A Chronology of a New View of Accounting

Ratnam Alagiah[1]

Introduction

Chatfield, (1977) in his history of accounting thought states, "Whether the progress of ideology governs the development of social institutions or vice versa, there are obvious connections between ideas and the conditions under which people live." (p. 3). In his analysis, accounting as a process is 'reactive' to the business needs and economic progress of the times. Such an analysis implies that accounting is reactionary to business needs and economic progress. This is further analysed in Costouros (1979) in Greece. Yamey (1949) and Yamey (1964) seem to confirm this.

Sombart, Eucken and de Roover (cited in Have, 1976, p. 9), Max Weber (1983), Winjum (1971) and Sombart (1919) however, advance the claim that accounting and the double entry book-keeping system have had a great influence on the economic development of societies and have therefore, been the cause and the initiator of social development. In particular, double-entry bookkeeping contributed to a new attitude towards economic life, which enabled economic calculations, enhanced systematic organisation, and finally separates ownership with management. In their thesis, accounting is the active catalyst, in the development of societies, and in particular, a certain type of society is created.

This article, in contrary to the above two opposing views, seeks to tell a different story. It aims to re-examine the history of accounting and state that accounting and business needs, along with economic progress, are dependent on, and exist due to wealth. That economic progress, with the experience of wealth and accounting happened at once, that wealth and accounting occur simultaneously and instantly. This article will argue that wealth and accounting are partners and mutually sustain each other and that they happened at once. The experience of wealth and accounting came into existence simultaneously. This article will argue that the experience of wealth and accounting are complementary, that they mutually confirm and sustain each other, and are inseparable parts of one unit. Removal of one would mean death to the other.

Counting in the Ancient World

In the history of human beings, ideas have always developed in societies. From the earliest Ramapithecus and later the Australopithecus, dating back to 3 million years, human beings began to use stones as tools and weapons. Homo Habilis and Homo Erectus began to use fire, built shelters, used spears and pots from trees and stones. The Neanderthal Man began to bury the dead. Homo Sapiens, some 40 thousand years made sophisticated tools, learnt to sow, carved bones, invented bows and arrows, made fish hooks and harpoons.

Typically, in the ancient world, before the concepts of numbers and of writing, a system of official record keeping existed without the aid of writing. Using memory, prehistoric humans did trade on a barter system with exchange of goods being concluded without carrying a transaction any further.

[1] University of South Australia

The concept of counting began long before recorded history. However, without sufficient evidence, the manner and nature of the development of counting is a matter of conjecture. It could be argued however, that humans, even in the most primitive times had some sense of keeping count, at least in the sense of understanding that three cattle were less than five, that humans could understand when things and objects were removed or added. As Hird (1975) put it, "This stage of development would not call for counting: the group would not think 'there are only nine of us-who is missing?' but, more simply 'Where's Fred?' "

Smith's Number Stories of Long Ago must reflect the reality of the history of counting. The need to count however, could not be seen, for money was unknown, measuring land and buildings and other objects were irrelevant and unnecessary. With the progress of time, a tribe would probably want to know how many belonged and how many were over the mountains and therefore there was a need for counting. A shepherd would want to know if the size of the flock of sheep was increasing or decreasing in size. Therefore, counting became necessary.

In 1937, Karl Absolom, found in central Czechoslovakia, a prehistoric wolf bone dating back 30,000 years. Fifty-five notches, in groups of five are cut into the bone. The first 25 are separated from the remaining by one of double length. Although it is conjecture as to how the bone was notched, it is not conjecture that prehistoric man was recording and counting. As to what prehistoric man was recording and counting is an open question.

Further, Eves (1983) cites the Ishango bone, dating back to some 8000 years, found at Ishango on the shores of Lake Edward in Zaire showing numbers preserved by the act of cutting notches in the bone.

Thus, from the earliest days, humans kept count. Humans kept count through making collections of pebbles or sticks, by making scratches on dirt or stones, by cutting notches on pieces of wood, or by tying knots in strings. It is possible that these records kept count of time, but it is more than probable that they were records of things and of possessions. "It is reasonable to assume that he made a notch for each object in the collection that he was counting" (Bunt, Jones and Bedient, 1976, p. 3).

Thus prehistoric humans kept a score of their possessions by keeping a record. Indeed, prehistoric humans kept a record of the number of sheep or cattle they had or the number of skins they possessed. This record told them of the things and objects they possessed. This indeed was, at the most basic level, a record of prehistoric human wealth.

Hird (1975) describes the progress of humankind and counting as going through several processes. The first of these is the phase of human evolution. Mostly to overcome personal inadequacy, the group was formed; and the first group was that of the family, followed by groups of families leading to a clan, groups of clans forming a tribe. It is at the level of the tribe that barter and comparative cost was born. "As time drifted by, the groups coalesced into tribes and the tribes into small nations" (Hird, 1975, p. 19).

