

WHO WAS THE FIRST ACCOUNTANT?

Accounting may be as old as civilization. As wealth was accumulated, inventories of wealth were needed. Writing was invented as a convenient way to track commercial transactions and accumulated assets in an abstract way. The "inventions" of money, banking, and credit took place and were important components of a rise of the great civilizations of the Ancient World. The Medieval Italian merchants became wealthy and powerful, partially as a result of the development of double entry bookkeeping. The Industrial Revolution, starting in the 18th century in England, led to mass production, big business, mass transportation, and sophisticated cost accounting. High tech accounting machinery, for the most part, had to wait for the 20th century. The calculator, typewriter, and tabulating machine were invented in the late 19th century and showed steady growth in the first half of the 20th century. The computer has dominated the second half of the century. In summary, the 10,000 years of accounting history starts with simple stone "tokens" to count wealth and continues to the integrated computer systems of today.

But this story is not complete. Who was the first accountant? The first priest to drop stones into a bag to count the temple's cattle? The scribe that "invented" writing to evaluate the king's wealth and tribute payments? The Italian merchant that developed double entry bookkeeping? The controller that developed the first sophisticated accounting system for a large factory? The first professional accountant? Or someone else? Below are some of the candidates. Their qualifications will be considered.

Jerry of Jericho, The First Inventory

The dawn of civilization is the transition from hunter-gatherer to farmer. Farming required a single location, stability, the use of seed crops, the calculation of seasons, plowing and harvesting, and the development of settlements. Crop surpluses lead to trade and specialization. The potter relied on the farmer for food, the farmer on the potter for utensils. Under a barter system wealth was determined by possessions--cattle, sheep, grain stores, and these served as mediums of exchange.

The ancient city of Jericho is in ruins in what is now Israel (close to the modern city of Jericho), ten miles north of the Dead Sea. It is most famous for its biblical conquest by Joshua, perhaps around the time of the Trojan War. The earliest archeological finds are dated from the 10th millennium B.C.E., the oldest fortified city yet discovered. From the oldest levels plain clay artifacts were discovered, called "tokens" by archeologist Denise Schmandt-Besserat. Tokens have been widely found throughout Near East archeological sites representing a period of 5,000 years, to 3,000 B.C.E. The earliest ones were plain, the later ones increasingly complex. Later tokens were often found in hollow clay balls called "envelopes", with abstract markings--evidence of pre-writing.

The tokens can best be explained as representations of inventory. Five round tokens may indicate five sheep, eight oblong ones eight cattle. Over time, the tokens were more complex, both in terms of shapes and also symbols scratched on the tokens. In these later periods plain tokens may have represented simple goods such as grain or livestock, while complex tokens may have represented manufactured goods such as textiles or utensils. Both the inventory type and count were likely represented abstractly.

Archaeologists discovered that an inscribed envelope could be matched to the tokens enclosed and the inventory represented livestock, grains, weapons, and so on. A specific envelope could relate to the "account" of a single scribe or steward or an inventory of a specific tribute payment. It could represent the obligation of this tribute. The envelope could be handed to the debtor and returned with the actual payment in kind, a stone age voucher system.



Envelope & tokens - Susa, 3300 BC (Louvre)

The tokens may represent an inventory count, the envelopes a summary "document" and a form of internal control. Thus, this can be interpreted as

a potential accounting system with some complexity and the continuing development toward writing. Perhaps the envelopment was a simple "balance sheet", as suggested by Mattessich [1987].

The names of the temple priests and scribes that developed this system are unknown. After all, this is a prehistoric period beginning in the Neolithic Age. Is the first accountant to be found here? Before 3,000 B.C.E. the complex token-envelope system can be considered a form of bookkeeping. It served the information purposes of the rulers and their administrators, before the development of either writing or money.

Marion the Sumerian, the Inventor of Writing

Recorded history can be traced to Sumerian city-states including Uruk and Ur, possibly the birthplace of writing. Scribes scratched signs on damp clay tablets with pointed sticks. Initially pictographs or stylized representations, these became standardized into cuneiform writing (Latin for wedge, not a Sumerian term). The process may have been a continuation of the token system developed in earlier millennia. These scribes were bookkeepers, the scratchings records of temple wealth, records of tribute based on a barter system.



