# To the Origins of Coinage

archaeometry.org/Coin\_Age.pdf

latest rev. +2025.01.10 contact: chronolog

## Leo Dubal

**The invention of coinage** may be seen as a spinoff of the singular geopolitical context of the *Double Sunset* on May 28<sup>th</sup>, -584 at the banks of the Halys river, where the Lydian king Alyattes staged the end of the Lydo-Medes war. Regarding the technological level at that date, we highlight the remarkable know-how of the neo-Babylonian lapicides in engraving *rock crystal* octagonal cylinder seals, and that of the Lydian blacksmiths in hardening bronze. Calibrated oval weights, called *staters & fractionals*, were already common (even some certified ones exhibited, obv.: striated field, rev.: double incuse punches). As blanks, for lack of better, the choice has mainly been the 4.75 g & 12 mm Ø Electrum Trite.

### **1.** The state-of-the-art of prestige cylinder seals

The engraving of an epigraphic cylinder seal requires special skills: characters and motives must be reversed, engraved *in negative*. The existence of neo-Babylonian cylinder seals in stone as hard as rock crystal shows that lapicides managed to engrave materials significantly harder than their hardest tools.







It is noted that to make a precise calligraphy, the octagonal cylinder is preferred to the round one. In other words, for inscriptions the lapicide follows vertical stripes.

#### 2. The first series of epigraphical coins

WALWET, written from right to left., in Lydian means *lion*. It is the name of the Lydian king called ALYATTES by the Greeks. On Electrum Trite, this king let mint *cards of prestige* with the highest degree of icono-epigraphic redundancy !



The two obverses (<u>right</u> & <u>left</u> heads of roaring lions) we selected have most likely been struck on the same die. Their superposition (Photoshop) highlights the perfect coincidence of details, and allows the virtual reconstruction of the *lost rectangular die* with its supposed *eight vertical stripes*.



If, according to our research, only those two obverses testify of the use of *rectangular dies* for striking the early misfitted blanks, nevertheless, other oval coins comfort this practice. The reference to KYKALIM, the ancestor of WALWET, squeezed in between the two <u>right</u> & <u>left</u> roaring lions, illustrates the attempts *to legitimize the imperial ambitions* of the grandson. Here, *KYKALIM is the message*. Those coins are no longer just cards of prestige, but the very first release of a tract of political propaganda !





The superposition of the protomes of Milesian boars is the work of <u>Rudolf HILBERT</u>.

Another coin led <u>Göran HENRIKSSON</u> to formulate his interpretation of *disc on lion's forehead* as a representation of the partial solar eclipse of <u>-584.05.28</u>. This coin is probably a <u>counterfeit</u>. The letters A-L-Y (for ALYattes), *written from left to right*, are not Lydian but obviously Greek !





Another case of forgery is a small 9 mm Ø anepigraphic coin. An obv. die used for striking Milesian striated 4.2 g certified hecte has been recycled, i.e.: *overengraved with Lydian iconography* (roaring lion & its eclipsed sun on its forehead).

#### 3. The solar eclipse that dates the invention of money

The solar eclipse, <u>correctly predicted</u> by *WALWET's scientific advisor, THALES of Miletus,* appears therefore as the minting founding event. Backing this assumption are two *later* artifacts of the *CROESUS reign* : the <u>oldest</u> <u>known hardened bronze die</u> & <u>coin</u>. The die's engraved figure & coin fit now together, and the *original eclipsed sun* and right & left lions give way to a *shining sun* on the forehead of a *unique right* lion.







Nevertheless, at the beginning of the reign of Croesus, as shown by this <u>elongated coin</u>, there have been attempts in the opposite direction, i.e.: to adjust the dimensions of the blanks to those of the die!



The invention of coinage was thus the result of the <u>sagacity of the first man of science, THALES</u>, of a power-hungry king, ALYATTES and of the implementation of the accumulated know-how of generations of highly qualified craftsmen, in particular, as we demonstrated, lapicides.