Nigam (1986) claims that the Bahi-khata, being a double-entry system of bookkeeping predates the 'Italian' method. "It is difficult to pin down the precise period of the advent of Bahi-khata. Circumstantial evidence indicates that it was introduced and used in prehistoric days. In fact, it was coexistent with the notion of wealth..." (p. 149). Later he suggests that "Under Bahi-khata, the compilation of pucca chitha (balance sheet) marks the end of the periodic accounting process. Basically, it is a statement of wealth, though it is defined as the itemised list of assets, liabilities and proprietorship of a business as at a certain date " (p. 158).

But dating back to the dawn of human records, and of counting, the antecedents of keeping records and of numbers, must have been wealth and of possessions. Littleton (1933) further lists seven preconditions for the emergence of systematic bookkeeping. They are the art of writing, arithmetic, private property, money, credit, commerce and capital. Such a view takes on a limited view of accounting, and seeks to establish that accounting is the result of commerce and enterprise. A broader social and more precise interpretation of the birth of accounting would be, that counting is born, at exactly the moment that wealth was experienced or in other words the experience of being wealthy is dependent on and only possible through some form of counting. Wealth in society, includes commerce and economic progress, which is a function of wealth. In Littleton's words,

> *There was capital, in the sense of wealth, in the ancient world, but the mere existence of wealth would not predispose other conditions to form double entry. Wealth in marble palaces and secret hoards does not create conditions favourable to the appearance of a coordinate system of financial records, but other forms of wealth could do so-wealth in the form of goods and ships which is active, turning over, ever changing in producing more. Wealth in such forms creates questions and doubts and hopes, and men, in striving to find answers to these, slowly evolve and adapt methods of record to serve their needs (p. 24).*

As the possessions and wealth of an individual grew and as his/her interest in what s/he possessed became more heightened, the need to keep count also became a necessity. Thus, to keep count of the number of sheep that one possessed, a tally system was installed.

> *When pebbles are placed in a row, one to correspond to each sheep passing through the gate, the final collection of pebbles represent the flock numerically and is more convenient to deal with than the actual flock (Smeltzer, 1970, p. 12).*

Ten thousand years ago, in the stone age, man began to live in settlements, and about this time the first town was founded in Jericho. It is also during this time that humans began to farm, grow crops and raise domestic animals.

By about 8000 B.C. civilisation flourished at Catal Huyuk, located some 320 kilometres south of the Turkish capital, Ankara. Archaeologists found a strange arrangement on examining the graves. The burial arrangements used for some of the graves were more ornate than others. In some cases the graves were those of rich men; in others they were just obviously those of paupers - a clear indication that society was stratified . Catal Huyuk existed somewhere between 7200-7100 and 6400-6300 BC!

In Susa, in the plain of Khuziatan in southwestern Iran, dating back to 4000 B.C., archaeologists found that Susa was the centre of a prosperous agricultural region. This new wealth allowed specialist crafts to prosper. Archaeologists also found objects of wealth in some graves. However, quantities of stone seals of ownership have been found, so the riches must have been accumulating in a few private hands.

By 3400 BC clay tablets appear carrying a written language. The script employed picture symbols, and many of the tablets list possessions, or relate to business deals and land sales. As the commercial world thrived, writing was developed to answer special needs; with goods changing hands on a large scale, some form of permanent bookkeeping was essential. It is also apparent that private merchants and traders controlled most of the wealth.

Between 7000 and 6000 B.C. farmers in the Middle East began to use objects to represent numbers. Small pieces of clay were used as symbols for numbers. Later to represent large numbers of goods,

an appropriate number of tokens was enclosed within a hollow clay ball. The ball was authenticated by having a stone cylinder seal rolled over its surface.

Schmandt-Besserat (1992) in *Before Writing*, recently revolutionised the way we thought by producing evidence to the show that writing is a crucial component for the formation of wealth. In this, we are told how numeracy evolved, of how the earliest tokens represented given quantities of given commodities, of how the prehistoric token system produces a three-dimensional representation of both numbers and commodities to the writing system that emerged at the beginning of history (Hallo, 1992, p. xi, cited in Schmandt-Besserat, (1992). But more importantly, writing ended inaccuracies found in speech which fades instantly, and made the spoken word permanent. Schmandt-Besserat provides evidence to suggest that the first written scripts, beginning with the fourth millennium B.C., derived from an archaic counting device, were the immediate precursor of the cuneiform script, were small clay counters of many shapes, such as cones, spheres, disks, and cylinders, *were an archaic mode of 'concrete' counting prior to the invention of abstract numbers, were a system that served as a counting device and an accounting for goods in the prehistoric cultures of the Near East.*

