932), pp. 539-551.

**Inoue: "Threefold Bookkeeping" by Matthäus Schwarz**

51

- Inoue, K. "The Oldest German Bookkeeping Text." *The Accounting Historians Journal* (Spring 1978), pp. 51-65.
- \_\_\_\_\_. "The Secret Book by Matthäus Schwarz." *Financial and Cost Accounting—SANGYOKEIRI* (October 1978), pp. 61-66.
- \_\_\_\_\_. *A History of Bookkeeping and Accounting in Germany*. Tokyo, Yuhikaku, 1980.
- Kellenbenz, H. "Der Stand der Buchhaltung in Oberdeutschland zur Zeit der Fugger und Welser." *Die Wirtschaftsprüfung* (November 1970), pp. 621-626.
- Penndorf, B. *Geschichte der Buchhaltung in Deutschland*. Leipzig, G. A. Gloeckner, 1913.
- Pölnitz, G. F. von. *Jakob Fugger, Kaiser, Kirche und Kapital in der oberdeutschen Renaissance*. Tübingen, J. C. B. Mohr, 1949.
- Reichard, E. C. *Matthäus und Veit Konrad Schwarz; ein Beytrag zur Geschichte der Kleidermoden, zur Beförderung der Menschenkunde und zur Kenntniß der deutschen Sprache des 16ten Jahrhunderts*. Printed at Magdeburg, no publisher's name, 1786.
- Reinhardt, E. *Jakob Fugger der Reiche aus Augsburg*. Berlin, Struppe und Winckler, 1926.
- Strieder, J. *Die Inventur der Firma Fugger aus dem Jahre 1527*. Tübingen, H. Laupp, 1905.
- Weitnauer, A. *Venezianischer Handel der Fugger nach der Musterbuchhaltung des Matthäus Schwarz*. München (Munich)/Leipzig, Duncker & Humblot, 1931.
- Yamey, B. S. "Fifteenth and Sixteenth Century Manuscripts on the Art of Bookkeeping." *Journal of Accounting Research* (Spring 1967), pp. 51-76.