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Ethical issues in the early works of accounting^{*}

Abstract

Accountants in Poland have recently had the opportunity to celebrate the 20th anniversary of the introduction of the Accounting Act. The act was passed by the Polish Parliament in 1994. 500 years earlier, a treaty on double-entry accounting system was published by Pacioli. The publishing of *Tractatus XI. Particularis de computis et scripturis* was a momentous event marking the beginning of a new field of economics. Double-entry accounting was in use since Cotrugli introduced it some thirty years before Pacioli published his work.

Recently, in accounting as well as in economics, emphasis has been put on ethics, moral values, and professional attitudes. It is worth considering whether, or to what extent, these were present in the early works of accountancy from 550 years ago and how accountants approached these matters at the beginning of the written history of accounting.

This article presents the main ideas included in the guidelines set by Pacioli and Cotrugli regarding double-entry systems and investigates if ethical guidelines were present there. It turns out that the author of an essential work in the history of accounting, as well as his predecessor, devoted much attention to the moral attitude of the merchant, their appropriate behaviour, their attitude towards customers, and their colleagues and competitors.

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1. Introduction

Recently, the Polish accountants had an opportunity to learn about the 20th anniversary of the introduction of the Accounting Act that was passed by the Polish Parliament in 1994. 500 years earlier, Luca Pacioli's treaty on double-entry accounting system was published. The publishing of *Tractatus XI. Particularis de computis et scripturis* was a pivotal event, marking the beginning of a new discipline of economic science.¹ Accounting as it is known today, and treated as one of the field of economics is based on the principles described as early as in the 15th century (Ziętowska, 2014, p. 179), known since the ancient times of Mesopotamia (Dobija, 2012, p. 6). The concept of double-entry accounting had been known a long time before the treaty was published and circulated in Europe. And it was not only because of Pacioli, but also due to the work of, among others, Benedetto Cotrugli, who described it 36 years before Pacioli. Since Cotrugli's work was published later, Pacioli is considered the father of accounting. It is believed that the main reason for a 100-year delay in the publishing of Cotrugli's treaty was its title, which referred to mercantile ethos, which was not commonly recognised at the time (Niemczyk, 2010, p. 87). For this reason, Pacioli's is treated as the beginning of accounting as a science (Ziętowska, 2014, p. 180).

It is worth investigating how these ethical concerns were approached by the scholars at the beginning of accounting as a practice.

The article aims to present the main ideas in Cotrugli's and Pacioli's works—related to double-entry accounting and, in doing so, it will also try to identify ethical guidelines these authors advocated. Accounting historians agree that the concept of double-entry accounting was not invented by one person (Banaszkiewicz, 2013, p. 36). Cotrugli and Pacioli did not create the accounting system they described. The two lived among great traders, and the invention of the printing press made it possible for them to publish their experience, enquiries, and treaties on double-entry accounting systems (Ziętowska, 2014, p. 179). The Duality Principle—essential in accounting—originated in a long historical process and describes the initial balance between heterogeneous assets and homogeneous capital (Dobija & Jędrzejczyk, 2011, p. 8). This principle also gave rise to other important elements of accounting such as the double-entry rule² and balance. Both treaties that this paper presents describe these rule in detail. It is worth noting that they remain unchanged to this day despite all the changes in the opinions of economic and financial experts. One of the issues that still remains unresolved has to do with the concept of capital—its interpretation is diverse (and this concept is crucial in economics), it lacks unanimous explanation and definition (Mikuła-Bączek, 2006, p. 158). With the development of accounting and technology, people sought the best method of recording economic events in account books (Banaszkiewicz, 2013, p. 36).

¹ For more details cf. Niemczyk (2010).

² For more details on the history of double-entry accounting cf. Rogozina (2012).

2. The balance principle and ethical guidelines in Cotrugli's writings

We can find a description of dual-entry accounting in the first book of the treaty *Della mercatura e del mercante perfetto*, chapter XIII on proper bookkeeping (Cotrugli, 2007, p. 18). It has been proven that the manuscript of the treaty is the oldest work describing dual-entry accounting in a scientific manner. Moreover, Cotrugli also authored three other treaties on different topics *De uxore ducenda* [On marriage], *Della natura dei fiori* [On the nature of flowers] and *De navigatione* [On sailing]. The treaty *Della mercatura e del mercante perfetto* was written as the second and dedicated to Francisco Stefani, a merchant from Dubrovnik (Cotrugli, 2007, p. 16). Pacioli, whom we will discuss later, knew this manuscript and appreciated it (Niemczyk, 2010, p. 87). The treaty *Il libro dell'arte di mercatura* is the most important of all four of Cotrugli's works. When reading it, we notice how detailed and vast were the knowledge and experience of this medieval merchant, but we also find information about his ethos and the spirit of contemporary economics. This made him one of the precursors of modern economics (Ziętowska, 2014, p. 188). Cotrugli, according to his plan, wrote his book in such a way so that it could be useful "not only for those of our century but also for future generations" (2007, p. 38).

