From Beldibi to Bedfordshire - 11,000 Years of Tokens
Part 3. Coming Full Circle

Gary Oddie

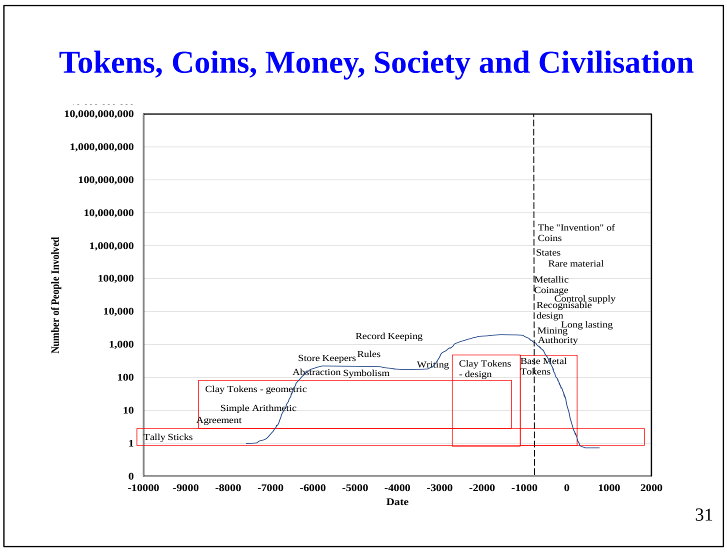
Introduction

This is the third and final Blog providing notes and describing the slides of a talk given at the 2023 Token Congress. The first part used a selection of the author's interests to provide an introduction of the scope of objects that might be called "tokens", but specialisation means that these can only be of limited extent in time and geography.[(1)] The second part used the subjects covered at a conference held at Warwick University in 2017 to take several series of tokens back to the beginning of the classical civilisations in the western world and beyond.[(2)]

That the simple clay tokens first appearing c.9000 BC were used as devices to keep records was interesting. But that their clay envelopes impressed with details of the contents, would form the earliest basis of writing and counting was a revelation. The acquisition of an example of a clay envelope (5500-4500 BC) with tokens inside allowed the application of some 21st century technology to look inside the bulla using x-ray tomography.[(2)]

More importantly this extension of tokens back into the neolithic resulted in the author to reassess the relationship between coins and tokens and their issuers and users. This attempt to create a unified picture of these objects will be described in the following sections.

The Conclusion of the Talk



The next few slides include charts showing how the early tokens might fit into a single picture. On the horizontal axis is the date starting at 10,000 BC all the way to 2000 AD. The vertical axis is an estimate of the number of people involved with a given token-related process. Note that the vertical scale is logarithmic, so each step is a factor of 10 increase in the population being considered. There is nothing precise here, just an attempt to describe general patterns graphically.

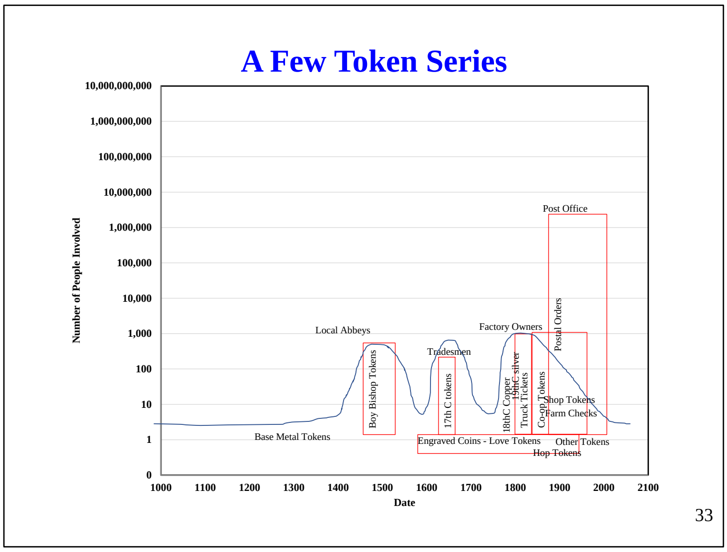
Thus, tally sticks, typically receipts between two people start very early and continue into the late middle ages. The clay shaped tokens and bullae started around 9000 BC and would be used in small settlements of maybe hundreds of people and were still in use about 1000 BC. Along with these come food storage, store keepers, and handling fees (taxation), symbolism, abstraction, writing, record keeping and most importantly agreed rules for the operation of the token system(s). As societies become larger and more organised, needing more food, with a social structure and hierarchy and specific roles, with more rules and interactions, it is not surprising that a new form of token appeared, sanctioned by the state, with all of its authority and symbolism. Most numismatic texts suggest that coins spontaneously appeared about 700 BC in Lydia, Asia Minor, made from electrum, a naturally occurring gold/silver alloy.