Scribe - Sakkara about 2500 BC (Louvre)

The writings gained relative simplicity and standardization and, therefore, efficiency. The earliest tablets from Uruk date from at least 3,100 B.C.E., although there is some debate on dating the tablets and the location of the birthplace of writing (e.g., limestone tablets from Kish may date from 3,000 B.C.E. to 3,500 B.C.E.). The invention of writing was a gradual process, probably over a wide area across the Fertile Crescent. Many clay tablets represented business transactions and demonstrate the increasing flexibility of writing systems. Writing would be expanded to literature by Sumerians with the Epic of Gilgamesh. However, it would be some 1,500 years before the development of the first alphabet.



Accounting records on pre-cuneiform tablet (Louvre)

The earliest attempts to define money were begun. For example, the shekel was an early monetary unit, the amount of gold

equivalent to the value of an ox. Coins were invented by the Lydians according to Herodotus. Written promises were recorded, receipts and payments in money equivalents. The Code of Hammurabi from 2200 B.C.E. was a complex law code that included regulations of commercial transactions and contracts. The Egibi Tablets identified bankers and money lenders in Babylon at 1000 B.C.E. In summary, writing allowed the recording and legal standing of standard commercial transactions based on money.

Jerome of Rome and Others in the Ancient World

Many great civilizations in the Ancient World developed in the Near East and around the Mediterranean: Sumeria, Akkad, Babylon, Assyria, Persia and others around the Fertile Crescent, Egypt, and later Greece and Rome. There was not a steady rise in culture and civilization. Instead, the "golden ages" were often followed by dark ages as advanced cultures often fell to the "barbarian" invaders. Greek civilization was a relative latecomer and, except for Alexander the Great, not much of a world power. The Myceneans were powerful city states known from the archeological record of Mycenae and other ruins and, according to Homer, the sack of Troy about 1240 B.C.E. Greece fell into a dark age shortly after that, recovering centuries later. The Age of Pericles, Greek tragedies, Socrates and Plato came some six centuries later. Greece apparently adopted the Phoenician writing system and invented the complete alphabet (the Greeks introduced vowels). Greek culture spread about the Mediterranean along with Greek oil, wine, and other trade goods. Athenian banking was well developed. The Zenon Papyri demonstrated a sophisticated accounting system in 5th century B.C.E. Greece.

From the small settlements on the Tiber River the Romans developed over a thousand years the civilization that was to be the cornerstone for Western civilization. The republic was replaced by the empire, which lasted in the West until the fall of the last Roman emperor in 476 C.E. Rome is not known for philosophy, but for pragmatic pursuits such as road building and engineering wonders, its legal system, and government administration. The huge bureaucracies demanded bookkeepers.

Littleton [1973] identified seven antecedents to bookkeeping: private property, capital, commerce, credit, writing, money, and arithmetic. All were developed in ancient times (arithmetic may not have been fully developed) and available to Roman merchants and bureaucrats. Patrician families seem to have kept records in memo form ("adversaria") and in ledgers (Cicero referred to "tabulae" and "codex accepti et expensi"), bookkeeping but probably far from a double entry system. Bankers kept formal accounts, in part, as evidence for possible legal proceedings. The main public treasury during the Roman Republic was the Temple of Saturn. Taxes were collected by middlemen called publicans, the tax gatherers. A vast bureaucratic network lead by administrators (consuls, questors, and so on) with a staff of scribes ran the Roman and provincial governments. Financial records were carefully kept on public accounts (although corruption was on a vast scale), including a monthly register of all receipts and payments. Payments were often made using written warrants to avoid transporting coins over long distances.