As mentioned before, chapter XIII, Book One, is the most important fragment from the perspective of the history of accounting. However, accounting also has an ethical dimension and so the remaining content of the work, related to the moral aspect of business activity and behaviour of merchants, is no less interesting (Ziętowska, 2014, p. 189). Book Three describes the qualities that every merchant have, which is ethical in character, not unlike Book Two that deals with merchants' attitude toward religion (Cotrugli, 2007, p. 17). Ethical issues are also described in Book One, also called the technical book, which in a way goes against the structure of the work, but here we can interpret it as showing how important ethics was to the author (p. 19). In Book I, chapter XIII, Cotrugli wrote about the *appropriate* method of keeping accounting books. This chapter also includes remarks on (Ziętowska, 2014, p. 189):

- (1) the importance of handwriting, pens and account bookkeeping,
- (2) dual-entry accounting,
- (3) office organisation, correspondence,
- (4) and a summary.

The author claims that since it is not possible to remember everything that happens in business activity, people record transactions in accounting books. Such record-keeping "not only safeguards and keeps in memory business transactions and deals" but are also crucial in "avoiding arguments, conflicts and taking things to court" (Cotrugli, 2007, p. 78). These serve to remind the merchant of everything they do or give, who "owes them and to whom they are indebted to," and all the activities that merchants "depend on" (p. 78). Cotrugli claimed that merchants

should keep at least three books, which he calls a notebook, a diary, and a great book (p. 78), and assigns these different functions. Describing the great book, he explained its (still valid) structure (p. 79):

- (1) “the goods you have must be the debtor, while the capital must be the creditor”;
- (2) “each sum [...] must be written twice, the first time as the debtor, the one who has to give back, the second time as the creditor, who must receive”;
- (3) “[t]he sum on the right side of the book is not unlike the debit, the one on the left is the one we demand”;
- (4) “debtors and goods are in debit and credit relation”;
- (5) “collating at the beginning of the year your income and debts, that is everything you spent and lost, will give you everything that remains as the capital entry for loans and gains, so you will easily achieve balance and assets.”

This description clearly shows the principles of duality and dual-entry, which remains the core of accounting (Ziętowska, 2014, p. 191). By only slightly changing the wording and the style, we can get the modern-day shape of accounting rules, but even without these changes accountants should have no difficulty reading them.

Cotrugli (2007) also wrote about organising the work connected with bookkeeping and recommended keeping order, labelling papers (when and where they came from), answering correspondence, and its proper storage. Every month, these should be packed and stored as the “most needed” things because they are “information for the merchant” (p. 81).

These fragments, taken from Cotrugli’s work, are crucial for accounting. They describe the way it was seen at the time, how long it has been practised, and that it was an area of theoretical investigation, with terms such as capital, debit, credit, assets and balance. Accounting work has a natural, ethical, dimension to it. Cotrugli, as a merchant had a lot of experience in trading, was able to see the disorder and violations that his contemporary merchants perpetrated (Ziętowska, 2014, p. 188). At the time, merchants kept their books on their own. Cotrugli believed that being a merchant, and so also an accountant, was a calling that required absolute human engagement and for this reason he devoted so much attention to the ethical side of their actions. He believed that a “merchant is more of a public figure than others” (2007, p. 86). He also characterises the ideal merchant who is most importantly proud of their profession, aware of their personal value as well as the benefits that their work provides for the country and the community (p. 21). Their versatile education should also be noted because ideal merchants are also knowledgeable about philosophy, logic, and the humanities. The author also claimed that the dignity and profession of merchants are significant due to the following four reasons (pp. 117–118):

- (1) creating the common good,
- (2) respect for their beneficial and worthy management of goods,
- (3) their connections in the higher social classes,
- (4) respect for the trust they enjoy.

