

The Third Side of the Coin: Book Review: *How Writing Came About* by Denise Schmandt-Besserat

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The invention of tokens at about 8000 BC led to the development of literacy and numeracy. Before the invention of tokens, there was no writing. There were also no names for large numbers -- by large, we mean "four", "five", "six", etc. By 3500 BC, the historical evidence is that people had developed writing and counting.

Both of these developments show a common source in the use of clay tokens to facilitate inventorying and accounting.

Denise Schmandt-Besserat is an art historian for the Center for Middle Eastern Studies at the University of Texas. About 20 years ago, she became interested in early clay. She visited many museums asking to inspect their materials. "I expected to find a lot of bricks and pots," she said. What she actually found puzzled her as they had thwarted the people who uncovered them. Unidentified and often uncatalogued were these little clay shapes roughly the size of a US Dime or a sewing thimble.

After about a year of study, Schmandt-Besserat came to understand them as tokens. The clay shapes represented farm produce and other objects. The purpose of the tokens was (ultimately) to accommodate taxation. They allowed a one-to-one mapping of assets.

After the tokens were used for over 3500 years we first find archeological evidence of abstract number. For thousands of years, people counted 5 as 2-2-1. Consider that even in modern French, "trois" is three and "tres" means "much (very)" while in Hungarian "negy" is four and "nagy" is big. These vestiges point to a time not so long ago when people counted "1 - 2 - many." Using tokens gave us an opportunity and a need to count beyond a handful.

At the same time that counting was invented, phonetic or syllabic writing was developed.

The earliest tokens, from 8000 BC, are simple geometric shapes. Cones, pinched cones, spheres, and disks probably represented heads of livestock, measures of grain, etc. It is telling that the earliest known pictograph for a sheep is a quartered circle. This is definitely an outgrowth of the precedent token, a quartered disk. Herein lies the

startling conclusion that writing did not evolve from pure pictographs. Rather, pictographs evolved from tokens. The shape of a token became the style of the written symbol.

The archeological evidence presented in these works includes clay "envelopes" for storing tokens. Once sealed and dried, of course, the hollow clay balls hid their contents. The solution was to impress on the outside of the envelope, the shapes stored inside. These impressions share the surface of the balls with the seals of the magistrates or clerks who tallied them. Eventually, the hollow clay balls, impressed with the shapes of the tokens inside, evolved into clay tablets, marked with the cuneiform representation of the tokens.

Like writing and counting, Schmandt-Besserat's discoveries have their own antecedents. She cites earlier archeologists, such as Adam Falkenstein. Falkenstein observed that pictographs for common objects such as "plow" were rare while symbols for epistemological abstractions, such as "metal," were common. This showed that when writing began, mere pictographs were not used.

Numismatically, these tokens were least like bullion and most like bank drafts. A check is only a promise to pay. It is an inventory counter. A cancelled check has no value (collecting aside) and is eventually destroyed. So, too, were the clay tokens only temporary. Archaeologists have uncovered many of them buried with the seasonal refuse and trash of the materials they represented. Once the farmer remitted his wheat to the authorities, the wheat tokens were no longer needed by the clerks.

For the numismatist, these facts are gripping, to say the least. Until now, we accepted a common-sense view that barter led to coinage and coinage led to money of account. We believed that this process ran parallel to, and independent of, the development of writing from pictures to hieroglyphs to the alphabet to moveable type. Yet this is not at all true. The fact is that the invention of tokens came 7500 years before the first coins. Furthermore, there is no way to separate the invention of large numbers from the invention of writing.

Since the publication of her two-volume opus, some genuine clay tokens have been authenticated. However, potential collectors should be extremely cautious. Schmandt-Besserat says that the first lot sent to her for authentication were all fakes. Later one of her colleagues did find a genuine clay token in a stall in the Middle East. Even so, the vast majority are sleeping in museum basements.