ACCOUNTING AND AUDITING IN ROMAN SOCIETY

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ABSTRACT

Lance LaGroue: Accounting and Auditing in Roman Society
(Under the direction of Richard Talbert)

This dissertation approaches its topic from the pathbreaking dual perspective of a historian and of an accountant. It contributes to our understanding of Roman accounting in several notable ways. The style and approach of Roman documents are now categorized to reflect differing levels of complexity and sophistication. With the aid of this delineation, and by comparison with the practices of various other premodern societies, we can now more readily appreciate the distinct attributes present at each level in Roman accounting practices. Additionally, due to the greater accessibility of Roman accounting documents in recent years – in particular, through John Matthews’ work on the Journey of Theophanes, Dominic Rathbone’s study of the Heroninos archive, and the reading of the Vindolanda tablets -- it becomes easier to appreciate such differences among the few larger caches of accounting documents. Moreover, the dissertation seeks to distinguish varying grades of accountant. Above all, it emphasizes the need to separate the functions of accounting and auditing, and to gauge the essential characteristics and roles of both. In both regards, it is claimed, the Roman method showed competency.

The dissertation further shows how economic and accounting theory has influenced perceptions about Roman accounting practices. In particular, double-entry accounting has been
overvalued in accounting theory. Early 20\textsuperscript{th} century works by Werner Sombart and Max Weber heavily influenced historians of Rome. Typically, they accepted that the Romans’ failure to develop double-entry accounting served as a structural flaw which deprived them of the impetus for economic rationalism and profit-seeking behavior. Roman historians, however, have not kept abreast of advances in accounting theory. Today, its practitioners reject the arguments upon which Roman historians have relied, opting to emphasize instead the worth the contributions made by the accountants and managers of accounting data themselves, which have never been adequately assessed in the Roman context.

Altogether, the dissertation taps an enlarged body of ancient testimony (still pitifully small, nonetheless) together with scholarship in two disciplines that had lost touch with one another, in order to place our appreciation of accounting and auditing in Roman society on a fresh, more realistic footing.
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I recognize that a dissertation can never be written in isolation. It was only possible with such wonderful advisors, mentors, family and friends. Thank You.
PREFACE

Accounting and Auditing in Roman Society has proven a challenging project for many reasons. Initially, when I discussed it with advisors and colleagues, their individual interests pointed the focus in a maze of different directions. Should the project reflect and catalog all accounting data and references as it pertains to the Roman economy? Or should it focus primarily economic theory in the ancient world, using accounting data to assess the degree of entrepreneurship of Roman merchants and bankers? Or should it give pride of place to exploring the differences between the Roman government and army’s uses of accounting versus the private sphere? Equally, what weight should it give to the social aspects of accounting, the ways in which the Romans valued and used accounting? To what degree should it seek to engage with accounting in other premodern societies for comparison?

My first experience was to try as far as possible to incorporate many of these elements. I sought to trace an individual Roman’s path through the process of accounting: who were the accountants, how much training did they receive, how much time did they spend on the job, how long did it take for them to compose documents, how varied were these documents, and what were their possible uses? The problem rapidly emerged, however, that there was not enough data to make meaningful assessments. The surviving material about education, career paths, training, time of composition, approach to documents, notions of standard format and more, was limited or even non-existent.
After prolonged experiment, it seemed the best compromise to discuss the surviving material not so much as a historian, but more as an accountant. Drawing on my training in that discipline, my concern became how accountants would approach the material, especially if they were to view it from the perspective of an audit. When accountants today view their data, they look for functionality and effectiveness. They ask whether their accounting documents are doing what they were designed to do: track inventory accurately and effectively; create an accessible format; offer speed of understanding with numeric data; provide cash flow analysis and calculate profitability. From this perspective, my contention is that the Romans can be seen to have had a fully functional accounting method. Admittedly, several weaknesses were present and I discuss them, but the method did allow the Romans to achieve the core roles and functions of accounting. Moreover, the one cultural area where their accounting material prominently featured was in the legal setting. Accounting ledgers and data were critical records which were clearly relied upon. Accounting was needed in banking and wills, and its perceived value alone could prove the innocence or guilt of an individual. These uses underscore the functionality of Romans’ accounting documents in their society. I draw upon our understanding of accounting in a limited, but varying, range of other premodern societies in order to reinforce this claim.

This dissertation contributes to our understanding of Roman accounting in several notable ways. The style and approach of Roman documents are now categorized to reflect differing levels of complexity and sophistication. With the aid of this delineation, we can now more readily appreciate the distinct attributes present at each level in Roman accounting practices. Additionally, due to the greater accessibility of accounting documents in recent years – in particular, through John Matthews’ work on the Journey of Theophanes, Dominic Rathbone’s study of the Heroninos archive, and the reading of the Vindolanda tablets -- it
becomes easier to appreciate such differences among the few larger caches of accounting documents. Moreover, the dissertation seeks to distinguish varying grades of accountant. Above all, it emphasizes the need to separate the functions of accounting and auditing, and to gauge the essential characteristics and roles of both. In both regards, the Roman method showed competency.

Finally, the dissertation shows how economic and accounting theory has influenced perceptions about Roman accounting practices. In particular, double-entry accounting has been overvalued in accounting theory. Early 20th century works by Werner Sombart and Max Weber heavily influenced historians of Rome. Typically, they accepted that the Romans’ failure to develop double-entry accounting served as a structural flaw which deprived them of the impetus for economic rationalism and profit-seeking behavior. Roman historians, understandably enough, did not keep abreast of advances in accounting theory. Today, its practitioners reject the arguments upon which the historians have relied, opting to emphasize instead the worth the contributions made by the accountants and managers of accounting data themselves, which have never been adequately assessed in the Roman context.

In short, this dissertation taps an enlarged body of ancient testimony (albeit still pitifully small) together with scholarship in two disciplines that had lost touch with one another, in order to place our appreciation of accounting and auditing in Roman society on a fresh, more realistic footing.
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Introduction

The traditional view of ancient Roman accounting (200 BCE- 400 CE) over the past hundred years has been that it was a hindrance to economic development and prosperity rather than an aid. This dissertation aims to correct this negative interpretation of Roman accounting and to suggest that it was more than sufficient for Roman accounting challenges. The greatest challenge to understanding Roman accounting is the general lack of evidence in both references and actual documents. However, existing documents and references are sufficient to establish an upper and lower range of complexity in the types of accounting formats the Romans utilized.

At the upper range, the Romans practiced a “sophisticated” style of accounting, which included monetizing assets (recording the value of an item in monetary terms), intricate organization, and profitability assessments. Although the evidence for such usage is very limited, its existence suggests that when the Romans desired to use more advanced accounting techniques, they could. The lower range of Roman accounting may be termed “basic”. At this level, it was an inefficient system. The primary reason for the inefficiency was the lack of Arabic numerals (0,1,2,3,4,5,6,7,8,9) that help to make well-sorted accounting columns. Additionally, there was the often rudimentary literacy level of the slaves or freedmen tasked with preparing the documents. Yet, it should be stated that the Roman system was still completely functional in conveying numeric information. Further, limiting the focus of study in Roman accounting to surviving documents and comparing them with formats such as double-entry accounting, as previously done by Roman historians, overlooks some of the critical advantages
in basic Roman accounting, such as the ease of production and understanding (simple documents are easy to read).

Finally, perhaps the most overlooked aspect that transcended both the “sophisticated” and “basic” styles of accounting was a favorable Roman cultural disposition toward accounting. There was a Roman willingness for creativity, understanding, and engaging with accounting documents that afforded them a certain power to overcome inefficiencies in format. This energy should not be underestimated.

In order to make the argument that the Romans were competent accountants with a satisfactory system for the maintenance of a large empire, this dissertation is split into two halves. The first half focuses on the Roman accounting system, while the second reviews the cultural infrastructure that helped overcome certain weaknesses. The first half, devoted to understanding Roman accounts, is divided into four chapters. The first chapter aims to frame the relative importance of accounting and its impact on Roman historians, especially for those less familiar with the subject matter and its historical importance. Specifically, it provides the historiography on how accounting has traditionally been viewed by Roman historians.

The second and third chapters are devoted to detailing the sophisticated and basic systems of accounting. Chapter two’s accounting example emphasizes the importance of Dominic Rathbone’s work on the Heroninos Archive, which examines accounting documents from 3rd-century Egypt. The primary purpose for this inclusion is to highlight how the accounting documents facilitated organization and profitability assessments of a multitude of farms with a series of monthly reports.
The third chapter illustrates the basic system of Roman accounting. It provides several examples of relatively simple accounting documents that are easily recognizable as disbursement sheets or inventory listings, which were typically prepared by slaves or freedmen. The main structural weakness apparent in these documents is the lack of Arabic numerals that affected Roman accounting.

The fourth chapter is comparative. It presents evidence from other pre-modern cultures such as Egypt, Sumer, early Islamic societies, and medieval Europe to help identify underlying strengths and weaknesses within Roman accounting practices. It also discusses the unique way in which labor was divided by class. Namely, this chapter shows how, in different societies, accounting could be performed by the less erudite classes (slaves and freedmen) or specialized professionals (the priestly class, merchants, or monks), according to their valuation of quantity over quality and vice versa.

The second half of the dissertation transitions into a social argument that Roman accounting culture compensated for format weaknesses. The overarching cultural argument is comprised of three components. The first is prevalence. Inextricably woven into the fabric of Roman society, Roman accounting presents a recurrent thread, touching such diverse elements as estate management, personal correspondence, and poetry. The second component posits that there existed a basic expectation to maintain records whether in a household, business, or governmental setting. The final component is a surprising affinity for accounting, evinced by references to Romans actually enjoying aspects of accounting.

The second half, like the first, is divided into four chapters (chapters 5-8). Similarly, the first three chapters of the second half focus on Roman accounting’s cultural prevalence, while
the fourth chapter provides a cultural comparison of accounting with pre-modern Great Britain. Each of the chapters will touch upon the three aspects of prevalence, expectation, and affinity rather than treating each component in isolation. For instance, chapter five is devoted to the *Digest* of Justinian, chapter six highlights evidence from Cicero’s law cases, and chapter seven presents a variety of literary evidence. This final comparative chapter develops the concepts of what it means to be a good accountant, with a specific focus on auditing. The overarching aim of this dissertation is straightforward. The goal is not to prove that the Romans were exceptional at accounting, but that they were quite competent with a fully functional system that did not diminish economic opportunities or their ability to maintain their empire.
Chapter 1: The Transformative Power of Accounting

Any historical review of a civilization’s accounting system encounters a series of challenges. Namely, how exactly does one interpret the extent of accounting’s importance to an individual civilization? Was accounting more important to a large empire such as that of the Romans, or was it more vital to a small, mercantile city-state such as that of the Renaissance Venetians? Or, do ‘importance’ and ‘value’ even matter to a society once its accounting needs are fulfilled? In that capacity, is it better to ignore direct historical comparisons and simply consider accounting as a societal tool such as a bowl or spoon — though structural design has changed little over the centuries, as long as the needs are met, sophistication matters little? Or, should accounting be considered as consistently altering the trajectory of world history as firearms have done? Specifically, should accounting be considered a device that, with each successive development, such as the transition from smooth bore guns in the 18th century to rifling in the 19th century, clearly altered the development of civilization?

As noted above, the approach and perspective to accounting are of immense importance. The point of raising such issues at the onset of a discussion of Roman accounting is to acknowledge that accounting occupies a unique sphere. It is exceedingly important because without accounting documents, a civilization simply cannot exist beyond an extremely basic level. People and societies would not be able to plan for future needs, maintain their finances, or
consider the optimization of supplies. Yet it is hard to define the extent to which accounting’s transformative power creates a ‘successful’ civilization. The question of transformative power has been the central feature of historical accounting studies, and one that has exerted the greatest influence on the study of Roman accounting. Moreover, the most traditional view of accounting’s historical influence stems from the late 19th to early 20th century through German sociologists Werner Sombart and Max Weber. Most Roman historians tend to have some familiarity with Weber due to his impact on sociology, but there is much less familiarity with Sombart. Both men were part of the historical trend of the ‘scientification’ of the liberal arts that dominated social sciences from the 1880s to 1920s in Germany. These scholars invested considerable energy into ‘mathematically testing’ much of the political philosophy originated by mid- to late-19th century academics including Georg Hegel, Louis Blanc, and Karl Marx. One of their key goals was to analyze the driving forces of capitalism. For Sombart, a large element of capitalism’s success was the advent of double-entry accounting, while for Weber it was the rational-legal bureaucracy.

Sombart’s 1902 six-volume work, Der Moderne Kapitalismus, arguably reflects the single most important moment in the accounting studies. In his work, he proposed that double-entry accounting in the late Middle Ages significantly aided the development of capitalism.\(^1\) Despite the fact that his discussion of accounting was limited to only six pages, its influence cannot be underestimated.

\(^1\)**Double-entry accounting** is a standard accounting method that involves each transaction being recorded in at least two accounts, resulting in a debit to one or more accounts and a credit to one or more accounts. Double-entry accounting provides a method for quickly checking accuracy, because the sum of all accounts with debit balances should equal the sum of all credit balance accounts. The purpose and goal of double-entry bookkeeping are to enter financial transaction records so that when financial statements and reports are run, the company's assets are equal to its liabilities plus owners' equity (net worth). This formula is expressed in accounting terms as: Assets = Liabilities + Owners' Equity (Net Worth).
To demonstrate the high degree of praise Sombart bestowed upon double-entry, the following are generally considered the points that accounting historians most often cite from Sombart:

(1) “Double-entry bookkeeping was born out of the same spirit as the systems of Galileo and Newton, as the theories of modern physics and chemistry.”

(2) “One will be able without a great deal of acumen to detect in double-entry bookkeeping, in immature form, the ideas of gravitation, of the circulation of the blood, of the conservation of energy as well as other ideas which have so very much fertilized insight into nature.”

(3) “Indeed double-entry bookkeeping can be contemplated not without awe and admiration as one of the most artistically arranged structures produced by the admirably rich formative capacity of the European human spirit.”

After Sombart’s publication, for roughly seventy years, nearly all successive accounting studies followed his view, extolling lavish praise on double-entry accounting. Among the most noteworthy studies are H.M. Robertson’s 1939 *Aspects on the Rise of Economic Individualism*, B.S. Yamey’s 1964 *Accounting and the Rise of Capitalism*, and J.O. Winjum’s 1972 *The Role of Accounting in the Economic Development of England*. Additionally, the importance of double-entry bookkeeping was consolidated in the 1930s by other indirect means. In 1936, John Maynard Keynes wrote his landmark book, *The General Theory of Employment, Interest, and Payment*, where he created his calculation that \( Y = C + I \) ( Aggregate Output = Consumption + Investment). Most economic students know this formula today as “Keynesian economics”. The underlying idea is that if you could calculate how much consumption or ‘demand’ was present in a community, then government could provide investment to increase overall output, thereby

\[Y = C + I\]

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2Lister 1985, 229-231.
increasing overall employment.\(^3\) However, the underlying basis for calculating each individual component of the formula utilized double-entry accounting.\(^4\) Similarly, Simon Kuznet’s development of gross domestic product as a measure of national economic output in the 1930s rested on calculations done by double-entry accounting.\(^5\) Finally, by the early 20\(^{th}\) century, all accounting done by certified public accountants (CPAs) was performed in double-entry. Visually, publicly, and theoretically, by the mid-20\(^{th}\) century, double-entry accounting had become the dominant form of accounting and was considered a transformative driver of capitalism.

Similarly, Max Weber’s ideas on bureaucracy influenced the study of Roman accounting.\(^6\) His 1922 book, *Economy and Society*, defined the ideal bureaucracy, or as he called it the *rational-legal bureaucracy*. Although his work incorporates many components, three of the key elements for the more successful model of bureaucracy included specialized education for technical positions, regular opportunity for advancements within the organization, and a merit-based promotion system.\(^7\) Although there are some exceptions, generally Roman

\(^3\) The formula forms the basis of “Keynesian economics,” advocating government intervention in the marketplace in times of recession to stimulate weak demand.

\(^4\) Gleeson-White 2011, 179.

\(^5\) Gleeson-White 2011, 180-182.

\(^6\) Part of Max Weber’s creation of the ideal bureaucracy consisted of a couple of bases. The first served as a way to think about creating efficiency and best practices in a world that was becoming increasingly centralized with larger corporations and factories. The second was to provide historical reasoning as to why Northern Europe had eclipsed the Mediterranean and Southern Europe in dominance from the 17\(^{th}\) century through the early 20\(^{th}\) century.

\(^7\) The following are two of the more relevant and instructive passages from Max Weber’s *Economy and Society*. Pg. 975: “Bureaucratization offers above all the optimum possibility for carrying through the principle of specializing administrative functions according to purely objective considerations. Individuals’ performances are allocated to functionaries who have specialized training and whose constant practice increases their expertise. ‘Objective’ discharge of business primarily means a discharge of business according to calculable rules and ‘without regards to persons’.” Pg. 973: “The strictly military character of the magistrates’ powers - a characteristic of the Roman polity unknown to any other people - made up for the lack of bureaucratic apparatus with its technical efficiency, its precision and unity of administrative functions, especially outside the city limits.” Weber 1978.
bureaucrats lacked all of these critical components. More importantly, the higher-ranking bureaucrats or members of society who performed accounting tasks, such as procurators or governors, seem particularly ill-equipped when viewed against Weberian bureaucratic measurements.

Most Roman historians have adopted Weber’s key points about the definition of an efficient bureaucracy, the result being the generalization that Roman bureaucrats are deemed quite inefficient or ‘amateur’. For instance, Brian Campbell states that “in the context of Roman society ideas of specialization and professionalism are largely anachronistic…senatorial career was built around traditional Roman conceptions of office holding of the state. The men who governed the great consular provinces were, in general, all round amateurs”. \(^8\) G.P. Burton declared: “Overall it is suggested that the clearest and most consistent feature of the proconsular government is its weakness.”\(^9\) Peter Brunt inverts Burton’s comments when he stated: “Hardly any class of men rendered more important services to the Roman state than those charged with local government,” thereby imply that little work was done by the appointed officials from Rome directly.\(^10\)

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\(^8\) Campbell 1975, 25.


\(^10\) Brunt 1990, 267 and 270. Also see Saller 1982, 79: “The position taken on this question has broad implications for the historian's conception of Roman imperial government. Modern 'rational-legal' bureaucracies are characterized in part by the objective of appointing and promoting in accordance with the impersonal criteria of seniority and merit. Though it may not be achieved, the objective is at least pursued through bureaucratic regulations and institutions (e.g., the Civil Service Examination). By contrast, in a patrimonial government there is little regulation: appointments depend on the discretion of the ruler who is apt to select on the basis of personal loyalty and friendship. Augustus' administration, made up of his household and friends, can be characterized as 'patrimonial'. The question is then: to what extent did appointment and promotion come to be regulated in the following two centuries? In answering this question, we shall also be offering a partial answer to the more general question of how far Roman imperial government was 'rationalized' in the Principate.”
The cumulative effect of Sombart’s view on double-entry and its relationship to capitalism and Weber’s rational-legal bureaucracy became a prominent feature of the two direct studies of Roman accounting in the mid-20th century. The first study was by Gunnar Mickwitz in his 1937 article, “Economic Rationalism in Graeco-Roman Agriculture,” in which he explored the use of accounting in economic decision-making regarding agriculture practices in ancient Greece and Rome. The primary ‘case study’ for his examination was the Zeno archives on the Greek side and the agricultural writers Columella, Varro, and Cato the Elder on the Roman side.

From Mickwitz’s perspective, each of these individuals left behind enough evidence, whether through actual farming records (as was the case with Zeno) or farming manuals (as was done by the Roman authors), to discern something of accounting habits and decision-making. Overall, Mickwitz came to the conclusion that profit calculation factored only minimally into Graeco-Roman agricultural decision-making. Indeed, their records indicated no amortization of capital expenditures, which would have hampered their ability to assess the true cost or impact of large purchases. Accounts for individual items such as vines (grapes for wine) or sheep

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11 Mickwitz 1937, 577-589. He suggests that there existed little differentiation between Greek and Roman cultures in regards to accounting; therefore, he combined his analysis of Greece and Rome to include the period of roughly 400 BCE to 300 CE.

12 The Zeno archives are a large cache of papyri found in early 20th century Egypt. Over 2,000 papyri document Zeno’s labors, correspondence, and business affairs from the 3rd century BCE. During this period, he served as private secretary to Apollonius, who was the finance minister to two different Ptolemaic kings. The three Roman writers span periods from the 2nd century BCE through the 1st century CE (Cato 234-149 BCE De Agri Cultura, Varro 116-27 BCE Rerum Rusticarum Libri III, Columella 4-70 CE De Re Rustica). Each man had achieved success in other various professions, most commonly politics and military service, before spending their later years writing. Cato and Varro wrote on a variety of subjects, whereas Columella is more obscure, and only his writings on agriculture have survived.

13 Mickwitz 1937, 586.

14 Mickwitz 1937, 578. “Had Zeno wished to give his master an account of the rate of profit attained he would necessarily have had to separate capital investment from current expenditure. For instance, he would have to
were separated and monetized (recorded in cash value), so it is much harder to calculate which farm or area was more profitable.\textsuperscript{15} Finally, recorded expenses were oversimplified to the point of near negligence in their omissions.\textsuperscript{16} Mickwitz ultimately demonstrates the accounting system’s failure to yield any true benefit to economic planning or profit maximization (i.e., economic rationalism).

The second study was by G.E.M. de Ste. Croix in 1956, titled, “Greek and Roman Accounting.”\textsuperscript{17} His article is part of the collected work, \textit{Studies in the History of Accounting}, edited by A.C. Littleton and B.S. Yamey. Its intention was to survey the historical development of Western accounting practices, with a focus on acknowledging the impact of double-entry accounting.

De Ste. Croix’s analysis treats Greek, as well as Roman, accounting practices similar to Mickwitz’s earlier work. However, he divides his analyses into separate Greek and Roman sections. Indeed, his goal is not to offer direct contrast but rather to reveal the structural weaknesses of both practices. Furthermore, the article is subdivided into seven sections. The

\textsuperscript{15}Mickwitz 1937, 584: “He [Zeno] says, ii. 5, that when the master visits his farm he should examine the steward's accounts which consist of money-accounts, grain-accounts, fodder-accounts, oil-accounts, and wine-accounts. This system seems very familiar to us, and it is, indeed, nothing but a repetition of Zeno's accounting method. It is now clear why Cato's advice as to the purchase of farms was so vague. Owing to the defects of his system of bookkeeping he was unable to make the necessary plans for increasing the monetary income from a particular farm.”

\textsuperscript{16}Mickwitz, pg. 587. “On the other hand Varro, i. 7, 10, takes into account the expenses incurred by vine-growing, but does this in a perfectly vague way: \textit{vineam sunt qui putent sumptu fructum devorare}. The same might be said of his description, i. 16, of different ways in which farming might be influenced by geographical position. If we turn to Pliny the Elder, we find the same remarkable neglect of expenses that we find in Varro’s writings. He tells us, xiv. 4, 49-50, the story of Remmius Palaemon, who bought a farm and in eight years was able to sell the crop of his vineyard for nearly the same amount that he had given for the whole farm. Pliny, however, entirely ignores the costs incurred by what was probably a very expensive experiment in model farming.”

\textsuperscript{17}De Ste. Croix 1956, 14-74. It is worth noting that Mickwitz’s initial study on ancient accounting was often overlooked by scholars, and most consider de Ste. Croix as the initial survey of ancient accounting methods. Further, de Ste. Croix even suggests on page 37 of his 1956 article that Mickowitz was overlooked: “The neglect of this important paper, especially by historians of accounting, maybe due partly to its rather unfortunate title.”
first two discuss the nature of Roman and Greek sources; sections three and four provide an overview of classical and Hellenistic accounting; section five analyzes Roman material; and the final two sections analyze key hindrances to Rome’s development of double-entry accounting.\(^\text{18}\)

De Ste. Croix argues that Roman accounting systems and practices reveal a notable lack of advancement or sophistication. He asserts that the Romans failed in any serious attempt to develop a double-entry accounting system. To understand why he, in addition to Sombart, thought this was critical, it is useful to review Littleton and Yamey’s introduction:\(^\text{19}\)

“Double Entry has three main advantages over the earlier methods of record keeping. First, the records are more comprehensive and orderly; second, the duality of entries provides a convenient check on the accuracy or completeness of the ledger; third, the ledger includes, among personal, real and nominal accounts in an integrated whole, the materials for developing, as part of the system, statements of profit-and-loss and of capital, assets, and liabilities.”\(^\text{20}\)

The following passage indicates de Ste. Croix’s opinion of the extent of double-entry’s importance.\(^\text{21}\)

“The question has often been asked in modern times how far the Greeks and Romans developed systematic book-keeping, and in particular whether they employed double entry. It will help to put the subject-matter of this essay in better perspective if I make it clear from the

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\(^{18}\) Sections are divided as follows: I. The Sources (pgs. 15-19), II. The Absences of “Bilateral Form” (pgs. 19-21), III. The Classical Greek Period (pgs. 21-31), IV. The Hellenistic Period (pgs. 31-33), V. Roman Accounting (33-50), VI. Greek and Roman Numerals (pgs. 50-61), and VII. Arabic Numerals and the Rise of Modern Accounting (pgs. 61-74).

\(^{19}\) Littleton and Yamey 1956.

\(^{20}\) Littleton and Yamey 1956, 9. For further elaboration, Yamey states: “Double entry is basically a classifying device or technique of considerable efficacy, adaptability and versatility. As such, the system itself does not determine what transactions or items should fall within its sway. The system remains intact, for example, in its not mentioning whether or not unrealized increases or decreases in the value of assets are recorded in the ledger. Again, the system does not determine how a particular item should be classified: for instance, Yamey and Littleton do not address whether a particular debit should be transferred as a negative item to the profit-and-loss account, or instead, be retained as an ‘asset’ in the balance sheet. As a classifying technique, the system of double entry has little, if any, influence on profit calculations and balance sheet valuations, issues central to the modern accountant; in a sense, all the system does in this field is to ensure consistency between the profit calculation and net changes in recorded asset values.”

\(^{21}\) De Ste. Croix, 14.
start that the Greeks and Romans, far from reaching the advanced stage of accounting at which double entry becomes possible, thought, and kept their books, mainly in terms of receipts and expenditure rather than debit and credit; and furthermore that they never even got as far as the habitual separation of what we should call debit and credit entries by inserting them in two separate columns, let alone on opposite pages of an account. That the Romans, at any rate, regularly wrote debit and credit entries on opposite pages of their accounts has been asserted again and again, without ever (as far as I know) being contradicted; but the whole conception is false, as I shall show. Ancient accounts are not disposed in double columns: they are not even placed precisely in single columns. If, as sometimes happens, the figures are written approximately underneath each other, this is done, as we shall see, not in order to assist computation but merely to give a neater appearance, or to make it easier and less fatiguing to follow the account and trace individual items within it. The Greeks and Romans did develop some quite advanced institutions in the fields of property law and commercial practice; but their bookkeeping, minutely detailed as it often was, remained rudimentary in method and never grew into an integrated double-entry complex, with interlocking accounts, or even into a unified single-entry system.”

To be sure, de Ste. Croix acknowledges that the Romans proved adept at keeping track of receipts and proceeds, and that they valued accounting sources in legal or court affairs. Yet, despite the resources available in terms of the monetized economy and ability for trade, they did not advance towards a more modern accounting system. It is perhaps this aspect that scholars of both accounting history and Roman society find puzzling.

The most recent work by a Roman historian in reviewing Roman accounting practices is the 1980 book, Der Codex accepti et expensi im romischen Recht: Ein Beitrag zur Lehre von der Litteralobligation, by Ralf Michael Thilo. The study is uniquely different from those of both Mickwitz and De Ste. Croix. Whereas they sought agreement with Sombart’s belief about accounting’s transformative power and Weber’s view that lack of double-entry acted as a barrier, Thilo sought to review the Roman language used in accounting practices. However, one critical aspect he confirmed was that the language of accounting did not seem to indicate a use or development of double-entry.

22De Ste. Croix, 17.
The great problem for Roman economic academics is their general lack of knowledge about how accounting theory has changed since the 1970s. Sombart in particular went unchallenged by a Roman historian until the early 1990s. However, since the 1970s, both Sombart and Weber have consistently been challenged by accounting historians, with the result that double-entry is now considered the most efficient means of accounting, but not so impactful force as to suggest it caused the development of capitalism. It is important to suggest that most Roman historians still remain largely unfamiliar with this shift in view. For Roman accounting studies the following consequences due to the primacy placed on Sombart and Weber should be understood:

1. **Double-entry accounting**: The majority of Roman historians who have discussed accounting directly or indirectly (such as in economic analyses) place too high significance on double-entry accounting. They become preoccupied with discovering whether it was utilized by the Romans, because it was considered the marker for a sophisticated or unsophisticated accounting system.

2. **Double-entry led to capitalism**: Roman historians have generally adopted the view (either consciously or subconsciously) that double-entry is a requisite precursor to capitalism. This is incorrect. Rather, double-entry is an efficient tool for individuals and firms in profit-oriented thinking, but its usage is not a good marker for detecting a society’s level of capitalistic orientation.

3. **Document focus**: Due to Sombart, the prevailing focus for 70 years was upon the accounting documents rather than the bookkeepers and accountants who were creating and utilizing such documents. Their role has been undervalued in analyses by Roman historians who adopted Sombart’s valuation of double-entry. Similarly problematic is the fact that accounting historians are generally too unfamiliar with antiquity to make a strong assessment about the Roman accountants themselves, and so must limit their studies to the documents and comments offered by historians unfamiliar with accounting.

4. **Amateur bureaucrats**: By Weber’s definition of a rational-legal bureaucracy, Roman bureaucrats who performed accounting duties were amateurs rather than trained professionals. Although in many ways accurate, such a general view prohibits an acknowledgement of accounting successes within Roman culture.
The problem for Roman historians is that they have largely not recognized reactions against Sombart and Weber since the 1970s. The current trend has been to diminish the impact of double-entry accounting and its capitalistic transformative power have diminished for three reasons: (1) historical implementation, (2) the philosophy of taxation and profit orientation, and (3) comparison of accounting practices, especially in non-Western societies.

Sombart erred in his original analysis by overlooking the general implementation of double-entry accounting. In fact, the first double-entry account dates from the 13th to 15th century in the Italian city-states of Genoa, Florence, and Venice. The first formal textbook discussing double-entry was published by Luca Pacioli in 1494. Even then, although it was developed in the late Middle Ages and early Renaissance, double-entry’s use was hardly ubiquitous until well into the onset of the Industrial Revolution in the 19th century. Even in the 18th century, the British maintained a largely split view of which types of accounts to maintain. For instance, 18th century England saw the publication of four distinct guides on accounting and estate management. Two of the guides, Charles Snell’s Accompts for Landed Men (1711) and Edward Laurence’s The Duty and Office of a Land Steward (1731), offered suggestions on the use of a familiar charge and discharge accounting system, one that is easier to understand and use for household managers, employees, and servants. Conversely, Thomas Richards’ The Gentleman’s Auditor (1707) and Roger North’s The Gentleman’s Accomptant (1714) advocated the use of double-entry due to its advantages in thoroughness.

Not only did the rift in approaches differ both in terms of advocacy, but it also showed a split across geographic regions. David Oldroyd and Alisdair Dobie have demonstrated that a

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23Summa de Arithmetica Geometria, proportioni et proportionalita. Published in Venice, 1494.

majority of 18th century estates in northeast England used the charge/discharge system in their accounting systems.\textsuperscript{25} They note: “Diversification in the types of records kept was a prominent feature of eighteenth-century estates in the north-east of England where a range of different reports was prepared in addition to the charge and discharge statements. For example, schedules of output were used to verify payments to and from subcontractors and lessees; stocks of goods and materials were listed and quantified; payments to workmen were dealt with through pay-bills which priced their daily output at the agreed rates; and the profitability of particular activities was calculated. The number of parties that were involved in the operations is quite striking, and included stewards, lessors, lessees, partners, shareholders, laborers, agents and tenants.”\textsuperscript{26}

Strikingly, however, during the same period, the Earl of Balcarres, who owned coal mines in Scotland and plantations in Jamaica, deliberately had his estate stewards employ double-entry bookkeeping methods.\textsuperscript{27} From his central office, he found that using this method resulted in a more accurate and more detailed idea of operations across his far-flung holdings.

An additional challenge in economic decision-making is the notion of the rationality of ‘income’ and ‘profit’. Accounting historian Richard H. Macve asserts that “one does not need double-entry accounts to be able to calculate income”.\textsuperscript{28} He makes the point that a struggle still exists among accountants regarding definitions of ‘capital’ versus ‘income’. The common debate includes the following:\textsuperscript{29}

\textsuperscript{25} Oldroyd and Dobie 2009, 109-111. Charge/Discharge Accounting: a bookkeeping system in which a person charges himself or herself with receipts and credits himself or herself with payments.

\textsuperscript{26} Oldroyd and Dobie 2009, 109-111.

\textsuperscript{27} Oldroyd 2007, 105.

\textsuperscript{28} Macve 1994, 56-60.

\textsuperscript{29} Macve 1994, 59-60.
1. What assets (and liabilities) should be included in measuring capital, and how should they be valued? The prevailing valuation convention is ‘historical cost’ (although this is itself a term of considerable ambiguity), but many other valuation systems could be used (e.g., based on current buying prices or current selling prices).

2. How much of the change between the net assets (i.e., assets less liabilities) at the beginning and end of the period should be regarded as ‘income’? Should one exclude amounts attributable to inflation, to changes in interest rates, or to amounts not yet realized?

Moreover, Macve further qualifies the discussion by separating the theoretical problems of distinguishing ‘capital’ from ‘profit/income’ and by noting the implementation of ‘income tax’ as a means of taxation (rather than taxing capital or a per-person ‘head’ tax). It was first introduced in England in 1799. Only when such taxation of one’s ‘income’ became commonplace, Macve suggests, did people start changing their thoughts and behavior regarding the separation of their income versus capital.\(^\text{30}\)

A final consideration is the historical comparative nature of bookkeeping. During the Tang and Song dynasties in medieval China (960-1279), a significant and perhaps higher percentage of trading actions was performed through credit sales, speeding up the business process, compared to those same transactions performed among European merchants.\(^\text{31}\) Moreover, merchants commonly updated their ledgers, known as the Tenquing Bu, at the frequent interval of every ten days.\(^\text{32}\) During the Ming dynasty of 1364-1644, a new

\(^{30}\) Macve 1994, 60-63. On pg. 62: “I would therefore suggest that if the ancient Greeks or Romans had decided to tax ‘income’ rather than ‘capital,’ then those involved in assessment and collection of direct taxes would have begun to work out something and developed conventions to meet the need.”

\(^{31}\) Lin 1992, 104-106.

\(^{32}\) Lin 1992, 107. The more common historical standard for officially updating ledgers is closer to monthly.
bookkeeping style was developed — the *Sanjiao Zhang* — which incorporated elements of both single and double-entry. If the medieval Chinese used credit and updated their ledgers more frequently and developed double-entry concurrently with late medieval Europeans, how does one reconcile the differences in economic thought among these civilizations by the 19th century? In essence, Sombart’s theory, purporting that double-entry propelled economic capitalism, did not materialize in China, even though economic approaches there comprised many of the same elements.

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When accounting historians and theorists moved away from Sombart’s earlier valuation of double-entry, intellectual approaches to Roman accounting, economics, and bureaucrats became fractured. One approach is the legacy of Sombart through Finley. If the Sombart-to-Finley double-entry nexus is critiqued, then is this done within that framework (i.e., an attempt to prove double-entry and economic rationalization in Roman society)? Or rather with an outright dismissal of the legacy, thereby initiating a new analysis? Similarly, if Weber’s status/embeddedness/rational-legal bureaucracy remains not fully overturned, especially the antagonistic view that Roman bureaucrats were historically ‘amateurs’ at their various jobs, then how does such a prevailing view impact an assessment of their accounting?

Two historians did seek to dismantle Sombart’s theory within the Roman context. The first, Kenneth Most, sought to do so in a 1974 article in which he refutes several of de Ste.

