

# **Calculation with jetons**

## **Historical overview**

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# About a French expression

Calling someone a **'faux jeton'**

The English say **'slug'** (**'limace'** in French)

This expression still used today finds its origin in the Middle Ages when the jeton, this small metal coin in use for calculation, without any value but similar to a coin, could create confusion.

**'Fake as a jeton'**

**The story of this jeton is much older, little known, very rich, exciting... and is not over yet.**

# Since Antiquity

In the (French) *Dictionary of Greek and Roman Antiquities* (1880): the word **abacus**

**Two definitions:**

**I: Tablet with a frame filled with sand on which one wrote with a finger or with a stylus.**

*In the Semitic language of the Near East, **abaq** means **sand** or **dust**.*

**II: Counting table consisting of a board on which divisions separated the different orders of unity. Small pebbles, jetons, or other marks were placed there.**

Excavations organized in Athens and Rome have brought to light abacuses represented in what follows.

# When archaeologists help to write the history of calculation

ATHENIAN ABACUS

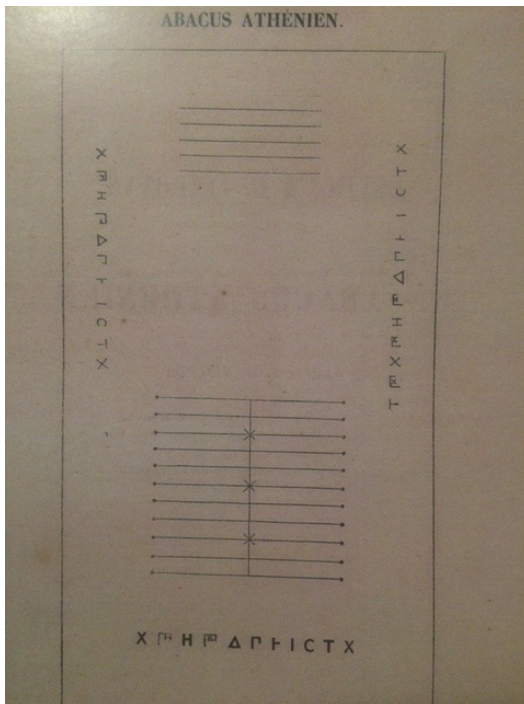


Diagram of the Salamis abacus at the  
Epigraphic Museum of Athens  
(marble, 150 cm x 75 cm)  
(About thirty abacuses exhibited)

ROMAN ABACUS



Reconstitution of the abacus preserved in the  
Medal Cabinet of the National Library in Paris

# Jetons, a very long history

The Athenian abacus is used with pebbles. The French word 'calcul' and the English word 'calculus' are coming from the Latin word 'calculus'.

- In Europe at the end of the 13th century, jetons take the form of metal coins, first in lead, then in brass.
- The first jetons are silent, then they present profane or religious legends, coats of arms of cities, companies, historical figures...
- They are used for the accounts of the kingdom, the big cities, the big houses, by the money changers (future bankers)...

# Geëter, géteir

**Geëter** or **géteir** in old French language means **count**.

Legends about jetons often have something to do with their use:

*Jet ei (jetez le) bien, me gardera*

*Si vous failles le recomptes*

*Se gectes seurment le conte trouveres*

*Qui bien gettera, le compte trouvera* (Who will throw well will find the account)

The word **jetton** appears in the 16th century, then one will write **jeton**.

Spanish jetons are designated by: **contadores**, **gitones**, in English: **counter**, in Italian: **gettone**, in Swedish: **rakne-penning**, in German: **rechenpfennig**.

# Used in our schools

## The 'Schoolmaster Jeton'



On the obverse of the jeton, the accountant still called "Schoolmaster"



On the reverse an alphabet. It symbolically recalls the mission of the school: learning to count, read and write



# Counting tables



counting table  
(copy)



Counting table  
Wood engraving – Strasbourg, around 1500



# Numismatics

- The purpose of numismatics is the study of coins, medals and jetons. It plays a very important role, especially in the history of antiquity.
- Computing jetons, like medals and coins, have been for a long time (15th century) collected, studied, listed and described with great precision in numerous publications, the diffusion of which has remained very limited and most often reserved for collectors or members of associations.
- Nicolas Mahudel, *De l'origine et de l'usage des jetons*, le Mans, 1858.
- Alphonse de Schodt, *Le jeton considéré comme instrument de calcul*, Gobbaerts, Bruxelles, 1873.
- Alfred Nagel, *Die Rechenpfennige und die operative Arithmetik*, Wien, 1888.
- David Eugene Smith, *Computing Jetons*, The American Numismatic Society, New York, 1921.
- Jacques Labrot et Jacques Henckes, *Une histoire économique et populaire au Moyen Âge. Les jetons et les méreaux*, Errance, Paris, 1991.

# At the crossroads of science and history

Historians in numismatics conduct their work from archives of different sources:

- City archives, which give very precise information, in particular on the manufacturers of the jetons, their price, the dates...
- State or regional archives
- Old publications
- Museums and private collections

**The history of computing jetons is well known today.**

# Decline and end of jeton calculation

- From the 17th century, calculation with jetons is the object of criticisms, and calculation with the pen strongly encouraged.
- Le Gendre's book, *L'arithmétique en sa perfection avec un traité de calcul aux jetons*, is republished until 1805.
- The calculation on the 'exchequer' for the accounts of the United Kingdom ended in 1826. The title 'Chancellor of the Exchequer' is still used today.
- The computing jeton was banned in French schools after the Revolution in 1789.
- Still used in some circles until the beginning of the 19<sup>th</sup> century.

# Conclusion

- Counting with jetons has been deeply rooted in the history of social and economic Europe for over two millennia.
- The computing jeton, actor and witness of this story, cannot be forgotten.
- Teaching today jeton calculation is opening to our children a broad window on our history.