The millennium following the fall of Rome was the Middle Ages, a thousand years without a bath. The feudal system and the Catholic Church both evolved from Roman administrative frameworks. Italian cities maintained commercial ties with Constantinople. Beginning in the 11th century merchants became leaders of the rich city states of Florence, Genoa, Pisa, Milan, and Venice. Important families

would later become hereditary rulers. The Medici family, for example, seized control of Florence in the mid- 15th century. The patronage of these powerful families as well as the growth of trade and a renewed interest in classical literature were partially responsible for the Renaissance.

Amatino Manucci and Double Entry Bookkeeping

Medieval business was conducted by artisans and village shopkeepers, with little need for detailed financial records. But the Crusades brought European nobles and soldiers in contact with the exotic East. Italian merchants were in an ideal position to exploit expanding trade opportunities from Europe to Constantinople and beyond. Successful merchants developed trading networks across Europe and the Mediterranean, which required sophisticated financial records.

The evidence suggests that double entry bookkeeping was an invention of Italian merchants in the Genoa-Venice-Florence triangle in the 1200-1350 period, a Commercial Revolution [Mills, 1994]. Not a single individual, but recordkeeping that met the needs of the particular merchant house. As business expanded and complexity increased, at least some merchant firms increased the sophistication of the accounting records. Accounts prepared by Amatino Manucci, a partner in the Florentine firm of Giovanni Farolfi and Company are among the few that have been recovered and analyzed.

The merchants were usually middlemen. They generally didn't produce the goods, rather they arranged the purchase in convenient locales and the sale of the products throughout the known world. These were relatively small operations in terms of manpower. These merchants became rich and powerful because they set prices and knew how to calculate costs and profits.

Few bookkeeping records remain from this period. Parchment was used for most record-keeping, too valuable not to reuse when original records were no longer needed. Generally, merchant partnerships were short-term--started and terminated within a few years. Then the books would be closed, accounts settled, and new books opened for new partnerships (perhaps with the same partners). Since the parchment was expensive, the pages likely would be washed or scraped and reused by the new firm.

The Piscan Document of Philadelphia dates from the early 12th century. Primitive bookkeeping with sequential transactions using Roman numerals was presented in paragraph form. Fragments of an unknown Florentine banking firm date from 1211. Not yet double entry bookkeeping, but advancing in that direction. Other fragments include the Castra Gualfred and the Borghesia Company from 1259-67; Gentile de' Sassetti and Sons, 1274-1310; and Bene Bencivenni, 1277-96. The most complete records were from Rinieri Fini & Brothers, 1296-1305, and Giovanni Farolfi & Co., 1299-1300.

Giovanni Farolfi & Company was a Florentine merchant partnership at the start of the 14th century, with Farolfi the senior partner. Amatino Manucci, also a partner, kept the books for the Salon, France branch. Salon was a center for olive oil production and a convenient center for buying commodities (wheat, barley, oats, wines and wool) and textiles. Farolfi also dealt in lending and moneychanging. How long this partnership existed is unknown. No additional facts are known of Manucci's life.

Apparently, at least six account books were used at the Salon branch, but only 56 pages of a "general ledger" (of 110 total pages) for the 1299-1300 period now exist (at Archivio di Stato, Florence). Financial information was in paragraph form, debits were recorded in the front of the book, credits in the back, figures were denominated in French livres. There was a single debit and a single credit for each entry, fully cross-referenced. Summary accounts show the "transfers" from other account books. Each page is totaled, with a grand total on page 91 for debits (the balance for credits is lost). As summarized by Lee: "The books were logically subdivided, with segregation of cash and goods accounts from the main ledger, a perpetual inventory of each line of agricultural produce and each grade of cloth or yarn dealt in, and full records of debtors and creditors, expenses, profits, interest and partners drawings..." [1977, page 94].

Is this true double entry bookkeeping? Lee [1977] identifies six components of double entry: (1) the concept of the business partnership as an accounting entity; (2) algebraic opposition, in simplest terms: for every debit there is an equal credit; (3) a single monetary unit; (4) a capital or proprietors' equity account; (5) the concept of profit and loss as a separate component that will increase or decrease equity; and (6) the use of an accounting period. Lee suggests that earlier fragments have many, but not all, these components. The 1211 fragments from the Florentine banking firm meet the first three, according to Lee. But it is the Farolfi accounts of Manucci that meet all criteria.