Whilst there has been a long history of crediting good ideas to the classical and dominant civilisations that have a habit of deleting the history of what went before, surely a more plausible scenario would be that coins evolved from already existing tokens, which had a track record of several millennia of trial and error, evolution and usefulness. The only difference is that the coins are issued by an authority and they are defined to be acceptable by the whole population.

To paraphrase Aristotle: Money does not exist by nature, but by law or convention. Thus both coins and tokens come with rules, have a form that is accepted, bearing symbols (images and/or writing) and are accepted. To allow control by the issuers they are made in limited quantities from materials or using techniques that are difficult to duplicate. Using precious metals or time-intensive processes allow central or local control. An inappropriate choice of commodity – for example "the leaf" would lead to great wealth, rampant inflation, a programme of defoliation and a burning of forests!(4)

Once currencies are no longer backed by reserves of metals defined as precious or having intrinsic value, they become fiat money and the recent invention of virtual currencies takes this to the ultimate limit where there is no physicality involved, but is still a medium of exchange. Crypto currencies also have elements called crypto tokens which are digital representations of an asset which can be bought or sold using both physical and virtual currencies.

Returning to the first part of these blogs, the plot here shows how the various series of tokens from the author's interests can be presented in the same format. Note the change in the horizontal scale with the dates running from 1000-2100 AD.