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Croix’s earlier points on Rome’s lack of double-entry.\textsuperscript{34} In particular, Most dismisses de Ste. Croix’s reasons for the Romans never having developed double-entry by refuting his claims \textsuperscript{35}:

\begin{table}[h]
\begin{tabular}{|l|l|}
\hline
\textbf{De Ste. Croix Theory} & \textbf{Most Refutations} \\
\hline
1. The Romans kept accounts of receipts and expenditures rather than by debit and credit. & These categorizations are not mutually exclusive. \\
\hline
2. The Romans never progressed to the habitual separation of debit and credit by writing these in two separate columns, let alone on opposite sides of an account. & Neither debit nor credit is a necessary feature of double-entry. \\
\hline
3. The Greek and Roman economy failed to develop to the point at which an advanced system of bookkeeping would have become generally necessary. & The Romans used advanced systems of banking and insurance and created a detailed bankruptcy code; they also engaged in large-scale manufacturing and trade. \\
\hline
4. Their numeral notation did not lend itself to this purpose. & Not so, as de Ste. Croix himself shows on page 64 of his paper. \\
\hline
5. An article by Gunnar Mickwitz, titled “Economic Rationalism in Graeco-Roman Agriculture,” claims that Greeks and Romans did engage in rationalistic cost-accounting to maximize profit. & This article shows merely that important value factors were omitted from Graeco-Roman farm accounts, just as modern business accounts fail to disclose all relevant factors, an example being a proprietor’s salary in the accounts of a sole trader. \\
\hline
6. “In a system which dealt largely in cash and in kind, the need for a technique such as double-entry would seldom arise…” & This argument fails to distinguish between the cash and accrual forms of double-entry bookkeeping. \\
\hline
\end{tabular}
\end{table}

For Most, the key problem in his review of de Ste. Croix is that de Ste. Croix overlooks the human element in creating and using the accounting and is too fixated on the quality of the final accounting document.\textsuperscript{36} The basis of his argument is that de Ste. Croix too readily dismisses the case and possibility of double-entry within Roman society. Moreover, de Ste.

\textsuperscript{34} Most 1979, 22-41.

\textsuperscript{35} Most 1979, 27-28.

\textsuperscript{36} Most 1979, 24. “One of the techniques developed by these institutions and used in identification and allocation of rights and duties is the analytical method known as accounting. Like the processes of debate, it is not very complex and has hardly changed during thousands of years; this may indicate that it is more deeply rooted in human personality than seems possible at first glance. If we can show that the elements of this technique were familiar to, and used by, the ancient Romans two thousand years ago and were not a discovery of the Renaissance similar, in the words of Sombart, to the systems of Galilee and Newton, we shall at least have provided some evidence with which to confront the technological fallacy.”
Croix falsely creates stylistic criteria (two columns, numeral notation, with no separate debit and credit entries) to gain the benefits of double-entry (tracking and profit calculation). Most suggests that at least some Romans could have used and developed double-entry. For evidence, he points to a military account tablet from Karanis, which de Ste. Croix upheld as the most sophisticated accounting document, as well as to excerpts from Cicero’s fragmentary speech, Pro Fonteio.37

It is easy to assess why the managerialist approach became the default mode of analysis for accounting history. It is also easy to start asking a multitude of questions. Why did the creator organize the data in this manner? Does the data tell us what mattered most to the user? Could the user attempt to hide any pertinent material within the format and numbers? Do we think there are any relevant materials missing from the included data?38

The second approach to accounting history is termed the positivist approach.39 It varies greatly from the managerialist approach in its assumption that the principal agent is already acting in an economically rational manner. For instance, there is no need to question why a manager laid out the accounting data in the manner that he did, as it is to be assumed that he did so to maximize personal gain. Therefore, in this view, the key person is switched from creator/manager to the non-creating audience. The key aspect is that the positivist approach is more concerned with the information received by its audience. For instance, how are shareholders reacting to the accounting documents of a corporation as opposed to the

37See chapter six for the relevant text of Pro Fonteio.

38 Toms 2009, 343. “Managerialist approach gives primacy to the role of managers as independent and usually rational economic decision-makers. There is little explicit reliance on theory. Accountability structures imposed by governance arrangements can significantly constrain managerial freedom.”

39 Toms 2009, 343.
accountants that compiled it or the Chief Financial Officier who managed the process? In addition, the positivist approach uses other modern business models of analysis, such as transaction cost theory, governance costs, and asymmetrical information studies.40

The third and final modern accounting perspective is the post-modernist approach, largely attributed to Michel Foucault, which shares similarities to Sombart’s interpretation of double-entry, as this approach interprets the ‘transformative power’ of the accounting documents themselves.41 For clarity, this style largely ignores the accountant’s reasons for assembling the document, and focuses instead on what future action the completed document itself inspires. Sombart’s illustration asserts that the development of double-entry accounting transformed the mindset of the user, who was able to more easily discern ‘profits’ once assets were neatly converted into currency and aligned against each other. The ability to read and gauge profit margins more precisely encouraged double-entry participants to engage more readily in further business ventures, thereby propelling capitalistic thought. The difference between the interpretations of Foucault and Sombart is predominantly one of scale, namely that Foucault thought more in the individual sense, while Sombart thought largely in terms of societal impact.

With the development of all three techniques for analysis, a clear trinity of ‘creator, user, and document’ emerges, which allows for a significantly more thorough study of any accounting practice. Sombart and subsequent scholars were not entirely mistaken to think of double-entry as

40Transaction Cost Theory suggests that firms organize exchanges internally which might otherwise be conducted in markets due to the costs associated with an exchange (transfer) of a good or service in the market (costly negotiating and monitoring costs that may accompany exchanges conducted within the market). Governance costs are related to tasks performed (1) to sustain competitive but fair markets, (2) to set incentives for involved actors to provide a certain level of public service, and (3) to coordinate public authorities involved in regulation. In economics and contract theory, information asymmetry deals with the study of decisions in transactions in which one party has more or better information than the other. This creates an imbalance of power in transactions which can sometimes cause the transactions to go awry.

41Toms 2009, 344. Also see Armstrong 2006.
transformative; they simply missed too many aspects by neglecting other questions and possibilities, and by not considering the creators and users of accounting documents.

By 1984, Macve became the first accounting historian to employ all three techniques for a study of Roman accounting when he sought to dismiss the lack of economic rationalization in Roman accounting practices. In making his point mentioned above about the nature of taxation and income, he notes that it is unlikely that many individuals truly thought about the nature of ‘income’ or ‘profit’ in a modern way until they faced an income tax. Macve’s approach uses the Foucault-centric, post-modernist method to suggest that the nature of income could not be fully formed until income tax came into existence. Therefore, the Romans would not have thought about income in the same manner.

Macve used the managerialist approach and the positivist approach in his reassessment of the economic rationality of Columella’s discussion on the profitability of viticulture (De Re rustica 3.3.7-15). Columella offers a basic financial comparison of whether to grow grapes for sale or to provide a loan at a six percent interest rate. Columella’s viticulture assessment proceeds as follows:

<table>
<thead>
<tr>
<th></th>
<th>HS [sesterces]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost of land</td>
<td>7,000</td>
</tr>
<tr>
<td>Cost of slaves for vine-dressing</td>
<td>8,000</td>
</tr>
<tr>
<td>Cost of preparation</td>
<td>14,000</td>
</tr>
<tr>
<td>Total:</td>
<td>29,000</td>
</tr>
</tbody>
</table>

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42Macve 1994.
Columella argues that a loan for the same amount (HS 29,000) at six percent would yield HS 1,950 per year, while the vineyard would provide HS 2,100 from the sale of grapes. Therefore, due to the slightly more profitable nature of the viticulture (150 HS), Columella suggests the latter as the more ideal business venture. However, as other historians are quick to point out, Columella ignores the depreciation and other non-cash costs that would affect such a business venture. De Ste. Croix critiqued Columella, stating that he “ignores the amortization of the vine-dresser, the cost of maintaining him, and of fertilization, the hiring of casual labor, and all other current expenses. It is interesting to find that the items which Columella ignores are just those which the ancient accounting system ignored.”

Macve takes further issue with the concept that Columella’s economic planning is considered haphazard in its lack of sophisticated assessment of opportunity cost and the calculation of profitability. In this context, Macve makes a comparison to the 17th century English farm accounts of Robert Loder, maintaining he had the exact same level of sophistication and analysis as Columella. To wit:

“These are not detailed day-to-day accounts, but annual summaries. They retain the primitive form of narrative paragraphs, often without money columns and using mainly Roman numerals. They are none the less sophisticated computations of the profitability of the various enterprises of the farm (and often of what profits might have been used, had some different course of action been pursued).”

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43 Mickwitz 1937, 586. “The evidence obtained from Roman manuals shows without doubt that Roman landowners were greatly interested in following those branches of agriculture which yielded the largest profit. And Columella's calculation, as quoted above, shows that incidentally they tried to have a rational foundation for their choice, but failed, nevertheless, to attain this end, owing entirely to the lack of development in the methods by which the profits to be obtained from farming could be ascertained.”


45 Macve 1984, 425.
The critical point for Macve is that the farmer, whether ancient or of the 17th century, has a limited set of options on how to best use his land. Therefore, from a managerialist approach, a daily revision of assets and calculations was rarely necessary. Operating costs such as feed for animals, the risk of parasites, and the monetary valuation of animals would have been known to both Columella and other estate managers. Moreover, the number of alternate investment options for most farmers, or the ability to attract ‘investors’ (a primary reason for modern balance sheets), would be limited and would rarely become an alternative option. Although Columella’s calculations were rudimentary, it seems likely that, similar to his 17th century counterpart, the ability to evaluate assets and profitability yearly seemed quite possible even without double-entry accounting. Finally, it seems more likely to Macve that the real intent of Columella is to convey the casual point to the reader (the positivist approach) that it is possible to make a quick assessment of whether such investments into farming could be more profitable than usury.

The final article that discusses Roman accounting directly was written by David Oldroyd in 1995. Oldroyd, an accounting historian, adopted a managerialist accounting position in his desire to update what he considered an unrealistic view by most Roman historians of the Roman emperor’s management of the monetary policy within the empire. In his article “The Role of Accounting in Public Expenditure and Monetary Policy in the First Century AD Roman Empire,” Oldroyd cites three examples from which historians tended towards adopting a rather passive outlook on the emperor’s duties. The first example, not surprisingly, comes from Moses Finley’s 1973 The Ancient Economy, when he says that “virtually nothing” came from the

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development of a Roman emperor with considerable economic power.\textsuperscript{47} Second, Oldroyd cites Fergus Millar’s study of the Roman emperor, which suggests that the emperor took a largely passive role in engaging in monetary policy.\textsuperscript{48} Finally, he notes Richard Duncan-Jones’ research on the monetary policy of Romans, which makes little mention of the role of accounting.\textsuperscript{49} With these examples, Oldroyd counters that with the degree of monetization present within the Roman economy, significant accounting controls were required.

To illustrate his point about direct controls, Oldroyd cites the earlier study of Chris Howgego, noting that the “various factors affecting the supply of bullion to the Aerarium. These factors included gains or losses associated with conquest, the productivity of the mines and the balance of payments with the East”.\textsuperscript{50} Because the supply was rather unstable and the emperor could not issue credit effectively, borrowing was limited, and deficits could not be maintained for long. Intense accounting controls were needed at a local level, with strategic planning by the emperor and his chief financial secretary (\textit{a rationibus}) on the basis of the accounting documents. For Oldroyd, such regular and frequent planning requiring accounting documents would necessitate an emperor being a highly active accounting manager. Oldroyd uses two primary sources as evidence to support this contention. The first is \textit{Res Gestae}, a document by Augustus circulated after his death. It lists his achievements, but more importantly, it records the

\textsuperscript{47} Oldroyd 1995, 118. Also see Finley 1973, 160-166. A longer treatment of Moses Finley and Roman accounting practices is provided in chapter four below.

\textsuperscript{48} Oldroyd 1995, 123. Also see Millar 1977, 120-122.

\textsuperscript{49} Oldroyd, 122.

\textsuperscript{50} Oldroyd 1995, 121. Howgego 1992, 2.
the empire’s assets in an accounting manner.\textsuperscript{51} The second source is that of references by Suetonius and Dio Cassius that “imperial accounts” were maintained after the death of Augustus.\textsuperscript{52}

Moreover, because previous analyses of Roman accounting were based on Sombart’s version of the post-modernist approach to accounting, discussion of the ‘Roman accountant’ was largely ignored. The reason why such discussion has been overlooked stems not only from the adoption of Sombart’s preeminence of double-entry, but also from the legacy of Max Weber’s concept of an ideal bureaucracy. The consensus among Roman historians in the 1960s through 1970s followed the Weberian view that the Roman bureaucrat was an ‘amateur,’ who lacked specialized education and training and merit-based promotions, and who frequently took an apathetic or disdainful attitude towards his bureaucratic duties. The problem here is that such views contradict what is known about Roman accounting culture (to be shown in chapters 2-4) — namely, that Romans maintained diligent accounting records, and their education mirrored that of accountants in other cultures up to the 1930s.

To fully illustrate the Weberian impact on Roman studies, there is value in reviewing the points made by Richard Saller’s 1982 \textit{Personal Patronage under the Early Empire}.\textsuperscript{53} In this

\textsuperscript{51} Oldroyd 1995, 124. “The \textit{Res Gestae} is a remarkable account of the Roman public of Augustus’ stewardship. It lists and quantifies his public largesse, which encompassed distributions to the people, grants of land or money to army veterans, subsidies to the Aerarium, building of temples, religious offerings, and expenditures on theatrical shows and gladiatorial games. It was not an account of state revenue and expenditure, but was designed to demonstrate Augustus’ munificence. The significance of the \textit{Res Gestae} from an accounting perspective lies in the fact that it was compiled retrospectively toward the end of Augustus’ life. This illustrates that the executive authority had access to detailed financial information, covering a period of some forty years, which was still retrievable after the event. Viewed in conjunction with the literary references, one is struck by the scope of the accounting information at the emperor’s disposal, which suggests that its purpose encompassed planning and decision-making.” For a longer discussion on the \textit{Res Gestae} as an accounting document, see chapter three below.

\textsuperscript{52} Oldroyd 1995, 124. Suetonius, \textit{Gaius Caligula} 16; Dio 59.9.4. A longer discussion of Suetonius is provided in chapter seven below.

\textsuperscript{53} Saller 1982, 111. “Secondly, the analysis in the previous sections of this chapter has, at least implicitly, measured the Roman system against an ideal type of a rational-legal bureaucracy. An objection might be raised that this is a meaningless comparison because even modern bureaucracies do not fully satisfy the criteria for this ideal type.”
book, Saller analyzes the promotion system of upper-level bureaucrats (procurators and those in a higher position). Using the earlier research of Hans-Georg Pflaum’s *Abrégé des procurateurs équestres*, he concludes that out of the 350 known procurator careers, there was no readily discernible promotion system based on education, specialization, or seniority.\(^{54}\) Similarly, he conducted his own study of 73 men who held legateships and, likewise, could not find a pattern for promotion clearly employing seniority or specialization.\(^{55}\) Saller quotes from Cassius Dio to illustrate that the priority for these elite classes was an ‘all-around’ education, not one structured towards specialization:

> “While they are still children they should go regularly to schools, and when they have grown out of boyhood into youths, they should turn to horses and arms with publicly paid teachers for each skill. For in this way they will become more useful to you in each kind of activity by having learned and studied from childhood all the things which they must accomplish upon growing into manhood.”\(^{56}\)

According to Saller, the most common way an *eques*, or senator, received an appointment was through patronage based more on positive, personal qualities such as “virtue” rather than

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\(^{54}\) Saller 1982, 81-82. “Here it is important to note that, although the age at which men held Republican magistracies was fairly constant, appointment to the important posts in the emperor's service was not nearly as predictable as has been thought. A recent reconsideration of the evidence has indicated that considerable modification of the old view is required. The names were collected of the 73 men who held consular legateships between 70 and 235 A.D. and whose earlier careers are known in detail. Of these only nine had careers conforming to the pattern of the *vir military* (i.e., holding only a legionary legateship and governorship of a praetorian province between their praetorship and consulate). Further, 43 out of the 73 held 3 or more regular praetorian posts; several held as many as 6. The logic behind holding only two praetorian posts was supposed to be that talented military men were hurried through their consulate to make them eligible for the great commands in the prime of their lives. Evidence for this conclusion seems to be weak as well. Indications of age during the consulate can only be deduced for twenty-one men in the list: fourteen of these seem to hold the consulates at a similar age, four were older; and the age of younger consuls can be explained by other factors, such as membership in the patrician order.” Saller 1982, 108. “In sum, it seems that none of the regular mechanisms postulated by historians for selection of meritorious candidates is securely attested.”

\(^{55}\) Saller 1982, 108.

because of a list of achievements. To demonstrate, Saller uses a number of Roman examples. Dio Chrysostom, for instance, in the late 1st century and early 2nd century, wrote a discourse on the nature of kingship in which he suggests that a king or emperor must be a beacon of honor for men to emulate:

“…among generals and commanders of armies of cities and people, whoever especially imitates your manner is seen to present himself in a way as similar as possible to your practices, this man would be among all men your closest and dearest companion. But if anyone becomes dissimilar and opposite to you, he would justly come upon censure and disgrace, and being quickly removed from his command he would give way to better companions more able to administer.”

Similarly, Saller uses Pliny’s encomium of Trajan’s reign in 100 CE to associate character with good governance:

“It is profitable for people to be good [now], since it is more than enough if it is not harmful; upon good men you bestow offices, priesthoods, provinces—they flourish by your friendship and judgment (sic). Those like them are spurred on by this prize for integrity and industry, while those unlike them are attracted to their ways; for rewards for virtue and vice make men good or bad.”

In a biography of his father-in-law, Agricola, Tacitus attributes to him the characteristics he deemed most prominent in making an excellent governor in the 1st century CE. These traits were *iusititia, gravitas, severitas, misericordia, integritas*, and *abstinentia* (justice, dignity, severity, mercy, integrity, and self-control). Likewise, Saller mentions that

57 Saller 1982, 96-98.
58 Saller 1982, 95-96.
59 Dio Chrysostom, *Orationes* 1.44. ὥσπερ οὖν ὅσοι στρατηγοὶ τε καὶ ἄρχοντες στρατοπέδων καὶ πόλεων καὶ ἕθνων, ὃστις ἂν τὸν σὸν μάλιστα μιμῆται τρόπον καὶ τοῖς σοῖς ἠθεσίν ὅμοιον αὐτῶν ὑπὸ δυνατῶν φαίνηται παρέχων, οὕτως ἂν εἰς ὑπὸ πάντων ἐπαυρώτατος καὶ προσφιλέστατος; εἰ δὲ τὶς ἐναντίος καὶ ἀνόμοιος γένοιτο, δικαίως ἂν τυγχάνοι μέμφετος τε καὶ ἀτυχίας καὶ αὐτῆς τις ἀρχῆς ταχὺ παυθείς παραχωρήσειν.
60 Trans. Saller 1982, 95. Pliny, *Paneg.* 44.7: Prodest bonos esse, cum sit satis abundeque, si non nocet; his honores, his sacerdotia, his provincias offers, hi amicitia tua, hi iudicio florent. Acuuntur isto integritatis et Industriei pretio similis, dissimiles alliciuntur; nam praemia bonorum malorumque bonos ac malos faciunt.
61 Saller 1982, 96.
“Antoninus Pius was thought to have been adopted by Hadrian because during his governorship he showed himself to be pious and serious.”

Saller ultimately goes on to make the point that these same characteristics for the selection of positions is nothing short of what the Romans upheld as traditional virtues dating to the Republican period. For instance, the qualities that made Cato the Younger a virtuous man, according to his contemporary the Roman historian Sallust writing in the 1st century BCE, included *eloquentia, integritas, constantia, modestia, severitas, and abstinentia* (Fluency, integrity, firmness, moderateness, strictness, self-restraint) — a near match to the ideals identified by Tacitus over a century later in praising his father-in-law.

A final feature of Roman bureaucrats is their preference for leisure (otium) while assigned to a bureaucratic posting. Saller cites an instance in which Pliny the Younger wrote his friend Baebius Macer, recounting how his uncle, Pliny the Elder, managed to write 102 books while holding a variety of procuratorships. In essence, Pliny implies that his uncle spent limited time on his duties, instead spending most his afternoons sunbathing and writing. Likewise, when Seneca writes to his friend Lucilius, who is about to hold a praetorship, he recommends that if he does not overwork, he will find sufficient time for his literary pursuits.

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62 Saller 1982, 96.
63 Saller 1982, 96.
64 Saller 1982, 96-100.
“To judge from what you write, my excellent Lucilius, you like Sicily and the duty of a leisurely procuratorship. And you will continue to like it, if you are willing to keep it within its own limits and not to make into imperium what is a procuratorship. I do not doubt that you will do this; I know how foreign ambition is to you and how familiar leisure and letters.”

Saller, among others, fully adopts the view of amateurism among Rome’s higher bureaucrats. Yet, to label the Roman bureaucrat simply as a slothful amateur is still rather problematic, as it ignores the achievements of the Roman bureaucratic state (organization, trade, and magnitude).

To sum up, the study of Roman accounting was dominated for a hundred years by sociological theories about the causative properties of double-entry accounting and bureaucratic theory. However, since Sombart’s importance has now largely been dismissed by accounting historians, there is the opportunity for a thorough review of Roman accounting. How does one best proceed with an analysis? If the original assessment by Sombart, Mickwitz, and de Ste. Croix was incorrect because too much emphasis was placed on comparing the perceived failings of Roman accounting documents against the perceived benefits of double-entry accounting, how does one reexamine the materials? An instructive way is perhaps to incorporate elements of the managerialist, positivist, and post-modernist approaches to Roman accounting data, as well as to take into consideration the accountants themselves, and the culture within which they worked. It must be acknowledged that the evidence for Roman accounting remains frustrating, since its limited remains make it impossible to establish meaningful statistical trends. Nonetheless, in the following chapters, there should be enough evidence to favor a more positive reframing of Roman accounting, one that does not necessarily underestimate its economic vitality.

67 Saller 1982, 100: “One other consideration serves to underline the amateurish nature of the top levels of Roman imperial administration: the amount of working capacity which an official devoted to his office.”
Chapter 2: ‘Sophisticated’ Roman Accounting Example

As has been indicated, the Romans had the capacity for advanced accounting. Understood simply, accounting is comprised of three tiers of sophistication. The first tier is concerned with inventory-tracking. At this basic level, accounting above all needs to be accurate. A quartermaster needs to know how many food provisions he has prior to winter, for example, or how much grain a farmer’s crop has yielded. Moreover, accounting needs to occur at regular intervals to facilitate resource-monitoring. The exact frequency would be determined by the manager in charge of the accounting documents. However, there is a clear benefit to be reaped through greater frequency, namely timelier (or swifter) assessments of such trends as provision utilization or crop performance.

The second tier of accounting sophistication includes the aspects of clarity and usability. For an accounting document, this refers to its format. A modern accounting balance sheet would state assets such as cash on hand, stocks, and accounts receivable before stating liabilities, such as debt. A contemporary cash flow document begins by listing the cash on hand and then proceeds to calculate any additions or subtractions, providing a net total below such calculations. In a modern context, there are measures such as GAAP (Generally Accepted Accounting Practices) that help to standardize documents. However, when a society lacks the equivalent of a private or state agency that encourages standardization, it is up to the creator of the accounting document to decide on the format. Another aspect of clarity is whether the accounting
documents take into account qualitative measures. For instance, would a carpenter specializing in chairs list the chairs by wood type or perhaps by overall quality of craftsmanship? If there is a strong qualitative component, is it such that one can accurately appraise the value of inventory?

The final tier of accounting sophistication relates to assessments of profitability (economic rationalism). In particular, does the accounting document go to the length of monetizing assets? Monetization means to record the value of assets in monetary value. For instance, let us say the carpenter from the previous paragraph assesses that each high-quality chair is worth 50 denarii. He has ten chairs. His listing, then, would be as follows:

10 High-Quality Chairs…………500 Denarii.

When all three tiers of accounting sophistication are incorporated, the result is an accounting document that is accurate, well organized, subject to regular updates and quality assessments, and monetized. With all aspects present, a manager may more accurately assess the financial health of an ongoing endeavor, anticipate possible profit, and make adjustments. Moreover, such a comprehensive tool could be presented to an external viewer, whether an auditor or potential investor, enabling the latter to make independent assessments. Lastly, all these elements typically represent what is known as “single-entry” accounting, which lists all the assets or cash flow in an organized and monetized manner. “Double-entry” accounting takes the next step and lists not only the assets but also all ongoing (i.e., future) obligations, such as debts, payments due, and loans. It is not that double-entry is more efficient than single-entry, however; rather, it provides a more thorough assessment of business endeavors and the financial health of an institution, as better forecasting is possible.
In regards to Roman accounting, there is one very important Roman accounting document that demonstrates all three tiers of accounting sophistication, develops an effective single-entry system, and uses economic rationalism. In the late 1980s through the early 1990s, Dominic Rathbone conducted a study of the Heroninos Archive, which comprises a papyri cache uncovered in the late 19th century in modern-day Harit (known as “Theadelphia” in antiquity). The documents date from 249-268 CE and focus on the estates of Appianus, a city councilor of Alexandria whose properties were scattered among several villages and towns along a 60-mile range in central Egypt. Rathbone’s work on these documents is often overlooked due to the fact that his book had several goals in addition to the study of accounting documents. He wanted to show how an estate was managed during the mid-3rd century CE. Additionally, he aimed to provide a discussion of the documents meant for papyrologists. It is not until near the end of his book that he discusses the intertwined nature of accounting documents and economic rationalism. On pages 332-333, he states the following concerning economic rationalism and Roman accounts:

“As regards economic history, the ‘Sombart’ thesis that the development of double-entry accounting was a precondition for the emergence of capitalism, because it first permitted sufficiently accurate calculation of profitability for economically rational decision making about future investment, has met with serious challenges. The alternative view, which seems to be gaining the edge in the debate, holds that the economic rationalism of modern capitalism has been exaggerated, that complex accounting systems are often of dubious value for anything more than checking the accuracy of the records, and that simpler accounting systems were and are quite adequate for economically rational management of relatively uncomplicated economic enterprises. Simple accounts do not necessarily indicate a simple economic mentality. Before

68Rathbone 1994, 13-56. Also see Rathbone 1991, 1. “The ‘Heroninos archive’ is the name given by papyrologists to a huge collection of documents, mostly letters, but also including a fair number of accounts, which comes from the Fayum area of Egypt and dates to the third century A.D. The collection can be subdivided into various groups which concern particular people or topics, but the bulk of the documents relates to the running of a large private estate, which I call the ‘Appianus estate’ after the man who owned it for most of the period to which the documents belong. The archive is named after Heroninos, who was for nineteen years manager of the unit of the Appianus estate centred on the village of Theadelphia, because he was the addressee of most of the extant letters and he drafted most of the extant accounts.”
comparing Greek and Roman accounts with any ideal of modern practice, their appropriateness to and efficacy in the context of the enterprises which produced them should be examined.”

Rathbone was able to note several key elements that made this archive so unique and applicable to demonstrating accounting sophistication. One in particular is the idea of linked accounts, or accounts that occur at regular intervals. Rathbone found that the Heroninos Archive utilized a monthly system for recording transactions and monitoring inventory. On each of the estates, there existed three types of accounts. The first set is best described as a “draft” account to be used on the estate for recording daily items such as “disbursements of wine” or “payments made”. The estate managers, or phrontistes, would be responsible for their own individual estates. Rathbone estimates that there were roughly 40 estates and 38 epikia (farmstead administrative buildings) that needed to be managed. Most of these estates were comprised of vineyards, olive groves, and grainland. The second type of accounts was more formalized accounts that summarized the month’s activities. The final account type was a yearly summary that incorporated a formal listing of each month’s activities and a final yearly submission for review by Appianus. As Rathbone correctly suggests, a large part of the accounting must have been devoted to the recording of the employment of men and draught animals and whether they received payment either by cash or produce.

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69 Based off of the Egyptian month that is shorter than a month in the Julian calendar.


71 Rathbone 1994, 31-34.

72 Rathbone 1991, 338. “Although the ‘monthly’ accounts each cover one Egyptian month, they were not drawn up each month but drafted in groups, probably all together at the end of each Egyptian year. The best evidence for this comes from P.Lond. 1170 verso, a set of accounts relating to the Egyptian year 258/9 drafted by a certain Lucretius in the name of Heroninos as pronooumenos of the unit at Theadelphia of the Herakleides estate. Lucretius took an old roll, already used on its recto, unrolled it partially and wrote on the verso, in what are now cols. Vii-xii, more or less complete drafts of the monthly accounts for Hathyr and Choiak (November and December 258), presumably based on his notes on another piece of papyrus.”

73 Rathbone 1991, 335.
The monthly accounts were typically all similar, and they mirror the format of the accounts seen at the end of this chapter. This accounting system demonstrates a notable level of advancement. Features include records for permanent staff and their salaries, inventories of wheat and vegetable oil, and a subsection listing disbursements of bread loaves. Also, smaller daily accounts were kept to track hay expended upon draft animals. For an illustration of this type of account, Rathbone translated the following from the estate (P.Fl. III 322. 35-49).

Field (kleros) of Crown Land, Seventy-Aroura locality:

Bundling hay on the 5 ar. which were (recorded as) mown in the previous account, 8,800 bundles at the rate of 9 dr. per ar., 4[5] dr.

Transporting hay, [x asses(?)].

Loading (them), 21 [oiketai and metrematiaioi]

Accompanying (them), [17(?) men at 2 dr. 2 ob.(?), 39] dr.

Stacking (it), [29(?)] oiketai and metretaiioi.

Harvesting 8 ar., 32 epiokiotai through the men

From Kleopatras and Myronos at 2 dr. 6 ob., 91 dr. 3 ob.

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75 κλήρου Βασιλικῆς τόπου (ἐβδομηκονταρούρου) δεσμεύοντες χόρτον τὰς τειλείσας (ἀρούρας) ε διὰ τοῦ α λόγου δέσμες Βω ως τὸν (ἀρούρων) ἐκ (δραχμών) δ[ -ca.?- ] (δραχμαι) δ χορτηγοῦντες [-ca.? ]

γεμίζοντες [-ca.? - ]κα ἁκολουθοῦν[τες -ca.? ] (δραχμαι) . . συντιθοῦν[τες -ca.? - ]

ρις θερίζοντες (ἀρούρας) η ἐποικιῶται λβ διὰ τὸν ἀπὸ τῆς Κλεοπάτρας και Μύρωνος ἐκ (δραχμών) β (δβλόων 6) (δραχμαι) φα (τριώβολον) συν[λέγ]ο(ντες(?)) δράγ’ ματα οἰκ(έται) καὶ γό(μοι) λγ . . . . . η τίλλοντες (ἀρούρας) β οἰκ(έται) καὶ ιβ γό(μοι) ιβ [γ(ίνονται) τ]’οδ κλήρου (δραχμαι) ρρε (τριώβολον) οἰκ(έται) καὶ μετρη(ματιαῖοι) ις
Tying up sheaves, 4 oiketai and metrematiaioi, 33 loads.

[?] 2 ar., 12 oiketai and metrematiaioi, 12 loads.

Total for the kleros: 175 dr. 3 ob.

The format of the documents, combined with the example above, indicates economic rationalism for several reasons. First, such a method would demonstrate not only the profitability of an estate from month to month but could also detail seasonal trends and, finally, the overall level of success for the year. Second, the level of detail is rather intense. In the example above, the detail goes to the point of breaking down the cost of each aspect of farming hay, from harvesting, loading, stacking, transporting, and accompanying the hay to tying it up. Moreover, at every step, the cost is monetized (cost is listed in drachmas), which can be further analyzed to understand the least to most costly aspects of growing hay for profitability.

Further, each record was sent to Appianus in Alexandria, who was assumed to review these accounts and make adjustments as he saw fit. It is at this juncture where an educated hypothesis needs to be made, as no surviving notes indicate Appianus’ thoughts. It could be easily envisaged that the standardized style of records received by Appianus from all his estates could be used to make an assessment of whether to expand field production, change the types of crops in certain fields, or change labor practices to maximize profitability.

It should be noted, as Rathbone did himself, that these archives were not available to Gunnar Mickwitz or Geoffery de St. Croix, and were not well researched by Moses Finley.76 However, it becomes apparent here that the Romans had the capacity for economic drive and complexity. Still, since so little remains of Roman accounting examples, it is hard to state with

76Rathbone 1991, 27.
any certainty the proportion of accounting documents that offered such a degree of sophistication.
Chapter Two Part Two: Accounting Documents from the Appianus Estate

The final part of this chapter is devoted to presenting a selection of the accounting documents from the Appianus estate as translated by Rathbone. When viewing them, the most important elements to consider include the organization, standardization of formation, level of detail, and corresponding monetization. The degree of detail is immense. For instance, every cost is monetized and assessed, such as in the case of hay, where its costs are separated into “attending hay,” “carrying hay,” and “stacking hay”. Moreover, most estate members are carefully listed, with the functions of many employees specified.

Regarding the standardization in formats, both entries which reflect individual months begin with an introductory letter to Appianus followed by monthly balances that are carried from one month to the next. Additionally, if payments occur in cash, they are then organized by all cash outlays. The same payment structure occurs if payments are made in wheat instead of cash. Also, employees and costs are organized by both types and functions. Therefore, it would be possible for an owner or manager, even from a distance, to make detailed profit evaluations, assess employee numbers, and indirectly oversee the routine functioning of the farm.
### APPENDIX 1. PAPYROLOGICAL MATTERS

#### Recto

**Col. i**

<table>
<thead>
<tr>
<th>Line</th>
<th>Text</th>
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</thead>
</table>
| 5    | Δευτέρος | γ' (πρώτος) ἐξ ἀναλογίας (ἐν ἡμέρα τοῦ ἡμερολογίου) βασιλείας αἰώνος τῆς ἀλήθείας τῆς λημάτωσις τῷ Πέτρῳ μνήμονι τῷ Παύλῳ τῷ Ηρώδῃ τῷ Όμπρι τῷ Ποσείδῃ τῷ Πολυδρικῆς τῷ Παρθένῳ τῷ Πλουταρχῷ τῷ Αιγιαλείᾳ τῷ Ἐραξίῳ τῷ Πλάτωνι τῷ Εὔριπίδεστῳ τῷ Χριστίνῳ τῷ Περιπλανώμενῳ τῷ Πατριάρχῃ τῷ Τραγικῷ τῷ Φιλόσοφῳ τῷ Παντοκράτῃ τῷ Σωτῆρи τῷ Πολιτείᾳ τῷ Πολιτικῷ τῷ Πολύτονως τῷ Παρθένῳ τῷ Παῦλῳ τῷ Πολύκλειτῳ τῷ Πολύκλειτῳ τῷ Πολύκλειτῳ τῷ Πολύκλειτῳ τῷ Πολύκλειτῳ τῷ Πολύκλειτῳ τῷ Πολύκλειτῳ τῷ Πολύκλειτῳ τῷ Πολύκλειτῳ τῷ Πολύκλειτﾘ τῷ Πολύκλειτῳ τῷ Πολύκλειτ AndAlso τῷ Πολύκλειτῳ τῷ Πολύκλειτῳ τῷ Πολύκλειτ لدينا تكوينات في البحوث السمعية والبدء في الانتقاء.

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<tr>
<td>10</td>
<td>καὶ ἀπὸ τὸ ἐν οἶκῳ ἀνέπο (προ) αὐτῶν καὶ ἐπὶ (ἀπε) διὰ Βέροιας Κέλλως (δρ.) μ' εἰς (τέ) τὸ στάτος (δρ.) μ' λημάτωσις 'Τοῦ</td>
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**Col. ii**

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<tbody>
<tr>
<td>15</td>
<td>(μ. 1) (δ) ἐν τῇ (ἀναλογίᾳ) ὑπαρχον'</td>
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<td>Πολιτείᾳ (δρ.) κ'</td>
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<td></td>
<td>Πολιτικῷ (δρ.) η'</td>
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<tr>
<td>20</td>
<td>Δεξιός (δρ.) η'</td>
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<td>'Ακιθής (δρ.) η'</td>
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<td>25</td>
<td>Χαράμα (δρ.) η'</td>
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<td>Δικαίωμα τοῦ θεοῦ (δρ.) μ'</td>
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#### Two Draft Monthly Accounts of Heroninos

**Recto**

**Col. i**

To Aurelius Appianus former-exegeneses and houleutes of the most glorious city of the Alexandrians and however he is styled, from Aurelius Heroninos phrōnites of Theadelphia:

- account of receipts and disbursements for the month Pauni of the present year 3.
- As follows:

**Receipts**
- From the price of 225 monochora of wine at 1 for 12 dr. 2,700 dr.
- And from (?) the bank 28 dr.
- And from the price of 13 art. wheat at 1 for 16 dr. 208 dr.
- And from the rest of a mill through Eionous (?) lessee and Eo(...) for 3 months (?) 100 dr.
- And from their occupation of a house and a room through Besis son of Keleus 40 dr.
- Making total of receipts 3,076

**Col. ii**

15 From which disbursements:
- For salaries:
  - To me Heroninos 40 dr.
  - To Pontikos 20 dr.
  - Polion cowherd 17 dr. 1 ob.
  - Aspis cowherd 48 dr.
  - Delos cowherd 60 dr.
  - Aikes ass-driver 8 dr.
  - Pounari ass-driver 8 dr.
  - Kastor ass-driver 17 dr. 1 ob.
  - Kostis' portuaries of Chaireou 8 dr.
- To Sarmates with him 68 dr. 4 ob.
- Dorion ox-driver 48 dr.
- Heriklas as-guard 16 dr.
- Dionysios oxen 4 dr.
- Papatas 4 dr.
- Deme 4 dr.
- Timokrates 4 dr.
- Hermes 4 dr.

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APPENDIX I. PAPYROLOGICAL MATTERS

Τιμήθηκεν με τον Αντικειμένον (δρ.) εις τον Κόσμον (δρ.) την Νόμον 35

και της Κοινής Κύριος (δρ.) ζήλος (τετραβάθμ.)