Manucci obviously did not invent double entry, that was a 100 year process (perhaps a 9,000 year process). But the process was effectively complete by the time of Manucci's books. If he didn't finish the process himself, it didn't occur long before. Existing fragments from the late 13th century were still missing key components prior to Manucci.

Pacioli - The Father of Accounting



Luca Pacioli (1447-1517), the wandering Franciscan monk and mathematician, was a contemporary of Columbus and a friend and collaborator of Leonardo da Vinci. His seminal work, *Summa de Arithmetica, Geometrica, Proportioni et Proportionalitate*, published in 1494, contained a section, "Particularis de Computis et Scripturis" (Details of Accounting and Recording) that described "the system used in Venice". This was four decades after the Gutenberg invention of movable type and printing centers all over Europe allowed Pacioli's *Summa* to be translated, printed, and spread across the continent.

Pacioli's *Summa* is the first known complete description of double entry bookkeeping. Three books were to be used: memorandum book, journal, and ledger. Journal entry postings from the memorandum book required debits on the left and credits on the right. Although many currencies existed, *Summa* required that all entries be translated to a single monetary unit. A trial balance was necessary when the books were closed. The balances from the profit and loss account were entered in the capital account. In other words, *Summa* described a system remarkably like modern bookkeeping. The *Summa* was translated into Dutch, German, French, Russian, and English and Pacioli's system spread across Europe. For this reason Pacioli is the "Father

of Accounting". Relatively little progress was made beyond Pacioli's Summa for several generations. In fact, it is difficult to identify pioneering accountants before the Industrial Revolution.

From Renaissance Italy to Industrial England

Pacioli's Summa was published not long after Columbus' return from the New World, a key event in the decline of Italian states and the rise of Spain as a world power. First Spain and Portugal and then Holland and England became great sea powers. England gradually gained the upper hand, through trade and imperialism under the Mercantilist theory that colonies provide raw materials and buy finished goods. Industry was based on a crafts system, with wealth based largely on land and merchandising. Thus, except for the vast colonial base, the system was similar to Renaissance Italy.

An important capitalist invention was the joint stock company, precursor to the modern corporation. One of the first in England was the East India Company, chartered in 1600, with monopoly rights between Cape of Good Hope and the Straits of Magellan. During the early years only short-term stock was issued for single voyages, then the stock liquidated and the proceeds divided among shareholders (permanent capital was first raised in 1657). One potential "first accountant" would have been Thomas Stevens, the first Accountant General for East India Company (to 1614). Unfortunately, no surviving accounting records exist before 1657.

Joint stock companies fell into disfavor with the bursting of the South Sea Bubble of 1720 (due to large scale fraud and speculation). Charles Snell may be the "first auditor" for his financial reviews after the South Sea Bubble, but accounting innovation had to wait for English entrepreneurs of the 18th century. Joint stock companies regained their popularity early in the 19th century.

The Industrial Revolution dramatically increased per capita production through mechanization. Eighteenth century England was changed from an agrarian and craft-based society to an industrial power. Cotton textiles were manufactured first, based on Kay's flying shuttle (1733), Hargreave's spinning jenny (1765), Arkwright's water frame (1769), and so on. Perhaps the most significant invention was James Watt's steam engine in 1769. Steam power made modern factories possible.

Each inventor was an entrepreneur with a need for capital and a vision, usually to generate vast personal wealth. A banking system and adequate transportation were necessary components. Banking began in England from goldsmiths safekeeping customer gold and silver and then lending the metals. Customers were given receipts which they used to pay their bills. The Bank of England, chartered as a Joint Stock Company in 1694, became the first central bank. Canal building began in the late 18th century, followed by locomotives from about 1830. With mass transportation the acquisition of large quantities of raw materials and the distribution of finished products over large distances became possible.