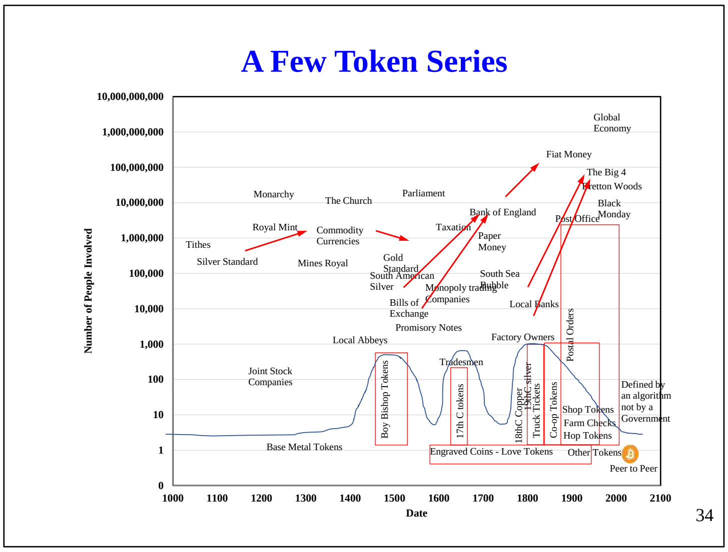


There has probably always been an undercurrent of local tokens for local applications. For a large part of history most of the population was "metal poor" with metal items (iron, steel, lead, copper and brass) being treasured, reused and recycled. Metallic coinage, issued by the state would not be suitable for most simple transactions, and barter, debt and tokens would fill the need. The church would have access to base metals and the early series of ecclesiastical tokens in pewter(5) would evolve into a more localised series of Boy Bishop tokens (c.1475-1558).(6) The circulation of Boy Bishop tokens likely involved high hundreds to low thousands of individuals. Similarly a traders' issue of 17thC tokens would circulate amongst a local population of maybe hundreds for the period between 1648 and 1672. The 17thC Town pieces would circulate amongst low thousands of people. Postal orders have been added to the picture, though they only circulated briefly as currency, as they allow a much larger part of the population to be included in the discussion. Since their introduction in 1881, they have been used by millions of people. Though their decline was temporarily slowed with the advent of eBay and people paying for online purchases, they are again in rapid decline, having been replaced by online payments.

The smallest population involving tokens – love tokens – appears as a horizontal box at the bottom of the plot as typically only two people are involved in that transaction.

This plot could be significantly refined with other series being added and a possible third dimension added to estimate the number of people/authorities issuing a given series of objects. For the Boy Bishop tokens – maybe half a dozen issuing authorities, 20,000 for the seventeenth century tokens, one for the Postal Orders (the Post Office), though if individual branches are counted that is about 20,000 + 3,000 (outside + inside London) at the peak in the early 1970s, but now reduced by a half.

It is now possible to superimpose those series that might be considered legal tender coins and banknotes. As with the previous plot this is quite parochial. Again it is possible to sketch the beginnings of a particular idea – sometimes several authorities competing (e.g. provincial banks), failures, consolidation and monopolies. There are a lot of ideas presented on this chart, some vaguely, but it allows general pattern in state controlled currencies to be seen.



Of importance, in the lower right corner is the symbol for Bitcoin, as a representation of all virtual currencies.(7) This deceptively small inclusion is of fundamental importance for the future of money, coins, tokens and trade. By its mathematical construction, the blockchain, this currency is a very secure method of peer-to-peer payments. It is untraceable, untaxable, sees no geographical borders and poses a significant threat to existing currencies. Though only a few decades old, and there are many dozens of competing cryptocurrencies, as with some early currencies, some will fail and existing establishments will try to undermine their credibility, devise laws to restrict them, maybe even define cryptocurrencies to be illegal. The genie is out of the bottle and presently about 1.5% of the world's money is in the form of cryptocurrencies with about 50% of that in Bitcoin.

This slide lists the main conclusions to the second part of the talk which seem to be applicable to tokens, coins and currencies in general.

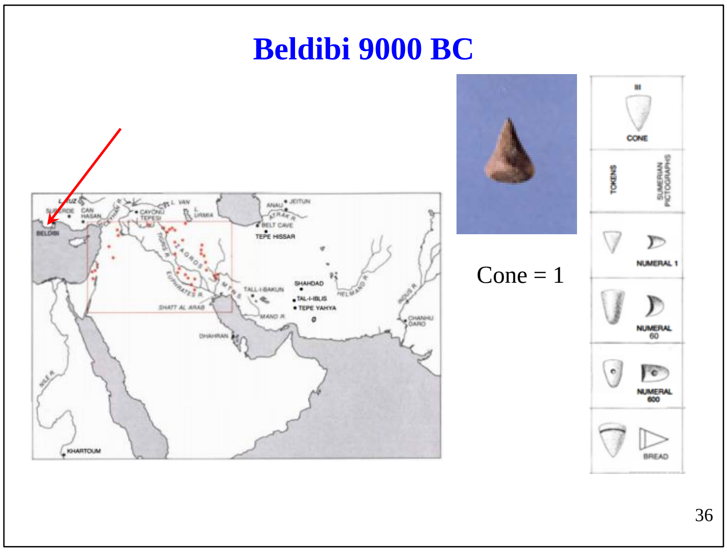
Conclusions – Part 2

- Precursors/Precedents
- Evolution of Concepts
- Many ideas fail
- One idea wins through
- "Establishment" prefers what it can control (Tax)
- People prefer what is practical and beneficial
  - Local tokens
- Civilizations hang on to old structures/ideas
  - Absorb new ideas – convertibility - transition
  - Revolution