(τ.υ.) Ιωάνναν (δρ.) σαν (τετραβάθμ.)

Col. iii
tειμί Χερσον τις τον Λόγον (δρ.) ιή
και τον Άγιον Ιούνιον Ευτύχιον (δρ.) ιή
και τον Άγιον Ιακώβον Παύλον (δρ.) ιή
προς την Ευαγγελίαν (δρ.) τον Κυρίο
προς την Ευαγγελίαν (δρ.) τον Κύριον
προς την Ευαγγελίαν (δρ.) τον Κύριον
προς την Ευαγγελίαν (δρ.) τον Κύριον
προς την Ευαγγελίαν (δρ.) τον Κύριον

Col. iv
διήθηκεν (δρ.) εις (δρ.) εις (δρ.) ιή
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εις (δρ.) εις (δρ.) ιή
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εις (δρ.) εις (δρ.) ιή

TWO DRAFT MONTHLY ACCOUNTS OF HERONINOS

Sarapammon 4 dr.
To Ases for discharge of dyke duties(?) 16 dr.
35 To Paterius prostates of the Hollow 68 dr. 4 ob.
To Lamethes with Timorates 48 dr.
Total of salaries 515 dr. 3 ob.

Col. iii
Price of paper for the account 4 dr.
To the komarchai of Euhemeria in respect of Akies ass-driver 16 dr.
40 To the komarchai of Taki in respect of Polion cowherd 12 dr.
To those from Dionysias in respect of Dorion 16 dr.
To those from Narmouthes in respect of Ases cowherd 8 dr.
To those from the village through Hermas in respect of Akies ass-driver 8 dr.
45 In respect of Kastor ass-driver 8 dr.
In respect of 3 cowherds 24 dr.
In respect of Kastor prostates of Chaireon 40 dr.
In respect of didrachmon for the same 20 dr.
In respect of Pousarion ass-driver 40 dr.
50 In respect of didrachmon for the same 20 dr.
In respect of monomeria for 42.5 ar. of crown land 32 dr.
In respect of didrachmon for the same 20 dr.
Price of 500 jars at 100 for 8 dr. 4 ob. 68 dr. 4 ob.
Price of 3 eurybalchelida of reds 20 dr.
55 To dieramatis in respect of the price of . . . (?) ar. wheat 28 dr.
Pulling 2 ar. vegetables(?) at 1 ar. for 16 dr. 32 dr.
Carrying sheaves, 15 . . . (?) asses . . . (?)
taken(?) altogether 15 days' work at [[4 dr.]] 2 dr. 6 ob. 42 dr. 6 ob.
Atting them, 15 days' work at 4 dr. 60 dr.

Col. iv
(Carrying?) sheaves (x asses, attending them?) 7 days' work at 4 dr. 28 dr.
. . . . , 7 days' work? (12 dr.) 14 dr.
Tying sheaves, 15 days of . . . (?) work at 2 dr. 30 dr.

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APPENDIX I. PAPYROLOGICAL MATTERS

ζυρτηγεύοντες ὄνομα Ἀπολλ. (? ) σφ( ) με καὶ ἔδω (πλν) ὄνομα

καπ(τοπος) σφ( ) ἕ-πληρος(ς) συν. . . . ( ) ἐγκ(τίμα) καὶ ἐκ (δρ.) β (χρήσκ.) (δρ.) λε

(πνευμάθη)

65 ἀκολουθούντες (καις) ἐγκ(τίμα) καὶ ἐκ (δρ.) δ (δρ.) ν [πνευμάθη]

συν(τίματας) ἐγκ(τίμα) καὶ ἐκ (δρ.) δ (δρ.) ν [πνευμάθη]

πτέρα . οντες ἐγκ(τίμα) ζ ἐκ (δρ.) α (πνευμάθη)

(καπ(τοπος) ) σφ( ) (χρήσκ.)

(πνευμάθη)

(μ.ι.α.) σφ( ) (χρήσκ.)

(m.1) τεμήρι κριστάν κ- [κ] 'Ερμίωνι τέκ(τον)

ἀναπηριζόμενον εἰς τὴν κολλήν

70 δι(τεσταλαντος) Νίννοι (δρ.) πκ

tεμήρι ἀρχαῖος 'Ερμίου τέκ(τον) ἀνα-

πηριζόμενος εἰς τὴν κολλήν ἔργας τῆς εἰς

τὸν Με (γραφείον) ἐκ (τεσταλαντος) Νίννοι: πτέρα (καις) εικ- (δρ.) μι

tῆς τεμήρι 'Ερμίου τεμήρι ἀλόγων β-

75 τελειοι ἀναπηριζόμενοι εἰς τὴν

κολλήν ἐκ (τεσταλαντος) Νίννοι (δρ.) π

tῆς τεμήρι τῆς ἀλόγων ἀλόγων παγο-

δέξις τοῦ Διόδπου (τεκν.) δεξίς τοῦ

(δρ.) εικ
tεμήρι χόρων ἀναπηριζόμενος καθά

80 Πάππου τοῦ μορίκα α ὡς τῶν μ ἐκ (δρ.) η (δρ.) εικ

Ἀταμάνιας πείραμι ὄνομα τῆς τοιτού (τεκνικάς)

δρ(χρήσκ.) εκ (δρ.) β (χρήσκ.) (δρ.) τῆς (δριστ.)

Col. v

κοινοῦντες κήπην τῆς βοσκή ἐγκ(τίμα) καὶ ἐκ (δρ.) β (χρήσκ.) (δρ.) εικ (δοκ.)

Κανάπαν τέκ(τον) πιθανῶν τύπων

85 ἐν κτηματίῳ Χρύσωγου Λερμνίου (καπ. Χελανίας) (μ.ι.α.) καὶ Χελανίας δρ(χρήσκ.) [ε (δρ.) к] β (δρ.) η

(μ.ι.α.) τῆς τεμήρι (μ.ι.α.) ταῖς ἐκ τοῦ Σκόλλακος βρ(χρήσκ.) β (δρ.) η

τῆς τεμήρι ἀντιστοίχιον άνδρον καὶ [κόν] δρ(χρήσκ.) (δρ.) [β (δρ.) η]

δρ(χρήσκ.) (δρ.) η

(μ.ι.α.) τῆς τεμήρι ἀντιστοίχιον άνδρον καὶ [κόν]

Καλλοκέθ(ον) δρ(χρήσκ.) (μ.ι.α.) δρ(χρήσκ.) εικ (δρ. καπ. Χελανίας)

430

TWO DRAFT MONTHLY ACCOUNTS OF HERONINGS

Carrying hay, 15 asses of Apoll( ) . . . (?) and another 4 asses of

Kastor . . . (?)

taken (?) altogether 23 days' work at 2 dr. 6 ob. 65 dr. 5 ob.

65 Attending them, 23 days' work at 4 dr. 91 dr.

Stacking (the hay), 23 days' work at 4 dr. 92 dr.

Children . . . . (?) 60 days' work at 1 dr. 5 ob. [91 dr. 3 ob.] 102 dr. 6 ob.

Price of 20 ring-components (?) to Horion carpenter

which were sent up to the city

70 by order of Ninnos 120 dr.

Price of a water-wheel to Hermes carpenter

which was sent up to the city being needed for

the Memphite by order of Ninnos, of 5.5 cubits 140 dr.

To the same Hermes, price of 2 finished

75 ploughs which were sent up to the

city by order of Ninnos 80 dr.

To the same, price of another plough

received by Dorian ox-driver, a second one (?)

24 dr.

Price of hay bought from

80 Paisios, 10,000 (bundles) at 100 for 8 dr.

To Atammon supplying (?) water to the river-workers

for 5 days at 2 dr. 6 ob. 14 dr. 2 ob.

Col. v

Making a drinking-fountain (?) for the cattle, 6 days' work at 2 dr. 6

ob. 17 dr. 1 ob.

To Kanopolos carpenter fitting (?) a (water-wheel) drum

in the enclosure of the Goldsmith, and to Chollon, for [11] ?

days [1117] 8 dr.

To the same . . . . (?) in the olive grove of Skyllas, for 2 days 8 dr.


20 dr.

To the same, (fitting) a new axle-shaft for the enclosure

of the Gouras, for days, for 5 days 20 dr.
TWO DRAFT MONTHLY ACCOUNTS OF HERONINOS

90 To the same, having fixed (?) them new at 4 d.,
price of 4 boxes (?) which were handed over
to Kaster the ass-driver
16 dr.
Price of 4 horsehair straining-cloths at 53 dr. 208 dr.
95 Turnings (?) the crop on the threshing-floor of the 7 ar. of barley,
Winnowing (on) the same threshing-floor, 6 days' work at 4 dr. 24 dr.
96 Turning (?) the crop on the threshing-floor of the 35 ar. of the Hollow,
25 days' work at [4] 2 dr. 6 ob. 86 dr. 5 ob.
Winnowing (on) the same threshing-floor, 24 days' work at 4 dr. 96 dr.
100 To a man lifting sacks with the ass-drivers,
6 days' work at 4 dr. 24 dr.
6 days' work on the threshing-floor of lentils, 3 days' work at 4 dr. 12 dr.

And to P (?) ass-driver, to the (4), from the (epoikion) of
Aulon 171 dr.

95 Turning (?) the crop on the threshing-floor of the 10 ar. previously
part of the (epoikion) of Sphinx and the 4 ar. of the Hollow, total
14 ar., 10 days' work [118 dr. 4 ob.] 30 dr.
105 Winnowing (on) the same threshing-floor, 10 days' work at 4 dr. 40 dr.

Col. vi
Making total of disbursements 3,400 dr., against which receipts of
3,076 dr., there is owing against the account 324 dr.

So too (account) of kind:
From the account for the previous month 119 art. 6 metra
From which disbursements: for salaries:
110 To the Heroninos 1 art. wheat.
To Pontikes 1 art. wheat.
Aikes ass-driver 1 art. wheat.
Pouaris ass-driver 1 art. wheat.
Kaster ass-driver 1 art. wheat.
115 Polion cowherd 1 art. wheat.
Herakles ass-guard 1 art. wheat.
APPENDIX I. PAPYROLOGICAL MATTERS

Kiot' prostates of Chaireou (πυροφ. ἄρτ.) 1-  
Δεος θεοκόλολος (πυροφ. ἄρτ.) 2-  
Σαραπάμον

120 Αμίσας (πυροφ. ἄρτ.) 2-  
Δεοσίπος (πυροφ. ἄρτ.) 2-  
Γερμής (πυροφ. ἄρτ.) 2-  
Πατής (πυροφ. ἄρτ.) 2-  
Σωκράτης (πυροφ. ἄρτ.) 2-  

125 'Ασημή κατ' ἐξήκτης χι.μ[άκας] (πυροφ. ἄρτ.) π-  
Θαλασσάς ἔλεγε γ-, (γίν.) δωματίων (ἐπ.) μέσα σ-  
Φορτούντας δοκεῖ τέρ α'  
Δαλανήν (ἐπ.) π-  

Col. vii

130 καὶ εἰς ἄρτοποιεῖν τῆς φροντίδος (ἐπ.) (m. i.a) σ-  

(ἐπ.) στοιχεῖοι εἰς ἄρτοποιεῖν διὰ  
Ποντικοῦ δρύι (θημέρας) λγ. ἐπιστηλεύων (ἐπ.) Νένου (ἐπ.) [σ]  

(m. i.a) σ-  

(ἐπ.) καὶ ἐπείδη ἂν οὐκ ἔζησαν τῇ δεκαετίᾳ διὰ  
τῶν ἀγγειωμάτων ἅλον (πυροφ. ἄρτ.) γ-  
135 (γίν.) τέρ (ἐπ.) τὸ σύνολον ἄμοι (ἀρματος) (ἐπ.) (m. i.a) μ-  

(ἐπ.) λουκών ἐπεβάσατο τῇ δεκαετίᾳ (ἐπ.) (m. i.a) σ- διομένος σ-  

(ἐπ.) καὶ στοιχεῖοι  
Περιγράφεται ἀπὸ κλήρου Γλαροποτίας  

(ἐπ.) ζ (δρ.) δίκη (ἐπ.)  

140 ἰλίοι (πυροφ. ἄρτ.) γνωρίμοιο γ' (ἐπ.) (ἐπ.) σ-  
καὶ δρυς (ἀρμόνιοι περιγράφονται ἀπὸ κτήματος ἐπὶ ἐπόκτης) τοῦ τοῦ  
Σημικός ἐπ.) 1-  
καὶ κλήρου Κύκλως Μικροῦ (ἐπ.) δ (γίν.) ἐπ.)  
μέσα (ἐπ.) σ-  
καὶ κλήρου 'Αλμιάδος (ἐπ.) δ κοινὸ πρὸς Δαλανῆν  
145 προστάτη (γιν.) ἑλθον Ποντικοῦ δρύι (ἐπ.) ροῖδ-  

TWO DRAFT MONTHLY ACCOUNTS OF HERONINOS

Kiot' prostates of Chaireou 1 art. wheat.  
Deo's cowherd 1 art. wheat.  
Sarapamon 1 art. wheat.  

120 Demes 1 art. wheat.  
Dionysios 1 art. wheat.  
Hermes 1 art. wheat.  
Papias 1 art. wheat.  
Timokrates 1 art. wheat.  

125 To Ases for discharge of dyke duties(?) 1 art. wheat.  
To the doorman of the guesthouse 5 metra.  
Total of salaries 16 art., 5 metra.  
To Fortunatus, present to supervise the threshing-floors 1 art.

Col. vii

130 And for making bread for the phrontes 1 art.  
To the river-workers for making bread through  
Ponikos for 33 days by order of Ninnos 112 art.  
And there were sold, of which the price has been recorded as a receipt in the account of cash. 13 art. wheat.  
135 Making total of disbursements 47.5 art.  
Remainder is left over 72 art. 1. metron.  
[[Barley:]]  
[[The return from the 7 ar. of the allotment of Glossosom...]]  
[[was 71.5 art. barley.]]  
140 Art. of other wheat of the crop of year 3: The return from the 35 ar. of the allotment of the Hollow of art. wheat by the receiving measure was 345.5 art.  
And so too the return from the 10 ar. of the enclosure previously part of the epokrion of Sphinx and the 4 ar. of the allotment of the Small Hollow, total 14 ar., was 159 art. 4 metra.  
And from the 9 ar. of the allotment of Alabien shared with Dioskoreos prostates, son of Ponikos, on terms of a half part of 149.5 art.
APPENDIX 1. PAPYROLOGICAL MATTERS

... (m.1) δραυνο διστατικος
... (m.1) τα γενάμενα ζεύγη (m.1a) [2] δραυνο(ός) = ]ζεύγη(ς) =
... (m.1) λουκ(όν) διστατητίς ζεύγη (ς) [κει] = (γεν.) = διστατητίς μετά
... (m.1) φατηος έγι ιογον το δραυνο(ός) μηνος (ός) =
... (m.1) φατηος έγι ιογον το δραυνο(ός) μηνος (ός)

436

TWO DRAFT MONTHLY ACCOUNTS OF HERONINOS

to be entered into the master’s account according to his half share
74 art. 7 metra 2 choin.
Making total 577 art. [55] 6 metra 2 choin.
Which are by the four-choinikos measure 666 art. 2 metra.
150 Which are ........ 8 dr.(7) ...

Col. viii
So too leaves:
From the account for the previous month 23 doubles, 1 (single) loaf.
And 1 art. was made into bread
totalling 40 doubles.
155 Making total [[37 doubles, 1 loaf]] 63 doubles, 1 loaf.
From which disbursements:
To the winnowers of the threshing-floor of the barley, 6 days’ work
over 2 days 6 doubles.
To the winnowers of the threshing-floor of the Hollow, 24 days’ work
24 doubles.
[[To the winnowers of the threshing-floor of the lentils, 3 days’ work 3
doubles.]]
160 To Kanosos carpenter, days’ work over 10 days 10 doubles.
To Atamanos supplying (?) water to the river-workers for 5 days, 7
doubles, 1 loaf.
Remainder is left over [166] 16 doubles. Total of disbursements
47, 1 loaf.
Barley: The return from the 7 ar. of the allotment of Gloukom ..
was 71.5 art.
These are by the four-choinikos measure 75 art. 3 choin.
165 From which disbursements: For the Lliologist 1.5 art. To the
breadmakers towards the leaves(?)
for the winnowers and the river-workers 1 art. Remainder is left
over 72.5 art. 3 choin.
Lentils: from the account for the previous month 5 art.
From which disbursements: to the winnowers on the threshing floors
...
APPENDIX I. PAPYROLOGICAL MATTERS

Col. ix
δρωσαεισχρου' ἐν λόγῳ(ν) (δητ.) ἐ μ(έτρον) πά-
κις "Αντίγκινης πιστωτική(ών) τοίς κοινομετρετοῖς κατ.(ς.) Λυ-
τοις λεγόμενος τὰς ὀλικιας ἐπερ(έφη) ἐν κοτ.(ς.) δι-
(π. 11) Φορακοντάτη ἐντα τον δικαιο(ν) κατ.(ς.) δ-
και προσοικ(έφη) τι τὸ λόγῳ ἐπί τοίς (προτερέου) μὴν(ν) κατ.(ς.)
λεγό-

(γίνεται ἐπὶ το οὖ και(ς) μὴν[(π. 11)] το το προσοικ(ή) τι τὸ λόγῳ

Col. x
ἐν τοις [προτερέου] μὴν[(ν)] δὲ αὐτὸ μανή(χει) χαὶ
καταμετρήθη μεν ἐνδῶν διὰ
Σουμαχαμου(νος) ἐν ἀποτελέσματος Νιννοῦ μανή(χει)
μὲν τὸ το οὖ κατά μανή(χει) χαὶ

185 (καὶ) διακαταχρομάτως
Κομόπη προσέχοντες 'Αρμάθων ἐν ἀποτελέσμασι
Νείναν δικαία μανή(χει) χαὶ
ἡμερ' Ἀμεποιοῦντι

190 Προκειμένου
μανή(χει) χαὶ
τιμηθεὶς ἄνθρωπος
μανή(χει) χαὶ

195 Πασίλης ἄνθρωπος
μανή(χει) χαὶ

Col. x
Καστόρ ανθρώπος
μανή(χει) χαὶ

195 Πασίλης ἄνθρωπος
μανή(χει) χαὶ

195 Πασίλης ἄνθρωπος
μανή(χει) χαὶ

200 Καστόρ ανθρώπος
μανή(χει) χαὶ

TWO DRAFT MONTHLY ACCOUNTS OF HERONINOS

the visiting supervisors 2 metra.

170 To Fortunatus present to supervise the threshing-floors 1 metron.
To the river-workers by order of Ninno 1 art.
Remainder is left over 3 art. 7 metra.

Col. ix
Chickling-sand: from the account 1 art. 1 metron.
Oil: To Asammon supplying water to the river-workers 0.625 kot.
To the winnowers on the threshing-floors, 23 days' work, 4 kot. 8.
To Fortunatus present to supervise the threshing-floors 4 kot.
And there is owing against the account from the previous month 58-375 kot.

Making total [489][47-375] 47 kot., which also is owing against the account.

180 Wine:
From the account for the previous month 426 single mon.
And there were brought to me from Ithbon through Soughammon by order of Ninno 52 mon.
Making total 478 single mon.

185 From which disbursements:
To Kopros promotes of Arbabon by order of Ninno 32 single mon.
In respect of the Amessaia:
To me Heroninos 1 mon.

190 To Pontikes 1 mon.
Akees ass-driver 1 mon.
Pouarri ass-driver 1 mon.

Col. x
Kaster ass-driver 1 mon.
Polon cowherd 1 mon.
Akes cowherd 1 mon.
Deos cowherd 1 mon.
Dorion ox-driver 1 mon.
To Ases for discharge of dyke duties(?) 1 mon.
To Heraklas ass-guard 1 mon.

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**APPENDIX I. PAPYROLOGICAL MATTERS**

<table>
<thead>
<tr>
<th>Page</th>
<th>Text</th>
</tr>
</thead>
<tbody>
<tr>
<td>46</td>
<td>46</td>
</tr>
</tbody>
</table>

**TWO DRAFT MONTHLY ACCOUNTS OF HERONINOS**

<table>
<thead>
<tr>
<th>Description</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sarapamon oiketes</td>
<td>1 mon.</td>
</tr>
<tr>
<td>Denesas</td>
<td>1 mon.</td>
</tr>
<tr>
<td>Doxyysis</td>
<td>1 mon.</td>
</tr>
<tr>
<td>Hermes</td>
<td>1 mon.</td>
</tr>
<tr>
<td>Timokrates</td>
<td>1 mon.</td>
</tr>
<tr>
<td>To Fortunatus present to supervise the threshing-floors</td>
<td>1 mon.</td>
</tr>
<tr>
<td>And there were sold, of which the price has been recorded as a receipt in the account of cash</td>
<td>225 mon.</td>
</tr>
<tr>
<td>To Heron chèresites and Neila coming for the winnowing on the threshing-floors for 6 days</td>
<td>2 mon.</td>
</tr>
<tr>
<td>Disbursements</td>
<td>278</td>
</tr>
<tr>
<td>Remainder is left over</td>
<td>200 single mon.</td>
</tr>
</tbody>
</table>

**Col. xi**

<table>
<thead>
<tr>
<th>Description</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>(vacat)</td>
<td></td>
</tr>
<tr>
<td>dēmos</td>
<td></td>
</tr>
<tr>
<td>eγ ὑγιοῦ τοῦ (προτέρου) μη(νός)</td>
<td>δέχεναι ρδ</td>
</tr>
<tr>
<td>215</td>
<td>μο(νό)χερ(α)</td>
</tr>
<tr>
<td>(όν) θαλ.Ι.μιοτος</td>
<td></td>
</tr>
<tr>
<td>επεμφατίζεις διὰ Ποντικοῦ διὰ(στελεχοῦς) Νίκου</td>
<td></td>
</tr>
<tr>
<td>(m.1.a)</td>
<td>διὰ Ποντικοῦ (m.1) δέχαρα (m.1.a) e (m.1) δέρας</td>
</tr>
<tr>
<td>τοῖς λεγΜεν ἔτος δῶρον καὶ Φοιτούσαρ</td>
<td></td>
</tr>
<tr>
<td>220</td>
<td>καὶ τοῖς εὐρομάζοντις μο(νό)χερα(ν)</td>
</tr>
<tr>
<td>λοιπ(ῶν) ἡμεῖς(ν) οὖν</td>
<td></td>
</tr>
<tr>
<td>225</td>
<td>μο(νό)χερα(ν)</td>
</tr>
<tr>
<td>κόρον</td>
<td></td>
</tr>
<tr>
<td>eγ ὑγιοῦ τοῦ (προτέρου) μη(νός) δέχεται μο(νό)χερα(ν)</td>
<td>σπ</td>
</tr>
</tbody>
</table>

**Col. xii**

<table>
<thead>
<tr>
<th>Description</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>δέξοντες ἐγ λόγον τοῦ (προτέρου) μη(νός) Εξ(ονεος)</td>
<td>[ε] (m.1.a) η</td>
</tr>
<tr>
<td>(m.1) (όν) θελ.Ι.μιοτος</td>
<td></td>
</tr>
<tr>
<td>ἀνελμήθη διὰ τῆς κόλης Κολοκυθών δέξονται</td>
<td></td>
</tr>
<tr>
<td>λοιπ(ῶν) ἡμεῖς(ν) οὖν</td>
<td></td>
</tr>
<tr>
<td>230</td>
<td>βοσκον</td>
</tr>
<tr>
<td>βοσκον</td>
<td></td>
</tr>
</tbody>
</table>

**Col. xii**

<table>
<thead>
<tr>
<th>Description</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>225</td>
<td>Axes: From the account for the previous month</td>
</tr>
<tr>
<td>From which disbursements:</td>
<td></td>
</tr>
<tr>
<td>To the river-workers through Pontikos by order of Ninnos through Pontikos</td>
<td>[4] 5 dich.</td>
</tr>
<tr>
<td>To the winnowers on the threshing-floors and to Fortunatus</td>
<td></td>
</tr>
<tr>
<td>and to the others who came up</td>
<td>1 mon.</td>
</tr>
<tr>
<td>Remainder is left over of sour wine</td>
<td>[100] 99 dich.</td>
</tr>
<tr>
<td></td>
<td>50 mon.</td>
</tr>
</tbody>
</table>

**Jars**

| From the account for the previous month | 280 single mon. |
APPENDIX I: PAPYROLOGICAL MATTERS

Col. xii
240 (π.ια) γραφή τετρασύλων:
ονόμα τέλους 1
μπόλας 15
τυμφάνιτον 4

245 μόσχος 8-

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TWO DRAFT MONTHLY ACCOUNTS OF HERONINOS

Account of tools:
Pruning-knives 5.
Hay-scythes 5.

235 Ploughshare for oxen 1.
Secondary ploughshare(?) 1.

240 Record of livestock:
Adult asses 13.
Mule 1.
Axe-foils 11.
Ox-team 1.

245 Calves 4.
Other calves 3.

250 Of Aesius cowherd: 8 adults, 2 calves,
increase of year 1: 1 calf.

255 Of Deinos: 10 adults, 2 calves,
increase of year 1: 1 calf.

Of Polion: 8 adults, 1 calf,
increase of year 1: 1 calf,
increase of year 2: 4 calves,
increase of year 3: 1 calf.

(space)
Verso

Col. i

χόρτου ζη(νοι)
λόγος ἀπειριστος τοις Πανιν, μη(νος)
ἐν λόγοι τοις (προπέροις) μη(νος) (μηρ.) δ δεσ(μ.) (δεσ(μ.)) ᾿Αριθμ.
καὶ ἡγούσθησαν (μηρ.) α

5 σών δε τη ἐν λόγοι (μηρ.) ε δεσ(μ.) ᾿Αριθμ.
(ἀν) ἀναθομίσως
α- δον γ- ἡδον ἀπο ἡμισςον ἐποδον δεσ(μ.) λ.
/ ἄλλον δον ε- μ(ολος) α- χρησ(ανης) δεσ(μ.) ζ.
δ λεπότες δον δεσ(μ.) θεμελιωτες τοις θεμελιωτέ
ταις τον ἀνε ἀνοι λ.
δεσ(μ.) ε
κτῆσι(ης) γα δραγκ(ματησιον) ἐν τη Κότη δεσ(μ.) λ.
β- δον ε- δραγκ(ματησιον) δεσ(μ.) ν
"ἄλλον δον Δ- (μ.1λ) μ(ολος) α- (μ.1) ἄνασα(νης) χόρτου 
δεσ(μ.) λ.

κτῆσι(ης) γα δραγκ(ματησιον) ἐν τη Κότη δεσ(μ.) λ.

(μ.1α) γ- δον δ δεσ(μ.) ο κτῆσι(ης) γ λ.
(μ.1) δ- δον δ- εις την πόλιν (εποδον ἀναθομίσως)
GREEK
ἀριστερά εις τον Με(α) (φιλητη) κριντοι
ἄλλον δον δ μ(ολος) α δραγκ(ματησιον) ἐν Κότη δεσ(μ.) γ 
κτῆσι(ης) γα δραγκ(ματησιον) ἐν τη Κότη 
δεσ(μ.) λ.
20 (μ.1α) ψ (μ.1) γτ

Col. ii

δ- δον δ μ(ολος) α δραγκ(ματησιον) ἐν τη Κότη δεσ(μ.) γ 
κτῆσι(ης) γα δραγκ(ματησιον) ἐν τη Κότη δεσ(μ.) λ.
δον δ- ἡδον ἀναθομίσως δεσ(μ.) λ.
ζ- / δον δ μ(ολος) α χρησ(ανης) δεσ(μ.) ν
25 άλλον δον δ- δραγκ(ματησιον) Κότος δεσ(μ.) μ-
κτῆσι(ης) γα δραγκ(ματησιον) εις Μιχρον Κότος δεσ(μ.) λ.
ζ- δον δ- δραγκ(ματησιον) δεσ(μ.) μ-
/ ἄλλον δον δ μ(ολος) α χρησ(ανης) δεσ(μ.) ν
κτῆσι(ης) γα δραγκ(ματησιον) ἐν τη Μιχρον Κότη δεσ(μ.) λ.
30 ζ- δον δ- δραγκ(ματησιον) μ Αλαμβ. δεσ(μ.) μ-

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TWO DRAFT MONTHLY ACCOUNTS OF HERONINOS

Verso

Col. i

Of dry hay:
Account of employment for the month of Pauni:
From the account for the previous month 41,519 bundles.
And there were bought 10,000.

5 With those from the account 51,519 bundles.
From which disbursements:

1. 3 asses came from Ithone with a load of wine 30 bundles.
The other 5 asses and 1 male carrying hay 60 bundles.
The remaining ass serving the river-workers from day 1 to day 30
300 bundles.

10 3 beasts carrying sheaves in the Hollow 30 bundles.
5 asses carrying sheaves 50 bundles.
The other 4 asses and 1 male putting the hay in store
300 bundles.

2. 3 beasts carrying sheaves in the Hollow 30 bundles.
9 asses 90 bundles, 3 beasts 30.
4. 4 asses to the city with a load of wood [[for a waterwheel
needed for the Memphite]] of ring-component(?)
The other 4 asses and 1 male carrying sheaves in the Hollow
30 bundles.

20 3 beasts carrying sheaves in the Hollow 30 bundles.
730. [[δύτο]]

Col. ii

5. 4 asses and 1 male carrying sheaves in the Hollow 50 bundles.
3 beasts carrying sheaves in the Hollow 30 bundles.
4 asses came from the city 40 bundles.
6. 4 asses and 1 male carrying hay 50 bundles.
The other 4 asses carrying sheaves at the Hollow 40 bundles.
25 3 beasts carrying sheaves at the Little Hollow 30 bundles.
7. 4 asses carrying sheaves 40 bundles.
The other 4 asses and 1 male carrying hay 50 bundles.
3 beasts carrying sheaves at the Little Hollow 30 bundles.

30 8. 4 asses carrying sheaves at Alabien 40 bundles.

445
**APPENDIX I. Papyrological Matters**

![Image of text]

**TWO DRAFT MONTHLY ACCOUNTS OF HERONINOS**

- The other 4 asses and 1 male carrying hay
  - 50 bundles.
- 3 beasts [to the Homestead] carrying sheaves
  - 50 bundles.
- 4 asses and 1 male carrying hay
  - 50 bundles.
- The other 4 asses carrying sheaves at Alabien
  - 40 bundles.
- 3 beasts to the Homestead.
- 4 asses and 1 male carrying hay
  - 50 bundles.
- The other 4 asses carrying sheaves at Alabien
  - 40 bundles.
- 4 asses and 1 male carrying hay
  - 50 bundles.
- The other 4 asses carrying sheaves at the Hollow
  - 40 bundles.

**Col. iii**

12. 3 asses and 1 mule to Ibon to get (?) wine.
    - The other 5 asses carrying hay
      - 50 bundles.
13. 3 asses and 1 mule came from Ibon
    - The other 5 asses carrying hay
      - 50 bundles.
14. 8 asses and 1 mule carrying hay
    - The ox-team from Eusphemia coming to cart off the irrigation-machine yokes needed for farmwork
      - 50 bundles.
15. 3 asses to the city with a load of 2 ploughs.
    - The other 5 asses and 1 mule carrying hay
      - 50 bundles.
16. 3 asses came from the city with a load of wine
    - The other 5 asses and 1 mule carrying hay
      - 50 bundles.
17. 4 asses carrying sheaves
    - The other 4 asses and 1 mule carrying hay
      - 50 bundles.
18. 8 asses and 1 mule carrying grain sacks
    - The other 4 asses of Pousaris came for farmwork
      - 40 bundles.
    - Another 3 asses from Eusphemia came for farmwork
      - 30 bundles.
    - Kerdon ......(?)
      - 10 bundles(?)
    - 1 ass from Ibon ridden by the cheirisites
      - 10.
    - The small ox-team came from Taiki
      - 50.
    - 730.

**Col. iv**

19. 8 asses and 1 mule doing farmwork
    - The other 4 asses of Pousaris doing farmwork
      - 40.
APPENDIX I. PAPYROLOGICAL MATTERS

εἶλεν ὁνόμα Θεόλητος γυναῖκας/οίνας 10
καὶ ὁνόμα Πάππης μουσακάς

56 εἶλεν ὁνόμα Πάππης ἰδίας καὶ ἐκ τῆς πόλιος ἤθελον ἀνθρώπους ἑπικονομάζειν.

75 ὁνόμα Πολύκριτος ἱλίαν ἐπὶ ὁνόμα 

Col. v
καὶ ὁνόμα Πολύκριτος ἵλιον ἐπὶ τῆς πόλεως

82 ὁνόμα 

TWO DRAFT MONTHLY ACCOUNTS OF HERONINOS

The other 3 asses of Philoias doing farmwork 30. 100(7).
20. 8 asses and 1 mule carrying sheaves on the crown land 90.
65. 21. 8 asses and 1 mule carrying sheaves on the crown land 90.

Another 3 asses [1 mule] from Dionysian coming with a load of bridles (?) needed for the city 30.
22. 4 asses to the city with a load of wood for a water-wheel.

The other 4 asses and 1 mule carrying hay 50.
70. 3 beasts came from the city 30.
Another 4 asses came to get the wine for Arabion 40.
23. 4 asses came from the city 40 bundles.

The other 4 asses and 1 mule carrying sheaves on the crown land 50.
24. 8 asses and 1 mule were at rest for the festival 90 bundles.
25. The other 4 asses came from Philoilies 40.
26. 12 asses and 1 mule were at rest for the festival 130 bundles.
27. 12 asses and 1 mule were at rest for the festival 130 bundles.
80. 28. 8 asses and 1 mule carrying hay 90.
1,230. The other 4 asses of Pousaris to the city.

Col. v
29. 8 asses and 1 mule carrying hay 90.
30. 8 asses and 1 mule carrying hay 90.
85. Making total for these items [3,510] [3,630] 3,560
11 ass-foals from day 1 to day 30.
To each at 8 bundles 2,840 bundles.
The ox-team, through Dorion, doing farmwork in the
Hollow from day 1 to day 30 1,500 bundles.
To 4 calves, 45 bundles daily
from day 1 to day 30 3,350.
To the other [4] 3 small calves
to each at [4 bundles] 5 11
[480] [160] 450 bundles.
95. 5,970.
APPENDIX I. PAPYROLOGICAL MATTERS

Col. vi

51

Col. vii

APPENDIX II. TWO DRAFT MONTHLY ACCOUNTS OF HERONINOS

Col. vi

51 of cattle:
At the enclosure of the Goldsmith 30 yoke/days' work 480.
Another yoke from day 1 to day 30 raising water for the livestock from day 1
100 to day 30, 30 yoke/days' work 480.
Of Pourris or Appho( ), 30 yoke/days' work 480 bundles.
Of Chaireous, 30 yoke/days' work 480 bundles.
Of Pantikos, 30 yoke/days' work 480 bundles.
Of Kleisodike, 30 yoke/days' work 480 bundles.
At the new plantation of Tares, 10 yoke/days' work 160 bundles.
At the enclosure of Similis, 8 yoke/days' work 128 bundles.
3,168. Making total for these items [[2;148]] 258.
110 [[Making (8;618)]]
115 [[Against which 51;519]]
110 [[Remainder is left over 32;901]] [[981]]

Col. vii

Making total of disbursements 12,668 bundles.
Against which 51,519 bundles.
Remainder to the next month 38,551 bundles.
Account of employment for the month
115 of Pauni of the present year 3
of our Lords Valerianus
and Gallienus Augusti.
As follows:
From the account  bundles.
120 From which disbursements:
1. 8 asses carrying sheaves in the Hollow 80 bundles.
2. So too 8 asses carrying sheaves 80 bundles.
3. 8 asses carrying sheaves in the Hollow 80 bundles.
4. horse coming from the city 1
6. by order of Nilas 12 bundles.
7. 4 asses to Narmouthis 80 bundles.
8. to transport the ploughs needed at Arabaun.
APPENDIX I. PAPYROLOGICAL MATTERS

Col. viii

130 Ἀλλα δ' Ποορίας δρυγα(ματηγηγούντες) ἐν τῷ Κέτι δεσὶ(μ.) π.
- δ' ἄνω δ' δρυγα(ματηγηγούντες) ἐν τῷ Κέτι δεσὶ(μ.) π.
- Λημαθραίη δεσὶ(μ.) π.
- Ἐορίας δ' Κάπτωρος ἡλίου ἐπὶ Ἀραβίαν δεσὶ(μ.) π.
- Ἐκεῖκα δ' Ποορίας χρη (τῆς) χούντων δεσὶ(μ.) π.
135 (m.1:1) δ' ἄνω η ἐπὶ Νεκλᾶ δεσὶ(μ.) π.
- Ἐορίας δ' ἡ δρυγα(ματηγηγούντες) ἐν τῷ Κέτι δεσὶ(μ.) π.
- δ' ἄνω η ἐπὶ Νεκλᾶ δεσὶ(μ.) π.
- δ' ἄνω δ' Χρυσάνθους ἐν τῇ βασιλείᾳ γῇ δεσὶ(μ.) π.
- δ' ἄνω δ' ἡ Χρυσάνθους ἐν τῇ βασιλείᾳ γῇ δεσὶ(μ.) π.
140 (m.1:1) δ' ἄνω η ἡ δρυγα(ματηγηγούντες) ἐν τῇ βασιλείᾳ γῇ δεσὶ(μ.) π.
- δ' ἄνω δ' Νεκλᾶ ἐπὶ Καλαμεινᾶν 
- δ' ἄνω δ' Ποορίας δ' δ' δρυγα(ματηγηγούντες) ἐν τῷ Κέτι δεσὶ(μ.) π.
- δ' ἄνω δ' Νεκλᾶ δ' δρυγα(ματηγηγούντες) ἐπὶ Καλαμεινᾶν δεσὶ(μ.) π.