The rise in productivity in Britain was dramatic, over 2% a year in gross national product (GNP). In 1750 per capita production was similar around the world. According to Kennedy [1987], if British productivity was 100 in 1750, then that of the Third World was 70 and the rest of Europe was 80. By 1900 British productivity was 1,000. By 1860 Britain produced more than half the world's iron and coal, was responsible for 20% of world trade and 40% of manufacturing trade.

Josiah Wedgwood and the Genesis of Modern Cost Accounting

Josiah Wedgwood (1730-1795) is well known as a potter and as grandfather of Charles Darwin.



His research of materials, use of skilled labor and successful business organization made him a leader of the Industrial Revolution. At a time known for the craft of pottery, Wedgwood became a pottery manufacturer, a pioneer in production. He established his first pottery works in 1759, beginning with an improved cream colored earthenware later called "queensware". In 1782 his was the first factory in the industry to install a steam engine.

Josiah Wedgwood by Joshua Reynolds

Wedgwood initially made little use of accounting. High prices were charged resulting in substantial profits even though costs were poorly tracked. The circumstances changed with the depression of 1772. Demand dropped, inventories rose, and prices were cut. Could he cut costs enough to avoid bankruptcy? His answer involved understanding cost accounting in enough detail to make informed decisions. An early discovery was a history of embezzlement by his head clerk, when the accounts didn't agree. A new clerk was quickly installed and a weekly accounting implemented.

Wedgwood was able to determine costs for materials and labor for each manufacturing step for each product. An attempt was made to allocate such overhead costs as breakage and interest as well as transportation costs. He discovered that certain products cost considerably more than others to manufacture, with a correspondent effect on prices and therefore profit. He also became aware of both the concepts of economies of scale and sunk costs. The large percent of fixed costs suggested the importance of greater overall volume.

Based on his cost analysis, the high price policy for pottery was changed. Lower prices could be charged differentially, increasing both demand for some products and greater overall profit. Demand became key to policies. The market could be divided between high-price high-quality products for richer customers, while a mass market could be appealed to with lower-cost lower-price products.

The cost system influenced wages paid, types of employees (e.g., apprentices were paid about one third of experienced workers and were efficient for certain tasks), amount of products produced, and specific techniques used. Prices were based on relative costs, demand, and how demand could be stimulated. Because of his pioneering accounting system Wedgwood survived, unlike hundreds of his contemporaries (Fleischman and Parker, 1991, estimate that only 10% of Industrial Revolution firms survived through the 1840s). In fact, the company he founded is still in business.

Was Wedgwood typical of entrepreneurs at the start of the Industrial Revolution? Fleischman and Parker [1991] analyzed 25 large British manufacturing companies from 1760 to 1850. Most were in

the textile (13) or iron (6) industries, with one potter--Wedgwood. Cost accounting progress was made at many of these firms, some perhaps at a level of sophistication similar to Wedgwood at about the same time. One example was Carron Co., a pioneer iron foundry in Scotland founded the same year as Wedgwood, 1759. It was the first firm in Scotland to smelt iron with coke. Out-of-control costs, lack of profit, and poor liquidity were major reasons for cost analysis. Cost estimates, monthly cost comparisons (costs per ton), performance measures for each department head, calculation of revenues and expenses for each cost center, and overhead allocation (including depreciation on an ad hoc basis) were some of Carron's innovations contemporary with Wedgwood. Competition was fierce and the company withdrew from the anchor trade and nails production because cost evaluations proved them to be unprofitable. Carron became a large-scale, vertically integrated company which included specialty products. Complexity stimulated product quality control and overhead allocation.

William Cooper and the Cooper Brothers: The Birth of a Profession

By the end of the 18th century, eleven men listed their occupation as "Accomptants" in London. Their role expanded with business activity and government regulations. The Bankruptcy Act of 1831 allowed accountants to be appointed "Official Assignees", the first official recognition of the profession. The responsibilities of accountants would grow throughout the century as Parliament passed new regulations on business demanding greater accountability.

