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## HOW ACCOUNTING CHANGES OVER THE YEARS

Dr. GEETA JOSHI

Lecturer- Commerce (Accountancy and Business Statistics)

Maharana Pratap College, Rawatbhata, District-Chittorgarh, Rajasthan

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### I ABSTRACT

Significant changes have taken place in the accounting profession over the years. Since Luca Pacioli first described the systems of debits, credits, journals and ledgers in 1494, significant changes have taken place due to economic, technological and other advancements.

The present paper aims to analysis about how accounting came to be (from early records 7,000 years ago to 15th century Italy, courtesy of celebrated mathematician and Leonardo daVinci collaborator Luca Pacioli), obviously a lot has changed. For a start, it's becoming digital now. The modern accountant is well-versed in business management and can advise you on how to grow your business. As indebted as our industry is to Pacioli and the countless other innovators, the systems we use these days are so much more sophisticated. We thought that comparisons to a more recognizable world would be fairer – so we're looking at the 3500 B.C to present time, to be precise. Here's how accounting has changed over the time.

**Keywords:** History, Accounting, Evolution, Narrative, Bookkeeping

### II. OBJECTIVE OF THE STUDY

The objective of this paper therefore is to examine the actual era in time from which modern day accounting started and also the promotion of international accounting bodies.

I shall undertake this exploration by considering what roles a notion of progress might play in historical research more generally and historical accounting research more particularly. This requires a review of the extent to which accounting historians have in the past appealed to notions of progress. Although there is some evidence of the use of progress as an organizing concept in so-called “traditional accounting history”, it tends to be associated with the highly ambiguous notion of evolution. The emphasis placed on evolution as a term describing accounting's patterns of change has been criticized by the so-called “new accounting history” (Miller et al., 1991; Miller & Napier, 1993). As Keenan (1998) has

pointed out, this criticism may itself be open to question as presupposing a rather specific and potentially confused understanding of the concept of evolution. Nervousness about describing accounting change as “progressive” may owe more to the fact that many historical accounting researchers (particularly those working within the “new accounting history” approach) come from social science backgrounds, where claims that evidence reveals a pattern of improvement over time might be held to be inappropriate value judgments.

Telling a story in terms of progress is often a persuasive and thus an effective way of structuring a small-scale historical narrative. This is so whether we describe a “success” in which accounting, or something affected by accounting, is held to improve, or a “failure” from which we hope to learn lessons to help us avoid mistakes in the future. On a larger scale, where accounting as a whole becomes the subject matter of our histories, it may be more difficult to tell a story of progress, as we seem to face a choice between the equally unattractive options of regarding accounting as eternally changing in a generally improving direction or as tending towards its end. This paper is therefore an attempt to explore what might be meant by describing accounting as “progressive”.

### **III ANALYSIS AND INTERPRETATION**

Accounting has changed dramatically over the years. From Mesopotamia to ancient Egypt, to ancient Greece, to ancient Roman from the first IBM computers to the AI-powered tools of the present day, the world of accounting has transformed hand in hand with technological change. Here is the brief of different under which Accounting has developed and reached in present form:

#### **Primeval era**

Little can be said about the origin of record keeping as different nations had their unique way of keeping record. “The Chaldean-Babylonian Empire is considered to be the foremost regularly organized government in the world” (Edwards, 1960). This era which lasted until 500 BC saw Nineveh and Babylon referred to as *Centre of Trade and Commerce*.

During this era – from Mesopotamia to ancient Egypt, to ancient Greece, to ancient Roman – government businesses were conducted by *Scribes* who are known to be the earliest record keepers and as such perform the duties of lawyer, Attorney, and Accountant. They were also responsible for the collection of taxes and payment of expenses. According to Edwards, the Scribes maintained inventory records and prepared accounts similar to a charge-and-discharge statement showing amount received and paid out. In some instances the record tablets show the reason for the transactions.

### **Mesopotamia accounting system**

This system date back to as far as 3500 B.C., five thousand years before the popularization of bookkeeping system. The book of record were kept by the scribe whose present day equivalent is the accountant. The Scribe's duties were more extensive in that he ensures all transactions' agreement comply with the code of commercial transaction as evident in *Hammurabi Code* and record such transactions on clay tablet since clay was in large quantity in the area. Although *papyrus* – a tall plant that is like grass and that grows in marshes especially in Egypt: *Paper made from it were used for writing* – were also used when available. In the place of feather quill, papyrus itself was also used in applying writing ink.

### **Ancient Egypt's accounting system**

The ancient Egyptian system was developed in a fashion that is likened to that of the Mesopotamia. The use of *papyrus paper* allow for detailed recording to be kept for Royal Storehouses. With a well-established internal control system couple with Royal audit in place, the bookkeepers kept detailed record. However, their inability to establish a single unit of measurement for valuation of goods and services impinged on the progress of the development of their accounting system.