These tokens starting about 8000 B.C., were counters that were needed to account for each type of good, and were used in one-to-one correspondence for accounting for commodities such as oil and grain. As the argument goes, the development of tokens was tied to the rise of social structures, such as city states, and with increased bureaucracy. Clay envelopes were invented to concealed these tokens, but had the drawback of hiding the tokens themselves. Accountants resolved this by imprinting the shapes of the token on the surface of the envelopes prior to enclosing them. Thus, an envelope containing seven ovoids bore seven oval markings. These markings and signs were not pictures of items representing items but were pictures of tokens used as counters in the previous accounting systems (p. 7). From this it was able to draw a conclusion that counting was not, as formerly assumed, subservient to writing but, on the contrary, writing emerged from counting.

It is ideas that first exist and they are then transformed to objects as manifestations of those ideas. These ideas once accepted transmute the existing conditions of society and societies are never the same, anymore.

According to Chatfield (1977), the Chaldean-Babylonian, Assyrian and Sumerian civilizations produced the oldest surviving business records, and record keeping is thought to have begun about 4000 B.C., and the oldest commercial document date from 3500 B.C. In Babylonia, for example, temple accounts showed receipts and disbursements, wage payment, rental income, interest and real estate transactions (Brown, 1968). In Egypt, receipts and disbursement records remained lists; and their means of trading, barter. This called for only records, perhaps with a balance, but never a summary, with ledgers consisting of charges and credits, with no attempt to isolate income, and increases in assets being the way success was measured (Chatfield, 1977, p. 7)

In China, during the Chao Dynasty (1122-256 B.C.) for example, according to Chatfield (1977, p.8), the Grand Treasury received revenues, allocated, authorised payments and prepared summaries of receipts and payments. An administrative control system transmitted resources into an elaborate system of funds.

In Greece, much of Athenian public wealth was represented by the property of the gods, shown forth by the Parthenon and other sacred buildings. Witness the Zenon papyri, where each area of production-the vineyards, farms, grain stores, herds, household and administrative units were all accounted for in the utmost detail. But observe, that in order to establish the wealth and the prosperity of the empire, some scheme of counting had to be established. It was nothing, even remotely, resembling the double-entry accounting, that we now know of.

In Rome, as well a whole system of accounting was instituted to keep records of receipts and payments, to manage the treasury, pay the army, and keep control of the government's wealth. Wealthy Romans even appointed managers to invest their surplus funds and special account books were kept.

Indeed, in the history of Civilization, and during prehistoric days, the person of wealth keeps count of her/his possession and of his/her wealth, by way of a one to one count. Empires kept count of their wealth through a system of counting that could be accounted for by the person entrusted with such wealth. Such a record or records, then establishes the wealth of a person or an empire. A person or an empire, knew of her/his or its, wealth only through such a count.

But for a reverse reason, prehistoric experience of wealth and prehistoric possession of wealth is only made possible through these records.

Medieval Account Keeping

During the medieval period, medieval record keeping centred around specialised institutions. The Feudal system, for example, centred around a lord who delegated authority to a person in the lower level, who was guaranteed certain rights in exchange for certain duties. This, is in essence the beginning of the relationship between the principle and the agent. The agent was to render to the principle a statement of charge and discharge, which allows the agent to perform the duties of a steward. The steward was then accounting to the lord and accounting for the wealth that was entrusted with him. Consider the "Pipe Roll", which was compiled annually from statements of accounts by sheriffs and other officials who were bringing to the treasury, all the rents, fines, taxes and other levies that were ultimately due to the king. Such a record accounted for the wealth of the monarch.

In manorial accounting, consider the case of the records of receipts and payments of this self-contained economic entity, where any dealings with those outside the manor was considered 'alien' to the manor. The steward was held responsible for producing records to show that he did indeed discharge his duties in an honest way. The records also testified to the earl or duke the relative wealth of the manor. These were mostly in the form of personal property of his tenants, along with cash values adjoining with physical quantities of goods in the form of money accounts, rents received, a corn and stock account for grains, sale of wood, cattle, meat and hay. Expenses involved food, fuel, cloth and other goods.

Such accounts then established what was received and what was utilised. This enabled the earl or duke to know the value of his worth and the wealth of the manor. Therefore, it is only through such a record that the earl or the duke establishes or experiences wealth. If no record of the incomings and outgoings were kept, wealth could not have been established.

The Development of Double Entry Bookkeeping

Littleton (1933) argues that the antecedents and the *sine qua non* of bookkeeping to be 1. Private property, 2. capital, 3. commerce, 4. credit, 5. writing, 6. money and 7. arithmetic, which have led to the favourable economic and social circumstances, leading to a methodology, which to Littleton, is a plan for systematically rendering Material into Language, is bookkeeping.

