

Fig. 2. Modell overview. The flow chart for each specific tetradrachm type in the TETRA model. The tetradrachms are minted mainly from Laurion silver, but also from re-melting of old worn tetradrachms and from coin and bullion silver from external sources, like revenues from trade, war booty and foreign donations. Tetradrachms are lost in several ways, by trade, loss into the ground and by selective re-melting. The lost tetradrachms are retrieved by finding them in the soil. These tetradrachms have 3 fates; in older time they were re-melted for their metal content, archaeologists would put them into museums and private people would keep them or sell them to collectors. A fraction of the tetradrachms in the soil are also lost to corrosion.



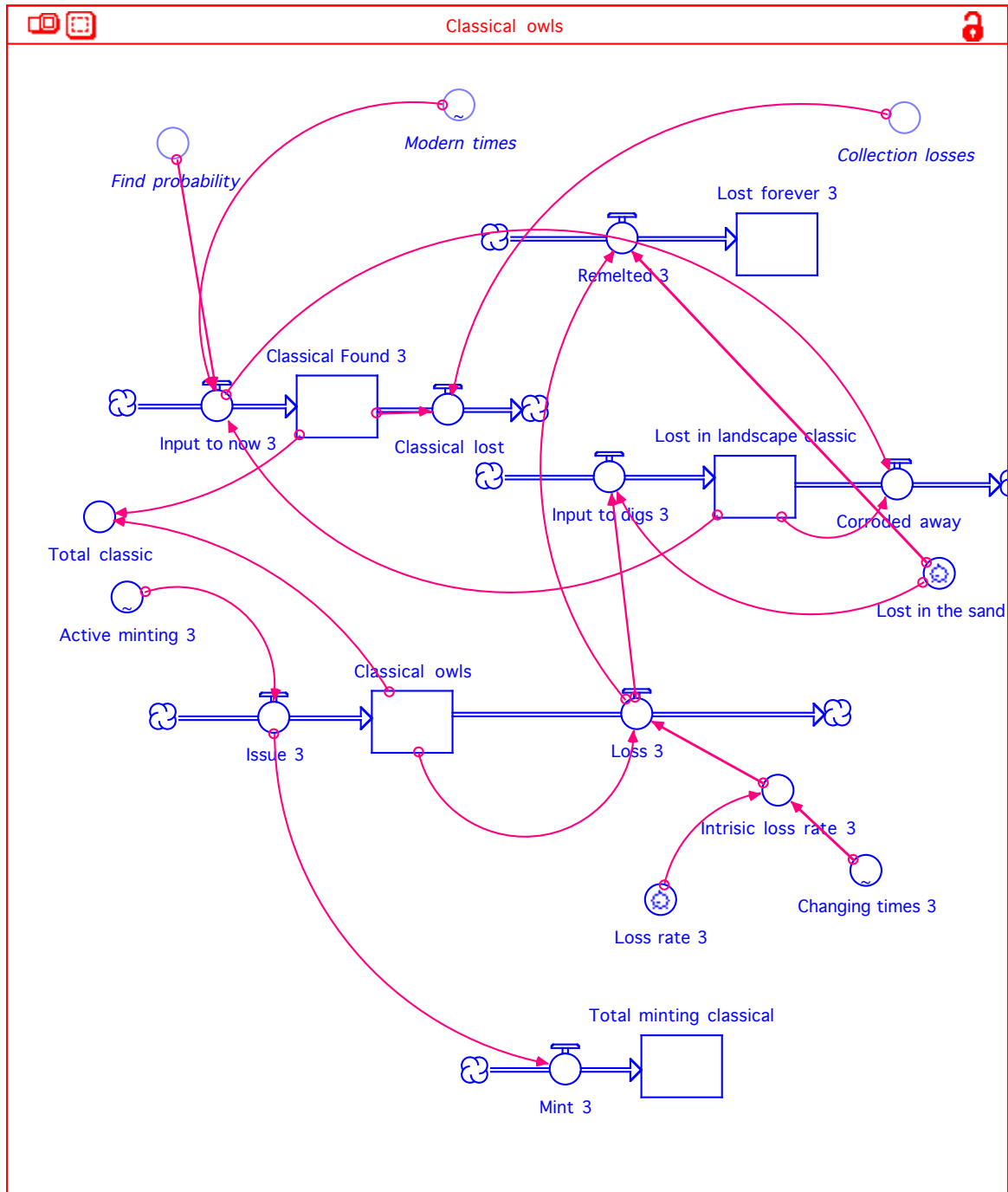


Fig. 4. STELLA® modell diagram for each type of tetradrachms, the unit component of the model. For each tetradrachm type we have 5 stocks: market stock, soil stock, re-melted and found from soil, as well as a stock for counting up the total minted value.