It can thus be said that both the internal control system and external audit system established during the Egyptian development is closely similar to the one obtainable in today's world of business (Edwards, 1960; Alexander, 2002).

### **Ancient Greek accounting system**

The most important contribution of the Greek was its introduction of coined money around 600 B.C., widespread use of coinage took time, as did its impact on the evolution of accounting. The Greek banking system seems to be more developed than those of prior societies. Members of the Athenian Popular Assembly (the Senate) legislated on financial matters and controlled receipts and payments of public monies through the oversight of ten selected state accountants. The use of state accountant was to allow the people maintain real control over public finances (Edwards, 1960; Alexander, 2002).

### **Ancient Roman accounting system**

Roman government requires its citizens to submit regular statement of assets and liabilities for the purpose of tax determination and citizen's civil rights. And as such Head of families kept traditional records called *adversaria (daybook)* wherein daily entries of receipt and payment are recorded and summary posted to another called *codex accepti et expensi (cashbook)* at the end of each month (Edwards, 1960; Alexander, 2002). Beside those records kept by the Head of Roman families, Roman bankers kept a third kind of record book called *liber rationum (book of accounts)*. The banker was duty bound to render account and, if asked, to produce an extract of the account before the praetor – a Roman Magistrate

ranking below a Consul and having judicial functions – who was a government official (Wooff, as cited in Edwards, 1960).

This can be said to be the beginning of modern day system of reporting to a third party. The banker which is referred to as *quaestor* (Alexander, 2002) can be seen as the equivalent of the modern day Accountant-General.

### **Medieval era**

The fall of Roman Empire interrupted the development of accounting system for over a thousand years. However, the Romans through the effort of the Church continued to preserve and improve on the existing techniques of receipt and payment bookkeeping. By 812 A.D., an ordinance known as *capitulore de villis* containing instructions for the administration of Imperial estates was issued by Charlemagne – also known as Charles the Great or Charles I, who was the King of the Franks from 768, the King of Italy from 774, and from 800 the first emperor in western Europe since the collapse of the Western Roman Empire. The ordinance prescribed that accounts of income and expenditure be kept and rendered. As a result of this development, numerous authorities were delegated by property/estate owners to actual possessors and users who are expected to give accounts of stewardship annually or as may be determined by the property/estate owner. This ordinance is a pointer to accounting regulation across international boundaries. According to Edwards, Every judex, or steward, on the Emperor's estates was required to report, giving an annual survey of the royal property, including inventory of lands and tabulations of rents, fines, farm produce, and so forth. Estate income and disbursements were recorded in separate books, but not in anything like an account form as the term is used today. The transactions were recorded in a journal, more or less in essay form.

Evidence of a more advance characteristics of double-entry was found in *Florentine Bank Ledger* of 1211 A.D. It shows that the depositor's account was debited on one page and credited on another (Liu & Yuan, 2011; Edwards, 1960), and “In Italy, the journal of a banker was generally considered a public record, which could not be contested in court.” Staley, (1906, p.178-179) (as cited in Sangster, p.4) in his own opinion stressed that: the genesis of double entry bookkeeping as defined here must be upon the bankers rather than the merchants, is to be found in the terminology of accounting which originated at that time in the *banker's guild of Florence*, including: *cassa* (cash), *banco* (bank), *bancarotta* (bankruptcy), *giornale* (journal), *debito* (debt), *debitore* (debtor), *credito* (credit), and *creditore* (creditor).

This opinion also invalidated claims that Pacioli and/or Cotrugli is/are the father(s) of modern accounting. Even though some authors have in their work credited the wide spread use of double-entry bookkeeping across borders to the publication of *Summa*. The claims by authors that are of the thought that Pacioli and Cotrugli are fathers of accounting is a fallacy owing to the enormous evidence that abound as to the invention of journal, ledger, and indeed double-entry bookkeeping been traceable to *Florentine* bank ledger and other account book kept by *Florentine* merchants in the early 13th century.

## Modern era

The later end of 15th and the start of 16th century saw the complete transition of record keeping into bookkeeping of today. Businesses now require the services of a bookkeeper who is to maintain permanent financial record and statement of assets and liabilities and that of income. The growth of partnerships and joint stock companies developed accounting reporting from that which is intended for two parties to that of multi-party. This in turn had a direct proportional increase on the number of bookkeepers in employment.

The increasing number of bookkeeping practitioner gave credence to the importance of accountants in municipal life of the people and indeed business survival. The importance of the accountant in Italy in the latter part of the fifteenth century is further suggested by the fact that in 1484 Duke Gradaliasso Maria Visconti, of Milan, granted to Giocanni Longone, his accountant the legal right to confer upon his descendents the office of accountant of Milan. This act is also a pointer to the establishment of the Office of the modern day Accountant-General.