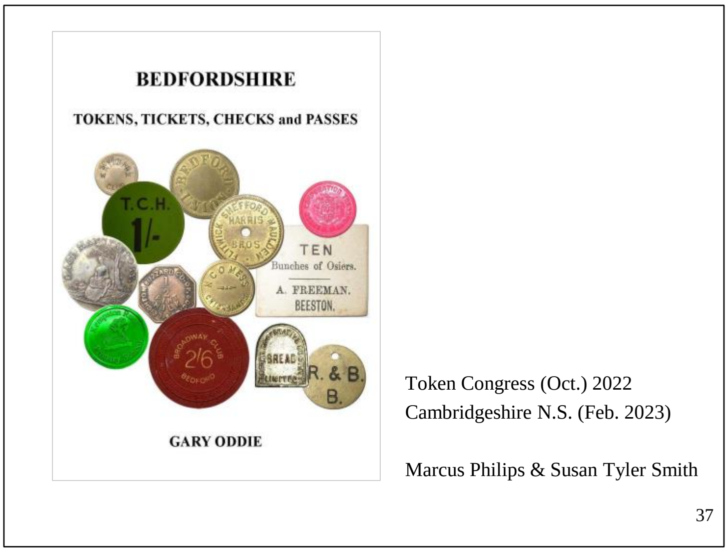
35

This might have been the end of the story – by taking the definition of a token as "something that represents something else", the concept has been pushed back into the neolithic, and the invention of abstract symbolism, writing and arithmetic.

One of the earliest sites where clay tokens have been found was at Beldibi and the simple cone has been interpreted as meaning the number 1.



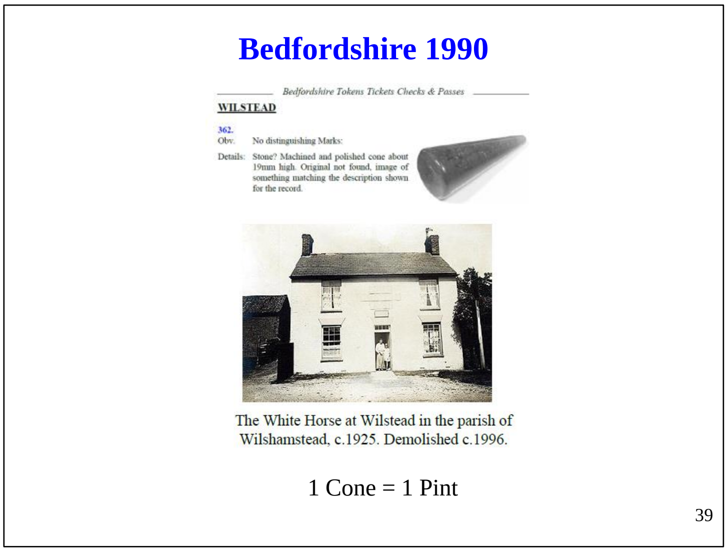
However, at the 2023 Token Congress I was also launching new a book about “Bedfordshire Tokens.”[8]



In the usual way a talk was prepared describing some of the tokens, the issuers and businesses involved. A description of the work in progress was given along with a request for details of any new pieces not already listed. This had been given at the Token Congress in 2022.

