Accounting Historians Notebook

Volume 39
Number 1 *April 2016*

Article 4

April 2016

TEACHING ACCOUNTING APPRECIATION AT THE BRITISH MUSEUM AND IN YOUR CLASSROOM

J. Riley Shaw

Dale L. Flesher

TEACHING ACCOUNTING APPRECIATION AT THE BRITISH MUSEUM AND IN YOUR CLASSROOM

J Riley Shaw, Ph.D., CPA
Associate Professor of Accountancy
Patterson School of Accountancy
University of Mississippi

Dale L. Flesher, Ph.D., CPA
Professor of Accountancy and Associate Dean
Holder, Roland & Sheryl Burns Chair
Patterson School of Accountancy
University of Mississippi

Every year the University of Mississippi offers an accountancy study abroad class in London, England. The title of the graduate-level class is "The Development of Accounting Thought." The class is intended to help the students think about how accounting started as a discipline and about accounting's contributions to society. One of the highlights of that trip is the visit to the British Museum to examine the cuneiform documents. This visit to the British Museum and the cuneiform exhibit serves to focus the students' attention on accountancy's contributions to the ancient world and to modern society.

What are cuneiform documents? Cuneiform tablets are the oldest known writings of mankind and they emerged from an ancient system of recordkeeping. That is, the first instances of known writing by mankind are, in fact, accounting records. The story of how cuneiform writing emerged is a powerful illustration of accounting's contribution to the invention of writing, numbers, and arithmetic, and the development of capitalism and the division of labor.

Although describing these contributions of accounting is certainly exciting in the vast halls of the British Museum while the students are able to peer at and sometimes even handle these ancient documents, it is also a compelling story that can serve to enhance the students' appreciation for accounting's contributions to modern society, even in principles of accounting courses. Most accounting students, and even most people in society, have no inkling of how writing emerged, and it is fascinating to contemplate what brought about its existence. As an accountant, it is even more impressive to realize that the accounting profession had such a profound impact on the world as known today.

Background

Waymire and Basu (2007) propose that accounting is largely an evolved institution. However, they note that there is comparatively little accounting history

(Continued on page 16)

(Continued from page 15)

research. Many current accounting textbooks introduce accounting history beginning with the formation of the SEC in 1934 (Waymire and Basu 2007). Some students may be aware of Pacioli's (1494) contributions to the accounting profession but most students are unaware that there is a rich history going back ten thousand years. Few, if any, current students know that some researchers hypothesize that accounting was responsible for the development of capitalism, or that accountants, as record-keepers, were responsible for the invention of writing and numbers.

Studying accounting history can be very valuable for accounting scholars. However, it can be equally beneficial to accounting students in that it will help them develop a professional identity. Accounting students may be under the mistaken impression that the accounting profession was a recent invention brought about by government mandate. However, accounting has been hypothesized to have enabled the development of capitalism, made for the success (or failure) of several medieval city-states (Soll, 2014), and that it was ancient accountants who were responsible for the emergence of reading, writing, and arithmetic (Waymire and Basu 2007). This knowledge can significantly enhance students' pride in their careers and accomplishments.

Dr. Jonathan Taylor, British Museum Assistant Keeper, Cuneiform collections of Mesopotamia, shows an example of a cuneiform document to a group of students from the University of Mississippi.

(Continued on page 17)

(Continued from page 16)

The British Museum's cuneiform collection is extensive in both breadth and depth. Dr. Irving Finkel, Assyrian Curator at the British Museum, describes the collection as follows.

> The tablet collections in the British Museum defied and still defy belief. Cupboards full of shelves laden with Victorian glass-top boxes house about 130,000 tablets of clay. All inscribed with Cuneiform writing with three-thousand years of wonderful wedge shaped messages. Who could ask for more?" (Finkle 2014, p. 29).

Seeing the collections in person is impressive for the student that is lucky enough to find himself in the British Museum. However, this resource can still be used in any classroom as there are extensive file photos of representative tablets available.

Accounting and the Development of Writing

The lesson begins by emphasizing that accounting played a crucial role in the development of writing. This beginning of writing came about by necessity. Writing first appeared in ancient Mesopotamia in about 3200 BC. "The stimulus that set writing on its path was not the urge to create poetry or the desire to record history but the need to accommodate the demands of bookkeepers" (Finkel 2014, p17). Dr. Finkel humorously explains that the "unromantic fact that writing was bestowed on humanity by ancestors of the Inland Revenue Service" (Finkel 2014, p 17), which is the British equivalent of America's Internal Revenue Service, is indeed a concept difficult to grasp for the nonaccountant. The first written documents that have been discovered deal with the practical documentation of individuals, goods and wages, and it is all carefully documented by Mesopotamian scribes in great detail with names and numbers (Finkel 2014)

Recordkeeping preceded writing by a few thousand years. Schmandt-Besserat (1992) documents that humans were using clay tokens for the purposes of recordkeeping as early as 8000 BC. Recordkeeping has been necessary since there has been owned property (Vollmers 2013). When humans began owning property it became necessary to have a means of documenting that ownership and also of recording transactions that resulted in a change in ownership. Credit transactions and agency relationships also led to a need for accounting documentation.