Col. ix

150 μεταφ(ερε') κλασάυνα σὺν τῷ ἕμπορον Ἐπουκ (π.)
- δ' ἄνω δ' δρυγα(ματηγηγούντες) 
- δ' ἄνω δ' δρυγα(ματηγηγούντες) 

TWO DRAFT MONTHLY ACCOUNTS OF HERONINOS

Col. viii

3. The other 4 of Pousaríus carrying sheaves in the Hollow 40 bundles.
4. 4 times carrying sheaves in the Hollow 40 bundles.
To Demasus carter 50 bundles.
7. The 4 times of Kastor came from Arabon 40 bundles.
The other 4 times of Pousaríus carrying hay 40 bundles.
135. 1 ass ridden by Nikas 10 bundles.
8. 8 times carrying sheaves in the Hollow 80 bundles.
9. 1 ass ridden by Nikas 10 bundles.
8. 8 times carrying hay on the crown land 80 bundles.
10. 8 times carrying sacks of grain in the Striipfields 80 bundles.
140. 11. 4 times carrying hay on the crown land 80 bundles.
The other 4 times carrying grain-sacks to Kalamine.
- Demasus coming from the city to get a cog-wheel 50 bundles.
- 12. 4 times carrying hay on the crown land 40 bundles.
- Demasus moving a [15-cubit cog-wheel] plough 50 bundles.
- 145. 13. The 4 times of Pousaríus came from Kalamine 40 bundles.
The other 4 times carrying hay on the crown land 40 bundles.
Demasus to get the [16-cubit cog-wheel for the phronitis of]
Magdala 50 bundles.
14. 14. 8 times carrying sheaves in the Hollow 80 bundles.
15. 15. You was handed over the builder(?) for the 80 bundles.
transport of bricks in epokion Chaireou.
150. To Demasus carter coming from Magdala 50 bundles.
80 bundles.
15. 15. 8 times carrying sheaves 80 bundles.
To Demasus carter coming from Magdala 50 bundles.

Col. ix

16. 16. 8 times carrying sheaves 80 bundles.
17. 17. 1 ass ridden by Heraklē 10 bundles.
18. 8 times carrying grain-sacks 10 bundles.
19. 18. 8 times carrying grain-sacks 80 bundles.
19. 19. 3 times to the city to get wine [19 bundles].
- The other [20] 5 to Eumembra to carry grain-sacks 30 bundles.
20. 20. The 3 times of Pousaríus from the city 30 bundles.
The other 5 times carrying sheaves 50 bundles.
APPENDIX I. PAPYROLOGICAL MATTERS

κε ὁ δὲ Κάρτιας γιά τὴν πάλιν ἔτι οἶνον δεσπ. 
ἀλ.δε(λο)ς ἐν Κάρτιας, χορτατη(σίαις) δεσπ. τὸν ἄνδρα ἡμερών γιά τὴν πάλιν ἔτι οἶνον δεσπ. τὸν ἄνδρα ἡμερών γιά τὴν πάλιν ἔτι οἶνον δεσπ.
καὶ ὁ δὲ Πούπικος ἡμερών γιά τὴν πάλιν ἔτι οἶνον δεσπ.
ἀλ.δε(λο)ς ἐν Κάρτιας, χορτατη(σίαις) δεσπ. τὸν ἄνδρα ἡμερών γιά τὴν πάλιν ἔτι οἶνον δεσπ. τὸν ἄνδρα ἡμερών γιά τὴν πάλιν ἔτι οἶνον δεσπ.
καὶ ὁ δὲ Πούπικος ἡμερών γιά τὴν πάλιν ἔτι οἶ

454

TWO DRAFT MONTHLY ACCOUNTS OF HERONINOS

21. The 3 asses of Kastor to the city to get wine
   bundles.
   The other 5 [of Kastor] carrying hay
   50 bundles.
22. The 3 asses of Kastor came from the city with a load of wine
    30 bundles.
   The other 3 of Pousaris to the city to get wine
   30 bundles.
   The other 2 carrying hay
   20 bundles.
23. The 3 asses of Pousaris came from the city.
   The other 4 of Akies came from the city
   40 bundles.
   The other 5 were at rest
   50 bundles.
   11 beasts came from the city with a load of wine
   120 bundles.
   4 asses with a load of . . . . (7)
   32 bundles.
   24. 12 asses were at rest for the festival
   120 bundles.
   11 beasts collecting charcoal
   120 bundles.
   4 asses with a load of . . . . (7)
   32 bundles.
   1 ass came with a load of . . . . (7)
   10 bundles.

Col. x
25. 12 asses were at rest for the festival
   120 bundles.
26. 12 asses delivering hay
   120 bundles.
27. 12 asses carrying sheaves in the Hollow
   120 bundles.
28. The 4 asses of Akies to Philoteria(?)
   The other 8 carrying hay
   80 bundles.
29. 8 asses
   80 bundles.
30. The 3 asses of Pousaris to the city with a load of . . . . (7)

Col. x
31. The 8 to Apiaies.
   2 ox-teams and 1 calf came from Dionysias
   from day 27 to day 30, daily
   105 bundles
   420 bundles.

(space)

455

53
Col. i

To Aurelius Appianus former exegetes and bouleutes of the most glorious city of the Alexandrians and however he is styled,

from Aurelius Heroninos proconsules of Threadelphia:

[account of] receipts and disbursements for the month of Hathyr

of the present year X. As follows:

[Receivings: From the price of 200 monochora of wine at 1 dr. 2 ob.]

2,057 dr. 1 ob.

[....]... (?) 16 dr.

[....]... (?)

[From the price of 13 art. wheat at] 20 dr. per art. 260 dr.

Total of receipts 2,457 dr. 1 ob. ?

(space)

Col. ii

For salaries:

To me Heroninos 40 dr.

456
APPENDIX I. PAPYROLOGICAL MATTERS

<table>
<thead>
<tr>
<th>Line</th>
<th>Text</th>
</tr>
</thead>
</table>
| 15   | Ποιησεις αγορακομος (δρ.) ικ |}
| 20   | Απεικονισεις αγορακομος (δρ.) ι |}
| 25   | Διοικητικος (δρ.) δ |}
| 30   | Διοικητικος (δρ.) δ |}
| 35   | Διοικητικος (δρ.) δ |}

Col. iii

[Text of an axe deposited by Kanopos, of 9.5 cubits 90 dr.]
APPENDIX I. PAPYROLOGICAL MATTERS

In respect of 

[...]

[two draft monthly accounts of Heroninos]

In respect of

doing dyke work for the enclosure

for 11 days, attending them, 20 days’ work at 2 dr. 2 ob. 45 dr. 5 ob.

[two team of 4 asses doing dyke work at the enclosure of Paniskos for 8 days, attending it, 8 days’ work at 2 dr. 2 ob. 18 dr. 2 ob. 1 herder for the bought beasts for[.]} days at 1 dr. 5 ob. [...?]

Of the enclosures, 16 days’ work at 2 dr. [...?]

With 1 team of 4 asses(?!) doing dyke work at the enclosure of Chaireou, [...?]

[attending it, 20 days’ work at 2 dr. 2 ob. 45 dr. 5 ob.]

Col. iv

With another team of 4 asses[ doing dyke work] at the enclosure of Perseus for 10 days, attending it, 10 days’ work at 2 dr. 2 ob. 23 dr. 2 ob.

[Children?] [... from day 1 to 8, 10 days’ work at 1 dr. 1 ob. 11 dr. 3 ob.]

For digging (...?) of the cattle 60 days’ work at 2 dr. 2 ob. [137 dr. 1 ob.] 68 dr. 4 ob.

To Kasosos, carpenter (space)

To Hera [or hares] carpenter for (?) a water-wheel, through the bank 100 dr.

With the ass(es?) irrigating in the enclosure of Poursis, 8 days’ work, attending them, 8 days’ work at 2 dr. 2 ob. 18 dr. 2 ob.

Price of dry hay purchased, 6,400 bundles at 100 for 20 dr. 1,280 dr.

Asles: 1 axe of (?)

Making total 1,590 dr. 6 ob. Another 326 2 ob.

Making [1,917 dr. 1 ob.]. 2,297 dr. 1 ob.

And to Poleon ass-driver of Tali 63 dr. 1 ob., making 2,260 dr. 2 ob.

To Hera for (?) a water-wheel 100 dr.

Making total 2,360 dr. 2 ob.

Against which receipts 2,457 dr. 1 ob.

Remainder to the following month 97 dr. 1 ob.
APPENDIX I. PAPYROLOGICAL MATTERS

50 [...] δροσηγήσεως εἰς κοίμησιν εἰς τετραπόδιον (tetrapolideon) τετραπόδεις β-β (θύμας) τα
ἀκολουθοῦντες ἐργα (ἔργα) κ. ἐκ (ἐκ.) β. (διδαφ.)(ἐκ.) μ. (περιβάλλ.)
χορωτιζόντων εἰς κτήσις Μαυρίκου

55 (tetrapoleion) ν. β' ήμερ(ήμερ) ἡ ἀκολουθοῦντες ἐργά (ἔργα) ἡ ἐκ (ἐκ.) β. (διδαφ.)(ἐκ.) μ. (περιβάλλ.)
προτότο κτησιον νυμ (νυμ.) ν. β' (θύμας) [ἐκ (ἐκ.) β. (περιβάλλ.)]
[συνάλλαγμα κλάθε εἰς πλιν]

60 κτησιον ἐργα (ἔργα) ν. β. [ἐκ (ἐκ.) β.]
... ἐπονομαὶ γεματιζόντων εἰς κτήσις Χαρίου (tetrapoleion) ἐπ. π. [ἀκολουθοῦντας ἐργα (ἔργα) κ. ἐκ (ἐκ.) β. (διδαφ.) (ἐκ.) μ. (περιβάλλ.)]

Col. iv
πάλαι[...] γεματιζόντων εἰς κτήσις Περεύας (tetrapoleion) ν. β' (θύμας) τα ἀκολουθοῦντες ἐργα (ἔργα) κ. ἐκ (ἐκ.) β. (διδαφ.) (ἐκ.) μ. (περιβάλλ.)
[ἐκ] (ἐκ.) β. (περιβάλλ.) τα (τρισάρχεια)

65 ἐπονομαὶ γεματιζόντων εἰς κτήσις τῶν βασιών ἐργα (ἔργα) ν. β. (ἐκ.) β. (διδαφ.) (ἐκ.) β. (περιβάλλ.) τα (παρατεταμένα) (ἐκ.) μ. (περιβάλλ.) τα (παρατεταμένα)

65a (tetrakosia)
Ἐραμ [καυμάτης τῇ] τεκτονικῇ εἰς λα[...] μετεπειδείς διὰ τριετές[...] (παράτητος) τα (παράτητος)

67a (kataxri)
Ἐραμ [καυμάτης τῇ] τεκτονικῇ εἰς λα[...] μετεπειδείς διὰ τριετές[...] (παράτητος) τα (παράτητος)

70 ταμή [εἰρετικός] χρονού χρονοσυνάδεις διασκεδάζειν ὑπεραμμάθην ὑπεραμμάθην (παράτητος) τα (παράτητος) ἀσπάζομαι διὰ (ἐκ.) μ. (παράτητος)

TWO DRAFT MONTHLY ACCOUNTS OF HERONINOS

In respect of didachemon for the same 20 dr.
To Paseis prostates of Kleisodike 60 dr.

50 [...] With 2 teams of 4 asses carrying chaff to the village as fodder for the animals
for 11 days, attending them, 20 days' work at 2 dr. 2 ob. 45 dr. 5 ob.
With 1 team of 4 asses doing dyke work at the enclosure
55 of Panikos for 8 days, attending it, 8 days' work at 2 dr. 2 ob. 18 dr. 2 ob.
1 herder for the bought beasts for [...] days
at 1 dr. 5 ob. [...] [collecting jars for brickwork?] [...] 77
of the enclosures, 16 days' work at 2 dr. [...] With 1 team of 4 asses doing dyke work at the enclosure of Chaireou,
... [attending it, 20 days' work at 2 dr. 2 ob. 45 dr. 5 ob.]

Col. iv
With another 1 team of 4 asses [doing dyke work] at the enclosure of Pereseus for 10 days, attending it, 10 days' work at 2 dr. 2 ob.

[Children?] [...] from day 1 to 8, 10 days' work at 1 dr. 1 ob. 11 dr. 3 ob.

65 For digging [...] of the castle
[66] 30 days' work at 2 dr. 2 ob. 137 dr. 1 ob. 68 dr. 4 ob.
To Kanopus carpenter [space]
To Herma [komarches] carpenter for [...] a water-wheel, through the bank 100 dr.
With the asses [...] irrigating in the enclosure of Poulaxis, 8 days' work, attending them, 8 days' work at 2 dr. 2 ob. 18 dr. 2 ob.

70 Price of dry hay purchased, 6,400 bundles at 100 for 20 dr. 1,280 dr.
Ashes: 1 axe of [...] (?)
Chapter 3: ‘Basic’ Roman Accounting

The majority of surviving Roman accounts utilize only the first tier of accounting sophistication. Typically, they reflect simple inventory listings and lack a sophisticated format, quality assessments, or monetization. For example, consider the accounting example from the archive of Theophanes (John Rylands Library-P.Ryl. IV 616-642).\textsuperscript{77} Theophanes, a wealthy Roman administrative official, made a six-month, round-trip journey from Hermopolis in Egypt to Antioch in Syria in the early 4th century CE with an entourage (size unknown) of friends and household assistants. The archive is remarkable in that it provides an in-depth accounting perspective of his trip, including inventory lists of goods from the beginning of his trip to goods purchased and their associated costs throughout the trip.

John Matthews, who has done the most research on this archive, notes in his book, \textit{The Journey of Theophanes: Travel, Business and Daily Life in the Roman East}: ‘Theophanes’ staff divided the Egyptian month of thirty days into six periods of five days with daily and periodic subtotals, the grand total being entered at the end of the month.’\textsuperscript{78} However, for purposes of journal entries, where the dates are recorded, data is frequently entered on the same day the transaction occurred. For instance, in \textit{Recto VI} (P.Ryl. 639), lines 121-129, the entries are dated to the Egyptian month Phamenoth (March) 18, 23, and 24. \textit{Recto V}, lines 100-120, shows date entries from Phamenoth 27-30 and Pharmouthi (late March) 1-2. The use of daily journal entries

\textsuperscript{77} Roberts 1952.

\textsuperscript{78} Matthews 2006, 90.
as the basis for five-day and monthly tabulations provides greater accuracy than less frequently updated accounting systems, as seen in the sample of entries below:

<table>
<thead>
<tr>
<th>Column V</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>547-59 (Pauini) 24</td>
<td></td>
</tr>
<tr>
<td>paid to the mender, for two tunics</td>
<td>400 cr.</td>
</tr>
<tr>
<td>cost of soda</td>
<td>200 cr.</td>
</tr>
<tr>
<td>cost of fine loaves</td>
<td>300 cr.</td>
</tr>
<tr>
<td>common loaves for the boys</td>
<td>600 cr.</td>
</tr>
<tr>
<td>green vegetables and gourds</td>
<td>100 cr.</td>
</tr>
<tr>
<td>firewood</td>
<td>100 cr.</td>
</tr>
<tr>
<td>fine olive oil, one krestes</td>
<td>1,000 cr.</td>
</tr>
<tr>
<td>vinegar, two xestai</td>
<td>200 cr.</td>
</tr>
<tr>
<td>eggs</td>
<td>200 cr.</td>
</tr>
<tr>
<td>lekme and cucumbers</td>
<td>100 cr.</td>
</tr>
<tr>
<td>for lunch with Antoninus</td>
<td>200 cr.</td>
</tr>
<tr>
<td>Total for the day</td>
<td>3,600 cr.</td>
</tr>
<tr>
<td>350-71 (Pauini) 25</td>
<td></td>
</tr>
<tr>
<td>cost of fine loaves</td>
<td>400 cr.</td>
</tr>
<tr>
<td>common loaves for the boys</td>
<td>600 cr.</td>
</tr>
<tr>
<td>vegetables and gourds</td>
<td>100 cr.</td>
</tr>
<tr>
<td>firewood</td>
<td>100 cr.</td>
</tr>
<tr>
<td>eggs</td>
<td>200 cr.</td>
</tr>
<tr>
<td>soap</td>
<td>100 cr.</td>
</tr>
<tr>
<td>spiced wine</td>
<td>100 cr.</td>
</tr>
<tr>
<td>olives for lunch for the boys</td>
<td>100 cr.</td>
</tr>
<tr>
<td>artichokes and cucumbers and lettuce</td>
<td>100 cr.</td>
</tr>
<tr>
<td>Total for the day</td>
<td>1,600 cr.</td>
</tr>
<tr>
<td>372-73 total expenses for five days</td>
<td></td>
</tr>
<tr>
<td>from 21st to 25th inclusive</td>
<td>3 tal. 100 cr.</td>
</tr>
<tr>
<td>374-86 (Pauini) 26</td>
<td></td>
</tr>
<tr>
<td>cost of fine loaves</td>
<td>200 cr.</td>
</tr>
<tr>
<td>common loaves for the boys</td>
<td>400 cr.</td>
</tr>
<tr>
<td>ordinary olive oil</td>
<td>700 cr.</td>
</tr>
</tbody>
</table>

Matthews 2006, 101-103.
Columns V and VI are framed.

Image of the *P.Ryl. 639.* Columns V and VI are framed.

---

80 Image from the John Rylands Papyri Collection Online: http://enriqueta.man.ac.uk/luna/servlet/ManchesterDev~93~3
The archive of Theophanes offers further revealing insight into Roman method from the accountant’s standpoint. Theophanes had a dispensator, a term for accountant (possibly a slave), present with him, likely to do much of the accounting. It is possible that the “errors” in the accounting reflect problems in his educational level, style, and accounting competence.

Matthews finds a mistake in Verso III, line 259, where the sum of money spent is incorrect. Matthews points out other inconsistencies too, found in the archive, such as dates frequently missing or out of order within the listing.

In addition to errors of computation and issues of dating, other aspects prevent the document from providing a more sophisticated accounting. One is the indiscriminate mix of multiple trifling expenditures minutely recorded along with a few substantial cash sums about which nothing is said. The most prominent is the lack of quantity associated with the various

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81 Matthews 2006, 54.
82 See Matthews 2006, 229 “To you.”
grocery purchases. For instance, the number of eggs or quantity of olive oil purchased is unspecified. Moreover, there is a degree of internal organization missing from the accounts. Although all types of items purchased were included, they are not sorted by alphabetization, cost, type, or any other recognizable grouping. Finally, while there is some attention paid to qualitative aspects such as “ordinary olive oil” or “common loaves,” it is not consistently applied. Even so, since the lists focused on itemized costs with very frequent entries, the aim was certainly to monitor whether Theophanes’ entourage was staying within budget during his trip.

The next set of relevant accounting documents comes from the archives of Vindolanda, located near Hadrian’s Wall in Northern England. The archives are thin strips of wood (local birch, alder, and oak) written on with ink. Remarkably, they were preserved and discovered in the 1970s. However, they could not be read until the 1990s, when infrared cameras were used to decipher the writing. One reason to consider these accounts is to juxtapose them with the Heroninos Archive presented in chapter two. Whereas it meticulously tracks every expense, standardizing its report, and monetizing cost, the Vindolanda tablets represent simple inventory listings or cash flow documents and lack complexity. (There is also the possibility that these accounts may represent “notes” or simple sheets for calculations, which would be in line with the Roman accounting practice of first preparing an adversaria [or “day-book”] before consolidating the information into a more formalized report.)

The four examples below from the Vindolanda archives help to illustrate the “basic” style

83 All the Vindolanda tablets are published online at a site devoted to the collection, see: http://vindolanda.csad.ox.ac.uk/
of accounts. Tablet 154 shows an inventory of soldiers’ availability. It assesses how many soldiers out of a total of 752 are healthy and available for service. The example itself is organized like the Theophanes papyri, with more of a columned approach listing out the calculations. Tablet 178 is a cash flow (revenue) listing over a four-day period with an end calculation. The format is still a columned approach.

Tablets 180 and 186 are particularly fascinating because they show a transition in format. Whereas the previous texts demonstrated a columned approach, these documents are written in a “narrative approach”. “Narrative” in this context means that they have a sentenced structure that one would find in a book. Tablet 180 describes a series of wheat distributions to various individuals in the month of October. Tablet 186 also lists distributions of various goods ranging from nails to Celtic beer. It is important to recall here that the primary benefit of Arabic numerals is their ability to stack numbers upon each other, which naturally encourages the adoption of a columned format. Without Arabic numerals, the author of an accounting document may not feel the need for stacking the information in a columned format.
<table>
<thead>
<tr>
<th>Tablet no. 154</th>
<th>Latin</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td>xv K(alendas) Iunias n(umerus) p(urus)</td>
<td>18 May, net number of the First Cohort of Tungrains, of which</td>
<td></td>
</tr>
<tr>
<td>rum cui praefectus IuliusVere-</td>
<td>the commander is Iulius Verecundus the prefect, 752,</td>
<td></td>
</tr>
<tr>
<td>Cundus praefectus dcclii in is (centuriones) vi</td>
<td>including centurions 6</td>
<td></td>
</tr>
<tr>
<td>ex eis absentes</td>
<td>of whom there are absent:</td>
<td></td>
</tr>
<tr>
<td>singulares legati xlvi</td>
<td>guards of the governor 46</td>
<td></td>
</tr>
<tr>
<td>officio Feroxis</td>
<td>at the office of Ferox</td>
<td></td>
</tr>
<tr>
<td>Coris ccxvii</td>
<td>at Coria 337</td>
<td></td>
</tr>
<tr>
<td>in is (centuriones) ii</td>
<td>including centurions 2 (?)</td>
<td></td>
</tr>
<tr>
<td>Londinio (centurio) [i]</td>
<td>at London centurion 1 (?)</td>
<td></td>
</tr>
<tr>
<td>uas...ad[c.4]...apadun...vi</td>
<td>… 6</td>
<td></td>
</tr>
<tr>
<td>in is (centurio) i</td>
<td>including centurion 1</td>
<td></td>
</tr>
<tr>
<td>[ac........allia viii</td>
<td>… 9</td>
<td></td>
</tr>
<tr>
<td>n is (centurio) i</td>
<td>including centurion 1</td>
<td></td>
</tr>
<tr>
<td>…c...ipendiatum xi</td>
<td>… 11</td>
<td></td>
</tr>
<tr>
<td>I in.ai</td>
<td>at (?) … 1 (?)</td>
<td></td>
</tr>
<tr>
<td>xxxxv</td>
<td>45</td>
<td></td>
</tr>
<tr>
<td>summa absentes cccclvi</td>
<td>total absentees 456</td>
<td></td>
</tr>
<tr>
<td>in is (centuriones) v</td>
<td>including centurions 5</td>
<td></td>
</tr>
<tr>
<td>reliqui praesentes cclxxxvi</td>
<td>remainder, present 296</td>
<td></td>
</tr>
<tr>
<td>in is (centurio) i</td>
<td>including centurion 1</td>
<td></td>
</tr>
<tr>
<td>ex eis</td>
<td>from these:</td>
<td></td>
</tr>
<tr>
<td>aegri xv</td>
<td>sick 15</td>
<td></td>
</tr>
<tr>
<td>ulcerati vi</td>
<td>wounded 6</td>
<td></td>
</tr>
<tr>
<td>lippientes [x]</td>
<td>suffering from inflammation of the eyes 10</td>
<td></td>
</tr>
<tr>
<td>summa eor[um] xxxi</td>
<td>total of these 31</td>
<td></td>
</tr>
<tr>
<td>reliqui ualenteccl.xxv</td>
<td>remainder, fit for active service 265</td>
<td></td>
</tr>
<tr>
<td>in [is (centurio) i]</td>
<td>including centurion 1.</td>
<td></td>
</tr>
<tr>
<td>Tablet no. 178</td>
<td></td>
<td></td>
</tr>
<tr>
<td>----------------</td>
<td>----------------</td>
<td></td>
</tr>
<tr>
<td><strong>Latin</strong></td>
<td><strong>English</strong></td>
<td></td>
</tr>
<tr>
<td>reditus castelli</td>
<td>Revenues of the fort:</td>
<td></td>
</tr>
<tr>
<td>vi K(alendas) Aug(ustas) (denarii) xxxvi s(emis)</td>
<td>27 July, denarii 36 1/2</td>
<td></td>
</tr>
<tr>
<td>v K(alendas) Aug(ustas) (denarii) xxvii</td>
<td>28 July, denarii 27</td>
<td></td>
</tr>
<tr>
<td>iii K(alendas) Aug(ustas) (denarii)</td>
<td>29 July, denarii ..</td>
<td></td>
</tr>
<tr>
<td>iii K(alendas) Aug(ustas) (denarii) \</td>
<td>July, denarii 5+</td>
<td></td>
</tr>
<tr>
<td>pr(idie) K(alendas) Aug(ustas) (denarii) xv.</td>
<td>31 July, denarii 15+</td>
<td></td>
</tr>
<tr>
<td>summa (denarii) lx</td>
<td>total, denarii 80+.</td>
<td></td>
</tr>
<tr>
<td>Tablet no. 180</td>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td></td>
</tr>
<tr>
<td><strong>Latin</strong></td>
<td><strong>English</strong></td>
<td></td>
</tr>
<tr>
<td><em>ratio frumenti emensi ex quo</em></td>
<td>Account of wheat measured out from that which</td>
<td></td>
</tr>
<tr>
<td>ipse dedi in cupam [ ]</td>
<td>I myself have put into the barrel:</td>
<td></td>
</tr>
<tr>
<td>mihi ad panem [ ]</td>
<td>to myself, for bread ...</td>
<td></td>
</tr>
<tr>
<td>Macrino m(odi) vii</td>
<td>to Macrinus, modii 7</td>
<td></td>
</tr>
<tr>
<td>Felicio Victor iussu Spectati</td>
<td>to Felicius Victor on the order of Spectatus</td>
<td></td>
</tr>
<tr>
<td>comodati m(odi) xxvi</td>
<td>provided as a loan (?), modii 26</td>
<td></td>
</tr>
<tr>
<td>in follibus tribus patri m(odi) xix</td>
<td>in three sacks, to father, modii 19</td>
<td></td>
</tr>
<tr>
<td>Macrino m(odi) xiii</td>
<td>to Macrinus, modii 13</td>
<td></td>
</tr>
<tr>
<td>bubulcaris in siluam m(odi) viii</td>
<td>to the oxherds at the wood, modii 8</td>
<td></td>
</tr>
<tr>
<td>item Amabili ad fanum m(odi) iii</td>
<td>likewise to Amabilis at the shrine, modii 3</td>
<td></td>
</tr>
<tr>
<td>[...] Idus Septem(bres) Crescenti</td>
<td>September, to Crescens</td>
<td></td>
</tr>
<tr>
<td>iussu [...] i m(odi) iii</td>
<td>on the order of Firmus (?), modii 3</td>
<td></td>
</tr>
<tr>
<td>item [...] c.6 ej [...]</td>
<td>likewise ..., modii ..</td>
<td></td>
</tr>
<tr>
<td>Macr[...] us[ ] m(odi) xv</td>
<td>to Macr... ..., modii (?) 15</td>
<td></td>
</tr>
<tr>
<td>item ma [...] c.6 m(odi) [ ] iii</td>
<td>likewise to Ma... (?) modii ..</td>
<td></td>
</tr>
<tr>
<td>Line</td>
<td>Translation</td>
<td></td>
</tr>
<tr>
<td>------</td>
<td>-------------</td>
<td></td>
</tr>
<tr>
<td>patri ad [ c.6 ] as m(odi) i</td>
<td>to father .... modii 2</td>
<td></td>
</tr>
<tr>
<td>vi Kal(endas)</td>
<td>26 September</td>
<td></td>
</tr>
<tr>
<td>Lu[..].[.. ben]eficiar[io] m(odi) vi</td>
<td>to Lu... the beneficiarius, modii 6</td>
<td></td>
</tr>
<tr>
<td>Felicio Victori m(odi) xv</td>
<td>to Felicius Victor, modii 15</td>
<td></td>
</tr>
<tr>
<td>ad turtas tibi m(odi) ii</td>
<td>for twisted loaves (?), to you, modii 2</td>
<td></td>
</tr>
<tr>
<td>Crescenti m(odi) ix</td>
<td>to Crescens, modii 9</td>
<td></td>
</tr>
<tr>
<td>militibus legionaribus</td>
<td>to the legionary soldiers</td>
<td></td>
</tr>
<tr>
<td>iussu Firmi m(odi) xi</td>
<td>on the order of Firmus, modii 11+</td>
<td></td>
</tr>
<tr>
<td>Candido m(odi)</td>
<td>to Candidus, modii ..</td>
<td></td>
</tr>
<tr>
<td>ubi in folle br.gese</td>
<td>to you, in a sack from Briga (?)</td>
<td></td>
</tr>
<tr>
<td>ubi</td>
<td>to you ...</td>
<td></td>
</tr>
<tr>
<td>Lucconi ad porcos</td>
<td>to Lucco, in charge of the pigs</td>
<td></td>
</tr>
<tr>
<td>Primo Luci</td>
<td>to Primus, slave (?) of Lucius ...</td>
<td></td>
</tr>
<tr>
<td>ubi</td>
<td>to you ...</td>
<td></td>
</tr>
<tr>
<td>Lucconi in ussus suos</td>
<td>to Lucco for his own use ...</td>
<td></td>
</tr>
<tr>
<td>item [.].uos m[.].i.</td>
<td>likewise that which I have sent ... modii .. (?)</td>
<td></td>
</tr>
<tr>
<td>in [.].uotur[.].</td>
<td>in the century of Voturius (?)</td>
<td></td>
</tr>
<tr>
<td>patri [a]d i[u]encos</td>
<td>to father, in charge of the oxen ...</td>
<td></td>
</tr>
<tr>
<td>item inter metrum</td>
<td>likewise, within the measure ...(?)</td>
<td></td>
</tr>
<tr>
<td>libr.s xv redd. librae xv</td>
<td>15 pounds yield 15+ pounds (?)</td>
<td></td>
</tr>
<tr>
<td>fiunt m(odi)</td>
<td>total, modii ...</td>
<td></td>
</tr>
<tr>
<td>item mihi ad panem m(odi) i</td>
<td>likewise to myself, for bread, modii ..</td>
<td></td>
</tr>
<tr>
<td>summa frumenti m(odi) cccxx s(emis)</td>
<td>total of wheat, modii 320 1/2</td>
<td></td>
</tr>
</tbody>
</table>
Tablet no. 186

<table>
<thead>
<tr>
<th>Latin</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td>_[ ] per traces</td>
<td>... through Gracilis (?)</td>
</tr>
<tr>
<td>[ ]. m(odi)os x[x][..] ......</td>
<td>... modii, 30+ ...</td>
</tr>
<tr>
<td>[ Decem]bres per Gracilem</td>
<td>November/December, through Gracilis,</td>
</tr>
<tr>
<td>[ ]. p(ondo) c ..[</td>
<td>... pounds 100 ...</td>
</tr>
<tr>
<td>[...].[Dece]mbres per Gracilem</td>
<td>November/December, through Gracilis,</td>
</tr>
<tr>
<td>[...]. p(ondo) xxii (asses) ..</td>
<td>... pounds 22, asses ..</td>
</tr>
<tr>
<td>[c.3] K(alendas) IJanuarias Gracili clauos</td>
<td>00 December, to Gracilis, nails</td>
</tr>
<tr>
<td>caligares - n(umero) c (asses duos)</td>
<td>for boots, number 100, asses 2</td>
</tr>
<tr>
<td>[ K(alendas)] Januarias per Audacem</td>
<td>00 December, through Audax,</td>
</tr>
<tr>
<td>salis p(ondo) lxxxv[ ]ii.</td>
<td>of salt, pounds 85+, asses 12+ (?)</td>
</tr>
<tr>
<td>[ K(alendas) ]Janua[ui]rias cer[u]ese</td>
<td>00 December, of Celtic beer,</td>
</tr>
<tr>
<td>metretam (asses) viii</td>
<td>a metretes, asses 8</td>
</tr>
<tr>
<td>[CAL]PURNIO PISONE VETTIO</td>
<td>In the consulship of Calpurnius Piso</td>
</tr>
<tr>
<td>[B]OLANO CO(N)S(U)LIBUS uacat</td>
<td>and Vettius Bolanus:</td>
</tr>
<tr>
<td>[c.5]Januarias per ...a..m</td>
<td>00 January, through Audax (?),</td>
</tr>
<tr>
<td>[ c.6 ]......c.ne (assemi)</td>
<td>goat-meat (?), ..., as 1 (?)</td>
</tr>
<tr>
<td>[c.5] Februuaris per Gracilem</td>
<td>00 January (?), through Gracilis,</td>
</tr>
<tr>
<td>[ c.7 ]..met.r.[c.3]s ...cum (asses) .</td>
<td>..., asses ..</td>
</tr>
<tr>
<td>[c.4] Februuar[as] per Gracilem</td>
<td>00 January (?), through Gracilis,</td>
</tr>
<tr>
<td>[c.4].m e. porc., traces</td>
<td>... pork (?) ...</td>
</tr>
<tr>
<td>[p]er Audacem porcine p(ondo) xi ..</td>
<td>through Audax, of pork (?), pounds 11+, ...</td>
</tr>
<tr>
<td>[...Id]us Februvarias per Similem</td>
<td>0 February, through Similis,</td>
</tr>
<tr>
<td>Ceruese metretam ...</td>
<td>of Celtic beer, a metretes, ...</td>
</tr>
<tr>
<td>[ c.7 ]as per Auda[c]lem</td>
<td>00 February (?), through Audax</td>
</tr>
<tr>
<td>[ c.8 ]Im traces</td>
<td></td>
</tr>
<tr>
<td>uacat</td>
<td></td>
</tr>
</tbody>
</table>
An example of a highly formalized form of narrative accounting can be seen in sections of Augustus’ *Res Gestae*. It was a triumphal work that celebrates his achievements. In sections 15-17, there is a series of Augustus’ financial disbursements using the narrative approach:

**Augustus, Res Gestae**[^84]

| 15. To each member of the Roman plebs I paid under my father's will 300 sesterces [44 BCE], and in my own name I gave them 400 each from the booty of war in my fifth consulship [29 BCE], and once again in my tenth consulship [24 BCE] I paid out 400 sesterces as a largesse to each man from my own patrimony, and in my eleventh consulship [23 BCE] I bought grain with my own money and distributed twelve rations apiece, and in the twelfth year of my tribunician power [11 BCE] I gave every man 400 sesterces for the third time. These largesses of mine never reached fewer than 250,000 persons. In the eighteenth year of my tribunician power [5 BCE] and my twelfth consulship I gave |
| [15] Plebei Romanae viritim HS trecenos numeravi ex testamento patris mei et nomine meo HS quadringenos ex bellorum manibiis consul quintum dedi, iterum autem in consulatu decimo ex patrimonio meo HS quadringenos congiari viritim pernumeravi, et consul undecimum duodecim frumentationes frumento privatim coempto emensus sum, et tribunicia potestate duodecimum quadringenos nummos tertium viritim dedi. Quae mea congiaria pervenerunt ad hominum millia numquam minus quinquaginta et ducenta. Tribuniciae potestatis duodevicensimum, consul XII, trecentis et viginti millibus plebis urbane |

240 sesterces apiece to 320,000 members of the urban plebs. In my fifth consulship [29 BCE] I gave 1,000 sesterces out of booty to every one of the colonists drawn from my soldiers; about 120,000 men in the colonies received this largesse at the time of my triumph. In my thirteenth consulship [2 BCE] I gave 60 denarii apiece to the plebs who were then in receipt of public grain; they comprised a few more than 200,000 persons.

16. I paid cash to the towns for the lands that I assigned to soldiers in my fourth consulship [30 BCE], and later in the consulship of Marcus Crassus and Gnaeus Lentulus Augur [14 BCE]. The sum amounted to about 600,000,000 sesterces paid for lands in Italy, and about 260,000,000 disbursed for provincial lands. Of all those who founded military colonies in Italy or the provinces I was the first and only one to have done this in the recollection of my contemporaries. And Later, in the consulships of Tiberius Nero and Gnaeus Piso [7 BCE], of Gaius Antistius and Decimus Laelius [6 BCE], of Gaius Calvisius and Lucius Pasionus [4 BCE], of Lucius Lentulus and Marcus Messalla [2 BCE], I paid monetary rewards to soldiers whom I settled in their home towns after completion of their service, and on this account I expended about 400,000,000 sesterces.