Even though the oldest and well preserved accounting record written in English language is in the Pipe Roll or Great Roll of the year 1130-1131 A.D. which can be found in the Exchequers of England and Scotland, the first record of a complete double-entry system of bookkeeping is found in books of accounts of stewards at Genoa in 1340. In 1406, a firm of traders known as Soranzo and Brothers not only kept ledgers but also income statement and that of Capital, and by 1482, the ledgers were being closed and profits calculated on an annual basis (Edwards, 1960). We can posit here that complete financial statements were prepared at different interval and that a fully developed double-entry bookkeeping system had emerged at the end of 15th century.

The British Lords of the 14th, 15th and 16th centuries due to the fact that their estate were yielding large return needed to employ the services of experts such as the steward who is to oversee the entire estate, the surveyor for the purpose of valuation, the receiver who is to receive cash and make payment, and the auditor who at irregular interval is to carry out audit. It is however not clear as the particular point in time whereby accounting evolved out of bookkeeping. The features of *limited liability* present in the joint-stockventures of the late 16th and early 17th centuries is one landmark in the developmental history of accounting. Although, a detailed investigation have revealed that around 1250 A.D. in Toulouse, France, 96 shares of the *Société des Moulins du Bazacle* (Bazacle Milling Company) were traded at a value that depended on the profitability of the mills the society owned, making it probably the first company of its kind in history to have shown such features. The earliest joint-stock company recognized in England was the Company of Merchant Adventurers to New Lands, chartered in 1553 A.D. with 250 shareholders. Russia's Muscovy Company, which had a monopoly on trade between Moscow and London, was chartered in 1555. The much more famous, wealthy and powerful English (later British) East India Company was granted an English Royal Charter by Elizabeth I on December 31, 1600 A.D. Soon afterwards, in 1602, the Dutch East India Company issued shares that were made tradable on the Amsterdam Stock Exchange. This invention enhanced the ability of

joint-stock companies to attract capital from investors as they could now easily dispose their shares. With joint-stock companies, the need to conserve investments became a monumental issue, as evidenced in the statement of the governors of the British East India Company that future distributions would consist of profits earned as against return of investment. These were the forerunners of the modern day corporation and by implication, had helped in the development and popularization of double-entry bookkeeping as well as modern day accounting system. This policy introduced the problem of determining the difference between income and capital invested and thus increase the responsibility of the accountant (Edwards, 1960).

### **The transition point**

The next century after Pacioli's publication of the *Summa* saw his followers attempting to advance on his work with some publication on bookkeeping appearing. Notable among such publication was a 1525 A.D. 24-page pamphlet on bookkeeping that was much better adapted than that of Pacioli for use in class room. Thereafter a sharp declining of importance was been recorded for Italian authors as a reflection of the decline of their country's commercial progress. While Italian authors were busy with advancing on Pacioli's work, the Dutch authors were beginning to take center stage. Holland was the training school of the British merchants and at the time had become the leader of Atlantic trade.

The Dutch authors at different time in the 16th century published various work on the modern day accounting. Edwards had written that:

The first native Dutch writer to deal with the subject of bookkeeping was Jan Ympyn Christoffels, whose treatise was published in French in 1543 and in English in 1547. He introduced the trial balance, as such, for the first time. Then, in 1588, Nicholaus Petrie, also of Holland, published the bookkeeping treatise in which the compound entry was first introduced. Simon Stevin of Holland published his *Hypomnemata Mathematica* in 1605. Stevin separated the ledger and inaugurated the practice of keeping the cash account, expense account, and so forth, in subsidiary ledgers. He also introduced the practice of balancing the profit and loss account at the end of each year, using the account itself, rather than a formal statement, to reflect the profit.

### **Evolution and promotion of international accounting bodies**

The evolution of accounting bodies date back to as early as 1164 A.D. Milan, when accountants serving as independent representatives of the public had come together to develop and compile a set of General Regulations of Taxation on Land, confirming the early formation of the body of accountants, though it may not have been formally christened. However, the christening started in the 19th century when accountants began to organize themselves to form different accounting firm in the United Kingdom, while in Italy according to Edwards, "a College was established in 1739 under the influence of practicing accountants of Milan, ... was opened in 1745. It was decreed that only graduates of the

school should be legally recognized as practicing accountants.” It was however not until 1854, precisely on the 6th of July when accountants practicing in Scotland organized themselves under the aegis of The Institute of Accountants in Glasgow petitioned Queen Victoria for a Royal Charter marking the beginning of modern day accounting bodies. By 1887, American Association of Public Accountants was formed.