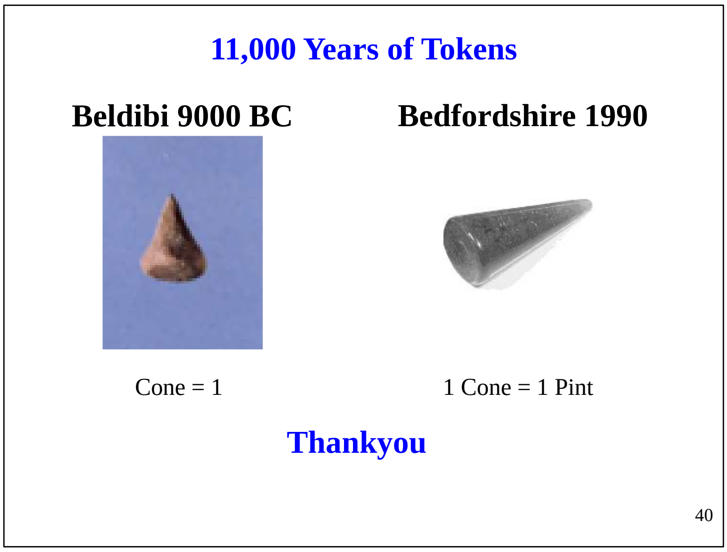
Whilst repeating the talk at the Cambridge Numismatic Society in early 2023, two members, Marcus Philips and Susan Tyler-Smith pointed out a token that was new and unlisted.

In 1990 a token had been used at the White Horse pub in Wilstead, five miles south of Bedford. The token was used to record prepayment for a pint of beer that had not yet been poured.[9] The local phrase for this was “to have one in the stable.” The token took the form of a small conical piece of polished stone. The pub was demolished c.1996, so it has not been possible to find an original, but a similar cone has been found to illustrate the token.



Thus 9,000 years ago in Beldibi, a small cone was a token representing a single unit and in 1990 and small cone was a token representing a single pint. That’s near enough 11,000 years of tokens.

Whether it is a bit of clay or a bit of data, tokens came first and serve the users as they need. State sanctioned coins and money are a special case of tokens used by the state to serve and maintain itself.



References and Links

(1) G. Oddie. From Beldibi to Bedfordshire - 11,000 Years of Tokens Part 1. What is a Token? *BNS Blog*, 5 December 2023.
https://britnumsoc.files.wordpress.com/2023/12/414-11000-years-tokens-oddie-blog-001.pdf

(2) G. Oddie. From Beldibi to Bedfordshire - 11,000 Years of Tokens Part 2. Pushing the Boundaries. *BNS Blog*, 6 December 2023.
https://britnumsoc.files.wordpress.com/2023/12/415-11000-years-tokens-oddie-blog-002.pdf

(3) S. Meikle. Aristotle on Money. *Phronesis*, v39n1, pp.26-44, 1994.
https://www.jstor.org/stable/4182455?read-now=1&seq=1#page_scan_tab_contents

(4) D. Adams. *The Hitchhiker's Guide to the Galaxy part 2. The Restaurant at the End of the Universe*. 1980.

(5) M. Mitchiner and A. Skinner. English tokens, c.1200 to 1425. *BNJ* vol. 53, pp.29-77, 1983.
https://www.britnumsoc.org/publications/Digital%20BNJ/pdfs/1983_BNJ_53_7.pdf

(6) M. Mitchiner and A. Skinner. English tokens, c.1425 to 1672. I vol. 54, 86-163, 1984.
https://www.britnumsoc.org/publications/Digital%20BNJ/pdfs/1984_BNJ_54_11.pdf

(7) G. Hileman and M. Rauchs. Global Blockchain Benchmarking Study (September 22, 2017), 2017.
https://ssrn.com/abstract=3040224

(8) G. Oddie. *Bedfordshire Tokens Tickets Checks and Passes*. St Neots Press, 2023.

(9) S. Tyler-Smith and M. Phillips. Pub Currency Carved out of Stone. *Newsletter of the London Numismatic Club*, v7n16, p23, July 1991.
http://www.mernick.org.uk/lnc/newsletter/V7_16.pdf p23

Thanks to Marcus Philips and Susan Tyler-Smith for pointing out the Wilstead pub “token” that allowed the connections to be made.