17. Four times I assisted the treasury with my own money, so that I transferred to the administrators of the treasury 150,000,000 sesterces. In the consulship of Marcus Lepidus and Lucius Arruntius [6 CE], when the military treasury was founded by my advice for the purpose of paying rewards to soldiers who had served for twenty years or more, I transferred to it from my own patrimony 170,000,000 sesterces.

Below are sections 15-17 reorganized into tabular format for comparison.

<table>
<thead>
<tr>
<th>Year</th>
<th>Amount</th>
<th>Recipient</th>
</tr>
</thead>
<tbody>
<tr>
<td>44 BCE</td>
<td>300 HS</td>
<td>+250,000 Roman plebs (Julius Caesar’s will)</td>
</tr>
<tr>
<td>Year BCE</td>
<td>HS</td>
<td>Description</td>
</tr>
<tr>
<td>----------</td>
<td>----------</td>
<td>--------------------------------------------------</td>
</tr>
<tr>
<td>29</td>
<td>400</td>
<td>+250,000 Roman plebs</td>
</tr>
<tr>
<td>24 BCE</td>
<td>400</td>
<td>+250,000 Roman plebs</td>
</tr>
<tr>
<td>23 BCE</td>
<td>12 grain ration portions</td>
<td>+250,000 Roman plebs</td>
</tr>
<tr>
<td>11 BCE</td>
<td>400</td>
<td>+250,000 Roman plebs</td>
</tr>
<tr>
<td>5 BCE</td>
<td>240</td>
<td>320,000 urban plebs</td>
</tr>
<tr>
<td>29 BCE</td>
<td>1000</td>
<td>120,000 military colonies</td>
</tr>
<tr>
<td>2 BCE</td>
<td>240</td>
<td>200,000 Roman plebs</td>
</tr>
<tr>
<td>? BCE</td>
<td>600,000,000</td>
<td>Italian lands (for military colonies)</td>
</tr>
<tr>
<td>? BCE</td>
<td>240,000,000</td>
<td>Provincial lands (for military colonies)</td>
</tr>
<tr>
<td>7 - 2 BCE</td>
<td>400,000,000</td>
<td>Retired military settled in their hometowns</td>
</tr>
<tr>
<td>? BCE</td>
<td>150,000,000</td>
<td>To administrators of the treasury</td>
</tr>
<tr>
<td>6 CE</td>
<td>170,000,000</td>
<td>To military treasury</td>
</tr>
</tbody>
</table>

It is difficult to determine which accounting format (columned or narrative) the Romans found “easier” to produce and comprehend. In terms of structuring data, it is arguably easier to comprehend inventory lists produced in a columned format, where each item stands out.

However, the narrative approach is quite conveniently comprehensible. To the Roman reader, it is conceivable that a narrative approach has qualitative measures already “built in” as a matter of form. For instance, in the Res Gestae sections above, it may carry accounting significance that plebs (or citizens) are listed before soldiers in the narrative style, emphasizing a priority for civilians.

****

The final Roman accounting document for two Romans soldiers included here is one originally discussed by de Ste. Croix. It is a pay sheet that shows greater clarity and formatting than other surviving accounts, certainly more than the John Rylands archives of Theophanes’ trip or the Vindolanda tablets.\(^6\) De Ste. Croix points out that each four monthly installments of pay here has its own columns, with rows for deductions of clothing, hay, and other equipment. Near the bottom of each column is the sum of the deductions subtracted from the installment deposited into the soldier’s “pay account.”\(^7\)


\(^7\) See Cicero’s Pro Fonteio in chapter six below when it is mentioned that Romans would often record items in multiple columns.
Q. Julius Proculus, from ? Damascus

<table>
<thead>
<tr>
<th></th>
<th>First Instalment of pay, third year of Domitian</th>
<th>Second instalment</th>
<th>Third instalment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>dr.248</td>
<td>dr.248</td>
<td>dr.248</td>
</tr>
<tr>
<td>Deduct</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>hay</td>
<td>dr.10</td>
<td>dr.10</td>
<td>dr.10</td>
</tr>
<tr>
<td>food</td>
<td>dr. 80</td>
<td>dr. 80</td>
<td>dr. 80</td>
</tr>
<tr>
<td>boots and straps</td>
<td>dr. 12</td>
<td>dr. 12</td>
<td>dr. 12</td>
</tr>
<tr>
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<td><strong>Total on Deposit</strong></td>
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C. Valerius Germanus, from Tyre

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Q. Julius Proculus? Dam.?  
C. Valerius Germanus Tyr.

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In sum, there are two likely reasons why most Roman accounts tended to be “basic”.

One is the particularly high use of slave labor for accounting work. This is not to deny that Roman citizens personally engaged in accounting, but rather to recognize that a high percentage of accounting (collecting and recording information) was performed by slaves. From a societal standpoint, the benefits and drawbacks of slave labor in regards to accounting can be generalized. The Romans had access to a plentiful, low-cost labor force that had acquired enough education to do rather unsophisticated accounting. The less artful nature of Roman accounting rendered the system extremely accessible, as it did not include any specialized

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88 Seider 1972, VII.
nuanced language, signs, structure, or terminology. An accounting inventory list would have
been simple to read and understand, whether an individual was in northern Gaul or Egypt. One of
the key benefits to such low-cost labor and materials was that the Romans, compared to most
pre-modern civilizations, could afford to engage in accounting practices more routinely and with
greater frequency to update journals, ledgers, and other documents.

However, since such documents often lacked clarity or a standardized structure, the
format was potentially time-consuming in that accounting documents could include generous
amounts of superfluous information. Moreover, because slaves collected information and
compiled the accounting document, it may not have included a list of the prioritized information
valued by the document’s primary user (owner, citizen, bureaucrat, and others). At least, our
examples — from the unsophisticated columned and narrative approaches found in the
Theophanes and Vindolanda tablets to the increasing sophistication of the Roman army pay sheet
and the fully developed single-entry system of the Heroninos Archive — demonstrate that the
Romans had the capacity to command the full range of accounting potential.
Chapter 4: Pre-Modern Accounting and Rome Compared

Chapter one focused on a debate that originated over 100 years ago and still persists today. In particular, two main issues have emerged:

1) To what extent do a society’s accounting practices contribute to its use of economic rationalism (profit-motivated economic practices)?

2) To what extent does a lack of sophisticated accounting practices (double-entry accounting in particular) prevent or impede economic development?

Roman historians have typically taken an affirmative stance on both issues — specifically, that accounting had a considerable impact on the development of economic rationalism and can function as a barrier to financial development. The end of chapter one introduced an emerging challenge to these ideas, explaining why the adoption of accounting as an agent of economic causation (X leading to Y) is problematic.

The goal of chapters two and three was not to challenge the theories of chapter one directly, but to side-step the debate temporarily in order to illustrate flexibility and competency within Roman accounting. In describing three tiers of accounting development (an obvious simplification), the goal was to illustrate that the Romans had an accounting system that could
meet societal needs. By establishing that they could use the tools of accounting in a cogent manner -- creating effective inventory lists, cash flow documents, and a single-entry system that monetized the value of goods -- we can perceive that there was no fundamental accounting tool that the Romans lacked.

At this point therefore, it is worth returning to the debate on the theoretical aspects of Roman accounting. First, did the Romans possess a good accounting system? One rewarding way to explore that question is to compare examples from other pre-modern societies. I have singled out other Mediterranean and Near Eastern civilizations such as Old Kingdom Egypt, Sumer, Early Islamic Near East, and medieval Europe. A second approach is to revisit economic rationalism, asking whether there is anything new to add to this long-standing debate.

The Old Kingdom Egyptians (2474-2455 and 2448-2445 BCE) used papyrus innovatively by applying its use to accounting. This practice made maintaining records considerably easier. To signify that a document had been updated or to distinguish between columns more easily, the Egyptians often alternated between red and black ink. If a task had been completed or goods had been delivered, the entry would be visibly crossed through. Likewise, Egyptians used different columns to indicate degrees of quality of an item stored, so that a priest-bureaucrat could “check” the appropriate “box” to indicate the condition, similar to modern practices of indicating quality by typical phrases like “very poor, poor, average, good, or very good.” For expediency, the Egyptians even prefabricated papyri as tabular accounting.

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89 Carmona and Mahmoud 2009, 93.
documents with the columns and rows already set so that recording agents could quickly evaluate the quantity and quality of inventory.  

This Egyptian accounting papyrus dates to around 2350 BCE. It pertains to the division of labor for the Sokar festival. Both hieroglyphs and hieratic script are used. Moreover, the hieroglyphs at the top are written in red ink, while the columns below script use black ink. Abusir Archive: Louvre E. 2.415C recto + Cairo 602, frame XI + BM EA 10735, frame 10 + University College Sheet C.

During the Ur III period of Sumerian culture (2119-1940 BCE), cuneiform state accounting documents recorded not only the quantity of wool, but upwards of five grades of quality associated with it. Specific terminology identified the types and colors of wool. Clothes and woven goods included data regarding the quality and time spent on the product. Similarly, the amount and number of cereals required to produce various forms of beer were

90 Goelet. 2004, 239.
91 Goelet. 2004, 244.
included with their entries. In the same way the scribes rated the quality of flour and other grains in their accounting nomenclature.\textsuperscript{93} Eleanor Robson notes that, in the 19\textsuperscript{th} century BCE, the accounting procedures of ruler Rim-Sin of Larsa included the development of the world’s first tabular accounting procedures that mimic modern spreadsheets.\textsuperscript{94} In document YBC 4721 (1822 BCE), for example, grain distribution is recorded in six columns and five rows. The first column lists the starting amounts of grain, and the next three columns record the amount of grain, its disbursement, and its location. The summary of the total grain disbursed is noted in the fourth column, while the final column lists the city of origin. Similarly, and immediately thereafter, the Babylonians of Hammurabi’s reign (1792-1750 BCE) adopted the same style of tabular bookkeeping and used it very effectively in calculating the shortfall of goods in various Babylonian communities, thereby enabling short-term loans or transfers.\textsuperscript{95}

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In a 2004 article, “Accounting Systems and Recording Procedures in the Early Islamic State,” Omar Abdullah Zaid focuses largely on changes (from the Roman period) that emerged in early Islamic accounting practices during the mid-7\textsuperscript{th} through 10\textsuperscript{th} centuries.\textsuperscript{96} In particular, he notes that religion had a powerful influence upon the nature of accountants’ reporting. Once the Quran and Sharia law became the basis for all Muslim states, it became necessary to keep track of the Zakat, a levy required of all Muslims on earnings on wealth thresholds exceeding certain

\textsuperscript{93} Mieroop 2004, 61.
\textsuperscript{94} Robson 2004, 127-129.
\textsuperscript{95} Robson 2004, 134-135.
\textsuperscript{96} Zaid 2004, 149-170.
limits. Furthermore, Zaid states: “The Quran requires the writing and recording of debts and business transactions in accordance with Aiah 282:”

“O ye who believe! When you contract a debt for a fixed period, write it down. Let a scribe write it down in justice between you. Let no scribe refuse to write as Allah has taught him, so let him write. Let him (the debtor) who incurs the liability dictate, and he must fear Allah, his Lord, and diminish not anything of what he owes. But if the debtor is of poor understanding, or weak, or is unable to dictate for himself, then let his guardian dictate in justice. And get two witnesses out of your own men. And if there are not two men (available), then a man and two women, such as you agree for witness, so that if one of them (two women) errs, the other can remind her. And the witnesses should not refuse when they are called (for evidence). You should not become weary to write it (your contract), whether it be small or big, for its fixed term, that is more just with Allah; more solid evidence, and more convenient to prevent doubts among yourselves, save when it is a present trade which you carry out on the spot among yourselves, then there is no sin on you if you do not write it down. But take witnesses whenever you make a commercial contract. Let neither scribe nor witness suffer any harm, but if you do (such harm), it would be wickedness in you. So be afraid of Allah; and Allah teaches you. And Allah is the All-Knower of each and everything. And if you are on a journey and cannot find a scribe, then let there be a pledge taken (mortgaging); then if one of you entrust the other, let the one who is entrusted discharge his trust (faithfully), and let him be afraid of Allah, his Lord. And conceal not the evidence for he, who hides it, surely his heart is sinful. And Allah is All-Knower of what you do.”

Zaid also draws heavily from two Islamic historians from the Middle Ages (Al-Khawarizmy in the late 10th century and Al-Mazenderany in the 14th century) to establish that the early Islamic peoples had regularized practices for the seven most common types of accounting procedures: for the stable (livestock), construction (building projects), rice farming, warehouses, sheep-grazing, the mint, and the treasury. It also appears that not only was the method standardized for each different accounting category, but reports to government officials were also regularized, occurring on a schedule. Such reports included the Al-Khitmah (a monthly report) and Al-Khitmah Al-Jame’ah (a comprehensive final report). Also notable is the fact that in the earlier period of Islamic accounting, two types of common ledgers were maintained, often referred to as the Arabian and Persian Methods. Eventually, the Arabian Method became

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dominant due to both the higher frequency of state accountants coming from the Arabian Peninsula and this Method’s emphasis on greater detail concerning the itemization of the inflow and outflow of cash and goods.\textsuperscript{100}

While Zaid’s study focuses heavily on the theory regarding what was supposed to occur, an earlier study by Mahmood Al-Mursy Lasheen analyzed accounting trends from the 8th century in Islamic states and noted the following 14 points: (1) Transactions were to be recorded immediately when they occurred; (2) Transactions were to be classified according to their nature, which required that a similar and homogenous transaction be classified under one account and recorded as such; (3) Receipts were to be recorded on the right-hand side of the page, and sources of receipts were to be identified and disclosed; (4) Payments were to be recorded and sufficiently explained on the left-hand side of the page; (5) Recorded transactions were to be carefully explained; (6) No space was to be left between transactions. If a space was left for any reason, a line had to be drawn across the space. This line was called anattarkeen; (7) Corrections to recorded transactions by overwriting or deletion were prohibited. If (the accountant/bookkeeper) Al-Kateb had mistakenly overstated the amount, he was obliged to pay the difference to the Dewan. If an expense was omitted, Al-Kateb was required to pay the shortfall in cash, even if it could subsequently be proven that the expense was legitimate; (8) When the account was closed, a specific sign was to be placed in the books to reflect the fact; (9) All similar transactions recorded in the preliminary book were to be posted to the specialized books maintained for that type of transaction; (10) The posting of similar transactions was to be performed by persons independent from those who recorded the transactions in the daily

\textsuperscript{100} Zaid 2004, 162.
books and others; (11) The balance, called al-hasel (the difference between two amounts), had to be extracted; (12) A monthly and/or yearly report was to be prepared. This report had to be detailed and provide sufficient information to determine, for example, the origin and distribution of incoming crops; (13) At the end of each financial year, a report was to be prepared by Al-Kateb, detailing all goods and funds under his custody and management; and (14) Annual reports prepared by Al-Kateb were to be reviewed (audited) and compared with prior yearly reports and with records maintained in the main Dewan. 101

Al-Mursy’s and Zaid’s studies effectively demonstrate that the theory of Islamic standards of accounting matched actual practice in the early period of Islamic states. Zaid argues that the Arabian Method, which became the dominant form, surpassed Roman accounting practices, its immediate precursor. Zaid posits that the Arabian Method functions as an early version of double-entry, in that on the left-hand side of any ledger are recorded all credits, and all debits are on the right-hand page. 102

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In the Western Medieval Period, there were some attempts at the regularization of accounts prior to 1270. Four treatises on medieval estate accounting are known. 103 By the 13th century, part of the ars dictandi, taught at Oxford University, included instruction on manorial

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102 Zaid 2004, 165.
103 The four treatises are: Walter of Henley’s Husbandry; Seneschaucie; Husbandry; Rules of Robert Grossete. For expanded discussion on these medieval treatises, see Oschinsky 1956, 92-93 and 98.
It was suggested that clergy members ought to receive accounting training, as increasing numbers of small landholders under the medieval demesne system did not know how to report their crop earnings accurately to their manorial lord, nor did the lord of the demesne have an adequate staff to meet accounting needs. However, despite attempts at standardization, a lack of uniformity persisted. For example, in one study of 12th century Genoa, Florence Roover found inconsistencies in how the Genoese recorded accounting transactions. Further, Roover noted problems in the hasty writing and compilation of the documents, similar to the archive of Theophanes in that there were errors in summations.

Drawing conclusions from comparisons of other Mediterranean civilizations with the Romans is both straightforward and complicated. In many cases, the Romans possessed a “weak” accounting system when compared to other pre-modern civilizations. The Sumerian system possessed a nuanced accounting language as well as categories that could more readily define the quantity and quality of a good. The Egyptians’ pre-fabricated spreadsheet system with two inks (to indicate quality) and a marking system was both elegant and fast. The drive toward heavy standardization in Islamic practices ensured a uniformity that may have expedited business proceedings. Arguably, even the monks of the medieval period made better accounting specialists due to their level of education than a common slave or freedman in the Roman Empire. The question arises from these observations of other civilizations: “Did Roman accounting possess any comparative benefit?”

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104 Manorial accounts are broadly associated with the change from the leasing of demesnes in the Middle Ages (peak early to mid-12th century) to their resumption in hand for direct demesne cultivation from the late twelfth century. In the twelfth century, demesnes were placed at farm (ad firmam) and leased to lessees or farmers (firmarii). Accounts were produced centrally, usually by religious houses or an episcopal estate.

105 Roover 1956, 88.
The Romans possessed two critical advantages — ease of production and accessibility. By stripping away specific accounting language, and not having formats dependent upon symbols and specialized columns to note quality, let alone a standardized system, it was easy to train a Roman or his subject to be a functional accountant. Moreover, without the specialized formats, documents were more easily readable by those without specialized training. The essential trade-off in pre-modern societies in regards to accounting was between quantity and quality. The accountants of the Egyptians, Sumerians, Early Islamic states, and medieval Europe were comprised of highly educated individuals such as monks, bureaucrats, and merchants. They possessed the highest levels of literacy, whereas many of the Romans’ accountants created their documents with limited literacy.

So, how is the evidence about the structural aspects of Roman accounting to be folded into a larger argument about the Roman economy? As we have noted, Romans could handle most accounting challenges (inventory, cash flow, and monetization evaluations) and had the advantage of requiring low literacy for compilation and accessibility. But when compared to other pre-modern Mediterranean civilizations, Roman accounting appears to be not as effective, with its lack of standardization, qualitative measures, and highly literate practitioners. There is no sign however, that Roman accounting documents impeded or hindered the Roman economy. As stated in chapter one, there is considerable evidence to doubt that double-entry acted as a true barrier to economic rationalism. Moreover, if the Roman method could handle all the functions of accounting while simultaneously maintaining a benefit in manufacturing quantity, there seems little reason to suggest that it actively hindered any economic decision-making or processes.
To argue that Roman accounting did not actively hinder economic development touches upon the ongoing debates concerning the Roman economy. Since the publication of Moses Finley’s 1973 *The Ancient Economy*, the Roman economy has essentially been viewed in two different ways. In short, Finley’s work was an amalgamation of thoughts developed by Karl Marx, Karl Polanyi, Max Weber, and, indirectly, Werner Sombart and applied to the Roman world. In the third edition of Finley’s book (1999), a foreword by Ian Morris describes these influences and how they correlate to Finley’s thinking on the ancient economy. In particular, Morris suggests that Finley adopted Polanyi’s idea of *substantivism*, namely that prior to the year 1800 “economic activity had not been an independent sphere of life governed by its own rules.” Rather, there was an inescapable element of reciprocity and redistribution that governed the rules for economic transactions. Similarly, Finley adopts Weber’s idea about “status,” which has one additional relevant component for a discussion on Roman accounting beyond the *rational-legal bureaucracy* mentioned in chapter one above. Namely, the financial success of an individual may not automatically confer the status or sense of privilege that it commonly would in a modern context.

Under these influences, Finley represents the Romans as culturally antagonistic to the use of economic rationalism — that is, to the desire to maximize profits. Finley adduces a large body of evidence from among Roman and Greek elites that profit-making, and especially profit maximization, was to be detested among them. For Finley, the role of accounting is minor, but significant, as it serves to confirm his beliefs about Roman attitudes. He directly reflects Gunnar

106 Finley 1999.

107 Finley 1999, xi-xii.

108 Finley 1999, xi-xii.
Mickwitz’s claim that Cato or Columella show no inclination toward profit maximization as part of their accounting practices. Finley provides two key indicators from pages 111 and 181 of *The Ancient Economy*:109  

“I need hardly enumerate the weaknesses: no consideration of the location of the farm with respect to available markets or to export possibilities; nothing about the nature of the soil beyond the single phrase, ‘if the wine is good and the yield is great’; no cost accounting of even a rudimentary nature.” (111)  

“For all this there is neither a shred of evidence nor a shred of probability. Graeco-Roman bookkeeping was exceedingly rudimentary, essentially restricted to a listing of receipts and expenditures, from which it was impossible to determine the profitability or otherwise of any single activity in a polyculture; hence the familiar maxim stated flatly by Cato: ‘Sell, don’t buy.’” (181)  

The same views were expressed in Mickwitz’s 1937 article:110  

“If we turn once more to modern farming we find that economic planning begins even before the farm is bought. Nowadays the price to be paid is only determined after calculating the possible income, and the choice is made on the basis of a relative comparison between price and yield on all available farms. It is very probable that after such an examination preference might be given to a cheap farm with bad soil rather to one with excellent land but offered at a much higher price. For a modern farmer seeks the highest possible interest on his invested money and cares little about record crops per acre.  

Cato also wrote a famous passage on the same subject. But in this case he seems not to regard the question of price at all. He gives only the following advice: ‘Notice carefully how prosperous the neighbors are; in a good district they should be quite prosperous,’ and ‘It should be in a region where owners do not often change and where those who do sell their farms repent of having sold them.’ No doubt this advice has practical value, but it shows a procedure no less empirical than that employed by Zeno. We find in these words no indication of the idea, so familiar to us, that lack of prosperity in a certain region might simply be the result of bad farming, and that an energetic farmer might be able to make money by buying a cheap farm in just such a district. The reason may be that this would only have been possible on the basis of accurate calculations of which Cato and his contemporaries were incapable.  

We get a glimpse of his methods of accounting from one of the subsequent paragraphs. He says [in] ii. 5 that when the master visits his farm he should examine the steward accounts which consist of money-accounts, grain-accounts, fodder-accounts, oil-accounts, and wine-accounts. This system seems very familiar to us, and it is, indeed, nothing but a repetition of Zeno’s accounting method. It is now clear why Cato’s advice as to the purchase of farms was so vague. Owing to the defects of his system of bookkeeping he was unable to make the necessary plans for increasing the monetary income from a particular farm, neither could he decide whether the farmers of a certain district were really growing the crops that paid best. That is why he was compelled to accept the results gained by the average farmer as his guiding norm.”

109 Also see Macve 2002.  
110 Mickwitz 1935, 583-584.
The adherents of Finley, and by default Polanyi, Weber, and Sombart, became known as primitivists. Their position is summarized by Ian Morris in his foreword (xxii):

“When one reads The Ancient Economy alongside Finley’s other writings, five consequences of the ancient civic status structure seem to loom large. First, for Finley, as for Weber, the most important thing about Graeco-Roman concepts of status was the way they acted as a brake on the development of markets in land, labor, and capital and therefore on technology and trade. Demosthenes and Cicero’s conceptions of appropriate behavior were different. But both sets of attitudes functioned to embed economic activity in a broader network of social relationships. Neither the Athenian nor the Roman orator was comfortable with admitting to lending at interest, investing heavily in profitable long distance trade, or defining their identities in terms of wealth-producing activities. In one essay Finley collected a whole group of stories about ancient failures to exploit the commercial potential of technological developments and suggested that status was once again responsible.”

Morris raises four additional points about why economic rationalism was never fulfilled:

(1) the nature of the large-scale use of slavery; (2) that many of the most profitable activities were the work of people on the margins, including “foreigners, women and slaves”; (3) that elites pursued wealth through political, and not financial, channels; and (4) “a powerful socioeconomic motive for war and imperialism.” These arguments have gained numerous adherents since their original publication, and even those who disagree with the overall conclusion can hardly dismiss any of the individual points. To illustrate how Finley’s view, coupled with Mickwitz’s earlier appraisal, became pervasive, take Peter Garnsey and Richard Saller’s 1986 The Roman Empire: Economy, Society and Culture. On page 45, they write:

“Successful merchants fall easy prey to the dominant ideology: they buy or marry their way into the aristocracy and seek political office…The theme surfaces in Cato’s On Agriculture of the mid-second century BC, and is taken up more than a century later in Cicero’s On Moral Duties

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111 In the past few years, the term Substantivists is also used.

112 Finey 1999, xii-xiii.
and then, more cursorily, in Varro’s *On Farming.*” This passage illustrates a view of financial security and profit-oriented business ventures as mutually exclusive.

Historians opposing Finley’s view concerning economic rationalism became known as *modernists* or *monetarists.* They have championed a view of the Roman world first fully conceived by Mikhail Rostovtzeff’s 1927 *A History of the Ancient World.* His view typified thoughts of general improvement in the Mediterranean as Rome went from a republic and consolidated under the empire. In Rostovtzeff’s view, the empire provided peace, financial stability, and independent local government, with a dominant Rome to settle interregional disputes. Perhaps nothing expresses his sentiments better than the first five topic sentences in Chapter 20: “The Roman Empire of the first and second centuries was beyond all question a brilliant spectacle…The state did its utmost to make communication safe and easy…Along the high roads which spread out like a fan from Rome and Italy it was easy travel to the Atlantic, or the North Sea, or the Dardanelles and the Black Coast…Municipal life throughout the empire was almost entirely free from irksome control of central power…Each community lived in accordance with its past traditions, in so far as these traditions were not offensive to the state.”

A reader today perhaps instantly thinks of other arenas in which international or large regional trade have flourished, such as after the formation of the European Union or even earlier contexts like the creation of the United States, with a strong, interregional trade apparatus but legal and monetary enforcement from a central authority.

The primary supporters of the modernists have tended to be Roman historians with economic, archaeology, or sociology backgrounds. As Ian Morris notes, these individuals (such as Keith Hopkins, David Mattingly, and Edward Cohen) have observed that Finley placed a

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113 Rostovtzeff 1927, 286-288.
heavy degree of emphasis on over-socialization; namely, they assert that he focused too much on the literature of a small set of elite Romans rather than on all variables.\textsuperscript{114} They suggest that he ignored aspects such as the number of shipwrecks, long-distance trade, the scale of olive oil production, and coinage manufacturing, which all tend to suggest production on a massive scale for an interregional export market that confirms Rostovtzeff’s view.

The reality for most Roman historians, especially by the early 2000s, was a dichotomy of views that became hard to reconcile: either take the position of the primitivists that the lack of economic rationalism prohibited further economic tools such as double-entry accounting, or side with the modernists and Rostovtzeff’s idea of Rome as a “brilliant spectacle” (supported by archaeological findings) with an expansive, interregional trade network. These two views represent quite a spectrum of difference, which is why many, if not most, Roman historians tend adopt a “split the difference” stance. One of the more salient comments on the debate comes from Peter Bang’s 2008 \textit{The Roman Bazaar}: “The unfortunate outcome has been that the debate on the ancient economy has become stuck on a well-worn track as attempts are made to pinpoint its precise location on a linear spectrum between the two opposites of primitive and modern…In that analytical game, less is never more.”\textsuperscript{115} The split can be seen in the following graphic image representing the elements of the debate, where one side acknowledges the cultural antipathy of elites toward extremely profitable endeavors while still acknowledging archaeological findings that tend to contradict such perspectives.

\textsuperscript{114} Finley 1999, xiv and xxxviii–xxix.

\textsuperscript{115} Bang 2008, 28-29.
But what happens to a primitivist’s argument if Roman accounting is no longer a hindrance? As mentioned in the first chapter, accounting historians since the 1970s have dismissed Sombart’s initial hypothesis that double-entry accounting was the origin of capitalistic thought. They have argued that its delayed general employment in the 19th century, as well as other countries’ usage of similar processes but not progression to capitalism (e.g., medieval China), tend to suggest otherwise. Likewise, Mickwitz’s and Finley’s view that Roman accounting prevented or at least severely hindered economic rationalism has been dismissed by Macve’s comparative studies of the mid-1980s: they showed that capitalistic cultures in the early modern period of the 17th through late 19th centuries frequently used accounting methods that were not double-entry or hardly more sophisticated than methods employed by the Romans.

Moreover, Macve’s argument that Romans would not need to hear a lecture on the depreciation of a wagon to know the profitability of certain endeavors, is likely accurate.
Further, as shown in chapter two above, Romans could employ economic rationalism, as Rathbone has shown in the Appianus estate. Lastly, Roman accounting could handle all of the basic functions, and its low threshold of literacy requirements would not have been a serious drawback. There is more than enough reason to suggest that Roman accounting cannot be considered part of the primitivists’ argument, even though the accounting documents alone fail to counter their assertion that the Romans possessed a relatively high antipathy toward capitalistic thought, an impression based on a notable body of cultural anecdotes.
Chapter 5: Accounting Culture and the Digest of Justinian

For a pre-modern society, Rome had a considerable level of engagement with accounting. By engagement, I mean a willingness to spend time with accounting documents, to make it part of daily life, and to regard the documents as important. From here on, my concern is to make a cultural argument about the role of accounting in Roman society, and in particular, to suggest a high level of engagement that could compensate for the structural weakness commonly found in the ‘basic’ style of Roman accounting documents.

Chapters 5-7 present testimony that reflects three specific components of cultural engagement. The aim is to show (1) prevalence, (2) societal expectations, and (3) affinity. Chapter 5 is dedicated to the Digest of Justinian, which is shown initially to provide a framework of pervasiveness of accounting in Roman society. It has a critical role in succession of estates, the legality of slaves, and banking regulations. Chapter 6 is dedicated to three court cases of Cicero where accounting comprises a critical aspect. This chapter presents the best illustration about the role of societal expectations in Roman accounting. Many of Cicero’s arguments presented in this chapter revolve around the notion that for Roman citizens, especially the elite, the maintenance of ledgers was a basic societal expectation, comparable to the modern practice of keeping relevant documents on hand in the event of an audit. For Cicero, a key element, consistent throughout all the cases, is the expectation that transactions would be always accompanied by the proper entries into a home or business ledger. Hence, from evidence
detailed in chapters five and six, there arises the notion of the validity of the home ledgers. That is to say, they would be admissible and relied upon in a court setting if a dispute between two parties arose.

While chapter seven presents examples of all three noted components of cultural engagement, there is a particular emphasis on Roman affinity towards accounting practices. In short, there is enough evidence to suggest that Romans gained satisfaction from accounting documents and culture. References of affinity include bureaucratic reflections, theater dialogue, and personal correspondence.

Chapter eight is the final chapter. Its objective is to establish that the Romans themselves could not only serve as accountants, but also as auditors, a core role within accounting practice. The role of the auditor is to investigate and assess accounts to ensure that they are accurate and provide an appropriate basis for making decisions. To substantiate the Romans’ command of this capability, an outline of the rise of the auditing profession in 16th-20th century England and Scotland is provided as a point of comparison.

The limitation of the cultural sources detailed in the following chapters is their lack of procedural evidence. Our evidence well establishes the general importance of accounts, but offers no insight into their process. Left unanswered are such questions as the time dedicated to compiling accounts, when in the course of a day such tasks would be performed, and whether the workload was substantial enough to warrant full-time employment. As regards this last question, if the workload was in fact too minimal, would secondary employment have been needed? Missing from the evidence for accounting’s importance and prolific usage is any description of an expected or preferred ledger format. Finally, as expanded upon in chapter eight, only limited information is known about the career path of a full-time accountant.
Perhaps the greatest problem, particularly for classicists and philologists, is the ostensibly synonymous yet inexplicably varied terminology evident in comparative accounting documents. The historian Ralf Thilo published *Der Codex Accepti et Expensi* in 1980, a book devoted to identifying the language of accounting in classical Latin. He focuses on a type of accounting ledger, namely *codex accepti et expensi*, a phrasing first seen in Cicero (*Pro Fonteio*). Thilo’s aim was to discern differentiation in format or other essential qualities from alternately labelled ledgers (*ratio* or *tabulae*). The lack of sufficient evidence, however, prevents a definitive conclusion. Thilo did pose a number of theories about the ledgers, including: (1) a formalized cash book for money already received and spent; (2) a book that handles normal accounts, cash disbursed, and debts; (3) a prototype of double-entry accounting that largely handled accounts receivable and payable; and (4) a book that simply refers to the household’s accounting book. His conclusion from pages 319-320, as translated from the German, states:

“This study’s goal was to shed new light on the codex and classical *litteris obligationes* within the context of Roman bookkeeping and accounting. In doing so I argued in favor of the ‘booking theory’ (Buchungstheorie). Examining the variations in the booking theory shows that they are neither practical nor can they adequately explain the sources; the ‘modernist’ theory cannot be reconciled with sources at all (although it might offer a compelling system strictly from the technical aspects of bookkeeping). Thus both the modern system of bookkeeping and the associated terminology (account, credits and debits) cannot be used when considering Roman practices.

Consideration of the writing materials, methods of calculation and the bookkeeping records handed down to us showed how inadequate modern conceptions are. Roman bookkeeping was not a thought-out system but a collection of individual remarks and comments made by the person in charge of accounting for him to keep informed of the standing of, and changes, in property value. The single recognizable principle in Roman bookkeeping (which was fully adequate for the purposes of the time) was to provide a detailed chronological report with a list of juridical signposts as a memory tool. The same principle could be seen in operation among different types of bookkeeping, be they for a private household, the guardian’s bills, accounting for the state, banking or large associations like the *societates*.

After this principle was recognized as fundamental in Roman accounting, the codex’s place was put into context. It was, for the most part, a monthly report issued by the paterfamilias’ own hand (based on scattered *rationes* of slaves and procurators as well as the paterfamilias’ own notes of *adversaria*) on his total holdings. It listed in chronological order the income, expenses, debts and dues. The terms used nowadays like ‘household expense book’ or ‘livre de raison’ are, for their generality, a fitting description, but with the codex they are in some need of precision. The term *codex accepti et expensi* which Cicero used in his speech defending Roscius can be
explained by the fact that the vast majority of the entries (income, expenses, debts and dues) could be categorized under the terms *acceptum/expensum*. Other terms referring to the codex are *tabulae, commentarius* and *ephemerides*. This fueled the comparison made between the codex and *tabulae publicae* and Mommsen’s passing comment that the two were basically similar. The resulting question on the age (first usage) of the codex led to the theory that it developed on its own in connection with the republican census. Originally it was merely an inventory which a well-heeled paterfamilias would have to draw up to demonstrate his taxable property correctly. Over time it became a comprehensive audit (Gesamtvermögensverzeichnis) when it became necessary to declare debts and dues as well, i.e. in the 4th century when capital assets were included in the census. The necessity in fashioning such a statement became all the more obvious after the growing wealth gained from the second Punic war and the transfer of administrative work to slaves.”

Thilo’s assessment that the three terms — *codex accepti et expensi, tabulae, and ratio* — were interchangeable is likely correct. However, in his attempt to evaluate the level of sophistication of the *codex accepti et expensi*, he relies on the overly simplistic Sombart-Finley framework. He states above: “Roman bookkeeping was not a thought-out system but a collection of individual remarks and comments made by the person in charge of accounting for him to keep informed of the standing of and changes in property value.” The remarkable aspect was not that the terms were similar or interchangeable but, more importantly, the emergence of bookkeeping as a responsibility recognized by the law as a vital component of business practices. Indeed, plainly overlooked by Thilo is the question of how contemporary society ought to view the Roman civilization. Despite functioning largely as an agrarian society with low levels of literacy, the Romans demonstrated a remarkable dedication to accounting records, and the discipline in maintaining them both domestically and professionally.
Chapter Five: Part Two  The *Digest* of Justinian

Banking within the *Digest* of Justinian appears to have the most organized and strict rules regarding account management, but it lacked specificity in regards to the internal format of the accounts. To illustrate, Ulpian affirms in 2.13.4 that bankers must maintain accounts: “Let those who operate a banking business produce accounts (*rationem*) in matters relating to their business with the day and consul added.” ¹¹⁶ Yet nothing is added about the types of accounts, how transactions were to be listed, or the formats for inventories.