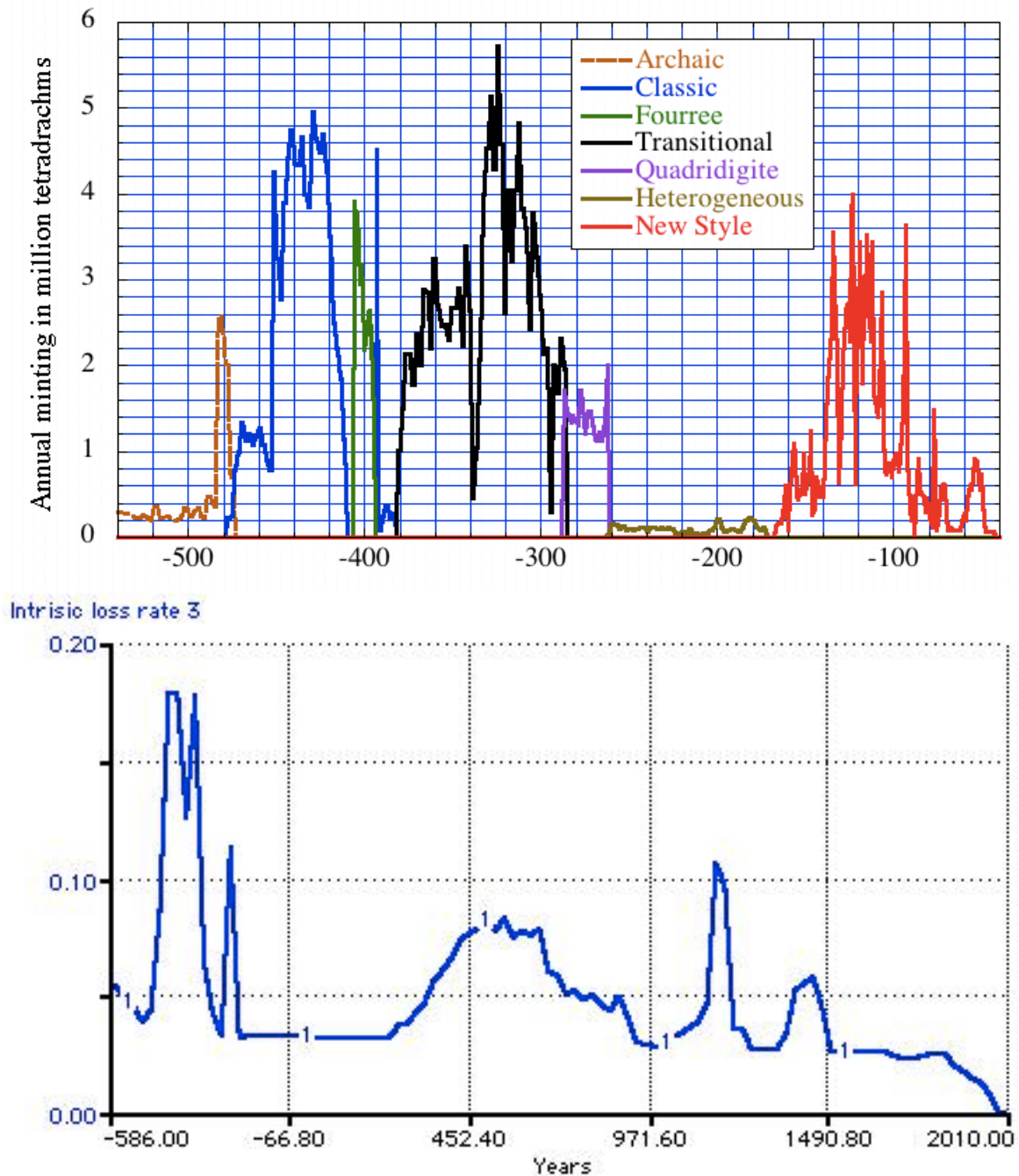


Fig. 6. The upper curve shows the annual minting rate of the Athenian mint distributed among the different coin types. The curve was drawn up in relative terms and then level calibrated using existing data on minting volumes from ancient literature. The bottom curve shows rates on intrinsic loss to re-melting and physical loss. The curve is determined by occurrences of such factors as warfare, social unrest and random factors. They were parameterized by an extensive survey of the Athenian history from 586 BC to present.