William Cooper started as a clerk for Quilter Ball and Company in London. He left in 1854 to establish his own accounting practice. He was later joined by three brothers to form Cooper Brothers & Co. in 1861. In the beginning the primary job was the preparation of accounts and the balance sheets of public companies, especially those in bankruptcy. The Bankruptcy Act of 1869 increased the accountants' role in bankruptcy and liquidations.

The role of auditor grew with government regulations, especially the various British Companies Acts. The Companies Act of 1862 required banks to be audited and the audit was required by all public companies by the end of the century. At that time, auditing was the backbone of the practice.

The Cooper brothers were active in developing the Institute of Accountants beginning in 1870. A royal charter was granted in 1880, with Arther Cooper an initial Council member and later President (William Cooper died in 1871). Ernest Cooper also became an Institute president and would run Cooper Bros. until his retirement in 1923.

The brothers ran their firm in the strict Victorian tradition, seemingly similar to Ebenezer Scrooge according to their own history. This included a basic six day, 50 hour work week (much longer during busy season), a strict dress code, clerks who had to pay for the privilege of training, low wages, and barking supervisors. Turnover was apparently high, even by Victorian business standards.

The firm was successful and provided professional services across the world, including a Texas cattle ranch, a Canadian lumber company, and a Hungarian electric utility. After a hundred years the firm had a hundred partners and offices in thirteen countries. The 1956 merger with the American firm Lybrand, Ross Bros, and Montgomery created what would become the Big Six firm Coopers & Lybrand.

Donaldson Brown and Big Business

Eli Whitney had much to do with the start of the economic growth of 19th century America. After his invention of the cotton gin, cotton became the staple of Southern planters. Whitney went on to manufacture firearms using interchangeable machined parts. As in England manufacturing was small scale, with most production done by independent craftsmen. Textile mills, saw mills, and foundries began to mechanize early in the 19th century, followed by iron and steel. By 1812 eleven steam engines were in operation, although water remained the primary source of power.

By the time of the Civil War the Southern economy was based on cotton, the West on agriculture, and the North on manufacturing. With McCormick's reaper even farming was mechanizing. In 1869 the Union Pacific and Central Pacific lines met at Promontory Summit, completing the first transcontinental line. Railroads were the biggest industry and dominated U.S. capital markets. Modern investment banking in the U.S. largely developed to finance railroad construction.

By 1900 big business meant consolidating activities: horizontal integration to eliminate competition, vertical integration to take advantage of all profitable opportunities. Accounting activities became increasingly important in setting prices, reducing costs, and controlling activities through a central office coordinating diverse internal operations.

Carnegie Steel was a mass producer at the end of the 19th century that relied on sophisticated cost accounting to control operations. This included a voucher system for materials and labor and cost sheets for specific operations (the focus was on direct costs, not overhead), used to become the low cost producer of steel products. Price cutting during recessions allowed Carnegie to maintain production levels and push competitors toward bankruptcy. In the early 20th century Carnegie Steel became the centerpiece of J.P. Morgan's U.S. Steel, the first billion dollar corporation.

Du Pont Powder Company was established in 1903 by three Du Pont cousins, in what would now be considered a leveraged buyout of E. I. Du Pont de Nemours. The old owners received bonds for the expected value of the firm; the cousins took stock--which would have value only if they successfully increased the profitability of the firm. This they did, creating a centralized, departmentalized operation controlled largely through a modern cost accounting system. First, they developed a fixed asset accounting system (rare at the turn of the century when plant and equipment were expensed quickly and few records maintained). Long-range planning focused on new investment in fixed assets, using a return on investment (ROI) calculation made possible with their fixed asset accounting records. Since expansion was financed largely from retained earnings, short-term forecasting of earnings and cash flows was necessary and sophisticated.

Du Pont had 40 manufacturing mills, with mill superintendents responsible for operating efficiency. Detailed monthly reports were maintained by the home office. Information was primarily associated with materials and labor, not particularly effective in estimating overhead. This made make-or-buy decisions difficult.

Marketing was equally structured and controlled from the home office. One interesting point was that the firm used the Holerith tabulating machines in the early 1900s to prepare daily sales sheets and other reports. Knowledge of demand was critical to pricing decisions.