¹¹⁶ “Argentariae mensae exercitores rationem, quae ad se pertinet, edent adiecto die et consule.”
“The praetor says: ‘Let those who operate a banking business produce accounts in matters relating to their business with the day and consul added.’ The reason for this edict is most equitable. For since bankers prepare the accounts of individuals, it was equitable that what he prepared on my account and the (relevant) documents, which in a certain measure can be deemed to be mine, be produced to me. Again, these words are understood to comprise a son-in-power so that even such a person is compelled to produce; it is a question whether his father also is. Labeo writes that the father is not to be compelled unless the banking business is operated with his knowledge. But Sabinus rightly replies that this is to be allowed in the case where profit reverts to the father. But where a slave sets up a banker (for he can), certainly if he does this with his master’s consent, the latter is to be compelled to produce an action is given against him just as if he had set up himself. But if the slave acted without his master’s knowledge, it is sufficient for the latter to swear that he did not have the accounts in question. If a slave sets up as banker with his peculium, the master is liable under the action on the peculium and for benefit taken. But if the master has the accounts and does not produce them, he is liable for the whole. Even one who has ceased to act as banker is compelled to produce. But he is compelled to produce at the place where he carried on the banking business, and this has been clearly settled. But if he has the documents of the bank in one province, although he has carried on business in another, I think he can be compelled to produce (them) in the place where he carried on business. For in the first instance he erred in transferring the documents elsewhere. But if he carries on business in one place and is asked to produce elsewhere, this he is by no means compelled to do, unless you wish him to give you copies in the place where the action is brought, of course, your expense.”

Praetor ait: “argentariae mensae exercitores rationem, quae ad se pertinet, edent adiecto die et consule.” Huius edicti ratio aequissima est: nam cum singulorum rationes argentarii conficiant, aequum fuit id quod mea causa confecit meum quodammodo instrumentum mihi edisti. Sed et filius familiae continetur his verbis, ut vel ipse cogatur edere: an et pater, quaeritur. Labeo scribit patrem non cogendum, nisi sciente eo argentaria exercetur: sed recte Sabinus respondit tunc id admittendum, cum patri quaestum referit. Sed si servus argentarium faciat (potest enim), si quidem voluntate domini fecerit, compellendum dominum edere ac perinde in eum dandum est iudicium, ac si ipse fecisset. sed si inscio domino fecit, satis esse dominum iurare eas se rationes non habere: si servus peculiarem faciat argentarium, dominus de peculio vel de in rem verso tenetur: sed si dominus habet rationes nec edit, in solidum tenetur. Etiam is qui desit desit argentarium facere, ad editionem compellitur. Sed ibi quos compellitur edere, ubi argentarium exercuit, et hoc est constitutum. Quod si instrumentum argentariae in alia provincia habeat, in alia administraverit, ibi puto cogendum edere, ubi argentarium exercuit: hoc enim primum deliquit, quod alio instrumentum transtulit. quod si in alio loco argentarium exercet, alibi autem ad editionem compelletur, minime hoc facere cogitur: nisi descriptum velis ubi de ea re agitur eum tibi dare, tuis videlicet sumptibus.

For the Digest, see Watson 1985.
Even though no passage in the *Digest* elaborates upon the internal organization of a ledger, there were specific requirements for it to be considered legal. For instance, Ulpian (*Dig.* 2.13.6.3, 2.13.6.7), and Gaius (*Dig.* 2.13.10.2), state that a banking ledger must include references to money received and spent and any ongoing debt obligations. Similarly, a ledger must have the capacity to be handed over or have a statement written about it. In addition, although there are not laws to suggest that audits were mandatory, there is enough evidence to suggest that they had the potential to be a part of common transactions.¹¹⁸ For instance, consider Ulpian (*Dig.* 40.7.6.7) and Callistratus (*Dig.* 35.1.82), who state that an audit should be conducted before a slave is given manumission, and include the conditions of a successful ‘rendering of accounts’:

*Dig.* 2.13.6.3 Ulpian

| Moreover, Labeo says “an account is a transaction involving two aspects, giving and receiving, credit and debit, incurring and discharging an obligation on one’s own account. Nor does any account (he says) begin with the bare payment of what is owed. If someone has accepted a pledge or a mandate, he is not compelled to disclose this fact since it has nothing to do with the accounts. But where a banker has agreed to pay a debt, he ought to disclose the fact, since this pertains to the banking business.” | Rationem autem esse Labeo ait ullo citro dandi accipiendi, credendi, obligandi solvendi sui causa negotiationem: nec ullam rationem nuda dumtaxat solutione debiti incipere. nec si pignus acceperit aut mandatum, compellendum edere: hoc enim extra rationem esse. sed et quod solvi constituit, argentarius edere debet: nam et hoc ex argentaria venit. |

¹¹⁸ For further discussion on audits and auditors, see chapter eight below.

*Dig.* 2.13.6.7 Ulpian

| “Moreover, to produce is either to dictate or hand | Edi autem vel dictare vel tradere libellum vel |
over a written statement or make available an account book.”

**Codex Gaius**

> “However, an account is understood to be produced only if it is produced from its starting point. Of course, this does not mean that each person has the power to inspect and copy the whole of the account book and all its pages, but that only that part of the accounts which it concerns a particular person to know may be inspected and copied.”

**Dig. 2.13.10.2**

> Edi autem ratio ita intellegitur, si a capite edatur, nam ratio nisi a capite inspiciatur, intellegi non potest: scilicet ut non totum cuique codicem rationum totasque membranas inspiciendi describendique potestas fiat, sed ut ea sola pars rationum, quae ad instruendum aliquem pertineat, inspiciatur et describatur.

**Codex Ulpian**

> “Suppose a man’s freedom was ordered, subject to the condition not of his giving ten, but of his rendering accounts, would this condition pass to the purchaser? It is certain in other cases that only those conditions pass to the purchaser which consist in giving, not in doing, for example, teaching a boy his letters; conditions of the latter sort are tied indissolubly to the particular persons named; but a condition that accounts are to be rendered insofar as it involves payment of sums due, consists in giving money, though insofar as it involves handing over the actual books of accounts, elucidating them by questions, balancing, and then checking and scrutinizing them, it means having done something. Would the man not then attain freedom by actually giving to the purchaser any sums due, whereas the other actions concern the heirs? So in my opinion, it remains for the heir to require rendering of the accounts and the sums due are to be paid over to the purchaser with effect that the condition is divided; so too Pomponius writes in the eighth book of *Sabinus.*”

**Dig. 40.7.6.7**

> Si quis non dare decem et liber esse, sed rationibus redditis liber esse iussus sit, an ad emptorem haec condicio transeat, videamus. Et alias scendum est eas demum condiciones ad emptorem transire, quae sunt in dando: ceterum haec, quae sunt in faciendo, non transeunt, ut puta si filium eius litteras edocuerit: hae enim personis eorum cohaerent, quibus adscribuntur. Rationum autem reddendarum condicio, quod ad reliqua quidem attinet, in danda pecunia consistit, quod autem ad ipsa volumina rationum tradenda percontandasque et examinandas rationes et in dispungendas atque excutiendas, factum habet. Nam quid ergo reliqua quidem et emptori dando perveniat ad libertatem, cetera in persona heredis consistant? Puto igitur et ad emptorem reliquorum solutionem transmitti: sic fiet, ut dividatur condicio: et ita Pomponius libro octavo ex Sabino scripsit.

**Codex Callistratus**

> “A slave is directed to be free if he present his accounts, and the heir is charged to give him an estate; let us consider whether the condition be

**Dig. 35.1.82**

> Cum servus ita liber esse iussus sit ‘si rationes reddiderit’ eique fundum heres dare damnas sit, videamus, utrum condicio libertati praeposita sit an...
prepended to the freedom only or also to the legacy. Now if we were to accept that it concerns only the slave’s liberty, further discussion would be unnecessary; the legacy being thus found unqualified would be ineffective. But if as some justly think, the condition inheres also in the legacy, the legacy will become operative and effective once freedom ensues. What, then is the import of the words: ‘if he presents his accounts?’ Some would say, ‘if he restore any balance,’ as though it mattered not whether the condition be rendering of accounts or restitution of any balance. For my own part, I do not consider the condition to be purely one of giving something or of doing something; rather it is a condition of mixed content. He will in no way become free if he holds a balance in some purse; the testator had not that in mind but rather that he should present accounts in the way in which a slave usually does present them, that is, he will present the accounts first for perusal and then for computation so that it can be established whether ascriptions have been properly or improperly made. Hence, in this way, the matter originates in activity but comes through to cash (settlement). In the words, it is implicit that the heirs draw up advisement of the accounts so that they know what is written under which head of account. For the testator is understood to direct his heirs to effect what he would himself do, were he alive. And he certainly would not have merely signed the accounts of a slave showing cash in hand: he would want to read, check, and excerpt. All in all, then, when a slave is granted testamentary freedom subject to the condition, ‘…if he render accounts,’ this means not merely that he produce to the heir all the records and documents of his stewardship but also discharge any balances.”

Although precise to a degree, the terms for giving (dandi), receiving (acciipiendi), credit (credendi), and debit (obligandi) do not fully correspond to their modern accounting counterparts. The terms ‘debit’ and ‘credit’ in a modern context correspond to the practices of
double-entry accounting, meaning each action must be marked twice. For Roman jurists, however, the more logical suggestion is not a formalized procedure such as double-entry, but rather that a banker must include cash spent and received, in addition to noting any ongoing debt obligations. Ulpian (Dig. 2.13.6.7) also confirms Cicero’s court arguments that accounts must be made available, or there must be a verified written statement confirming the authenticity of the information.

The recognition that ledgers could be damaged is interesting. Paul (Dig. 2.13.7) states that if an individual ledger was lost in an accident, then a banker can reproduce that ledger (assuming from memory or notes) and it would be considered valid.119 Similarly, a banker is legally allowed to correct an error for up to 20 years.120 The logical correspondence found in 2.13.8 (Ulpian) is that if a ledger was intentionally not produced, then that is considered a punishable crime.121

\[119\] Dig. 2.13.7 As, far example, where he shows that he has left abroad what was first produced or a full production has not been made or the accounts (produced) were lost by an unavoidable accident not by carelessness.

Veluti si peregre habere quod primum editum est doceat; vel minus plene editum; vel eas rationes, quas casu maiore, non vero neglegentia perdiderit. nam si eo casu amisset, cui ignosci debeat, ex integro edi iubebit.

\[120\] Dig. 50.8.10 (Modestinus) The reversal of an error in accounting will be accepted even after ten or twenty years. But if the accounts are said to have been reckoned up corruptly, they will not be accepted (as being in error).

Calculi erroris retractatio etiam post decennii aut vicennii tempora admitetur. Sed si gratiose expunctae dicentur, non retractabuntur.

\[121\] Dig. 2.13.8 (Ulpian) When a banker is asked to produce accounts, he is punished if, intentionally, he does not produce (them), but he will not be accountable for fault unless it approximates to guilty intention. Moreover, he intentionally does not produce both where he has produced with some malicious purpose and where he has not produced at all.

Ubi exigitur argentarius rationes edere, tunc punitur, cum dolo malo non exhibet: sed culpam non praestabit nisi dolo proximam. dolo malo autem non edidit et qui malitiose edidit et qui in to tum non edidit.
Additionally, if there was fear of a debt not being honored, then a creditor could perform a one-time itemization of the borrower’s assets.\(^{122}\) If a borrower was recorded to have several debts with multiple bankers and these bankers brought a lawsuit against the borrower, then the conglomerate of bankers would comprise a single lawsuit against the borrower.\(^{123}\) Lastly, a banker was to note and keep track of the different types of depositors within his accounts. If the banker or bank became insolvent, then depositors who entrusted their funds without expectation of interest or a joint venture would be paid first.\(^{124}\)

\(^{122}\) *Dig. 42.5.15.1 (Ulpian)* We should now consider whether the creditors are allowed an inspection and itemization only once or on more than one occasion. Labeo says that “no more than one survey is allowed.” However, he further says that “if the claimant swear that he is not making a false claim and does not have what he itemized [previously], he is to be given no more than a second inspection.”

Utrum semel an etiam saepius recognitio et dispunctio concedenda sit creditoribus, videamus. et ait Labeo amplius quam semel non esse concedendam: si quis tamen, inquit, iuraverit non calumniae causa se postulare neque habere quae dispunxerit, iterum ei faciendam potestatem ait nec amplius quam bis.

\(^{123}\) *Dig. 2.14.9 (Paul)* If several persons have the same action, they are held to count as one person. For example, where there are several promises under a stipulation or several bankers to whom someone has incurred debts at the same time, they are counted as one because there is one debt. And when several tutors of a creditor *pupillus* have made an agreement, they are counted as one because they have agreed in the name of one *pupillus*. And also if one tutor makes an agreement in the name of several *pupilli* laying claim to one debt, it is settled that he counts as one since it is difficult for one man to undertake the role of two. For a person who has several actions as against one who has one action is not understood to count as several persons. We estimate the total of a debt by reference to several sums, as, for example, where small sums totaling one hundred *aurei* are owed to one person but a sum of fifty *aurei* to another; for in this case we look at several sums because, added together, they exceed (the other debt). Moreover, we ought also to include interest in the calculation of a sum.

Si plures sint qui eandem actionem habent, unius loco habentur. ut puta plures sunt rei stipulandi vel plures argentarii, quorum nomina simul facta sunt: unius loco numerabuntur, quia unum debitum est. et cum tutores pupilli creditoris plures convenissent, unius loco numerantur, quia unius pupilli nomine convenerant. nec non et unus tutor plurium pupillorum nomine unum debitum praetendentium si convenerit, placuit unius loco esse. nam difficile est, ut unus homo duorum vicem sustineat. nam nec is, qui plures actiones habet, adversus eum, qui unam actionem habet, plurium personarum loco accipitur. Cumulum debiti et ad plures summas referemus, si uni forte minutae summae centum aureorum debeatur, ali i vero una summa aureorum quinquaginta: nam in hunc casum spectabimus summas plures, quia illae ecedunt in unam summam coadunatae. Summae autem applicare debemus etiam usuras.

\(^{124}\) *Dig. 16.3.7.2 (Ulpian)* Whenever moneylenders become insolvent, it is customary for account of the depositors to be taken first, that is, of those who had money on deposit, not money at interest with the moneylenders, or invested
Where banking is rather straightforward with regards to ledgers, inheritance becomes more complicated. One of the key problems was the common practice for a slave to maintain the accounts of a household, thereby placing him in charge of the disbursements of wills while simultaneously achieving freedom through manumission. Such a system where a slave was essentially entrusted to the overseeing of an estate while simultaneously trying to safeguard his own route to freedom led to potential conflicts, including accusations of mismanagement, embezzlement, and other problems leveled against the slave accountant. Julianus (Dig. 34.3.12) states that in the will of Lucius Titus, there was a slave named Eros whom Titus wished to free upon his death. However, Titus’ heirs claimed that Eros received money both while as a slave and upon manumission that he did not correctly enter into Titus’ ledger. The resulting ruling was that Eros was not to be considered free unless the situation concerning the accounts was corrected, or some document from Titus was produced, acknowledging the missing accounts prior to his death.\(^\text{125}\) In addition, Scaevola (Dig. 34.3.28.9) states that the testator seems to have recognized in conjunction with the moneylenders, or left with them to make use of. This is the position so long as account is not taken of those who received interest also afterward, as if they renounced the deposit.

\begin{quote}
Quotiens foro cedunt nummularii, solet primo loco ratio haberi depositariorum, hoc est eorum qui depositis pecunias habuerunt, non quas faenore apud nummularios vel cum nummulariis vel per ipsos exercebant. et ante privilegia igitur, si bona venierint, depositariorum ratio habetur, dummodo eorum qui vel postea usuras acceperunt ratio non habeatur, quasi renuntiaverint deposito.
\end{quote}

\(^\text{125}\)Dig. 34.3.12 (Julianus) Lucius Titius who had an agent called Eros provided as follows in a codicil: “I desire that Eros be free and I wish him to give accounts of all transactions falling after my last signature.” He subsequently manumitted Eros in his lifetime, kept him in the same employment, and signed the accounts up to a day shortly before he died. The heirs of Lucius Titius allege that Eros received certain sums, both while still a slave and subsequently when free without entering them in the accounts signed by Lucius Titius; I ask whether the heirs should demand nothing from Eros during the period when Lucius Titius signed the accounts. I have given it as my opinion that Eros cannot sue for release in respect of the above-mentioned circumstances, unless this, too, has been specifically permitted him.

Lucius Titius cum Erotem actorem haberet, codicillis ita cavit: “Erotem liberum esse volo; quem rationes reddere volo eiusmodi temporis, quod erit post novissimam meam subscriptionem”. Postea vivus Erotem manumisit in eodem actu habuit rationesque subscriptis usque in eum diem, qui fuit ante paucissimos dies quam moreretur. heredes Lucii Titii dicunt quasdam summam et servum adhuc Erotem et postea liberum accepisse neque in eas rationes, quae a Lucio Titio subscriptae sunt, intulisse: quaero, an heredes ab Erote nihil exigere debent eius temporis, quo Lucius Titius subscriptis. respondi Erotem ex ea causa quae proponeretur liberationem petere non posse, nisi et hoc specialiter ei remissum est.
the problems of children claiming action against a slave who managed the accounts of the estate and who desires to be manumitted. His fideicommissum specifies the following: “Not to demand from Gaius Seius accounts of his administration through his bank to the date of my death, and release him in that respect.” In other words, the testator seals the accounts to prevent future claims such as fraud or lack of entries.

In the above instance from Scaevola (Dig. 34.3.28.9), the accounting documents were sealed when it appears an owner wished to protect the outcome of a slave during inheritance procedures. However, normally access to accounting documents after an individual’s death seems plausible. According to Papinian (Dig. 34.9.17), the ability to secure redress from inheritance profits was possible with proper accounting documentation.

\[126\text{Dig. 34.3.28.9 (Scaevola)}\] A testator had appointed his daughters heirs and imposed upon them a fideicommissum in the following words: “not to demand from Gaius Seius accounts of his administration of my estate which he has administered through his bank or outside his bank to the date of my death, and release him in that respect.” It has been asked, since he has had charge of the entire accounts up to the date of death, including those affected through his bank and those administered outside it, whether he is liable to account to the heirs. (Scaevola) has given it as his opinion that release has in fact been left to him according to the facts as given, but that the judge will decide how far it is to be afforded him from the nature of the argument. Filias heredes scripserat, quarum fidei commisit in haec verba: “ne a Gaio Seio rationes actus rei meae, quae per mensam sive extra mensam in diem mortis meae gesta est, exigatis eoque nomine eum liberetis”. quaesitum est, cum universas rationes in diem mortis iste administraverit et per mensam suam et quae extra administrabantur, ad rationes reddendas heredibus teneatur. respondit liberationem quidem secundum ea quae proponentur legitam esse, sed quatenus praestanda sit, ex qualitate disceptationis iudicem aestimaturum.

\[127\text{Dig. 34.9.17 (Papinian)}\] I held that an heir who knowingly makes light of securing redress for the death of the deceased should be compelled to give back all profits from the inheritance and cannot decently claim the right to request the restoration of any merged actions; but that if he was deceived by ignorance of what had happened, he should be able to advance the defense that he was possessor in good faith, at least if an accounting of the profits was made before the question was raised, and should not be forbidden to demand the restoration of merged actions. Heredem, qui sciens defuncti vindictam insuper habuit, fructus omnes restitueret cogendum eximiam nec probe desideraturum actionem confusam restitui: deceptum autem ignorantione facti bonae fidei possessoris defensionem habiturum ante motam scilicet controversiam, si ratio fructuum subducatur, nec improbe confusam actionem reddi postulaturum.
Conditions could also be placed upon slave accountants in order to gain manumission. In *Dig.* 40.7.40.8 (Scaevola), a banker in his will states that his stewards or accountants are to gain manumission if they collect all outstanding debts within six months, but would not be free if they failed to do so. In *Dig.* 40.5.41.10 (Scaevola), a condition is set by the testator that the slave-accountant maintain and render accounts to his heir, a boy who was not yet of legal age and required a guardian until he reached the age of 16. However, the boy died prior to reaching that age, so Scaevola’s ruling is that the steward still must wait and present accounts until the boy would have turned 16 and not prior. Similarly, in *Dig.* 40.7.6.7 (Ulpian), a slave is required to

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128 In Roman law, a slave to be manumitted conditionally was known as a *statuliber*.

129 *Dig.* 40.7.40.8 (Scaevola) A banker, almost all whose assets consisted in debts due to him, gave freedom to his slave stewards in these terms: “Whoever is my heir, if my slave Dama has rendered accounts to my heir for administration of the affairs carried on in his name and that of his fellow slave Pamphilus and has squared them within the sixth month from my death, he is to be free.” Does the phrase “squared them” refer to all debts, except when the debtors are bankrupt, with the meaning that they must collect all money due from all debtors and pay the heir or give him security therefor with the effect that they would not be entitled to freedom, they had failed to collect from the debtors within six months? He replied that the condition expressed in the words quoted from the will was perfectly plain; so they would only be free, if they complied with it or were prevented by the heir.

Argentarius coactor cum paene totam fortunam haberet, servis actoribus libertatem ita dedit: “quisquis mihi heres erit, si Dama servus meus actus sui, qui agitur nomine eius et Pamphili conservi sui, heredi meo rationes reddiderit pariaque fecerit a die mortis meae intra mensem sextum, liber esto”. quaestitum est, an haec verba “pariaque fecit” ad omnia nomina pertineant exceptis perditis, ut hoc significent “si omnem pecuniam ab omnibus exegerint et heredi solverint vel eo nomine satisfecerint” et, si in exactione nominum cessaverint intra sex menses, libertas illis non competat. respondit manifestam esse conditionem verbis testamenti supra scriptis positam: igitur ita demum liberos fore, si aut ei pareant aut per heredem stet, quo minus pareant.

130 *Dig.* 40.5.41.10 (Scaevola) The following grant of freedom was made by will: “I wish my slave, Cupitus, to be free after rendering accounts, when my son, Marcianus, has completed sixteen years”; after the testator’s death the tutors entrusted Cupitus with the collection of debts; he got in the cash and paid it over to the same tutors; then the son died without reaching the age of puberty, and his mother, who was his heir, secured condemnation of the son’s tutor by a judgment on tutelage; Cupitus proclaims his right to freedom at the time at which, if still alive, Marcianus would have been sixteen, furnishing accounts for one year to the date of testator’s death, since his other accounts had been certified. The question has been raised whether Cupitus should be compelled to render those accounts too which the tutors had passed at their own risk. He replied that the man in question seems to have complied with the condition that he must render account, if he rendered account in full to the extent that can rightly be required in respect of his administration; in fact, the other condition can be, by a more benign interpretation, accepted as meaning that if the *pupillus* had died, it is enough for him to await the time at which, if he had lived, the *pupillus* would complete his sixteenth year.
pay a remaining balance owed, maintain accounts, and teach an heir his “letters” before being
granted manumission. In this case, if he simply paid any amount owed but not the other
obligations, he may not obtain freedom. An unusual condition in Dig. 15.1.4.1 (Pomponius),
although not necessarily an inheritance issue, was placed upon a slave by his master (dominus) in
that he wished to remove a slave’s debt. It stated that if he wished to have a debt removed, intent
is proof enough and does not require a ledger entry.\footnote{Dig. 15.1.4.1. (Pomponius) If a master wants to release his slave from a debt, I think that the debt is extinguished
by the mere intention of the master; but if the master makes entries in his books suggesting that he owes the slave
something when, in fact, he owes nothing, I think the opposite is true; any increase to the peculium must be effected
by acts, not words.}
However, if a dominus wished to add funds to a slave’s peculium (savings), then just a ledger entry was not enough.

In one complicated case involving a slave (Stichus), nearly all of the aforementioned
problems of a slave managing the accounts of an estate while receiving manumission upon his
dominus’ death came to the fore.\footnote{Stichus is a placeholder name for a slave. It is not referring to a specific slave Stichus. The equivalent in
English is “John Doe.”} The dominus of the estate wished for Stichus to become
manumitted along with his wife, also a slave, if several conditions were met. The first was for
Stichus, who also acted as a money lender on behalf of his dominus, to collect all outstanding
debts. However, a question arose; should one of the borrowers become insolvent and be unable

\begin{verbatim}
Libertatem ita testamento dedit: " Cupitum servum meum, cum Marcianus filius meus sedecim annos impleverit, rationibus redditis liberum esse volo": post mortem testatoris cupitum exactionem commiserunt isque nummos redactos expensavit eisdem tutoribus: deinde filius impubes decessit, cui mater heres exitit et tutorem tutelae iudicio filii condenanntum habuit: Cupitus ad libertatem proclamat eo tempore, quo, si viveret Marcianus, annos sedecim aetatis habiturum esset, offerens rationale unius anno in diem mortis testatoris, quod ceterae subscripsit fuerunt. quaesitum est, an eas quoque rationes, quas tutores periculo suo egerunt, Cupitus reddere compelli debeat. respondit eum de quo quaeritur condicioni rationis reddendae ita videri paruisse, si omne ex eo, quod gessit, recte desiderari potest, reddiderit: nam alteram condicionem humaniore interpretatione ita accipi posse, ut defuncto pupillo tempus, quo, si viveret, sedecim annos impleret, exspectare satis fuerit.
\end{verbatim}
to repay the loan, would Stichus still be granted freedom? If Stichus did not render the accounts within the designated period, then he was not to be manumitted.\textsuperscript{133} The answer was yes, that it was possible to ‘render’ any outstanding balances less the insolvent ones and for Stichus to be granted freedom.\textsuperscript{134} Not surprisingly, if Stichus was found to be neglectful in not recording all applicable income from tenant farmers, then he would not receive manumission until rendering the missing entries.\textsuperscript{135}

\textsuperscript{133}\textit{Dig. 40.5.41.12 (Scaevola)} They did not prepare the accounts within the period specified in the condition but furnished them later; do they attain liberty? The answer given was that if it was their own fault that they did not prepare them within the time specified in the condition, they will not become free by reason of the fact that they wish to render accounts out of time.

\begin{quote}
Intra certa tempora condicioni reddendarum rationum non paruerunt, postea parati erant: quaesitum est, an perveniant ad libertatem. Respondit, si per ipsos stetisset, quo minus intra tempora praescripta condicioni parerent, non idcirco liberos fore, quod postea rationes velint reddere.
\end{quote}

\textsuperscript{134}\textit{Dig. 40.5.41.17 (Scaevola)} “I wish Stichus to be free after rendering accounts.” Stichus as treasurer lent money with his master’s sanction; he produces accounts signed by the master and has made no subsequent loan; if the debtors, with whom other collectors of debts were concerned, were insolvent, would it appear that the condition had not yet been fulfilled? He replied that, on the facts stated, the insolvency of the debtors was immaterial to the man’s responsibility for rendering accounts.

"Stichum rationibus redditis manumitti volo". Stichus arcarius probante domino nomina fecit et rationes a domino subscriptas exhibet nec postea nomen ullum fecit: quero, an, si qui minus solvendo fuerint debitores, quibus alii exactores erant applicati, nondum videatur condicioni satisfactum. respondit secundum ea quae proponerentur non pertinere ad onus reddendarum rationum, quod solvendo non esse debitores.

\textsuperscript{135}\textit{Dig. 40.7.40 (Scaevola)} Freedom was given to Stichus thus: “I ask my heirs and commit it to their good faith, to manumit Stichus after he has rendered accounts.” A large sum was due from the chest entrusted to the man after the testator’s death; he had not entered in the accounts certain moneys collected from the tenants; he had despoiled the inheritance by secretly opening the barns, removing furniture and clothing, and emptying the stores. Would fideicommissary freedom be due to him only when he had restored the sums he had embezzled and all the things he had stolen?

Sticho libertas data est: "ab heredibus meis peto fideique eorum committo, ut rationibus redditis Stichum manumittam." quaesitum est, cum ampla pecunia exacta post mortem testatoris sibi commissa reliquetur et quasdam summas a colonis exactis rationibus non intulerit hereditatemque spoliaverit apertos clam horreis sublatisque supellectili et veste et apothecis exhaustis: an non prius ei fideicommissa libertas debeatur, quam ea, quae mala ratione reliquatus est quae furatus est, reposuerit. respondit non prius ei fideicommissam libertatem praestandam, quam et reliqua et omnia, quae per eum abessent, restituisset.
The other conditions upon Stichus involved the heir of the estate. Since the heir was under age, Stichus was to hand over the remaining funds and accounts and render balances to the child’s guardian — namely, the tutor at the time of the dominus’ death. However, if the tutor claimed that money was stolen and Stichus was able to prove that the missing funds were no fault of his own, then he would still be manumitted.\footnote{Dig. 40.4.22 (Africanus) A man who instituted as heir a son below the age of puberty had ordered that Stichus should be free after rendering account of the silver under his care; the slave removed part of the silver and shared it with the tutor, and in consequence the tutor certified that his account was in balance. On being asked for an opinion whether Stichus was free, he replied that he was not; for whereas in other circumstances it would be approved that a statuliber under orders to pay money would attain freedom if he paid the tutor, or if the tutor prevented his compliance with the condition, this must be taken to mean that the transaction should take place in good faith without fraud on the part of the statuliber and the tutor in accordance with the regular practice for the alienation of property of a pupillus. Hence, if the statuliber offers money and the tutor be unwilling to accept it to the detriment of the pupillus, freedom only accrues to the slave if his offer is not fraudulent. The same applies in regard to the curator. It has also been asked in what manner a slave ordered to render account of silver should be deemed to have complied with the condition; that is, suppose that some pieces of plate have disappeared through no fault of the slave and he has faithfully handed over the rest to the heir, would he attain freedom? He replied that he would, for it is enough if he renders account on a fair and reasonable basis; then, if his account rendered to the heir is such as a good head of a household would accept, the condition (for his freedom) seems to be fulfilled.}

\footnote{Dig. 40.5.41.13 (Scaevola) “I ask my heirs and commit it to their charge that when my son completes sixteen years of age, they manumit Stichus on his rendering accounts.” My question is: Does the testator wish that same slave to continue his activity until the son reaches the age of puberty? The reply was that the testator obviously wished an account to be rendered also of his activities for that period by Stichus.} Even so, since Stichus was to be manumitted only once the heir reached 16 years of age, he was required to render accounts twice —once upon the death of his dominus and again for the period between when the dominus died and the child reached 16.\footnote{Dig. 40.4.22 (Africanus) A man who instituted as heir a son below the age of puberty had ordered that Stichus should be free after rendering account of the silver under his care; the slave removed part of the silver and shared it with the tutor, and in consequence the tutor certified that his account was in balance. On being asked for an opinion whether Stichus was free, he replied that he was not; for whereas in other circumstances it would be approved that a statuliber under orders to pay money would attain freedom if he paid the tutor, or if the tutor prevented his compliance with the condition, this must be taken to mean that the transaction should take place in good faith without fraud on the part of the statuliber and the tutor in accordance with the regular practice for the alienation of property of a pupillus. Hence, if the statuliber offers money and the tutor be unwilling to accept it to the detriment of the pupillus, freedom only accrues to the slave if his offer is not fraudulent. The same applies in regard to the curator. It has also been asked in what manner a slave ordered to render account of silver should be deemed to have complied with the condition; that is, suppose that some pieces of plate have disappeared through no fault of the slave and he has faithfully handed over the rest to the heir, would he attain freedom? He replied that he would, for it is enough if he renders account on a fair and reasonable basis; then, if his account rendered to the heir is such as a good head of a household would accept, the condition (for his freedom) seems to be fulfilled.}

Finally, if Stichus himself died after his dominus died but before
rendering accounts, would his wife gain her freedom still? The answer was no, as the original condition to render accounts had not been met.

It becomes apparent through the Stichus examples and prior Digest entries that diligent accounting, correct paperwork, and informing heirs about intent were all of great importance for a testator to have his will successfully followed. In addition to manumission concerns, an

"Ab heredibus meis peto fideique eorum committto, cum filius meus sedecim annos impleverit, Stichum rationibus redditis manumittant:" quero, an eundem servum testator in diem usque pubertatis filii sui actum agere voluerit. respondit manifestum esse testatorem huius quoque actum rationem a Sticho reddi voluisse.

Dig. 40.7.40.3 (Scaevola) A slave was manumitted by will in these terms: “Let my slave and steward Stichus be free if he has rendered a complete account to my heir of his administration and given satisfaction for it, and I wish him when he is free, to be given twenty and his peculium.” If he is ready to render to the heir accounts of which he was in charge for many years without a signature by the testator (certifying that they were correct), would he be free under the will, considering that because of ill health the testator was unable to sign the accounts, though he did sign the will? He replied that if the accounts were rendered honestly and any sums due paid in, he would be free.

Servus testamento ita manumissus est: "Stichus servus meus actor si rationem omnem actus sui fide reddiderit eoque nomine satisfecerit, liber esto eique, cum liber erit, dari volo viginti et peculium suum". quaecum est, an, si rationes, quas eget per multos annos sine subscriptione testatoris, heredi reddere paratus sit, liber ex testamento fiat, cum propter gravem valetudinem testator non potuerit rationibus subscribere, testamento tamen subscripterit. respondit, si ex fide ratio redderetur reliquaque inferantur, liberum fore.

Dig. 35.1.81 (Paul) Your question is this: Suppose a provision of a will, “if Stichus renders accounts, let him be free together with the slave-woman with whom he lives and let the heir give them ten”, should Stichus die before rendering accounts, having an adjuster or balance, does the woman become free? And would we say the same of the legacy? Where freedom is granted on condition of rendering accounts, it is implicit therein that the person so charged be seen to render balances faithfully to his stewardship. If there be none, they will be held to have an unconditional grant of freedom; should the death occur after the heir’s acceptance of the inheritance, the legacy, if freedom results, will be theirs also. But should Stichus die while still holding balances, the woman, being regarded as receiving freedom on the same terms, will be deemed not to have satisfied the condition. It is, though, not without a smack of elegance to say that Stichus indeed is conditionally manumitted but that his woman receives unqualified manumission, the linking of their names being, not to subject them to the same condition but for the purpose of identification. The condition will then be regarded as satisfied because its nonfulfillment is due to the one who would be liable if it had been satisfied.

Quaesisti, si ita in testamento cautum esset: "Stichus si rationes reddiderit, cum contubernali sua liber esto eisque decem heres dato," an Sticho mortuo antequam rationes redderet, vel pariatore vel reliqua habente, libera esset mulier? et an de legato idem accipiamus. libertate data, si rationes reddiderit, hanc condicionem rationum reddendarum, ut iussus videatur reliqua reddere, si qua habet, cum fide actus sui. quae si nulla sunt, pure accepisse libertatem videbuntur: et si post aditam hereditatem decestit, competente libertate etiam legatum eos secutum est. quod si, cum adhuc reliqua habeteret, dececessit, sub eadem condicione et contubernalis eius libertatem accepisse videtur et defecta videbitur condicione. sed non ineleganter illud dicetur Stichum quidem sub condicione manumissionem, contubernalem autem eius pure et illam coniunctionem non ad coniungendum condicionem, sed ad necessitudinem demonstrandam pertinere.
orderly inheritance required a properly listed ledger. In *Dig.* 33.10.10 Javolenus states that a husband listed that all furniture upon his death would go to his wife. Under furniture, he also made reference to clothing. However, since ‘clothing’ is not ‘furniture’ and it was improperly listed, it was not given to his wife.\(^{139}\) Clearly, at least in principle, the Romans thought that a well-ordered account had proper divisions in the different types of property inventories.

The last remaining area where the *Digest* reflects particular rules about accounts focuses on guardianships. It would frequently occur that an heir (*pupillus*) would be underage, infirm, or possibly a young wife, and would require a legal guardian (*tutor*). The guardian would be expected maintain accounts during this period.\(^{140}\) A *pupillus* also had the ability to sue his or her *tutor* and force the tutor to reveal the accounts to help discover whether fraud or mismanagement

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\(^{139}\) *Dig.* 33.10.10 (Javolenus) A man who was accustomed to set down in his accounts all his clothing and articles of many kinds as furniture legated his furniture to his wife. Labeo, Ofilius, and Cascellius rightly denied that the clothing would go with the legacy, because clothing cannot be held to be included under the term furniture.

Qui vestem omnem et res plurium generum supellectilis expenso ferre solitus erat, is uxori supellectilem legaverat. Labeo Ofilius Cascellius recte negabant vestem legato cessuram.

\(^{140}\) *Dig.* 2.13.9 (Paul) Certain persons are under a duty to produce accounts for us, and yet they are not compelled by the praetor by means of this edict. For example, when a procurator has administered our affairs or accounts, he is not compelled by the praetor through fear of an *actio in factum* to produce accounts. Of course, the reason is that we can obtain them through the action on the mandate. And when a partner has carried out transactions fraudulently, the praetor does not intervene by means of this clause, since there is the action on the partnership; Nor does the praetor compel the tutor to produce accounts to a *pupillus*. But he is normally compelled to produce by the action arising from the guardianship.

Quaedam sunt personae, quas rationes nobis edere oportet nec tamen a praetore per hoc edictum compelluntur. veluti cum procurator res rationesve nostras administravit, non cogitur a praetore per metum in factum actionis rationes edere: scilicet quia id consequimur possimus per mandati actionem, et cum dolo malo socius negotia gessit, praetor per hanc clausulam non intervenit: est enim pro socio actio. sed nec tutorem cogit praetor pupillo edere rationes: sed iudicio tutelae solet cogi edere.
of negligence, then the *pupillus* had the ability to have a praetor’s action (*actio*) to force recompense from the tutor.⁴¹

In sum, accounting reflected in Roman law highlights two points. The first is an affirmation of accounting documents. In particular, there is the likely process of moving accounting day notes of the *adversaria* to a formalized ledger. Moreover, both Cicero and the jurists reflect the need for well-maintained accounts that can be presentable for a variety of circumstances, including transactions, wills, manumissions, and guardianships. However, the second point reflects the limitations of what is known. Similar to the sheer lack of volumes of accounts (although several terms are clearly used [*tabulae, codex accepti et expensi*, and *ratio*]), no realistic assessment about the expected or normalized internal structure of accounts can be gleamed from the *Digest*.

