Is emergence sufficient to explain the origins of double entry

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Emergence v origins

- Double entry accounting emerged in Italy around 1300 and a popular argument as to its emergence is that it was the product of the crusades, which accelerated the wealth and trading advantages of Italian cities (Littleton, 1927).
- But, Liyanarachichi (2014) argues social conditions by themselves do not necessarily lead to the emergence of the double entry method.
- Emergence should not be confused with origin: antibiotics emerged commercially in the USA (Merck & Co) but originated in UK. The first computer was BINAC 1949 but Baggage 1822-37 envisaged the concept of the programmable computer.
Pacioli disclaimed originality

Holzer (1984) further comments that Pacioli had disclaimed originality, merely putting down the practices of business, concluding, “It may be assumed that the practice of double entry accounting had ceased to be a jealously guarded secret” (Holzer, 1984, p. 26).

Holzer (1984) without paper (invented in China) and Arabic numerals, it doubtful that double entry would have replaced the form of single-entry.

The Silk Road besides being a trading route linking Italy & China was also an information exchange channel as various traders met and formed networks.
Secrecy

- Accounts have always been guarded information as Pacioli observed.
- It is unlikely that traders along the Silk Road would have easily shared their methods of accounting except to friends who posed no obvious competition or who had influence and were highly favoured.
- Marco Polo travelled the Silk Road in 1271 and reached the court of the Emperor Kublai Khan in 1276 returning a rich man in 1295 to Venice.
- Much favoured by the Chinese Emperor, he was given gifts and access to the explore China. Being from a merchant family it is likely he would have interested in the merchant houses of China, which were at that time Marco Polo observed the most advanced in the world.
Emergence

- Based on the emergence of the Farolfi ledger in 1299, Ball (1960) and Chatfield (1968) maintain double entry was the invention of Florentine merchants.
- Evidence of Italian double entry before 1299 is circumstantial such as Littleton (1927) offers.
- What is generally agreed is that, whether double entry came to Italy from the East or was the direct result of Italian commercial expansion, the emergence of double entry bookkeeping occurred around 1300 (Gleeson-White, 2011).
The Arab case for inventing double entry

• Lieber (1968) suggests that Italian traders obtained double entry from their Arab counterparts. Supporting this contention, Heaps (1895) points out that Europeans gained knowledge of algebra from Arabia and also gained bookkeeping from Arabian merchants well before the 13th century.

• Zaid (2000) claims further that Islamic states used accounting practices that directly led to double entry and Zaid (2000) to support his claim provides some examples.

• Zaid (2004) adds the further point taken from Ball (1960) that, “We can hardly suppose that the Italian merchants were ignorant of the methods of keeping accounts of their best customers” (pp. 208-209). That is connections along the Silk Road were a necessary feature among traders using the road.

• Albraiki (1990) research of tax records show that from the 9th century there developed bilateral accounts and dual entries and a system of balancing accounts. Nonetheless, this Muslim system fell short of developing trial balances and balance sheets.
The Indian case for inventing double entry

• Yamey (1956) mentions that an eighteenth century British resident in India, Alexander Hamilton, claimed in a book review that Indian traders had been using double entry for centuries. But, this suggestion Yamey (1956) rejects for lack of documentary evidence.

• Marco Polo mentioned this ability but, not unsurprisingly given his interest in the more romantic and bizarre aspects of his travels for popular consumption, did not go into detail (Scorgie, 1990).

• Nigan (1986) draws on evidence provided by Hamilton, that Indian traders operated a cash book double entry system requiring two entries for each transaction rather than the sort of system described by Pacioli
The circumstantial case for double entry arriving in Italy via trading routes such as the Silk Road is strong. Around 1200, as Marco Polo testifies (Latham, 1958) China was the greatest trading nation in the world and it merchants used paper money facilitated by the invention of block printing. The municipal authorities in China had adapted a system of vouchers known as “flying money” to enable merchants to transfer money across the vast country with confidence.

Chinese government officials have used the three column method of accounting which evolved into the four-column method during the Tang dynasty (AD618-907) and comprised the old balance brought forward plus the new receipts less payments to find a new balance to carried down (Gao and Handley-Schachler, 2003).

Aiken and Lu (1993) describe this system as a breakthrough from single entry to double entry. During this time Aiken and Lu (1998) show how the cash, purchases, sales and other diaries resemble journals and how these entries were transferred to their respective ledger accounts.
The Chinese case for inventing double entry (continued)

• The four-column method that produced a form of numerical equation (balance brought down + receipts = payments + balance carried down) that some see as Lin (1992) the earliest elements of the concept of double entry.

• Moreover, there was a form of double entry for non-cash transactions; if silk (inventory) was used to pay an account payable then it would be recorded as a decrease in inventory and a disbursement in the form of a decrease in account payable (Aiken and Lu, 1998).

• The argument posed by Yamey (1947) is what counts as double entry?

• The paper throughout supports a definition of double entry as being a duality of entries in a bilateral form of accounts (Yamey, 1947).
Daoism – Yin and Yang

- Gao and Handley-Schachler (2003) explain the four-column method as being a by-product of Daoism beliefs and the concept of balance known as Yin and Yang.
- Yin and yang can be thought of as complementary (rather than opposing) forces that interact to form a dynamic system in which the whole is greater than the assembled parts.
- Gao and Handley-Schachler (2003) point out that heritage documents were considered sacred, while commercial activities and records of transactions had no place within sacred archives. The result is that in contrast to the West where the religious arena could be a site of commercial activities, in China archives were forbidden as storage sites for commercial documents.
Conclusion: diversity of origins v the brute fact of emergence

• Marc Polo reported that Chinese traders are the busiest and most advanced in the world. Moreover, it may also be assumed that during his 17 years in China he would have sent various letters and reports back to Italy, as to the methods used by Chinese merchants (Latham, 1958).

• Fu (1971) that China is the likely source or inspiration for double entry accounting.

• The case for the Italian invention of double entry rests on what Littleton called likely “antecedents”. Prior to 1299, there is a strong case for arguing that such antecedents applied to China being the most developed country with a series of strong imperial governments.

• Marco Polo found China to be the greatest trading country in the world. It is likely that merchants along the “Silk Road” mixed with each other and shared ideas and can explain the subsequent Italian use of bills of exchange. It is also likely that knowledge of gunpowder, paper as well as Arabic numerals reached Europe via merchants travelling the Silk Road.

• Emergence is a brute fact not to be disputed, but a study of origins should cast a wider net