One of Du Pont's financial officers was Donaldson Brown, who was well known for the ROI approach, including the decomposition of ROI into the sales turnover ratio and operating ratio of earnings to sales. An electrical engineer by training and initially an electrical equipment salesman for Du Pont, Brown became assistant treasurer in 1914.

When General Motors was foundering in the 1920 recession, Du Pont bought a substantial equity interest in GM and Pierre Du Pont became president. Donaldson Brown and Alfred Sloan were recruited to reorganize GM. Brown as Chief Financial Officer brought Du Pont's accounting system and added additional sophistication. An advanced flexible budgeting system, uniform performance criteria, a pricing formula to determine target prices to yield a specific ROI under standard volume, incentive and profit sharing plans, and a market based pricing system are among the innovations (often based on his

Du Pont experience) put into place. Thus, the "modern" cost system used during much of the 20th century was developed (or refined) by Brown. In fact, as stated by Kaplan: "Virtually all of the practices employed by firms today...had been developed by 1925" [1984, p. 390]; that is, the GM system. Beginning in 1924 Brown wrote a series of articles on the GM pricing and budgeting systems.

So, Who Was the First Accountant?

The suspects have been rounded up, the period under study limited to the last 10,000 years. Somewhere between the first scribe to attempt an inventory and GM's innovative CFO is the first accountant.

Before the name is cast in stone, it may be useful to consider fundamental characteristics of accounting. Accounting provides a financial information system, giving users basic data to make decisions. A key point is that it is user specific. None of the nominees is concerned with a "standard-setting" process. Instead, the advances developed were needed to solve specific problems.

***** Insert Table 1 *****

A second consideration reduces the list. The pioneering efforts should have a direct impact on modern accounting. Inventory control, money, ownership of property, trading, lending, and credit originated in ancient times, but their modern impact dates back to Medieval Italy. This excludes the nominees from the Ancient World, since accounting innovations essentially were lost during the Middle Ages. The earliest direct impact on modern accounting seems to be the invention of double-entry bookkeeping. Amatino Manucci remains a viable candidate. However, Pacioli does not. He may have math innovations to his credit, but not accounting. His contribution was to describe the existing accounting methods developed by the Italian merchants. Thus, credit him as the first textbook writer in accounting.

William Cooper was one of many mid-19th century British accountants who would forge a profession. Cooper was an early founder of what became a Big Six firm. However, the profession in Britain started at least by 1800, based on accounting concepts developed over earlier centuries.

The remaining candidates developed cost accounting innovations. Donaldson Brown, an innovator of modern cost accounting, unlike earlier candidates, was a full time accountant. However, he is too late to be considered the first accountant. Josiah Wedgwood is a serious candidate, as an

entrepreneur driven to innovative cost accounting to stay in business. However, he's still relatively late in the game. His contribution was advanced cost control to provide adequate information on production costs, important but centuries beyond the first accountant.

That leaves...the winner: Amatino Manucci, the writer of the earliest surviving complete double entry bookkeeping system. Modern accounting is not fundamentally different from that of Manucci. He's not likely to become a household name, but should be recognized as the First Accountant.

Table 1

The Candidates

8000 BCE	Jerry of Jericho	First used "tokens" to accurately count the temple's wealth
3100 BCE	Marion the Sumerian	Invented Cuneiform writing to determine the king's wealth & tribute payments
0	Jerome of Rome	Rich Romans kept financial records in memo form and on ledgers. Scribes kept detailed financial records of the Empire
1299	Amatino Manucci	Florentine merchant, developed the first known financial records that included all major components of double entry bookkeeping
1494	Luca Pacioli	Publication of Summa, which included the first full description of the Italian method of double entry bookkeeping
1772	Josiah Wedgwood	Industrial Revolution entrepreneur that developed innovative cost accounting records following a severe recession
1854	William Cooper	Early founder of a Big Six firm, important to the development of the British accounting profession
1920	Donaldson Brown	GM CFO developed the "modern" cost accounting system used by industrial giants to control vast operations