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⁴¹*Dig.* 26.7.46.5 (Paul) A tutor who was sued in an action on tutelage showed his account book; in accordance with this he was condemned and made payment. Afterward, when the *pupillus* wanted to enforce payment from debtors of his father, whose debts were not included in the account book, these persons produced the tutor’s receipts. It was asked whether an action was due to him against the tutor or against the debtors. Paul replied that if during the period of administration of the tutelage the debtors made payment to the tutor who was managing the tutelage, they are automatically released from their obligation to the pupillus; but if there was an action with the tutor, this same *adulescens* can go to law on account of this case on tutelage and make use of a reply of fraud against a defense of *res judicata*.

Tutelae iudicio tutor conventus edidit librum rationum et secundum eum condemnatus solvit: postea cum a debitoribus paternis, quorum nomina libro rationum non inerant, exigere vellet pupillus, prolatae sunt ab his apochae tutoris: quaesitum est, utrum adversus tutorem an adversus debitores actio ei competat. Paulus respondit, si tempore administrandae tutelae turoi tutelam gerenti debitores solvissernt, liberatos eos ipso iure a pupillo: sed si cum tutore actum esset, posse eundem adulescentem propter eam causam tutelae experiri et adversus exceptionem rei iudicatae doli mali uti replicatione.
Cicero, better than any other surviving Roman source for accounting, helps to illuminate the Roman culture of accounting as it likely occurred on a daily basis. As mentioned in chapter five, the most appropriate analogy in regard to societal expectations concerning accounting is that of keeping available all pertinent accounting information in case an audit were to occur. However, there is a more common occurrence to consider, which includes the recording of a financial transaction between two individuals. Today, nearly every transaction has an identifiable record or receipt, so if problems were to emerge, there is a reference for the transaction. For Romans, as particularly seen in Cicero, there is evidence that any large transaction between two individuals ought to be accompanied by an appropriate entry in a home journal.

For instance, Cicero’s success in his early court case Pro Quinto Roscio Comoedo depended upon the proper recording of a transaction in a home journal. The preserved court speech dates to 80 BCE, when Cicero was 26 years old. Cicero defends his client, Quintus Roscius, against claims that Caius Fannius Chaerea owed him 100,000 sesterces, a small fortune. However, Cicero maintains that Roscius never recorded such a transaction in his home ledger, whereas Chaerea can only produce it in his adversaria, a lesser journal, or “day-book,” but not in his formal ledger. In consequence Cicero argues, that since his client has no recorded
transaction, and the accuser cannot produce adequate evidence, Roscius should not be liable for such funds.

Cicero, *Pro Quinto Roscio Comoedo* 1.1-5:

1. As one of the best of men, no doubt, and of singular integrity, he attempts to use his own account-books as evidence in his own cause. Those who desire to prove the payment of a sum of money by the account-books of an honorable man are in the habit of saying: “Should I have been able to corrupt such a man so as to persuade him to make a false entry in his ledger to oblige me?” I am waiting to see how long it will be before Chaerea uses the following language: “Should I have been able to induce this hand, full of treachery, and these fingers of mine to make a false entry of a debt?” But if he produces his account-books, Roscius also will produce his. The entry will be found in Chaerea's books, but not in those of Roscius?

2. Why should greater credit be given to Chaerea's books than to those of Roscius?

Would Chaerea have made such an entry of money disbursed unless he had been authorized by Roscius? Would not Roscius also have made an entry of money disbursed to him, if he had authorized Chaerea to make it? For it is as dishonorable not to enter what you owe as it is disgraceful to set down as due from another what is not due. For the account-books of one who has not entered what is true are as much to be condemned as those of one who has written down what is false. But see how far I am ready to go, relying upon the ample means I possess for proving my cause. If Gaius Fannius produces his account-books of money received and expended, set down in his own interest and in accordance with his pleasure, I have no objection to your giving judgment in his favor.

| 1. Is scilicet vir optimus et singulari fide praeditus in suo iudicio suis tabulis testibus uti conatur. Solent fere dicere, qui per tabulas homines . . . citi pecuniam expensam tulerunt: 'Egone talem virum corrumpere potui, ut mea causa falsum in codicem referret?' Expecto, quam mox Chaerea hac oratione utatur: 'Egone hanc manum plenam perfidiaet hos digitos meos impellere potui, ut falsum perscriberent nomen?' Quodsi ille suas proferet tabulas, proferet suas quoque Roscius. Erit in illius tabulis hoc nomen, at in huius non erit. |

Trans. Freese 1930.
3. What brother or father thinks so highly of his brother or son as to regard as confirmed whatever either of them has entered in his books? Roscius will regard it as confirmed; produce your books; what you may have been convinced of, he will be convinced of; what you may have approved of, he will approve of. A little time ago we asked for the account-books of Marcus Perpenna and Publius Saturius we now urgently call for yours alone, Gains Fannius Chaerea, and have no objection to judgment being given according to them in your favor; so why do you not produce them?

4. Does he not make up his books? On the contrary, most carefully. Does he not enter small amounts in his ledgers? On the contrary, every sum. Is this debt unimportant and trifling? It is 100,000 sesterces. How is it that such a large a sum of money lies neglected and is omitted from the books? How is it to you that 100,000 sesterces are not entered in the ledger? Oh immortal gods, to think that there can be a man so audacious as to dare to claim a sum which he is afraid to enter in his account-books; as not to hesitate to swear to a debt in court which, when not on oath, he did not like to enter in his ledger; as to endeavor to persuade another of something which he cannot prove to his own satisfaction!

5. He says that I am in too great a hurry to express my indignation about the account-books; he admits that he has not this item entered in his ledger, but maintains that it can be seen by anyone in his day-book. Are you then so devoted to yourself, have you such an intense admiration of yourself, as to ask for money not on the strength of your account-books, but of your day-books? It is presumptuous to quote one's ledger as a witness; but is it not sheer madness to produce rough notes of one's entries and erasures?

6. But if day-books have the same value, the same exactness, and the same authority as account-books, what is the use of making a ledger, of putting...
everything down, of keeping an ordered list of transactions or a record of old documents? But if, because we have no faith in day-books, we have adopted the practice of compiling ledgers, ought authority and sanctity to be attributed before the judge to what is considered by all to be feeble and unimportant?

7. What is the reason why we write our notes carelessly but make up our ledgers carefully? What is the reason? It is because day-books last for a month, ledgers forever; day-books are immediately destroyed, ledgers are religiously preserved; day-books embrace the memory of a moment, ledgers attest the good faith and conscientiousness which ensure a man’s reputation for all time; day-books are ill-arranged, ledgers are put together in order. This is why no one ever produces day-books in court; it is ledgers that are produced, it is account-books that are read.

In regards to the language found in *Pro Quinto Roscio Comoedo*, Cicero uses three distinct terms—*adversaria*, *codex accepti et expensi*, and *tabulae*. For comparison, the *Digest* only uses the term *ratio*. Moreover, the references to the *codex accepti et expensi* in the *Pro Quinto Roscio*
Comoedo tend to indicate that, in this instance, it recorded money both received and spent. Thus Cicero states: “Would Chaerea have made such an entry of money disbursed unless he had been authorized by Roscius? Would not Roscius also have made an entry of money disbursed to him?” What is unclear is whether the codex accepti et expensi normally refers to a listing of cash disbursements (namely, money that has previously been paid and received) or whether it could refer to ongoing obligations similar to modern ‘accounts receivable and payable’. Finally, could the codex accepti et expensi refer to simply an all-encompassing household ledger that listed inventory, disbursements, and ongoing obligations?

Indeed, if it is more akin to accounts receivable and payable, then it could be a litteris obligatio (written debt obligation), a formalized recording process for recording a debt transaction (debt = nomen or nomina transscripticia).

Perhaps a good point of reference for Cicero’s statements from Pro Roscio is the accounting documents from the Appianus estates found in chapter two above (Heroninos Archive). Those documents appear to have utilized a format similar to what Cicero suggests, a transition from a less formal adversaria to the formalized ledger. The Appianus example may be significantly more complex than average, but it provides a clear instance of what a well-organized monthly summary could look like with monetization, the organization of payments, and a clean presentation.

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Another instance that demonstrates the relative difficulty of understanding the Latin terms, while still conveying the importance of maintaining accounts, occurs in Cicero’s Pro Fonteio. In this case,
dating to about 73 BCE, Cicero defends the ex-governor Fonteius against embezzlement charges during his tenure in Gaul ten years earlier. The phrase accepti et expensi in *Pro Roscio* changes here to acceptis et datis. The change is interesting, as datis (having been given) means relatively the same as expensi (paid out); both indicate money already spent. Similarly, the four instances of tabulae and the one instance of ratio seem to refer to account books in general, no doubt relating to the governorship of Fonteius.

What is clearly articulated from Cicero’s standpoint during his defense of Fonteius is that the documents were well maintained and held in importance. In *Pro Fonteio* 3, he indicates that the documents have not suffered any noticeable changes or tampering. As he states, he believes in their validity to the point that he calls them “uncorrupted and honest” (*incorruptae atque integrae*). In section 11, he makes the case that if there were competing accounts, someone would have produced them. Cicero even claims that Romans are so diligent in their record-keeping that if something corrupt did occur, then someone’s account would reflect fraudulent transactions. These sentiments are made clear when he dares to boast: “No Gaul does any business without the aid of a Roman citizen; not a single sesterce in Gaul ever changes hands without being entered in the account-books of Roman citizens.”

The conclusion must be that Cicero uses generalizations to describe accounting ledgers. His terminology is not precise enough to know whether ongoing debts, cash dispensed, and inventory listings were held in separate account books. For Cicero, the distinction is simply between a well-organized ledger and an informal notebook. What is unmistakably clear is the overall Roman commitment to producing verifiable records. Comparing *Pro Fonteio* to *Pro Roscio*, it emerges that
innocence is sustained not by compliance with a standardized format of ledger but by the ledgers being
eat, orderly, and presentable.

*Cicero, Pro Fonteio* 143

| 3. No one—no one, I say, O judges—will be found, to say that he gave Marcus Fonteius one sesterce during his quaestorship, or that he appropriated one out of that money which was paid to him on account of the treasury. In no account-books is there any hint of such a robbery, among all the items contained in them there will not be found one trace of any loss or diminution of such monies. But all those men whom we ever see accused and found fault with by this sort of inquiry, are overwhelmed with witnesses; for it is difficult for him who has given money to a magistrate to avoid being either induced by dislike of him, or compelled by scrupulousness, to mention it; and in the next place, if witnesses are deterred from appearing by any influence, at all events the account-books remain uncorrupted and honest. Suppose that every one was ever so friendly to Fonteius; that such a number of men to whom he was perfectly unknown, and with whom he was utterly unconnected, spared his life, and consulted his character; still, the facts of the case itself, the consideration of the documents, and the composition of the account-books, have this force, that from them, when they are once given in and received, everything that is forged, or stolen, or that has disappeared, is detected. All those men made entries of sums of money having been received for the use of the Roman people; if they immediately either paid or gave to others equally large sums, so that what was received for the Roman people was paid to someone or other, at all events nothing can

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143 Trans. Watts 1931.
have been embezzled. If any of them took any money home…..

11. …that in the time of this praetor Gaul was overwhelmed with debt. From whom do they say that loans of such sums were procured? From the Gauls? By no means. From whom then? From Roman citizens who are trading in Gaul. Why do we not hear what they have got to say? Why are no accounts of theirs produced? From the Gauls? By no means. From whom then? From Roman citizens who are trading in Gaul. Why do we not hear what they have got to say? Why are no accounts of theirs produced? I myself pursue and press the prosecutor, O judges; I pursue him I say, and I demand witnesses. In this cause I am taking more pains and trouble to get them to produce their witnesses, than other advocates for the defense usually take to refute them. I say this boldly, O judges, but I do not assert it rashly. Gaul is filled with traders,—is full of Roman citizens. No Gaul does any business without the aid of a Roman citizen; not a single sesterce in Gaul ever changes hands without being entered in the account-books of Roman citizens.

12.See how I am descending, O judges, how far I seem to be departing from my ordinary habits, from my usual caution and diligence. Let one set of accounts be produced, in which there is any trace whatever which gives the least hint of money having been given to Fonteius; let them produce out of the whole body of traders, of colonists, of publicans, of agriculturists, of graziers, but one witness, and I will allow that this accusation is true. O ye immortal gods! what sort of a case is this? what sort of a defense? Marcus Fonteius was governor of the province of Gaul, which consists of those tribes of men and of cities, some of whom (to say nothing of old times) have in the memory of the present generation carried on bitter and protracted wars with the Roman people; some have been lately subdued by our generals, lately conquered in war, lately made remarkable by the triumphs which we have celebrated over them, and the monuments which we have erected, and lately

| 11. | ....that in the time of this praetor Gaul was overwhelmed with debt. From whom do they say that loans of such sums were procured? From the Gauls? By no means. From whom then? From Roman citizens who are trading in Gaul. Why do we not hear what they have got to say? Why are no accounts of theirs produced? From the Gauls? By no means. From whom then? From Roman citizens who are trading in Gaul. Why do we not hear what they have got to say? Why are no accounts of theirs produced? I myself pursue and press the prosecutor, O judges; I pursue him I say, and I demand witnesses. In this cause I am taking more pains and trouble to get them to produce their witnesses, than other advocates for the defense usually take to refute them. I say this boldly, O judges, but I do not assert it rashly. Gaul is filled with traders,—is full of Roman citizens. No Gaul does any business without the aid of a Roman citizen; not a single sesterce in Gaul ever changes hands without being entered in the account-books of Roman citizens. |
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mulcted, by the senate, of their lands and cities: some, too, who have fought in battle against Marcus Fonteius himself, have by his toil and labor been reduced under the power and dominion of the Roman people.

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In the final case where accounting comprises a critical aspect, Cicero prosecutes the former Roman governor of Sicily, Gaius Verres, for corruption in 70 BCE.\textsuperscript{144} The orator’s speech was prepared but mostly never delivered, because Verres fled Rome and went into exile, thereby evading justice. As in his case defending Roscius, in part of this prosecution Cicero relied on an expectation to maintain a ledger. He intended to show that Carpinatius, a contracted tax collector for Rome (\textit{publicanus}), worked in collusion with Verres and ‘lent’ him large sums of money when doing so was illegal.

This case demonstrates that Cicero was aware of not only the existence of laws on ledgers but also of the points of these laws as well. It is clear that he had the authority to survey and review a witness’ ledger. Further, he was skilled enough to recognize fraud, alterations, and discrepancies in the accounts, linked to collusion with Verres. In addition, he was aware that the law forbade him to remove a ledger, but that he was allowed to have a copy made which would carry authority in a court setting. Moreover, when a copy was made, that was to be done publicly, and those witnessing the work recognized the process quite readily.

\textsuperscript{144} Trans. Greenwood 1935.
We will now go back to the company’s accounts of receipts and expenditure, which they had no respectable means of suppressing, and to your friend Carpinatius. I was at Syracuse looking through the company’s accounts kept by Carpinatius, in which a number of items showed that persons who had paid sums of money to Verres had borrowed for the purpose from Carpinatius—a fact that will be clearer than daylight to you, gentlemen, the moment I bring forward the actual persons who made these payments; for you will see that the dates at which they bought release from their critical situations by bribery correspond, not only year for year but month for month, with the company’s accounts.

While noting these particular facts, with the accounts open in my hands, I suddenly caught sight of some erasures that suggested recent injuries to the tablets. As soon as this suspicion struck me, I transferred my eyes and attention to these special items. There were sums entered as received from Gaius Verrucius son of Gaius; but whereas up to the second “r” the letters were plainly untouched, all after that were written over an erasure; and there was a second, a third, a fourth, a large number of items of the same character. Since these erasures on the tablets manifestly indicated some conspicuously villainous and dirty proceeding, I proceeded to ask Carpinatius who this Verrucius was with whom he had such extensive money transactions. The man hesitated, shuffled, went red in the face. As the law exempts the accounts of revenue-contractors from liability to removal to Rome, and as I wished to have the facts clearedup and corroborated as far as I could, I brought an action...
against Carpinatius before Metellus, and took the company's accounts along to the court-house. A large crowd gathered; and since Carpinatius was notorious as a partner of Governor Verres and as a money-lender, there was great and general curiosity to know what the account-books contained.

188. I stated my charge before Metellus, saying that I had inspected the company's accounts; that they included a large one, with a great many entries, under the name of Gaius Verrucius; and that by comparing the months and years I had discovered that no such Verrucius had kept any sort of account with Carpinatius either before the arrival of Gaius Verres or after his departure. I demanded therefore that Carpinatius should tell me who this Verrucius was, merchant or banker or arable or pastoral farmer, and whether he was still in Sicily or had gone away. The whole audience shouted that there had never been in Sicily anyone called Verrucius. I insisted that he should answer me and say who this was where he was, and where he came from, and why the company's slave who wrote up the accounts, when he wrote the name of Verrucius, always went wrong at one particular point.

189. And I did not make these demands because I thought it right that he should be forced to answer my questions against his will; my purpose was to make quite plain to everyone the peculations of Verres, the misconduct of Carpinatius, and the audacity of them both. So I left the man there before the praetor, speechless and dazed and half dead with the terrors of his guilty conscience, and proceeded to make a copy of the accounts, there in the market-place with a great crowd looking on. Men of position in the
district helped with the writing, and every letter and erasure was transferred, reproduced exactly, from the accounts to my books. The whole thing was then examined and compared with scrupulous care, and signed and sealed by certain gentlemen of high standing.
Chapter 7: Roman Affinity for Accounting

A significant portion of references to accounting in Roman society are located in a mix of sources ranging from theater, to correspondence, encomia, and imperial biography. There are several aspects worth noting. One obvious aspect is the sheer range of the testimony. Another is its temporal span, from the 3rd century BCE to the 4th century CE. Strikingly recurrent is the level of satisfaction and pride in the ability to maintain a ledger. To be sure, much of the testimony is merely anecdotal, yet the representation of a positive accounting milieu in Roman society is still consistent.

Take first a reference in the works of the Roman playwright Plautus, who wrote in the late 3rd century BCE and early 2nd century BCE. His play, Mostellaria (“The Haunted House”), tells the story of a young man (Philolaches) who fell in love with his family’s female slave (Philematium). When the young man’s father departed for a trip, Philolaches used the opportunity to purchase the female slave’s freedom and marry her. After the hasty wedding, the young man invited friends to come to his father’s estate for several days of partying and celebration of the marriage. However, events turn rather comical when neighbors notice the noise and commotion coming from the estate and ask what is happening. The young man convinces his best friend, the family steward, to help cover for his partying by telling all further visitors that the house has become haunted and they must leave immediately. The young man lends his aid in the ruse by dressing and acting as a ghost to help further frighten any other guests away.
The section of *Mostellaria* that has a bearing on accounting occurs early in the play. In lines 297-310, Philolaches has successfully bought Philematium’s freedom, and they are affectionately joking about the “worth” of a loving smile. After jesting with each other about how much they owe each other, they express their love in accounting terms. For clarity, Plautus uses the term most connected to the notion of ‘credit and debit’ — namely, “ratio accepti atque expensi,” which directly translates to “account of receipts and debts.” Plautus evidently thought his audience, which was not just aristocratic, would be quite aware of accounting terminology and would understand the metaphor of equating the ‘balance of love’ to the ‘balance of accounts.’

**Plautus, Mostellaria 297-310**

| PHILOLACHES | You’ve already got ten minæ with you; or reckon up the account: thirty minæ I gave for your freedom---- | etiam nunc decem minae apud te sunt; uel rationem puta. Triginta minas pro capite tuo dedi. |
| PHILEMATIUM | Why reproach me with that? | cur exprobras? |
| PHILOLACHES | What, I reproach you with it? Why, I had rather that I myself were reproached with it; no money whatever for this long time have I ever laid out equally well. | egone id exprobrem, qui mihimet cupio id opprobrarier? Nec quicquam argenti locaui iam diu usquam aequre bene. |
| PHILEMATIUM | Surely, in loving you, I never could have better employed my pains. | certe ego, quod te amo, operam nusquam melius potui ponere. |
| PHILOLACHES | The account, then, of receipts and expenditure fully tallies between ourselves; you love me, I love you. Each thinks that it is so deservedly. Those who rejoice at this, may they ever rejoice at the continuance of their own happiness. Those who envy, let not any one henceforth be ever envious of | bene igitur ratio accepti atque expensi inter nos conuenit: tu me amas, ego te amo; merito id fieri uterque existumat. Haec qui gaudent, gaudeant perpetuo suo semper bono; qui inuident, ne |

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The *Mostellaria* is far from being the only literary work that includes a reference to accounting. In *Satyricon*, a witty satire written by Petronius in the mid 1st century CE, the author criticizes many aspects of Roman society but perhaps none more pointedly than the *nouveau riche* Trimalchio. Trimalchio, a former slave turned wealthy shipping magnate and moneylender, hosts a dinner party during which he bungles the manners characteristic of his rich peers. In particular, he errs on the topics of history, poetry, and etiquette. He also unabashedly aggrandizes himself and his position of wealth. However, some revealing actions regarding accounting occur at the outset and during the event. The person greeting guests at the estate’s entrance is a chamberlain (*procurator*) acting in the role of an accountant by recording guests’ names in all cases (*accipiebat rationes*) while also collecting a fee from some.\(^{146}\) Similarly, after the dinner celebration, when the guests watch dancing, a clerk interrupts the entertainment by reading inventory lists of property, at which point Trimalchio declares: “I will not have any property which is bought in my name entered in my accounts unless I hear of it within six months.”\(^{147}\) Despite the references to accounting practices being minor components of the dinner and party sequences, both examples signal a familiarity with accounting usage.

Polybius’ *Histories*, written in the middle of the 2nd century BCE preserve the story of Publius Cornelius Scipio Africanus and his brother Lucius Cornelius Scipio Asiaticus being

\(^{146}\) *Satyricon* 30. “We now went through to the dining-room. At the entrance the steward sat receiving accounts. I was particularly astonished to see rods and axes fixed on the door post of the dining-room, and one part of them finished off with a kind of ship’s brazen beak.” Nos iam ad triclinium perveneramus, in cuius parte prima procurator rationes accipiebat. Et quod praecipue miratus sum, in postibus triclinii fasces errant cum securibus fixi, quorum unam partem quasi embolum navis aeneae finiebat, in quo erat scriptum. Trans. Rouse 1905.

\(^{147}\) 53.7 “mihi fundi empti fuerint, nisi intra sextum mensam sciero, in rationes meas inferri vetuo.”
prosecuted by two tribunes for embezzling 3,000 talents after their return from defeating the Seleucid King Antiochus III in 187 BCE. The tribunes demanded that the brothers present their ledger for review. Publius asked his brother to produce it. Then, citing the accounts in the ledger, Publius addressed their accusers, demanding to know how they dare ask him for 3,000 talents when it was he and his brother who were responsible for defeating the enemy and providing Rome with 15,000 talents. He dramatically ripped up the ledger and tossed the shreds, a dramatic gesture that caused the inquiry to be dropped.

Polybius, *Histories* 23.14

| On another occasion when someone in the senate asked him [Publius] to render an account of the moneys he had received from Antiochus before the peace for the pay of his army, he said he had the ledger, but he was not obliged to render an account to anyone. When the senator in question pressed his demand and ordered him to bring it, he asked his brother to bring it; and when the book was brought to him, he held it out and tore it to bits in the sight of everyone, telling the man who had asked for it to search among the pieces for the account. At the same time, he asked the rest of the senate why they demanded an account of how and by whom the three thousand talents had been spent, while they had not inquired how and by whose hands the fifteen thousand talents they were receiving from Antiochus were coming into the treasury, nor how they had become masters of Asia, Africa, and Spain. So not only were all abashed, but he who had demanded the account kept silent. | πάλιν δὲ ποτε λόγον ἀπαιτοῦντός τινος ἐν τῷ συνεδρίῳ τῶν χρημάτων ὧν ἔλαβε παρ᾽ Ἀντιόχου πρὸ τῶν συνθηκῶν εἰς τὴν τοῦ στρατοπέδου μισθοδοσίαν, ἔχειν μὲν ἔφη τὸν λογισμόν, οὐ δὲν δʹ αὐτὸν ὑποσχεῖν οὐδὲν λόγον: τοῦ δʹ ἐπικειμένου καὶ κελεύοντος φέρειν ἡμᾶς τὸν ἀδελφὸν ἐνεγκείν: κομισθέντος δὲ τοῦ βυβλίου, προτείνας αὐτὸ καὶ κατασπαράξας πάντων ὥρων τὸν μὲν ἀπαιτοῦντα τὸν λόγον ἐκ τούτων ζητεῖν ἐκέλευσε, τοὺς δʹ ἀλλοὺς ἤρετο πῶς τὸν μὲν τρισχιλίων ταλάντων τὸν λόγον ἐπιζητοῦσι πῶς ἐδαπανήθη καὶ διὰ τὸν, τῶν δὲ μυρίων καθὸλου καὶ πεντακισχιλίων ὧν παρ᾽ Ἀντιόχου λαμβάνουσιν, οὐκέτα ἡμᾶς πῆς εἰσπροέστει καὶ διὰ τὸν, οὐδὲ πῶς τῆς Ασίας καὶ τῆς Ἰβηρίας, ἐτε δὲ τῆς Ιβηρίας κεκυριεύκασιν. ὡστε μὴ μόνον καταπλαγῇ πάντας, ἀλλὰ καὶ τὸν ἡμᾶς τὸν λόγον ἀποσιωπήσαι. |

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Various examples reflect accounting as seen in correspondence. The first four come from Seneca’s *Epistulae Morales* of the mid-first century CE to Lucilius, a procurator serving in Sicily. These letters predominantly concern advice given to Lucilius about how to better practice the philosophical tradition of Stoicism. Yet, despite the philosophical overtones, the letters reveal information regarding many aspects of daily activity, including several accounting references. Epistle 8 is similar to the example from Plautus above in its metaphorical accounting references. In Epistle 1, Seneca suggests that, due to his own fastidious maintenance of his expense account ledger (*ratio inpensae*), he can tell that he is not particularly frugal.

**Seneca, Ep. Mor. 1**

<table>
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<tr>
<th>“You may desire to know how I, who preach to you so freely, am practicing. I confess frankly: my expense account balances, as you would expect from one who is free-handed but careful. I cannot boast that I waste nothing, but I can at least tell you what I am wasting, and the cause and manner of the loss; I can give you the reasons why I am a poor man. My situation, however, is the same as that of many who are reduced to slender means through no fault of their own: everyone forgives them, but no one comes to their rescue.”</th>
<th>Interrogabis fortasse, quid ego faciam, qui tibi ista praecipio. Fatebor ingenue: quod apud luxuriosum sed diligentem evenit, ratio mihi constat inpensae. Non possum me dicere nihil perdere, sed quid perdam et quare et quemadmodum, dicam; causas paupertatis meae reddam, sed evenit mihi quod plerisque non suo vitio ad inopiam redactis: omnes ignoscunt, nemo succurrit.</th>
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Two other letters by Seneca, Epistles 8 and 14, make direct reference to accounting ledgers. Epistle 14 is particularly telling about the nature of ledgers and accounts. Seneca describes them in philosophical terms, stating that a man who becomes obsessed with seeking to increase the balance of his ledger (i.e. personal wealth) is no longer the master of his accounts but rather its “steward”.

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**Seneca, Ep. Mor. 8**

“But I must stop, and pay my customary contribution, to balance this letter. The payment shall not be made from my own property; for I am still conning Epicurus. I read today, in his works, the following sentence: “If you would enjoy real freedom, you must be the slave of Philosophy.” The man who submits and surrenders himself to her is not kept waiting; he is emancipated on the spot. For the very service of Philosophy is freedom.”

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**Seneca, Ep. Mor. 14**

“But what difference does it make who spoke the words? They were uttered for the world. He who craves riches feels fear on their account. No man, however, enjoys a blessing that brings anxiety; he is always trying to add a little more. While he puzzles over increasing his wealth, he forgets how to use it. He collects his accounts, he wears out the pavement in the forum, he turns over his ledger, but in short, he ceases to be master and becomes a steward.

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One further illustrative reference is from Cicero’s *De Officiis*, where he describes an array of philosophical tenets on how to best live one’s life. The reference to accounting and ledgers is short but important. The section describes how two men (Canius and Pythius) made an exchange of property and wealth by noting it on each other’s respective ledgers.

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**Cicero, De Officiis 3.59**

this mean?—all these fish?—all these boats?"

“No wonder,” answered Pythius; “this is where all the fish in Syracuse are; here is where the fresh water comes from; the fishermen cannot get along without this estate."

Inflamed with desire for it, Canius insisted upon Pythius’s selling it to him. At first he demurred. To make a long story short, Canius gained his point. The man was rich, and, in his desire to own the country seat, he paid for it all that Pythius asked; and he bought the entire equipment, too. Pythius entered the amount upon his ledger and completed the transfer. The next day Canius invited his friends; he came early himself. Not so much as a thole-pin was in sight. He asked his next-door neighbour whether it was a fishermen's holiday, for not a sign of them did he see.

“Not so far as I know,” said he; “but none are in the habit of fishing here. And so I could not make out what was the matter yesterday.”

Historical references to ‘accountants’ are also found. One is from Plutarch’s “Life of Fabius Maximus.” Here, Plutarch describes Fabius’ capture of Tarentum during the Second Punic War. Formerly an ally of Rome, it switched sides to join Hannibal. Fabius acted harshly. The scene describes the aftermath, when an accountant works with the general to catalog Roman ‘plunder.’ The accountant asks the general whether or not they should also plunder the images of the various gods, at which point Fabius states that such objects should remain out of respect.

Plutarch, Fabius Maximus 22

While everything else was carried off as plunder, πάντων δὲ τῶν ἄλλων ἄγομένων καὶ φερομένων

it is said that the accountant asked Fabius what his orders were concerning the gods, for so he called their pictures and statues; and that Fabius answered: ‘Let us leave their angered gods for the Tarentines.’

Several references characterize the engagement of the emperor in the 1st century CE with accounting documents; there are no subsequent such references. Emperors’ interest in maintaining accounts of their funds is clear.

There are two examples of Augustus directly maintaining a ledger of his estates. The first, from the biographer Suetonius, recounts that when Augustus was gravely ill, he debated feverishly whether or not to hand power back to the Roman senate when he died. Suetonius states that Augustus gave a *rationarium* to leading magistrates so they would have a full listing of assets available. Similarly, in his final years, Augustus created a *libellus* which Tiberius ordered to be read out in the senate.

**Suetonius, The Deified Augustus 28.**

“He twice thought of restoring the republic; first immediately after the overthrow of Antony, remembering that his rival had often made the charge that it was his fault that it was not restored; and again in the weariness of a lingering illness, when he went so far as to summon the magistrates and the senate to his house, and submit an account of the empire. Reflecting, however, that as he himself would not be free from danger if he should retire, so too it would be hazardous to trust the State to the control of

De reddenda rep. bis cogitavit: primum post oppressum statim Antonium, memor objectum sibi ab eo saepius, quasi per ipsum staret ne redderetur; ac rursus taedio diuturnae valitudinis, cum etiam magistratibus ac senatu domum accisis rationarium imperii traditit. Sed reputans et se privatum non sine periculo fore et illam plurium arbitrio temere committi, in retinenda perseveravit, dubium eventu meliore an voluntate.

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152 Trans. Rolfe 1913.
many, he continued to keep it in his hands; and it is not easy to say whether his intentions or their results were the better.”

**Tacitus, *Annales* 1.11**

| “More in such a speech was impressive than credible; and Tiberius’ words, even on matters which he was not for concealing, were whether by nature or habit always weighed and dark; but on that occasion, when he was striving to hide his feelings deep down, their extra complication led to uncertainty and ambiguity. But the fathers, whose one dread was that they seemed to understand, poured out complaints, tears, and vows; they were stretching out their hands to the gods, to Augustus’ likeness, to the man’s own knees, when he ordered a booklet to be produced and read out. Its contents were the public resources, what numbers of citizens and allies under arms, how many fleets, kingdoms and number of provinces, taxes and revenues, and also necessary expenses and lavishments—all of which Augustus had listed in his own hand, and had added the counsel of confining the empire within its boundaries (whether in dread or through resentment being uncertain).” |
| Versae inde ad Tiberium preces. et ille varie disserebat de magnitudine imperii sua modestia. solam divi Augusti mentem tantae molis capacem: se in partem curarum ab illo vocatum experiendo didicisse quam arduum, quam subiectum fortunae regendi cuncta onus. proinde in civitate tot inlustribus viris subnixa non ad unum omnia deferrent: plures facilius munia rei publicae sociatis laboribus exsecuturos. plus in oratione tali dignitatis quam fidei erat; Tiberioque etiam in rebus quas non occultaret, seu natura sive adsuetudine, suspensa semper et obscura verba: tunc vero nitenti ut sensus suos abderet, in incertum et ambiguum magis implicabantur. at patres, quibus unus metus si intelligere viderentur, in questus lacrimas vota effundi; ad deos, ad effigiem Augusti, ad genua ipsius manus tendere, cum proferri libellum recitarique iussit. opes publicae continebantur, quantum civium sociorumque in armis, quot classes, regna, provinciae, tributa aut vectigalia, et necessitates ac largitiones. quae cuncta sua manus perscripsisset Augustus addideratque consilium coercendi intra terminos imperii, incertum metu an per invidiam. |

After the death of Augustus, the practice of publishing an official summary ledger is known to have resumed briefly during the reign of Caligula. Suetonius states that Caligula did this after Tiberius’ failure to do so.

Suetonius, Gaius Caligula 16

“He published the accounts of the empire, which had regularly been made public by Augustus, a practice discontinued by Tiberius.”

Rationes imperii ab Augusto proponi solitas sed a Tiberio intermissas publicavit

Imperial accounts feature in a late first century CE eulogy about Domitian’s chief budget official (a rationibus). Statius dedicates this poem to the life of the father of Claudius Etruscus, who served as a rationibus. Here he cites the vast range of categories for which the a rationibus was responsible.

Statius, Silvae 3.3. 85-105

“Iamque piam lux alta domum praecelsaque toto intravit Fortuna gradu; iam creditor uni sanctorum digestus opum partaeque per omnes divitiae populos magnique impendia mundi. Quicquid ab auriferis eictat Hiberia fossis, Dalmatico quod monte nitet, quod messibus Afris verritur, aestiferi quicquid terit area Nili, quoque legit mersus pelagi scrutator Eoi, et Lacedaemonii pecuaria culta Galaesi perspicuaque nives Massylaque robora et Indi dentis honos—uni parent commissa ministro quae Boreas quaeque Eurus atrox, quae numbilus Auster invehit: hibernos citius numeraveris imbres silvarumque comas. Vigil idem animique sagacis; et citus evolvit quantum Romana sub omni pilae die quantumque tribus, quid templae, quid alti undarum cursus, quid propugnacula poscant aeroris aut longe series porrecta viarum, quod domini celsis niteat laquearibus aurum, quae divum in vultus igni formanda liquescat massa, quid Ausoniae scriptum crepet igne Monetae.”

Statius, Silvae 3.3. 85-105

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Lastly, two images of Roman accountants may be noted. The first is a relief known as the ‘Pannonian Banker’ from Serbia. Presumably, an assistant is reading the *adversaria* (informal day-ledger) to the banker or accountant before it is transferred into a more formal ledger (*ratio, tabulae, codex accepti et expensi*). The seated accountant has a ledger and arguably seeks to confirm his numbers by examining the bag of coins in front of him.

The second image is from the Roman port of Ostia. Porters are unloading amphorae onto the quay, where accountants tally the goods. To the right, two

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155 Illustration from Jones 2006 (cover image). The stele is in the National Museum, Belgrade, Serbia.

156 Meiggs 1973 Plate XXVIa.
men appear to be conversing as they are about to mark their ledger. A man to the left of the two looks to be giving the porter a token.

Sadly, no image survives comparable to the depiction on a wall which Trimalchio’s guests passed showing, among other scenes, the young slave Trimalchio learning accounting in Rome.\textsuperscript{157}

\textsuperscript{157} Petronius, \textit{Satyricon} 29 ("ratiocinari didicisset").
Chapter 8: The Roman Auditor

The high integration between wealthy elites who functioned as auditors and the numerous slaves who performed basic ‘bookkeeping’ maybe considered a distinctive feature of Roman accounting practice. Many societies developed a specialized class of accountants, whether they were merchants (as in Venice, Genoa, or the Song dynasty of China) or bureaucratic specialists (as in the Sumerian, Old Kingdom Egyptian, Carolingian, or Ottoman cultures). Lack of such development in Rome resulted in the Romans forming a bipartite method that could be considered as something of a pre-modern anomaly. Indeed, the best historical parallel for Roman auditors may be found in the rise of professional accountancy in England and Scotland during the 16th to 20th centuries. During this period, many Roman practices were mirrored; governments, organizations, and businesses typically employed bookkeepers for the daily upkeep of offices, inventories, and disbursements. And to verify the ever-increasing recordkeeping, a dedicated class of professional auditors (whose legal expertise surpassed that of the casual bookkeeper) was introduced.