While it may be accepted that personal belongings, and commerce, credit and writing, money and arithmetic are essential to the development of the double entry form of bookkeeping, it is more crucially the change in concepts of wealth that excited the development of double entry bookkeeping.

This is built on the following reasons. During this time, the art of writing was uncommon and illiteracy was commonplace. The only people who needed a scribe and who needed records, were people with wealth. As for personal belongings and credit, commerce, money and arithmetic, all these factors did exist, and yet there was no accounting in the double entry form.

Wealth in earlier times, consisted in a count of the numbers of the possessions that was held. Indeed, the amount of grain that was possessed could easily be accounted for by a form of 'stores accounting'. Indeed, this practice has not changed over the years and we still keep count of physical inventories through this manner.

But something happened to the concept of wealth.

Wealth in the form of marble palaces, and lists of grain and quantities of cattle, lost meaning when wealth was converted to productive capital, to generate further wealth. Trade increased, particularly trading with the east. Merchant bankers began to extend credit, bills of exchange were introduced, insurance and in particular marine insurance became common, and the number of transactions increased like never before. Wealth took on the form of capital and this capital was invested. The normal methods of keeping count no longer sufficed.

Indeed this was spurred on by the separation of ownership and control. Wealthy people of the time realised the gains that could be made in pooling wealth and venturing this wealth. But with introducing wealth as capital, the manager of capital, stood apart from the control of this wealth. People of wealth no longer held control of the wealth but stood apart from it.

Witness Lee's (1973, p. 36) claim that:

> *…nothing like a complete set of business accounts has come down to us from before 1296. The art of bookkeeping was most highly developed among the bankers, merchants and clothworking firms of Florance. Their businesses showed a high degree of continuity from year to year (unlike the mercantile enterprises of Venice or Genoa, with their concentration on separate trading ventures), and they were carried on by stable partnerships, who needed to ascertain and divide profits from time to time, as well as to record the drawings of each partner for deduction from his share.*

Such a view would suggest that wealth no longer stayed dormant, but was rather put to venture in the hope of earning more wealth. The books of Rinieri Fini and Brothers (1290-1305), of Giovanni Farolfi and Company (1299-1300) testify adequately to this theme.

With this new form of wealth and of new forms of enterprise a certain extension to what was previous record keeping, came to light. Lee (1977, p. 94) cites the ledgers of Giovanni Farolfi as far back as 1299. The ledger being in one hand, that of Amatino Manucci, who lists

> *…a perpetual inventory of each line of agriculture produce and each grade of cloth or yarn dealt in, and full records of debtors and creditors, expenses, profits, interest and partners' drawing, as well as the state of account with the head office at Nimes, and an estimate (15 per cent per annum) of the expected rate of return on capital employed.*

Thus, wealth to Giovanni Farolfi consisted of agriculture produce, cloth, a list of debtors and creditors, profits and gains. Indeed, for Giovanni Farolfi, the records that were kept constituted a

record of wealth. If not for accounting records, it is impossible that wealth could have been established. Such an analysis could be extended to The Gallerani Account Book of 1305-1308 (Nobes, 1982) and of Jachomo Badoer (Peragallo, 1980).

Pacioli

Fr. Luca Paciolo, sometimes referred to as Fr. Luca Pacioli, has been often times, alluded to as the originator of double-entry bookkeeping. Pacioli did not invent double-entry bookkeeping. The fact is that the originator is unknown. Despite this, Pacioli, is the first known writer to publish a work describing the double entry process. Whether Kautilya's Arthsastra (Nigam, 1986) may indeed contain the germ to the double-entry puzzle, is still an open question, as is whether double entry was first used in the golden age of Islam.

Whatever the source of double-entry bookkeeping, bookkeeping is a record of wealth. Observe Pacioli's statements from his original discourse. "It has happened that many, entering business with nothing but good faith, have yet carried on big business; and through their credit, faithfully served, they have attained to greater wealth" (Crivelli, 1966, p. 11). For Pacioli, there were three factors that was essential to the conduct of business. The first was cash, secondly a good accountant and a sharp book-keeper, and thirdly, 'all particulars as to debit and also the credit of all of them' and the purpose of every business was to make profits.

However, to begin the process of operating a business, Pacioli recommends that an inventory of the wealth of the businessman be first determined.