(Continued on page 18)

(Continued from page 17)

This documentation initially took the form of clay tokens. Clay tokens of different sizes and shapes were used to record amounts of commodities. The tokens were in many shapes such as cones, spheres, disks, and cylinders, which served as a means of bookkeeping in prehistoric times (Mattessich 1987).

These clay tokens, representing quantities of commodities in a particular transaction or record, were stored in a clay envelope. The clay envelopes were simply a hollow sphere formed in clay that held the tokens. According to Schmandt-Besserat (1992), a drawback of the clay envelopes was that they hid their contents. One could not easily determine the specific details of a transaction or record without breaking the envelope open. To eliminate the need of bashing open the clay envelopes every time one needed to remember the contents, accountants imprinted the shape of the tokens on the exterior of the envelopes before sealing them. The quantity of each commodity was still expressed by making a separate impression for each object included in the transaction.

The impressions made on the exteriors of the envelopes was a first step toward writing. In the fourth millennium BC the scribes realized that the tokens within the envelopes were unnecessary by the presence of the marking on the outer surface. As a result, tablets bearing records of transactions replaced the hollow envelopes (Schmandt-Besserat 1992). These first known writings of mankind from about 3200 BC are in fact accounting records. The need to record transactions resulted directly in the invention of writing.

Cuneiform comes from the Latin word cuneus*, which means wedge. The scribes used a stylus that had a wedged shape to impress the clay as shown here.*

The markings on these early tablets became a system of their own that developed additional signs and details. The resulting writings are referred to as cuneiform documents and the first one dates to approximately 3200 BC. Cuneiform is a kind of writing, not a language. The word comes from the Latin word "cuneus," which means wedge shape. It refers to the shape made when the writer imprinted the clay. The early cuneiform documents originated in Mesopotamia, which is modern Iraq.

(Continued on page 19)

(Continued from page 18)

Cuneiform tablets come in two main languages, Sumerian and Akkadian although there are many others (Finkel and Taylor 2015). Cuneiform documents are not written using an alphabet. Instead there are between 600 and 1,000 characters used to write words or parts of words (Finkel and Taylor 2015).

Accounting Causes the Development of Numbers and Counting

The next step in the lecture is to ask students if they believe that numbers or counting is innate. Some authorities explain that many cultures had a vocabulary limited to three "number words" equivalent to "one," "two," and "many." The research in this area shows that humans innately have only a vague sense of numbers (Schmandt-Besserat 1992). The need for counting and abstract numbers, and arithmetic, arose to help ancient scribes record transactions more efficiently.

The need for recordkeeping brought about the development of numbers and counting. The token system preceded the invention of abstract numbers. Initially, according to Schmandt-Besserat (1992) tokens served as a "concrete" counting system to facilitate recordkeeping. There were no tokens discovered that represented abstract numbers (Schmandt-Besserat 1992). Instead a particular shape was needed to account for each particular commodity being accounted for in a one-to-one correspondence. Eventually, different sizes of tokens represented different quantities of a particular commodity. For example, a large triangular token may represent five goats, whereas a smaller triangular token might represent one goat (Vollmers 2013).

As transactions grew in complexity it became impractical to use signs that did not contain a numbering system. As previously mentioned, the token system was a one-to-one representation scheme. That is, one jar of oil was represented by one token, two jars of oil by two tokens, and so on (Schmandt-Besserat 1992). This one-to-one system was replaced by numbers or signs used to express abstract numbers. Once the concept of numbers was developed the one-to-one system was abandoned. Instead the pictographs were preceded by a number. The numbering system, brought about by a need to keep a record of various transactions, created an economy of notation.

Accounting Brings About Incremental Development of Capitalism

Next, the students are asked to think about a recent transaction that they have entered into such as a purchase at a local store using their credit card. In modern society we don't think much about this type of event because it is so common. However, there is a lot going on in this basic type of transaction. The

(Continued on page 20)

(Continued from page 19)

student is asked what they bought and what had to be established before that simple transaction could take place. Using an example from Basu and Waymire (2006, pp. 211-212), "suppose someone goes to the grocer and buys several pounds of meat for a weekend barbeque. The cost is $9 per pound and he pays with the credit card, which represents a promise to reimburse a third party within 30 days. The third party will directly pay the grocer and collect from the customer without involving the grocer further. Someone else likely produces and processes the meat…and an intermediary (e.g., American Express) assumes the risk that the customer will not pay. Credit providers, in turn, rely on credit history suppliers like Equifax when they issue credit cards. A transaction record such as a receipt will likely be helpful in *ex post* disputes – e.g., what happens if the meat is spoiled, one of the customer's guests dies, and the customer files a lawsuit against the grocer? And finally the transaction also requires definitions of terms like 'dollar,' 'pound,' 'day,' and 'nine.'" Even the simplest exchanges require us to work out matters like money, timekeeping, numbers, weights and measures, and a means to settle disputes when promises are not kept (Menger 1892, as cited in Basu and Waymire, 2006). Basu and Waymire (2006) show that developments in "exchange-enabling institutions" probably results from expanded trade, urban development, specialized production, and improved information technologies.