The first reason for making a historical comparison between Roman and early modern British auditing is simple — to attribute a higher degree of competency than would traditionally be assigned to Roman auditors. One can easily embrace the Weberian position, which suggests that slaves performed all accounting duties, thereby attributing amateurism to the auditors. However, the Roman bipartite method required attentive concern from both parties, slaves and elites.
A second rationale for this historical comparison is to dispel any technical myth that an auditor’s ability exceeds the standard mathematical qualification of wealthy, elite Roman auditors who served to check the work of bookkeepers compiled either for themselves or for a third party. One group collects and compiles; the other organizes, filters, and verifies. In training, organization, and skill, the Romans could certainly come close to a historical parity with the British forerunners of today’s professional accountant.

In the 16th through the 17th centuries, some of the earliest known audit requests appeared in England and Scotland. The focus for these early auditors was totally on validation, accuracy, and a degree of consultation of accounting ledgers performed by bookkeepers. An instructive example comes from the 1564 English Book of Ordinances, which states the need for auditors to ascertain the accuracy of account entries and balances. Similarly, an auditors’ report of the earlier, 1560 Book of Ordinances demonstrates how these early accountants reported mistakes found in audits and reported the failing of the daily bookkeepers in the clear phrasing “We fynde by the neclygence.”

A later example from 1673 shows auditors performing a ‘consulting service.’ That is, after adding up expenditures of “The Worshipful Company of Carpenters,” they note that the company is holding overly lavish dinners in addition to providing too much money to charity.

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158 Brown 1905, 80. The Book of Ordinances (Taxation document- London) of 1564 contains the following statement requesting a formal yearly audit. “Also it is agreed that there shall be foure awdutours chosen eury yeare to awdit the Crafft accompte and they to parvse it and search it that it be perfect. And also to accompts it Correct it and allowe it So that they make an ende of the awdet thereof between Mighelmas and Christmas yearely and if defaute be made of fenishinge thereof before Christmas yearely euyre one of the saide Awdytours shall paye to the Craffe boxe vj s. viij. D. pece.”

159 Brown 1905, 81. Audit Report of the Book of Ordinances (London) from 1560. “That this accompts was awdyt the xxij day of decembr in Anno Domine 1560 and in the therd yere of the Raigne of our Soveraigne lady Quene Elyzabete, by us Willm Baker, Willm Mills, Nicholas Turn, and Richard Scot. So that we fynde by the neclygence of Mr. Hustwayte and Nicholas Crostwayete and John Gery warden theise cells following...”
services, both factors causing the company go into debt. Such observations included:

“Severall sumes of money were given to the poor over and above their pencons on the qter eves & on hydaies without any order of court whereby the stock of this Company is unnecessarily wasted & the Company run further in debt & little likehood of getting out unlesse a speedy retrenchment be or some other remedy or redresse found out.”

By the late 17th century, professional auditing in England and Scotland started to focus on legal demands. The initial impetus for this development was the expansion of bankruptcy laws developed in England in 1696, which made the dissolution of estates more complex. This need for expansion became more manifestly apparent in the late 18th century, when, after the loss of the American colonies in 1783, many companies, merchants, and wealthy elites were forced to recognize massive losses or even declare bankruptcy.

A record from Lanark, Scotland, in 1683, illustrates accountants requesting accounting documents for inspection in a legal context:

“Baille Inglis being warrit and callit for this day to give in his accounts and not comppearing, orders that betwixt and Fryday he compeire before his former auditors and count; and alse Thomas Stodahart upon oath produce his registres and hail papers that he hes quich appertenis to the brugh; otherwayes both of them are ordered to be taken to prissone.”

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160 Jupp 1848, 173. The Worshipful Company of Carpenters on ‘audit day’ in 1673: “That they found many exorbitant expenses in dinners & preparacons, with divers frivolous and extravagant expenses both at home and abroad, as well upon publique meetings & courts, as in private with old msters and others, and that severall sumes of money were given to the poor over and above their pencons on the qter eves & on hydaies without any order of court whereby the stock of this Company is unnecessarily wasted & the Company run further in debt & little likehood of getting out unlesse a speedy retrenchment be or some other remedy or redresse found out. And for that purpose they therefore represented the mater to the consideration of this court; whereupon this Court after some debate in ye premises doth think fit and so order upon vote That no more superfluous money be given to the poore.”

161 The Institute of Chartered Accountants of Scotland 1954, 1-4.

162 Brown 1905, 84.
In Britain during the early modern period, most auditing accountants served only part time. They typically listed their services as “Merchant and Accountant.” It was not until 1793 that an individual (Walter Ewing Cathkin) listed his sole profession as an “accountant.” Listing the merchant component was presumably meant to draw attention to a higher degree of familiarity with ‘business math.’ In particular, accountant-merchants needed to draw up frameworks for increasingly common joint ventures, especially when annuities or multi-year interest were present. An advertisement for John Gibson’s services from the 1778 Glasgow Mercury newspaper shows the multifaceted math and legal services offered by these merchant-auditors:

JOHN GIBSON
Who has been regularly bred to business, offers his services to the public, as an ACCOUNTANT In EXAMINING and ADJUSTING of BOOKS and ACCOUNTS; SETTLING OF COPARTNERY or OTHER DISPUTES, MAKING OUT ACCOUNTS of the RANKINGS of CREDITORS, and the DIVISIONS of SUBJECTS, and ACCOUNTS of EVERY KIND, and in transacting every other species of business,

As practiced by the most approved Accountants in Edinburgh.

Gentlemen of the Law, or others, who shall be pleased to favour him with their business, may depend upon having it executed with the utmost fidelity and dispatch.

By 1853, the first official society of chartered accountants was formed in Edinburgh, and the more structured period of account auditing began. However, an important point to note is that the auditor at this stage (and until the 1930s) still largely focused on knowledge of the law

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163 The Institute of Chartered Accountants of Scotland 1954, 4.
164 The Institute of Chartered Accountants of Scotland 1954, 5.
165 The Institute of Chartered Accountants of Scotland 1954, 11.
with diligent math application. Even the professional accountants’ boardroom library in
Edinburgh in 1854 comprised only seventeen books — twelve related to law and just five
concerning math. Where the limited degree of advanced math application becomes clear is in
the 1892 professional accounting final examination. The test was composed of four sections: (1)
preliminary; (2) basic; (3) intermediate; and (4) final. Each student was expected to pass each
section before proceeding to the next, reflecting their increasing difficulty. The preliminary
section included the rudiments of English composition, grammar, and arithmetic. The basic
section dealt with the common curricula of (in today’s terms) a high school or university liberal
arts education, including history, geography, Latin, French, or German.

It was only in the further two sections — the intermediate and final — that accounting
skills came to the fore. The intermediate section covered the basics of accounting, including
“Advanced Arithmetic and Algebra, Bookkeeping, Framing Accounts and Correspondence.”
The final section included three components of math-based accounting and four of law. The
three math components included “Theory and Practice of Bookkeeping, Preparation of Balance
Sheets and Profit and Loss Accounts, and Audit of Accounts.” Even in these advanced math
components, however, the difficulty of the math is limited. There were no advanced formulas in
the manner of engineering, physics, or chemistry. The highest level of difficulty focused on the
basics of annuity or depreciation calculations. In essence, the math skills required were still by
no means complex, and certainly would have been within the grasp of educated Romans.

A marked change in the accounting profession is reflected in the 1933 professional
accounting examination. Its degree of difficulty is higher in all regards, with major differences
occurring especially in the math, at least in its range. By this time, the exam had been reduced to
two sections — an intermediate and a final. The intermediate level addressed most of the basics

166 The Institute of Chartered Accountants of Scotland 1954, 149.
of accounting, including balance sheet preparation, bookkeeping, finance, and statistics. The advanced exam expanded to include three types of taxation: group accounts, pension accounts, and banking practices relating to stocks. Further, the exam extended to cover a more in-depth level of legal knowledge, adding material on insurance, joint stock companies, and the law regarding factories in different formats such as partnerships and corporations. Expertise expected in the more complicated formulas relating to corporations, taxation, and finance led to a broadening of the requisite skillset. Similarly, a greater range of study was now required. If there were a Weberian threshold of *amateurism versus professionalism*, it was the 1933 exam. This exam benchmarked a mastery of accounting skills at a highly elevated level of education and specialization necessary to earn certification.

However, even past the 1930s, the fundamentals of diligence and legal knowledge remained. In the 1954 United States Internal Revenue Service (IRS) audit manual guide, it is clearly apparent that all actions are concerned with careful assessment. The manual does not suggest that extraordinary expertise is necessary beyond interest rates, annuities, and depreciation rates.\footnote{IRS Audit Guide 1954, 8-27.} Perhaps the most instructive evidence in favor of attesting to the potential of Romans’ auditing capabilities (diligence and law required more than math skill sets) comes from the commissioner of the IRS’ foreword to the manual.\footnote{IRS Audit Guide 1954, 1.} Here, it is stated that three segments of vital importance constitute a “quality examination” — namely, “competence” and knowledge of “accounting and tax law.”

Development of auditing in the England-Scottish context was driven by the change in complexity in business practices, in bankruptcy law, colonial mercantilism, and the Industrial Revolution. The Romans did not undergo such a transformational change, even though they did
display a competency in auditing. Roman auditing skill found its strength in culture. If mathematical sophistication was not requisite, then what sufficed were persistence, deliberation, and meticulous attention to detail in order to prevent errors in summations. This distinction is critical, providing evidence of a plausible and effective, if inelegant, mode of operation that compensated for complexity. The essential argument is that elevated cultural esteem for an endeavor should translate to greater proclivity towards its pursuit. Indeed, this appears to be the case among the Romans, whose diligence in accounting stands as a manifestation of societal regard. Accounting material is pervasive socially, temporally, and geographically.

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As mentioned above, Romans exhibited a bipartite system of accounting by which slaves tended to gather and process accounting data, and elites checked and verified their work. The cultural foundations, demonstrated from the republic throughout the empire, suggest a cultural amicability towards accounting that would indicate a strong willingness to provide the necessary time to maintain accounts and to audit them thoroughly. It is, therefore, important to understand more completely the nature of the significant role of auditing in the Roman context.

Before discussing auditors, however, it is important to understand the two critical accounting divisions that existed among slaves. One was a general group of slaves capable of collecting, sorting, and assembling accounting data. Within this group, a variety of titles are found, including dispensator (accountant/steward), arcarius (treasurer), ab argento (in charge of silver), ad possessiones (financial administrator), actuarius (recordkeeper), and adiutor (assistant). P.R.C. Weaver notes in his study, Familia Caesaris: A Social Study of the Emperor’s
Freedmen and Slaves, that the above positions were generally treated as subclerical or junior-clerical grades.\textsuperscript{169}

The distinctively unique position was that of the \textit{tabularius}. Unlike the first set of positions, the \textit{tabularius} had an advanced position, often held by former slaves, upon manumission around age 30. The \textit{tabularius}, in accounting terms, is best thought of as a supervisor of the first group of slaves, or as an accounting manager. However, precise knowledge of all possible \textit{tabularii} positions remains limited, as a multitude existed. It is difficult to reconstruct duties or day schedules beyond titles, but this is not necessary for understanding the accounting divisions. Although \textit{tabularii} had greater distinction than the other accountants, the evidence remains primarily epigraphic from funerary stele. Typical examples are presented below, comprising an accountant of inheritance, a marble bureau, and a papyrus bureau.

\textit{L'Année Épigraphique 1948, 57}

Marcus Ulpius Mithres (?), freedman of Augustus, accountant of inheritances, to his most chaste and most loyal wife, Antonia Valentia, daughter of Marcus

Antoniae M(arci) f(iliae) / Valentinae / coniugi castissimae / et piissimae / M(arcus) Ulpius Aug(usti) lib(ertus) / Mithres / tabular(ius) hereditatium

\textit{L'Année Épigraphique 1974, 153}

To the Manes-gods of Titius Flavius Felix, Successus, freedman of Augustus, accountant of the marble bureau, to his dearest freedman

Dis Manibus / T(itii) Flavi Felicis / Successus Aug(usti) lib(ertus) / tabularius / rationis / marmorum / Lune\textsubscript{n=S}sium / liberto karissimo

\textsuperscript{169} Weaver 1972, 224-243.
To the Manes-gods, to Potamon, freedman of Augustus, supervisor of contracts (a pacticiis), Festus, accountant of the papyrus bureau, heir and co-heir

D(is) M(anibus) / Potamoni / Aug(usti) lib(erto) / a pacticiis / Festus / Aug(usti) lib(ertus) / tabularius / rationis / chartariae / heres et / coherhedhes(!)

A strong likelihood exists that on imperial estates (mines, quarries, mints, etc), the tabularius was the individual primarily responsible for overseeing the creation of a final accounting document. To be precise, either he or the slave below his rank may have created the document. But from the known organizational structure, the tabularius would need to have approved of any formally produced documents, even if he had not directly created them.

After the accounting documents were composed, it is likely that non-slave Romans would perform an audit. During the Imperial Period, household and personal-level audits would be conducted by the pater familias. At an imperial estate, this responsibility would go to a procurator working on behalf of the emperor, while in Rome, the work on behalf of the emperor would be performed by the a rationibus.¹⁷⁰

The discussion of the Roman emperor by David Oldroyd (cited in chapter one above) is particularly important in understanding the Roman auditor, especially the Roman procurator as an auditor. Oldroyd suggests a much more assertive role for the Roman emperor, as he would constantly have to check the accounts to successfully maintain the financial well-being the empire. Similarly, the roles of imperial procurators deserve a second glance due to the frequency of account review. During the Imperial Period they held the most financially oriented

¹⁷⁰ One of the best documented instances of clear accounting hierarchy of procurator → tabularius → dispensator can be seen at the Dacian gold mines of the 2nd century CE. Alfred Hirt has identified where a single operation in Dacia over the course of forty years had votive offerings from 8 different procurators, 4 tabularii, 2 adiutor tabularii, and 2 dispensatores. For epigraphic evidence see: CIL III 1286, CIL 1300, CIL III 1303, CIL III 1314, CIL III 1315, CIL III 1317, CIL III 1318, CIL III 1333, CIL III 1335, AE 1944:27, AE 1959:306. Hirt 2010, 150-152.
position, certainly more so than provincial governors, whose primary duties were judicial in nature. Yet, as Saller notes, these positions frequently went to young men of equestrian status, often in their mid-twenties with relatively limited experience and time. Still, if their primary task was not actually managing (which was left to individuals such as a veteran tabularius) but rather auditing, then a competent auditing job was certainly more than possible. The English-Scottish examples show that, for the greater duration of audit history, diligence and patience were the primary assets for a sound auditor not math skills.

Moreover, it may have been rather advantageous to have the procurator in the position of a short-term auditor. The Romans would arguably have greater demand for audits as their reporting periods were relatively short, often occurring every few days. And their level of detail was rather thorough. Furthermore, having the procurator work as an outside auditor without prior knowledge of the staff, and being typically separated by class, may have prevented instances of collusion or hesitancy to report problems.

To summarize, the Romans had a unique accounting system in that it frequently possessed a hierarchical accounting structure in which one group of slaves was commonly responsible for collecting data, another slave verified and possibly organized the data, and one Roman served primarily as an auditor. The high frequency of accounting reporting, the level of detail, and having an outside auditor represent unexpected strengths of the Roman system.

The following two charts represent two graphical representations of the Roman accounting structure for much of the Imperial Period. The first shows how accounting would function in the three-stage process on an imperial estate run by a procurator. The second chart is of the same group but integrated into a large structure based on a concept of Oldroyd, that of an assertive emperor-manager of a variety of accounts.

\[171\] Saller 1982, 80-84.
Possible structure of Pliny’s “Audit Team” involving the use of both friends and slaves to assist in account review. It could also easily be assumed that any dispensators or tabularii that may have accompanied Pliny could have directly reported to him.
There is no better reminder of the importance and delicacy of the auditor’s role in Roman society than the metaphor which Augustus’ confidant Sallustius Crispus uses in his loaded reminder to Livia about affairs of state in 14 CE, according to Tacitus:

**Tacitus, Annales 1.6**

“He warned Livia that the mysteries of the household, the advice of friends and the services of soldiers should not be made public and that Tiberius should not dissipate the essence of the principate by calling everything to the attention of the senate: it was a condition of commanding that the account would not balance unless it were rendered to a single individual.”

Perhaps the most instructive view of an individual Roman functioning as an auditor is provided by Pliny the Younger when governor of Bithynia-Pontus around 110 CE. He focused on several tasks, but a primary concern, as seen from his correspondence with Trajan, was the role of inspecting the accounts of several mismanaged communities. Trajan evidently singled out Pliny specifically to act as an auditor on his behalf. As military tribune in his youth, Pliny had audited accounts in Syria. He had later served two years at the Military Treasury from 94 to 96 CE, and then two years at the state treasury from 98 to 100 CE. Subsequently, he had

173 For documentation of Pliny’s career, see *PIR²* P 490.

174 10.18 “I think, that I am acting in their own interests, and you too will see that it is made clear to them that you were chosen as my representative for a special mission. Your first task must be to inspect the accounts of the various towns, as they are evidently in confusion.” Trans. Radice 1969.

Nam et tu dabis operam, ut manifestum sit illis electum te esse, qui ad eosdem mei loco mittereris. Rationes autem in primis tibi rerum publicarum excutiendae sunt; nam et esse eas vexatas satis constat.
served two years overseeing the maintenance of the Tiber River banks. In addition, governors’ accounts had been material of critical importance in several trials for provincial maladministration where Pliny acted as advocate. Last but not least in this connection, Pliny was himself a landowner accustomed to keeping a more or less watchful eye on the accounts relating to his various estates.\textsuperscript{175} Altogether, therefore, Pliny was an excellent choice for the mission for which Trajan identified him. Pliny likely would have brought a staff that could assist in the reviewing of any accounts.

Although Pliny’s letters are ‘edited,’ as they were adapted for circulation,\textsuperscript{176} they nonetheless clearly reflect the basic aims of an audit — review and consultation. Note first 10.17A and B, in which Pliny states that he is examining expenditures, revenues, and sums owing at the community of Prusa.

\textbf{17A Pliny to Trajan}

\begin{quote}
“I am now examining the finances of the town of Prusa, expenditure, revenues, and sums owing, and finding the inspection increasingly necessary the more I look into their accounts; large sums of money are detained in the hands of private individuals for various reasons, and further sums are paid out for quite illegal purposes. I am writing this letter, Sir, immediately after my arrival here.”
\end{quote}

\textbf{17B Pliny to the Emperor Trajan}

\begin{quote}
Will you consider, Sir, whether you think it necessary to send out a land surveyor? Substantial sums of money could, I think, be recovered from contractors of public works if we had dependable surveys made. I am convinced of this by the accounts of Prusa, which I
\end{quote}

\begin{quote}
Dispice, domine, an necessarium putes mittere huc mensorem. Videntur enim non mediocres pecuniae posse revocari a curatoribus operum, si mensurae fideliter agantur. Ita certe prospicio ex ratione Prusensium, quam cum maxime
\end{quote}

\textsuperscript{175} Note the comments of Talbert 2007.

\textsuperscript{176} See the discussions of Stadter 2006 and Woolf 2006.
Letters 23-24 are similar to 17B in that Pliny indicates that funds are available to the community at Prusa to build a public bath once money is called in from private individuals, sums presumably checked against accounts and contracts.

23. Pliny to the Emperor Trajan

“The public bath at Prusa, Sir, is old and dilapidated, and the people are very anxious for it to be rebuilt. My own opinion is that you could suitably grant their petition. There will be money available for building it, first from the sums I have begun to call in from private individuals, and secondly because the people are prepared to apply to building the bath the grants they usually make towards financing the distribution of olive oil. This is, moreover, a scheme which is worthy of the town's prestige and the splendor of your reign.”

24. Trajan to Pliny

“If building a new bath at Prusa will not strain the city's finances, there is no reason why we should not grant their petition; provided that no new taxes imposed and there is no further diversion of funds of theirs intended for essential services.”

Letters 37 and 38 reiterate the core part of Pliny’s mission to inspect accounts. He informs Trajan that the city of Nicomedia (despite spending more than 3.5 million sesterces) still has not completed an aqueduct, but has enough materials and capital to do so. Trajan responds, telling Pliny that he wants him to discover why so much money was wasted. Letter 39 demonstrates the limitation of account review. Pliny states
that after the community of Nicaea has spent more than 10 million sesterces on an unfinished theater, sums so large cannot be recovered simply from the accounts.

37. Pliny to Trajan

“The citizens of Nicomedia, Sir, have spent 3,318,000 sesterces on an aqueduct which they abandoned before it was finished and finally demolished. Then they made a grant of 200,000 sesterces towards another one, but this too was abandoned, so that even squandering such enormous sums they must still spend more money if they are to have a water supply. I have been myself to look at the spring which could supply pure water to be brought along an aqueduct, as originally intended, if the supply is not to be confined to the lower lying parts of the town. There are very few arches still standing, but others could be built out of the blocks of stone taken from the earlier construction, and I think some ought to be made of brick, which would be easier and cheaper. The first essential is for you to send out an engineer or an architect to prevent a third failure. I will add only that the finished work will combine utility with beauty, and will be well worthy of your reign.”

C. Plinius Traiano Imperatori In aquae ductum, domine, Nicomedenses impenderunt HS XXX CCCXVIII, qui imperfectus adhuc omissus, destructus etiam est; rursus in alium ductum erogata sunt CC. Hoc quoque relictio novo impendio est opus, ut aquam habeant, qui tantam pecuniam male perdiderunt. Ipse perveni ad fontem purissimum, ex quo videtur aqua debere perduci, sicut initio temptatum erat, arcuato opere, ne tantum ad plana civitatis et humilia perveniat. Manent adhuc paucissimi arcus: possunt et erigi quidam lapide quadrato, qui ex superiore opere detractus est; aliqua pars, ut mihi videtur, testaceo opere agenda erit, id enim et facilius et vilius. Sed in primis necessarium est mitti a te vel aquilegem vel architectum, ne rursus eveniat quod accidit. Ego illud unum affirmo, et utilitatem operis et pulchritudinem saeculo tuo esse dignissimam.

38. Trajan to Pliny

“Steps must be taken to provide Nicomedia with a water supply, and I am sure you will apply yourself to the task in the right way. But for goodness' sake apply yourself no less to finding out whose fault it is that Nicomedia has wasted so much money up to date. It may be that people have profited by this starting and abandoning of aqueducts.”

Curandum est, ut aqua in Nicomedensem civitatem perducatur. Vere credo te ea, qua debebis, diligentia hoc opus aggressurum. Sed medius fidius ad eandem diligentiam tuam pertinet inquirere, quorum vitio ad hoc tempus tantam pecuniam Nicomedenses perdiderint, ne, dum inter se gratificantur, et incohaverint aquae ductus et reliquerint. Quid itaque compereris, perfer in notitiam meam.
39. Pliny to Trajan

“...The theatre at Nicaea, sir, is more than half built but it is still unfinished and has already cost more than ten million sesterces, or so I am told- I have not yet examined the accounts. I am afraid it may be money wasted. The building is sinking and showing immense cracks, either because the soil is damp and soft or the stone used was poor and friable. We shall certainly have to consider whether it is finished or abandoned, or even demolished, as the foundations and substructure intended to hold up the building have cost a lot, but look none too solid to me. There are many additions to the theatre promised by private individuals, such as colonnades on both sides and a gallery above the auditorium, but all these are now held up by the stoppage of the work on the main building which must be finished first. The citizens of Nicaea have also begun to rebuild their gymnasium (which was destroyed by fire before my arrival) on a much larger and more extensive scale than before. They have already spent a large sum, which may be to little purpose, for the buildings are badly planned and too scattered. Moreover, an architect admittedly a rival of the one who drew up the designs has given the opinion that the walls cannot support the superstructure in spite of being twenty-two feet thick, as the rubble core has no facing of brick.

The people of Claudiopolis are also building, or rather excavating an enormous public bath in a hollow at the foot of a mountain. The money for this is coming either from admission fees already paid by the new members of the town council elected by your gracious favor, or from what they will pay at my demand. So I am afraid there is misapplication of public funds at Nicaea and abuse your generosity at Claudiopolis, though this should be valued above any money. I am therefore compelled to ask you to send out an architect to inspect both theatre and bath and decide whether it will be more practicable, in view of what has already been spent, to keep to the original plans and finish both buildings as best we can, or to make any necessary alterations..."
Two further letters of Pliny associated with accounts are also revealing. In 43, after inspecting accounts at Byzantium, Pliny notes that the city can save 3,000 sesterces yearly by reducing travel expenditures for its officials. And 47 and 48 show how closely guarded the accounts could be kept: Apamea was a Roman *colonia* whose citizens were willing to show Pliny their accounts, but they preferred not to do so, because of their community’s privileged status. Pliny refers the question to Trajan on how best to proceed, and the emperor insists upon an inspection in this special instance.

### 43. Pliny to Trajan

`“When I was inspecting the accounts of the city of Byzantium, Sir, where expenditure has been very heavy, I was informed that a delegate was sent annually to offer you a loyal address and allowed 12,000 sesterces for his expenses. Remembering your wishes, I decided to send on the address but no delegate to convey it, so that the citizens could reduce expenses without failing in their official duty towards you. In the same accounts there is an entry of another 3,000 sesterces under the head of annual travelling expenses for the delegate sent with an official greeting to the governor of Moesia. This, too, I thought should be cut down in future. I pray you, Sir, to think fit to give me your opinion, and either confirm my decision or correct me if I am at fault.”`

`Requirenti mihi Byzantiorum rei publicae impendia, quae maxima fecit, indicatum est, domine, legatum ad te salutandum annis omnibus cum psephismate mitti, eique dari nummorum duodena milia. Memor ergo propositi tui legatum quidem retinendum, psephisma autem mittendum putavi, ut simul et sumptus levaretur et impleteretur publicum officium. Eidem civitati imputata sunt terna milia, quae viatici nomine annua dabantur legato eunti ad eum qui Moesiae praeest publice salutandum. Haec ego in posterum circumcidenda existimavi. Te, domine, rogo ut quid sentias rescribendo aut consilium meum confirmare aut errorem emendare digneris.`

### 47. Pliny to Trajan

`“When, Sir, I wished to inspect the finances of Apamea, sums owing, revenue, and expenditure, I was told that the citizens were all quite willing for me to see the accounts, but as Apamea was a colony, none of the proconsuls had ever done so;`

`Cum vellem, domine, Apameae cognoscere publicos debitores et reditum et impendia, responsum est mihi cupere quidem universos, ut a me rationes coloniae legerentur, numquam tamen esse lectas ab ullo proconsulum; habuisse`
and it was their long-established custom and privilege to manage their internal affairs in their own way. I told them to set down their statements and authorities quoted in the form of a petition, and this I am sending to you just as I received it though I realize that much of it is irrelevant to the point at issue. I pray you to think fit to instruct me how I ought to act. I am anxious for it not to seem that I have exceeded or fallen short of my duty.”

Privilegium et vetustissimum morem arbitrio suo rem publicam administrare. Exegi ut quae dicebant quaeque recitabant libello complecterentur; quem tibi qualem acceperam misi, quamvis intellegerem pleraque ex illo ad id, de quo quaeritur, non pertinere. Te rogo ut mihi praeire digneris, quid me putes observare debere. Vereor enim ne aut excessisse aut non implesse officii mei partes videar.

48. Trajan to Pliny

“Having received the petition from the citizens of Apamea which you sent with your letter, I think I need not look into the reasons why they wish it to be known that the senatorial governors of the province refrained from inspecting their accounts; seeing that they raise no objection to an inspection by you. I think then that you should reward their honesty and assure them that on this occasion you are making a special inspection at my express wish, and that it will be carried out without prejudice to their existing privileges.”

Libellus Apamenorum, quem epistulae tuae iunxeras, remisit mihi necessitatem perpendendi qualia essent, propter quae videri volunt eos, qui pro consulibus hanc provinciam obtinuerunt, abstinuisse inspectione rationum suarum, cum ipse ut eas inspiceres non recusaverint. Remuneranda est igitur probitas eorum, ut iam nunc scient hoc, quod inspecturus es, ex mea voluntate salvis, quae habent, privilegiis esse facturum.

Inevitably, much remains obscure when reviewing Pliny’s letters from an auditing standpoint. It is unknown what procedure he and his group adopted in tackling the accounts. Moreover, the time to analyze any account is not known, nor how accessible Pliny found the material, as most communities would have written them in Greek and possibly presented them differently from one another. Yet it is clear that Pliny did manage to audit accounts to restore construction projects, reduce yearly spending, and provide leverage to reclaim capital, therefore proving himself a successful auditor.
To sum up, several noteworthy characteristics about Romans as auditors merit attention. First, the technical expertise of the auditor from its traditional inception in England and Scotland to the present has relied primarily on legal knowledge and diligence and less frequently on technical training, thereby demonstrating the possibility of competent Roman auditors such as Pliny the Younger. Second, the Romans enjoyed a certain culture of accounting that implies their willingness to apply themselves assiduously when reviewing accounts. Finally, the pater familias and the procurator often employed a three-step division of the accounting process. Their divisions of collecting, organizing, and auditing suggest that an astute audit was not only highly possible but was also capable of withstanding intense scrutiny. Because auditing is a primary function of the accounting process in general, one may infer that the Romans held a substantial grasp of overall accounting practices that they put to use very effectively in their daily lives.
Conclusion

The approach throughout this dissertation has been to analyze Roman accounting from as many different perspectives as possible in order to gain the most accurate grasp of the value of its practices. Chapter one opened with a theoretical discussion of the value of accounting within society. Namely, how does one assess the societal role, strengths, and ultimately the success of accounting systems? The first two chapters then outlined and rejected the two most common ways in which Roman accounting systems have been measured, specifically through the theories of the interpretation of causation (Sombart and Weber) and economic rationalism (Mickwitz, de Ste. Croix, and Finley). Causation suggests that sophisticated accounting systems were either requisite or required for profit-orientated thought (capitalism), and therefore, since the Romans lacked sophisticated accounting, they could not develop further economically. Economic rationalism argues the opposite sequence, that instead of ‘X’ (sophisticated accounting system) leading to ‘Y’ (capitalistic thought), the Roman disdain for ‘Y’ (capitalistic thought) prevented ‘X’ (sophisticated accounting).

Similar to the above theories of causation and economic rationalism, their respective rejections originate from both non-Roman and Roman historians. First, accounting historians have demonstrated that double-entry accounting, the most sophisticated version of accounting practices, did not achieve widespread usage until the late 19th century, and therefore, it ought not to be considered requisite for capitalistic thought. Second, other cultures such as the medieval Chinese, used systems more integrated than and nearly as sophisticated as double-entry, but their
usage failed to yield more capitalistic developments. Moreover accounting systems are shown often to meet specific needs, especially in terms of distance. For example, the 18th century Scottish estate owner and merchant in Edinburgh may request more nuanced data from his plantation in Jamaica than if he were managing the estate in person. In the Roman context, Rathbone demonstrated the sophisticated accounting from the Heroninos Archive on the Appianus estates, while Oldroyd showed governmental planning by the emperors based on accounting documents.

The development of the causation and economic rationalism arguments and their rejection has left an odd void. Sombart’s Der Moderne Kapitalismus was originally written in 1902, with Finley’s The Ancient Economy appearing in 1973. The direct rejection of their theories as applied to Roman accounting began with Most in 1976 and lasted until 1996 with Oldroyd. Within this period scholars focused on refutation but did not suggest a new, overarching theory on how to view Roman accounting. In particular, the lingering question is whether we should now consider Roman accounting a true ‘success’ or simply ‘not bad,’ and not the source of capitalistic limitations.

In order to answer the question of the extent of Roman accounting’s success, it is worthwhile to use the modern techniques introduced in chapter one of the managerialist, positivist, and post-modern perspectives. A simpler way of explaining these three approaches is to think of analyzing accounting as an entire process, from creator, organization within the documents, and end user. The managerialist question asks, “Why was this accounting document created?” Therefore, it is fair to ask what the respective accounting needs of the Romans were, and whether they were met. In the Roman world, common accounting needs included such elements as legal business transactions, state management, inheritance, manumission,
profit/estate management, payments, and inventory management. Did the Roman accounting system adequately handle all of the above as illustrated in chapter 1-8? In short, yes, the Roman accounting system met its needs.

The style, range, and format within the accounting documents (i.e., the positivist approach) changed to meet its needs. If it was simple inventory-listing, with wood tablets, such as at Vindolanda, would suffice. If a more extensive inventory listing with frequent updates and associated costs were required, then those used by Theophanes on papyri on his trip from Hermopolis to Antioch and back would work well. The same may be said of the calculation of soldiers’ pay as arranged in an orderly format to deduct expenses and calculate what is due. Lastly, the format from the Appianus estates shows monetization, transport costs, employee costs, and the profitability of goods sold to optimize profitability calculations. Five distinct styles were shown, from simple listing to profit calculations embedded in the accounting; the material ranged from wood to papyri. In terms of the documents themselves, the Romans, despite not possessing a standardized accounting format, possessed a flexibility to meet such needs.

In the areas where accounting documents do not exist but were known to be needed, such as for purposes of manumission or inventory-listing as part of an inheritance, then it is worth reflecting upon the culture of Roman accounting. Chapter seven demonstrated that the Romans did care about accounting. Cicero maintains that Romans record every transaction, unlike the Gauls; Seneca notes that he records every expense; and Plautus even measures love in accounting terms. There are enough anecdotes bordering on statistical evidence to infer that the Romans saw value in accounting. The jurists and Cicero’s law cases involving accounting, suggest that the most important aspect about Roman accounting was its clarity in format, not
standardized procedure, and this clarity the Romans could certainly obtain from their cultural commitment to accounting.

The next question is whether Rome should be considered a historical ‘success’ in terms of accounting, and not simply adequate for its own needs. Did the Romans leave an accounting legacy? Largely, that answer appears to be no, they did not. The style of accounts the Romans used were not employed in either medieval Europe or the medieval Islamic caliphates. The introduction of Arabic numerals changed the accounting format to include decimal columns and the stacking of numbers, which fundamentally changed approaches to accounting. Moreover, strict standardization in format occurred in the Islamic systems, but never in the Roman system. Even if one acknowledges that most Roman households maintained ledgers, their cultural habits did not transition to the medieval Europeans, who were dependent to a degree on monks, bankers, and court stewards to handle accounting, especially for taxation purposes.

Even if one reviews civilizations beyond the immediate successors of Rome — the Byzantines, western medieval Europe, and the Islamic Middle East — Roman accounting is organizationally weaker than many other accounting systems. Moreover, it did not regularly monetize or use a format such as double-entry, which allows for better profitability assessments. Even compared to Old Kingdom Egypt, the Romans did not use a pre-made, ‘spreadsheet’ style of organization to rapidly calculate inventory. In essence, all of the modern hallmarks of efficiency within accounting were missing from the Roman system. Therefore, it could be said that the final legacy of Roman accounting was negligible in terms of the development of accounting history.
However, despite the inherent weaknesses of Roman accounting, there are two vastly underrated elements — engagement and accessibility — to consider. When reviewing the list of areas in which the Romans used accounting (such as in contracts, inheritance, profitability assessments, and estate management), the strata of society involved, both in terms of ‘class’ and profession, are almost certainly greater than nearly any other pre-modern society. The earliest of states, such as the Egyptians and Sumerians, used accounting only among a select group of centralized bureaucrats. The Islamic Middle East saw the heaviest usage among merchants and state officials. Western medieval Europe’s dominant use of accounting was due to demesne holdings of nobility or the church. Yet, with the Romans, the uses, regulations, and even societal references to accounting ranged from merchants, travelers, and distant estate managers to farmers and individuals concerned with inheritance or manumission.

It was the simplicity of Roman accounting, whether in the narrative or columned format, that made Roman accounting accessible. Accounting documents could be created with just a moderate amount of literacy. Other pre-modern ledgers were much more demanding to create. There is every reason to imagine that a Roman account written in Latin or Greek and composed in Britain could be understood in Egypt. The idea of auditing, both in the actualized form of Pliny the Younger and references to it in the Digest, suggests that the Romans could read, understand, and act upon distantly composed ledgers. Likewise, the court speeches of Cicero suggest that whether an account was originally composed in Sicily or Gaul, it would likely undergo a process transferred from informal notes to a formal ledger, which would bear scrutiny in a Roman court.

Ultimately, Roman accounting proved successful. The reasons are largely cultural — namely, that the Romans saw benefits in using accounting practices in a multitude of areas and
diligently recording everything. Perhaps most impressive is the Romans development of a societal impetus for accounting despite the lack of Arabic numerals or the compulsion to enforce accounting, such as with the development of income taxes. However, since the Romans’ accounting practices typically lacked sophistication, their legacy did not survive or influence future civilizations.
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