> *He must then make his diligent inventory in the following way: he must first of all write on a sheet of paper, or in a book aside, all that he has in the world, his personal belongings and household goods, estate. etc., and always begin with the things that are more valuable and easier to lose. These consist of ready cash, jewels, silver, etc., because estate, such as houses, lands, lakes, valleys, ponds, and the like, cannot be mislaid as can personal belongings and household goods (p. 13).*

Pacioli then proceeds to discuss in detail the process of bookkeeping that is known today: that of taking an inventory of the assets, recording the original entries in the accounting records based on that inventory, recording business transactions, posting to ledger, complete with comments on posting references, preparing a trial balance to check the accuracy of the bookkeeping process; and closing the nominal accounts through profit and loss into the capital account. Pacioli also wrote about internal controls, using numbers and dates for the memorandum, Journal and Ledger and also that their pages be prenumbered. It is also suggested that transaction documents be complete in detail, and permanently filed; that a summary account for small business expense be kept and that the books be audited for internal check (Brown and Johnston, 1963). For Brown and Johnston, "Although we have now abandoned the Memorandum as the book in which business transactions should be recorded chronologically, the overall process described by Paciolo is otherwise precisely the same as is now performed" (1963, p. 9).

But, in all this, one is able to see a common tread. In his last factor necessary for business, Pacioli states that the businessman's affairs or wealth should be so arranged in a systematic way so that he may get their particulars at a glance and that the debit and credit method should be used, and that without systematic recording, it would be impossible to conduct business, or know of one's affairs or know of one's wealth. Indeed, accounting records, during this time, start with what one possesses as wealth, and recorded the wealth of a person.

It is then accounting that predicates wealth and for a reverse reason accounting is only useful in the actuality of wealth. For without wealth there would be nothing to account.

Witness also Brown's (1968) *A History of Accounting and Accountants* wherein it is stated "The object of book-keeping is stated by Paciolo in precise terms: to give the trader without delay information as, to his assets and liabilities" (p. 111). This is not surprising since the very existence of bookkeeping and of accounting was to provide an exact rendering of one's prosperity, one's wealth.

Double Entry Bookkeeping After Pacioli

De Roover (1955) designated the period after Pacioli's Summa (the fifteenth century and the period till the nineteenth century) as the period of stagnation. For over 300 years, the concept of wealth remained, mostly undifferentiated. Bookkeeping and bookkeeping methods were refined and elaborated, with accrual accounting and financial statements becoming popular, but the concept of wealth remained mostly unchanged during this time.

The practice of bookkeeping that was in vogue by the merchants of this time remained mostly to meet the needs of the mercantile firm, and were mostly venture accounts. Some changes to closing the book at the end of each venture, was that the accounts were now closed at the end of each year, rather than at the end of each venture. Bookkeeping by double entry was now adapted to meet the needs of large firms, monasteries and governments.

Don Angelo Pietra in 1586, who published a book on bookkeeping for non-profit organizations, placed emphasis on financial statements, separated the owner from the business, and promoted the use of the balance sheet and the income statement. The purpose was to "account for all changes in the entity's financial status". Accounting for the changes of the entity's financial status thus signified the changes that wealth underwent over periods of time. In 1633, Ludovico Flori, devised the method of placing transactions in their proper accounting periods, used the trial balance to prove the precision of the ledger accounts, and aided the process of closing the ledger accounts.

Simon Stevin, introduced compound entries, separated the practice of keeping the cash and expense accounts in subsidiary books, introduced daily and monthly columnar totals, and even administered a system of keeping the books without the usual religious invocations, insisted on account balancing, made listings of assets and liabilities outside of ledgers, introduced the system of calculating wealth by comparing the balances from one period to another, which enabled the resolution of periodic profits by contrasting net assets between two periods.

Weddington and Peele, in England, departed from Italian bookkeeping, by separating the memorandum into books that contained transactions relating to inventory, cash receipts and payments, purchases and sales, with the journal being eliminated, inducted accruals and deferrals, classified current and long-term loans, with commodity accounts having individual columns for amounts shipped and received.

Witness the "Jones" English system of Bookkeeping by Single or Double Entry (1796) which initially taught that time could be saved, balancing could be made easier, that fraud could be easily detected; that using this system, errors such as wrong postings could not occur.

Thus, during this period the concept of wealth remained the same; that of the view of the merchant trader, while the very instrument that necessitated the existence of, and the determination of wealth, became more and more sophisticated. The motive was to keep trace of the merchant's wealth, through keeping track of dealing involving credit, inventories and capital; that there was ready record for reference. Indeed, records show that the desire to calculate an income was altogether missing the real desire was to determine the net increase in the wealth of the merchant, by looking for the change in value of all the merchant’s possession. This was done by taking note of the difference in value between two balancing dates.

Accounting, it was traditionally argued, was then reacting to several factors outside of bookkeeping, to factors such as changing social needs and business conditions. But for a reverse and equally valid reason, the experience of wealth and of being wealthy, is only made possible through accounting.

Meanwhile, other ideas changed. America was discovered, the view of empires and their existence grew to the creation of nation states, a uniform set of coinage came into existence, Arabic numerals replaced Roman, paper became more easily available, and printing became common place. This was further spurred on by the producer concern, the idea of a tax on income and the birth of the accounting profession.