Almost a century later, the International Federation of Accountants (IFAC) was formed in Munich, Germany in 1977. Prior to the formation, Accounting profession have been internationalized for a long time, with the first international congress for accountants being held in St. Louis, USA in 1904, and the second, where there were more substantial numbers of foreign delegates, in Amsterdam in 1922. The 8th World Congress held in New York in 1962 discussed the need for international standardization of accounting and auditing practice. In 1965, Sir Henry Benson saw the need for accounting institutes in the US, Canada and Britain to establish the ‘Accountants’ International Study Group (AISG)’. At the 9th International Congress (Paris, 1967) an international working party was set up to examine the international needs of the accounting profession and to report back to the next International Congress to be held in Sydney in 1972 (Olson, 1982 as cited in Humphrey & Loft, 2008). Following the report of the international working party, an International Coordination Committee for the Accounting Profession (ICCAP) was formed at the 1972 Congress. The membership of ICCAP comprised five, fifteen year members (namely, Australia, France, the Netherlands, UK and the USA) and six, five year members (Canada, West Germany, India, Mexico and the Philippines, with Japan being voted in as an additional five year member at the first meeting of ICCAP) (Humphrey & Loft).

### **1970s – Early computers**

The 1970s weren’t all flared trousers and bright colours, they were shaped by political and economic turbulence, defined by events such as the Watergate Scandal in the States and the Three-Day Week in the UK. But the years weren’t all doom and gloom, especially for accountants, who began to reap the rewards of the first mass-produced microcomputers. 1978 saw the arrival of VisiCalc, short for “visible calculator”, the first spreadsheet software. The Apple II computer’s “killer app”, VisiCalc revolutionized financial modeling and sold over 700,000 copies in six years.

### **1980s – Changing workplace**

As accountants became empowered by these new tools, the make-up of their workforce was also changing for the better. The social upheaval of previous decades had paved the way for a less male-dominated accounting industry, and by 1985, almost one third of all American accounting graduates were women. PCs had now become a part of everyday life too, with more user-friendly computers and software rapidly entering the workplace. As a result, the early eighties saw the birth of not one but two accounting software pioneers, by the names of Sage and Intuit.

### **1990s – Rise of accounting software**

Fast-forward to the decade of the Spice Girls, Titanic and the early days of the internet, and the accounting landscape had developed into something we'd recognize today. Many accounting tasks had been automated and computers were used by the majority of businesses. Meanwhile, firms like Sage had broken North America, with the acquisition of leading desktop accounting software, Peachtree, ultimately securing a multi-million pound valuation and entering the FTSE 100.

### **2000s – Scandal and regulation**

The fall of Enron, once labeled by Fortune as “America’s Most Innovative Company”, shook both Wall Street and the accounting industry. The scandal brought down Arthur Andersen LLP with it, previously classed among PwC, Deloitte, EY and KPMG. In short, both Enron and Arthur Andersen had hidden Enron’s losses and made the firm appear more profitable than it really was. New laws came to action in the wake of the scandal, with heightened consequences for fabricating financial statements, along with fresh compliance measures and closer attention paid to accounting firms’ ethical conduct.

### **Present day – Cloud accounting and AI**

After the instability of the noughties, the 2010s have brought with them the accounting industry’s most significant change yet. With the advent of cloud accounting tools, first with Xero in 2006, then new products from Quick books and Sage, accountants and businesses can now access their accounts regardless of location, on any device.

At the same time, artificial intelligence now has very real, practical applications across a range of industry sectors, thanks to advances in computer processing power and the volume of data to play with. Take Fluidly’s real-time cashflow forecasting software, which combines AI with financial modelling to produce a forecast that’s always up to date. By connecting to an accounting package, Fluidly applies its bespoke cashflow algorithms and machine learning, and uses accounting platform data to automatically build a detailed baseline cashflow forecast.

It’s no secret the accounting industry has come leaps and bounds in the past 50 years. For companies to remain competitive, it’s crucial they continue to move with the times. Find out more about managing cashflow with Fluidly



#### IV. Conclusion

In summary, investigations into the historical development of accounting revealed that there have been well organized forms of accounting reporting system. It also revealed that there is no real evidence to show that Luca Pacioli popularized the use of double-entry bookkeeping and that its invention cannot be ascribed to anyone base on the enormous evidence cited earlier in this paper.

The various developments in view of the transition from record keeping to double-entry bookkeeping and finally to accounting and indeed the evolution of cost and management accounting have been due largely to rapid industrialization and commercialization and also the quest for perfection.

The future is quite bright and the pace of technological advancement is encouraging. Adaptability has become an imperative quality that all accountants in the modern day should possess and apply in order to survive and still remain competitive in this dynamic and sophisticated environment.

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