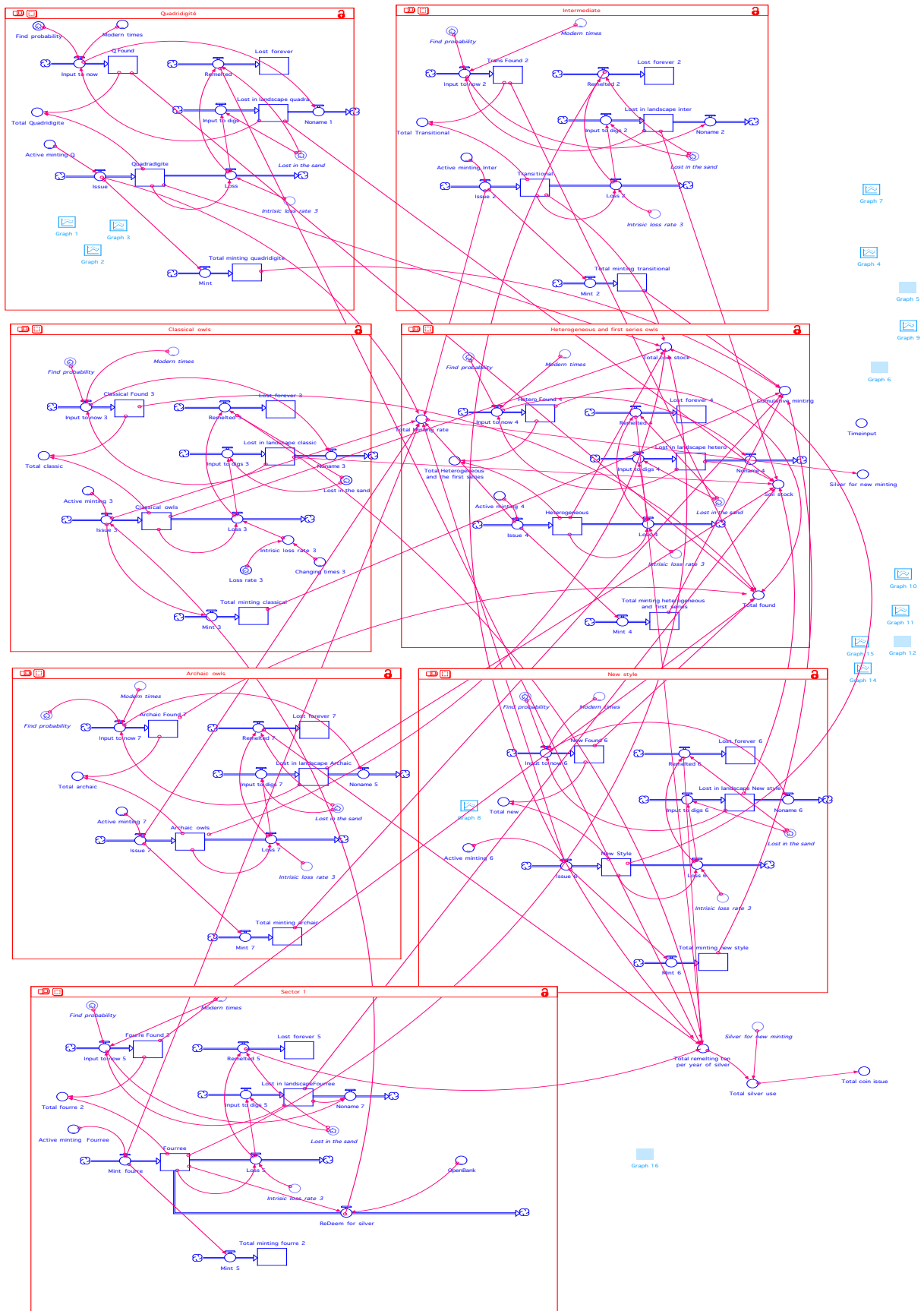


Fig. 5. Modell overview III: STELLA® modell diagram for all types of coin: archaic, classical, fourree, transitional, heterogeneous and new style tetradrachms.