Thus wealth, in the form of ventures and capital, remained essentially the same during this long history. Bookkeeping as a means by which one's wealth is established and comprehended underwent greater refinement, in the use of specialised rules and procedures. Wealth and men of wealth used accounting as a means of extending their wealth, of creating greater wealth.

Account Books, Financial Statements, and Limited Liability

Chatfield (1977) attributes the development of bookkeeping to specialised journals and ledgers to the Industrial revolution, the need to communicate financial information to, first creditors and to stockholders. Bookkeeping no longer only meant keeping records but had to come to the aid of management, to help make decisions, and "to help allocate resources and maintain a money market in an economy which was being industrialised" (p. 70). Chatfield further furnishes examples of renaissance balance sheets, each typically, drawn to show the assets and liabilities of the estate (in this case of Derrick Roose) with the beginning capital at year end and at the beginning of the year it was, the difference being the increase during the year.

Is this then, not the use of the balance sheet to determine, and verify, ascertain, and uncover, demonstrate, and establish, fix and unravel, confirm and adjudicate, decide and to deduce, the wealth of Derrick Roose? Is this not the way wealth was indeed presented to Derrick Roose? Is this not the way that Derrick Roose could understand wealth?

For an almost opposite and valid reason, is it not true that Derrick Roose's wealth demanded and necessitated that some kind of accounting be maintained? and as for the other reason, Derrick Roose's wealth was only established by such a statement.

Thus, a clear picture emanates from this scheme, as to the relationship between wealth and accounting. On the one hand the existence of wealth necessitates the existence of accounting but for a reverse reason it is accounting that establishes wealth. Of course, as to which came first, there is no such thing. The creation of both accounting and wealth is synchronous, concurrent and instant.

The Shift from Wealth to Income

Prior to the coming of the corporate form of business organisation and during the era when owner and manager were the same, and when business income consisted of the results from ventures, it is unlikely that the annual income figure were useful for the purpose of testing the viability or the profitability of the operations. It was not useful as a guide to future action (Chambers, 1966, p. 514). The balance sheet, which during this time signified the amount of wealth that the venturer owned, was of considerable importance. Littleton (1933, pp. 132-36) for example, suggests that the balance sheet, during the fifteenth century, reflected a merchant's estate for the purposes of taxes. Merchants would pay taxes based on the amount of wealth that they owned. Taxes were not paid based on income during this stage of the development of accounting. Jacques Savary in 1673 for instance proposed that the balance sheet was really the 'estate' of the merchant, which would

imply, the wealth of the merchant, while the income statement was no more than the proof of the estate. This would suggest that during this period, the balance sheet was far more important and far more useful than the income statement, for both internal users as well as external purposes. With merchants remaining on the shore, the persons who managed their ventures for these merchants, did not need to show income. For these merchants the increase in wealth as reflected in the balance sheet was sufficient to indicate the increase in their wealth. These merchants did not have to report to any persons outside of the venture. Here again, something happened to wealth that would change and transform the concept of wealth.

One of the causes for the shift in emphasis from the balance sheet to the income statement is seen in the periods between 1750 and 1800. It is during this period that the industrial revolution took place. Inventions in England, especially in the textile industry, spearheaded this revolution. James Hargreaves with his spinning jenny (1764), Richard Arkwright with his water frame (1769), Samuel Crompton with his spinning mule (1779), James Watt with the improved steam engine (1785) along with John Kay (1738) and Edmund Cartwright (1784) with their perfection of power weaving using mechanical tools, greatly increased quantities of goods. With this great rapidity with which goods were produced, all aspects of the economy began to see great economic improvement. But still, the agent that had to change remained unmoved. Ownership of capital had not moved. Ownership still remained in the hands of individuals or at best partnerships. With the owner of the business still managing the business, and in the case of partnerships, the partners being directly involved in the business, there did not arise the need to shift the emphasis from the balance sheet to the income statement.

Garner (1950, pp. 2-14) summarises the developments of cost accounting during this time, whereby greater refinement in the determination of components of cost was achieved. The system of production which used animal power now began to be based on mechanical power. With these developments, the situation was getting to a climax - leading to the development of a new type of business organisation - the company. Along with the development to the company form of business, came large amounts of capital investments, making competition the next obvious stage.