Cotrugli (2007) paid significant attention to knowledge and believed in its unique value; he highlighted that it was necessary for the merchant to receive a proper education, which would make them versatile and well-behaved individuals, capable of understanding others and coping with any and all circumstances (p. 23). He understood justice according to contemporary rules (that are in operation even today) as, e.g. that “it is not allowed for those who have property as a pledge to gain any profit from it” (p. 103). The author claimed that they should deduce it from the main debt. Similarly, he wrote about how unfair a deal was that involved giving money ahead of time and paying less for the goods than the evaluation of how much they “will be worth later, or their current worth” acknowledging only the price that was currently valid (p. 104).

3. The theory of accounting and Pacioli’s ethics

Summa de arithmetica geometria proportioni et proportionalita by Pacioli, published in 1494, is essentially a mathematical work, but one of its chapters is devoted to the Venetian method of accounting (Hoňko, 2013, p. 41). Pacioli is described as a scholar who managed to comprehend the entire domain of his contemporary science—the whole of the scientific knowledge of the 15th century—when there was no separate field of economics or physics, and accounting was just a natural application of mathematics (Dobija & Dobija, n.d., p. 23). Pacioli’s mathematical model of an enterprise consisted of the following elements (Niemczyk, 2010, p. 92):³

- (1) money is the number and measure of economic processes,
- (2) Assets = liabilities,
- (3) gain = income – costs.

It is claimed that the fundamental equation of accounting—the Duality Principle—which can be found in Pacioli’s work evolved into the domain of economics because it was Pacioli who differentiated material resources and the homogeneous medium they included—the capital. For this reason, it is also claimed that the concept of capital appears in his work (Dobija & Dobija, n.d., p. 23). Pacioli is considered to have been a very versatile teacher and scholar (Hoňko, 2013, p. 42), a renowned scientific authority (Dobija & Dobija, n.d., p. 23), a mathematician, philosopher and a logician (Niemczyk, 2010, p. 92). Despite the fact that his treaty is practical in character, he formulates certain definitions, like the aforementioned concept of “capital” or the term “cash register” (Hoňko, 2013, p. 45). Accounting, since Fibonacci and Pacioli, has been based on the Duality Principle, which describes the same resources as economically dual; as heterogeneous assets and homogeneous abstract capital (Dobija, n.d., p. 2). Some believe that Pacioli never

³ The first claim refers to the rules of sum recording. Money as a number is inherently connected with the simple structure of an account. The second claim refers to several other rules of accounting—subjectivity, dual-entry and balance creation. The third claim refers to the rule of periodisation and economic rationality.

explained the essence of dual-entry recording, stating only that “[...] capital always has to be the creditor at the beginning on the main book and the diary, while the register must be the debtor” (Hoňko, 2013, p. 46). Nevertheless, the claims in his work are sufficient to say that he formulated this principle and that explaining it thoroughly was impossible partly due to how careful he had to be considering the novelty of his ideas. Lesław Niemczyk (2010) writes about it and highlights (p. 89):

- (1) the contemporary structure of science, with no room for the eighth discipline; Pacioli himself knew that economics was a separate discipline within liberal arts, but it could not fit into the system of science at the time (it would be the fifth element of the second group, which then had bad connotations);
- (2) the fact that Pacioli had enemies who were able to harm him; it was because Pacioli was granted certain privileges by the Pope, which made some powerful members of the clergy jealous.

Niemczyk (2010) states that “Pacioli’s responsibility for the fate of the new research program” was reflected in the fact that *Summa* encompasses economics understood as a dry method of mercantile bookkeeping, but even such a depiction of ideas “allowed the educated to have insight into the mercantile method [...]”. Potential enemies could not see anything that would violate the static order of the Middle Ages.” Niemczyk believes that this ploy, an example of unconventional research policy, made it possible to preserve economics in the work. He thinks that it is reasonable to say that momentous events in economic history (the Great Industrial Revolution and the Great Information Revolution) can be partly attributed to Pacioli, who diagnosed the mechanisms of the Great Trade Revolution and presented its basic “code” in his work.

When it comes to describing Pacioli as a uniquely versatile teacher, we can see that many scholars agree that the main factor that made his book so successful, apart from its factual content, was the way he presented the subject or its special didactic quality because *Summa* was written from the perspective of a mentor sharing his experience (Hoňko, 2013, p. 42). Besides that, Pacioli not only taught accounting terminology and account bookkeeping but he also explained the relationship between economic activity and book records (p. 44).