Basu and Waymire (2006) show that transaction records that evolved in ancient Mesopotamia were a means to counteract the limitations of humans in storing information about past events that are too numerous and repetitive. The permanent records created in the token system and later on cuneiform documents allowed information to be stored and later referenced, which vastly increased the scope and scale of economic activity. For example, owners of livestock could verify stewardship of their flock by breaking open the clay envelope and comparing the returned sheep with the token records. According to Schmandt-Besserat:

> Seven types of tokens were used, including spheres, discs, cones, biconoids, ovoids, cylinders and triangles. She noted that cones, spheres, and triangles were units to measure capacity of grains, barley in particular. She stated that the units were not fully standardized and volume varied from place to place. Various systems were used to measure animals, barley, land and so forth. Repetition of the sign signified quantity ("Did Accounting…, 1980, p. 12).

(Continued on page 21)

(Continued from page 20)

The emergence of the token system coincides with the appearance of agriculture and the significant increase in the size of human settlements with communal storage of grains (Schmandt-Besserat 1992).

According to Waymire and Basu (2007), accounting had a large part to play in the development of our modern society and economic institutions. Accounting was pivotal in allowing humans to cooperate far more broadly and intensively (Waymire and Basu 2007). Accounting has provided the foundation of trust that allowed sophisticated economic organizations and markets to develop. They provide that "[w]e expect that the transactional memory and improved decision-making facilitated by evolved accounting will ultimately be seen as a key causal mechanism through which Adam Smith's 'Invisible Hand' is manifested in economic organizations, markets, and related economic institutions" (Waymire and Basu 2007, p. 3). All of this is seen in the artifacts from the British Museum (and many other smaller museums around the world, including some university museums).

Accounting evolved to document ownership and exchanges of property. This development of recordkeeping was necessary because it rendered the information "hard" in that *ex post* it "will be difficult for people to disagree" (Ijiri 1975, p36). Transactional records have been used ever since as the basis for resolving disputes. Without this development there would be a limit on transactions based on an individual's ability to remember details. The development of the token system allowed prehistoric men to enter into larger and more complex arrangements for the transfer of commodities and other property. As the mechanisms for recordkeeping evolved, it allowed for a more complex division of labor (Basu and Waymire 2006).

Accounting Used as a Memory Aid Increases Complexity and Frequency of Transactions

Since this is a teaching case, at this point a classroom activity can be used (particularly in a principles class) to show how many more transactions can be remembered if writing (or some other device like tokens) is used to enhance human memory. For example, a student volunteer would receive some small number of items with different prices. Then other volunteers each buy one of these items on credit and ask the volunteer to remember who and how much each buyer owed. Next, a different volunteer will replicate the task, but that person will be allowed to write down a record of who owed how much.

(Continued on page 22)

(Continued from page 21)

Conclusion

Once the meanings of the ancient accounting records from the British Museum have been absorbed by the students, more modern records from the 1700s and 1800s can be introduced where accounting records show barter transactions, three-way transactions, multiple currencies (such as existed in American during colonial times), and even non-monetary currencies such as muskrats.

The end result is that students view accounting from a different perspective and they have a greater appreciation for the role accounting has played in the history of the world. Accounting becomes viewed as an exciting and much needed activity.

References

Basu, S. and G. Waymire. 2006. Recordkeeping and Human Evolution. *Accounting Horizons* 20 (3): 201-229.

"Did Accounting Antedate Writing?," (1980) *The Accounting Historians Notebook*, Spring, p. 12.

Finkel, I. 2014. *The Ark Before Noah: Decoding the Story of the Flood*. London, UK: Hodder & Stoughton.

Finkel, I. and J. Taylor. 2015. *Cuneiform*. London, UK: The British Museum Press.

Ijiri, Y. 1975. *Theory of Accounting Measurement.* Studies in Accounting Research no. 10. Sarasota, FL: American Accounting Association.

Mattessich, R. 1987. Prehistoric Accounting and the Problem of Representation: On Recent Archaeological Evidence of the Middle-East From 800 BC to 300 BC. *The Accounting Historians Journal* 14 (2): 77-91.

Schmandt-Besserat, D. 1992. *Before Writing: From Counting to Cuneiform, Volume I*. Austin, TX: The University of Texas Press.

Soll, Jacob. 2014. *The Reckoning*. New York: Basic Books.

Vollmers, G. 2013. "Recordkeeping in Mesopotamia," in Cunningham, G. (ed.), *Reclaiming Accounting's Lost Identity*. Mjölby, SWE: Atremi AB.

Waymire, G. and S. Basu. 2007. Accounting is an evolved economic institution. *Foundations and Trends in Accounting* 2 (1-2): 1-173.