In 1844, in Great Britain, the first companies act came into existence, and along with this came new processes for making steel, the dynamo was invented and the internal combustion engine was invented. British society at this stage began to develop into an industrial society based on technology, mass production and mass marketing. With technological progress and growing consumer demand, large amounts of capital were required. In the U S A, the great industrialist such as Andrew Carnegie, J.P. Morgan, Samual Slater, Philip Armour and many others began to finance these large undertakings. Competition became rife and often bitter with ruthless tactics being employed. There was a high degree of bankruptcy, as businesses began to crumble with this increased competition. These frequent cases of bankruptcy quickly led to investor insecurities. All these developments led to the need of a new type of organisation that would draw investors to make investments but also be in a position to have their liabilities limited. This led to the birth of the Company.

The company was ideal. It offered limited liability, ownership in the company, transferability of interests in the joint stock company, and most importantly, it made possible the separation of ownership from managers.

With a great expansion of the economy, a shift in the needs of the time also took place. Initially, there was a great need for industrial capital, but as time progressed, the need for financial capital- provided through the banker, the investment banker, the insurance company- became more important. With the advent of the financial capitalists, a diversification took place in the range of business.

Financial capitalists extended their business and control over many different industries, instead of restricting themselves to just one kind of business. With this development, the interest of the financial capitalists extended over different places and over different business, making it impossible for them to completely control the day to day operations of their businesses. Managers were appointed and employed to assume the interest of the financial capitalists and were to look after the business. The emergence of this new breed of managers soon led to the separation of managers from owners of the business.

With their investments in a great variety of businesses, financial capitalists were less and less interested in day to day operations of the business, and became more interested in the policies that governed these businesses. Businesses grew to become giant companies, and as they increased in size, it became impractical for owners to control and operate these businesses. Furthermore, the number of shareholders also increased. With these developments, larger companies were departmentalised, specialised, and expanded. A new set of managers emerged, as experts in their own field, and their own areas of expertise they became heads. These professional managers had to account to the owners of these firms through the use of accounting and statistics. However, during this period of intense competition, the balance sheet still took on greater importance. These were mostly because of the reason that there appeared legislation that required balance sheets to be presented in a full and fair manner, without emphasising the income statement. The second reason is that it was generally believed that the income statement was a statement that contained confidential information that would assist the competition, if disclosed. For both these reasons the income statement was considered as less important to the balance sheet.

The New Emphasis On Income

The industrial revolution during the periods of 1750 and 1800 saw many new inventions, especially in the textile industry, mostly in response to increasing demand for goods and services, in both the domestic and overseas markets. New inventions in the textile industry, greatly increased the quantity of goods, through the factory system. Other factors also came to play that began to shift the emphasis from the balance sheet to the income statement. One of these developments was the application of cost accounting between 1885 and 1930. Henry Metcalfe published *Cost of Manufacture* in 1885, which exposed new techniques and ideas about the costing and manufacturing process and the beginning of cost control for profit maximisation was introduced (Garner, 1950, pp. 2-14). Garcke and Fells published their first edition of factory accounts which innovated the process of integrating cost accounts with financial accounts in the general ledger. This made possible the improved method of calculating for profit through the matching of revenues with expenses. Other writers emphasised the importance of cost accounting for profit maximisation through cost control. Nicholson (1909) in his book - *Factory Organisation and Costs* (1909) which emphasised the creation of the cost centre where costs were accumulated under the three main elements of direct labor, materials and burden, and also introduced a system of distinguishing the sales for each section or division. This provided further evidence that income statements became more and more useful.

Another development during this time is the activities of scientific management engineers. Witness Frederick W. Taylor's *The Principles of Scientific Management* (1911) where, according to Taylor, the principle object of management should be to secure the maximum prosperity for the employer, coupled with the maximum prosperity for each employee (p. 9). In his more technical book, *Shop Management,* Taylor looked at cost accounting as a means of measuring efficiency. Thus cost accounting was used to compare the actual cost of an operation as against the predetermined cost. This process led to the concept of standard costs which was used to determine and investigate wastes and efficiency. This method of comparing standards and actuals was Taylor's method of efficiency calculations and was the basis of his scientific management. This helped to provide a

means of better matching costs with revenue and the use of the income statement as a tool to check this, was enhanced.

Thus, the development of cost accounting and scientific management led to the development of the shift of emphasis from the balance sheet as a statement of wealth, to greater emphasis on profit determination and the income statement.

The emphasis grew from the controlling costs to enhancing profits. This also signals the beginning of the increased demand for information by management resulting from the rise of the corporate form of business. This is further enhanced by the increasing size of the firm; the increase size and complexity of the business spurred on by the changing environment of greater competition in industrial societies. Central in this development is the emergence of the investor's viewpoint resulting in greater growth in stock ownership. With this growth, investors and the general public began to demand greater information from the company. Investors wanted to determine the growth of their investments and ensure the safety of their original investment. The income statement became the tool for such analysis for the income statement allowed investors to make decisions regarding alternative investments.