Pacioli made many references to the Christian faith and ethics of merchants, whom he considered the foundation of the state (2007, p. 124) and people enjoying great social trust. He wrote that in great republics, there was nothing more valuable than the “faith of a good merchant,” that people swore upon (p. 61). He highlighted the importance of Christian symbols, ordering the readers to begin each book in the name of God and the sign of the cross, just like he wanted all business to begin in the name of God (pp. 63, 71). Owing to Pacioli’s suggestions, we can understand the importance of the systematic character of recording, which guaranteed their falsifiability, lowered the risk of fraud, but also of following ethical principles in accounting (Hoňko, 2013, p. 46). The awareness of the risk of unethical practices is clear in Pacioli’s writings. In chapter 24, he wrote that all operations recommended by him were indeed just safety measures, which should be taken due to: “dishonesty, which our time is full of” (2007, p. 108). Later in the

same chapter, he demanded that the rules are obeyed so that nobody can accuse the merchant of dishonesty (p. 113). When describing a method of creating balance, he addressed his words directly to accountants and claimed that a good accountant needs to know the grounds for all records and the reasons for all the differences between them “to avoid any suspicion regarding the book” and that they need to act in such a way “as to always preserve mercantile reliability” (p. 188). Pacioli believed that the perfect merchant needs the knowledge of accounting because “if they are not also a good accountant, they blindly wander in their business, which can result only in harm” (p. 122).

Pacioli in Treaty XI often refers to mercantile habits, suggest exemplary solutions, good practices, and paints the picture of a “good” or “perfect” merchant (Hońko, 2013, p. 46). Such a merchant was characterised by honesty, systematic work, attention to detail, preference for order in documentation, and a good organisation of their accounting work. Unlike Cotrugli, Pacioli did not write about the principles, habits, norms, practices and qualities of a good merchant in a separate chapter, but rather he described them in various parts of his work. These ethical aspects were used as justifications for some of the practices he recommended. They were supposed to shape the proper attitude of a merchant or an accountant when performing certain duties. This shaping of character takes place on reading the book, somewhat simultaneously to gaining factual knowledge. He was also aware that applying his recommendations can be imperfect, that it risks improper or unethical execution, and so he gave motivational advice which justified constant striving for high quality of work: “for your everyday business activity not to seem arduous” (Pacioli, 2007, p. 68). Maybe because of this, *Summa*, and especially Treaty XI which is an accounting manual, enjoyed so much popularity (Pogodzińska-Mizdrak, 2007, p. 18). Scholars suggest that the main didactic qualities in Pacioli’s manual are (Hońko, 2013, p. 49):

- (1) ordered content presented in the form of short chapters;
- (2) announcements for the material to be covered and later revisions, which facilitate controlling progress;
- (3) a simple style and understandable definitions;
- (4) a complete example, enabling following new records in account books;
- (5) references to contemporary practice and mercantile habits.

Thus, the manual—we may say, within our present-day framework of qualifications—educates in knowledge, skills, as well as social competencies, including ethics, shaping the characters of its readers.

4. Conclusions

The history of accounting as a research area is underappreciated, despite its size and richness (Ziętowska, 2014, p. 180). This article presents just two renown individuals from the history of accounting: Pacioli, considered to be the father of accounting while Cotrugli, remained unknown until recent scholars rediscovered

his work. The author showed how these two teachers of merchants and accountants perceived accounting and how they thought about economics in general. It turns out that each of them devoted much attention to moral values and mercantile ethics. At the time, it was the mercantile ethics that accounting ethics was an element of (Turzyński, 2013). In their works, they recommended keeping account books in an ethical way—they wrote not only the aspect of the balance rule, dual-entry accounting, reliability, but also about the proper attitude in the mercantile profession, whose inherent part involved bookkeeping. At the time and many years after, there were no accounting services, which is so common nowadays. These two authors taught the same principles of accounting, divided the records into 3 books and described them in a similar way. These taught how to conduct the business of accounting honestly, and how to be a perfect merchant. They spread the same ethical values, but in a slightly different way: by creating special chapters devoted to the topic, as was the case of Cotrugli, or weaving them into factual descriptions, as in Pacioli's writings. The fundamental qualities of a merchant and the ethical values they described and demanded are, e.g. the awareness of the importance of their profession and the social trust it enjoys, the sense of responsibility, also for the state, the sense of dignity of the profession, appropriate knowledge and skills, being just, honest and reliable. They also named certain characteristics of the mercantile trade such as attention to detail, being systematic, tidiness, respect for business partners, answering correspondence, the ability to understand people and do well in any circumstances. It seems that this list of characteristics or ethical qualities is still relevant today. Unfortunately, even though accounting has evolved so much since that time, the same cannot be said about its ethics. When it comes to following ethical principles in practice, our current situation provides little evidence for their historical development and reinforcement among merchants and accountants.

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