Two other developments that led to the importance of the income statement as against the balance sheet was the effects of inflation. The prices of goods and services began to fluctuate rapidly in the early twenties. With this development prices and values quoted in the balance sheet became quite unreliable. This is particularly true of values contained in the balance sheet. The public were quite convinced that values in the balance sheet were unreliable and therefore called for greater information by way of the income statement. A further development that led to the shift of emphasis from the balance sheet to the income statement is taxation. The tax authorities had to tax on some basis and therefore placed emphasis on the income statement. The federal taxation of income was only possible through the income statement. This was spurred on by related court decisions. The courts played a key role in the shift to the income statement since they were preoccupied with identifying what income was.

Developments in Nineteenth-Century Britain

During the nineteenth-century, banks, railway companies, assurance companies, friendly and building societies along with public utility companies, being regulated, were usually large, had monopoly powers over the market, and had some form of special privilege granted to them through some legislation by parliament. In particular banks and financial institutions had an intimate relationship with the public due to the reason that these institutions provided financial stability to the entire economy. Given this, the financial stability of regulated companies was the subject of great concern by legislators. In 1844, banking institutions were regulated through the Joint Stock Banks Act. All the railway companies were regulated with the passing of the Railways Regulation Act in 1868. The Life Assurance Companies Act was passed in 1870 and building and friendly societies were regulated through the Building and Friendly Societies Act of 1874. Included in this regulatory process were the public utilities, which were all subject to company accounting legislation.

Legislation governing these companies required that in addition to the balance sheet, a detailed income statement as a legislative measure, be issued to protect shareholders and the wider interest of the community. There had been several select committees and Royal Commissions, which investigated and recommended that for the purpose of controlling widespread fraud, irregular and unethical income determination, that these companies be regulated. It is partly due to this reason that the income statement had assumed a central position in the practice of accounting. The other major reason was that the income statement displays the process of income determination (Littleton, 1953, pp. 18-36).

Edey and Panitpakdi (1956) suggest that income during this time was mainly determined by the surplus method, which is the surplus of total valued assets over total valued liabilities, which may be obtained by comparing successive balance sheets between two accounting periods. This method suggests that the balance sheet was the basis upon which income was determined. The major issue, under this method, was which particular assets and liabilities, and their valuation bases, should be included in order to determine income. The alternative method, is the use of the income statement method, where income is determined as the excess of total revenues less all expenses chargeable to the period's revenue, with the resulting figure being income.

Jones and Aiken (1993, 1994) show that British judicial dividend law, since 1889 clearly rejects the surplus concept of income, based on the balance sheet to determine income available for dividend. The income statement method was clearly supported by the British judiciary, for legal, ethical and commercial reasons (Kehl, 1976; Weiner, 1928; Littleton, 1934). Legislation affecting regulated industries required the disclosure of the income statement. The disclosure of the income statement was intended to remedy and display the income determining process. Jones and Aiken, (1994, p. 227) show that available historical evidence indicates that the income determination practices of regulated industries were probably the single most important factor that motivated regulators to require disclosure of the income statement. Thus in Britain, it has become clear that the emphasis shifted from the balance sheet to the income statement.

Zeff states,

> *From the managerial viewpoint, and from that of the stockholder, the correct showing of profit, and an enlightened forecast of future profits is the vital thing. The recognition of this appears with increasing frequency both in formal statements made in texts and in the increasing attention given by accountants, analysts, and investors. (1982, p. 8)*

and later he states that there has been a tendency to exalt the income statement as compared with the balance sheet (p. 11).

Conclusions

This article has argued that accounting and wealth are inseparable partners. From the earliest days, from counting, the experience of wealth came into existence. The experience of wealth is made possible through some form of counting. Indeed, if not for counting and later accounting, wealth could not be experienced or imagined. Thus, accounting and wealth are two sides of the same coin, are partners in maintaining and sustaining each other. The experience of wealth is made possible through, initially, some form of counting and later through accounting. Absence of the experience of wealth would make the need for accounting and counting unnecessary, and the experience of wealth could not be established without some form of counting and later some form of accounting.

In this interplay, in this perfect relationship, in this balance that accounting and wealth maintains, a new creation is also brought into existence, which is a reflex of such an existence. About this time, laws relating to that other creation, that other experience, had been set in motion, through the process of confinement, and human beings were systematically excluded and controlled. Society had clear lines drawn that distinguished one from another.

Wealth or in determining wealth, the opposite had to be created, for if not for the 'poor' wealth could not be experienced. That is, if not for the 'poor', the experience of wealth could not be imagined. Instead, if not for the 'poor' society would be all wealthy or society would be all poor. It is in the creation of the opposite that the other is established.

Such an analysis shows that wealth and counting, and later accounting, is represented by and represents one section of society. However, this section of society does not and did not know it existed until it confined and excluded the 'poor'.