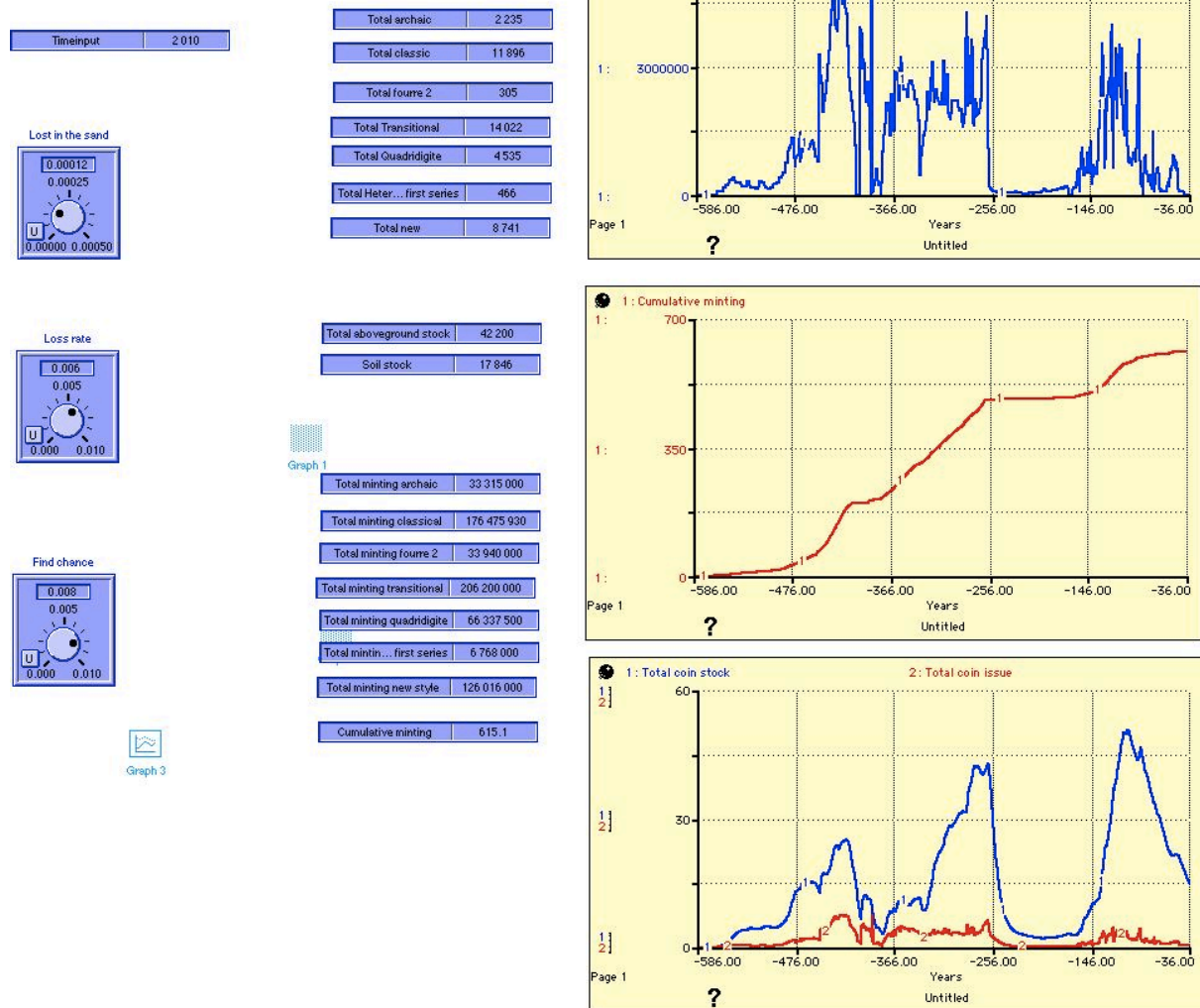


Fig. 7. The TETRA model control deck. With the control deck, the underlying model structure is controlled, as well as it allows interactive control with some of the inputs. The diagram shown in Fig. 8 is underlying the control deck. At the bottom level, all equations can be displayed. The most important output diagrams are pegged on the control deck, normally they rest on the level below.

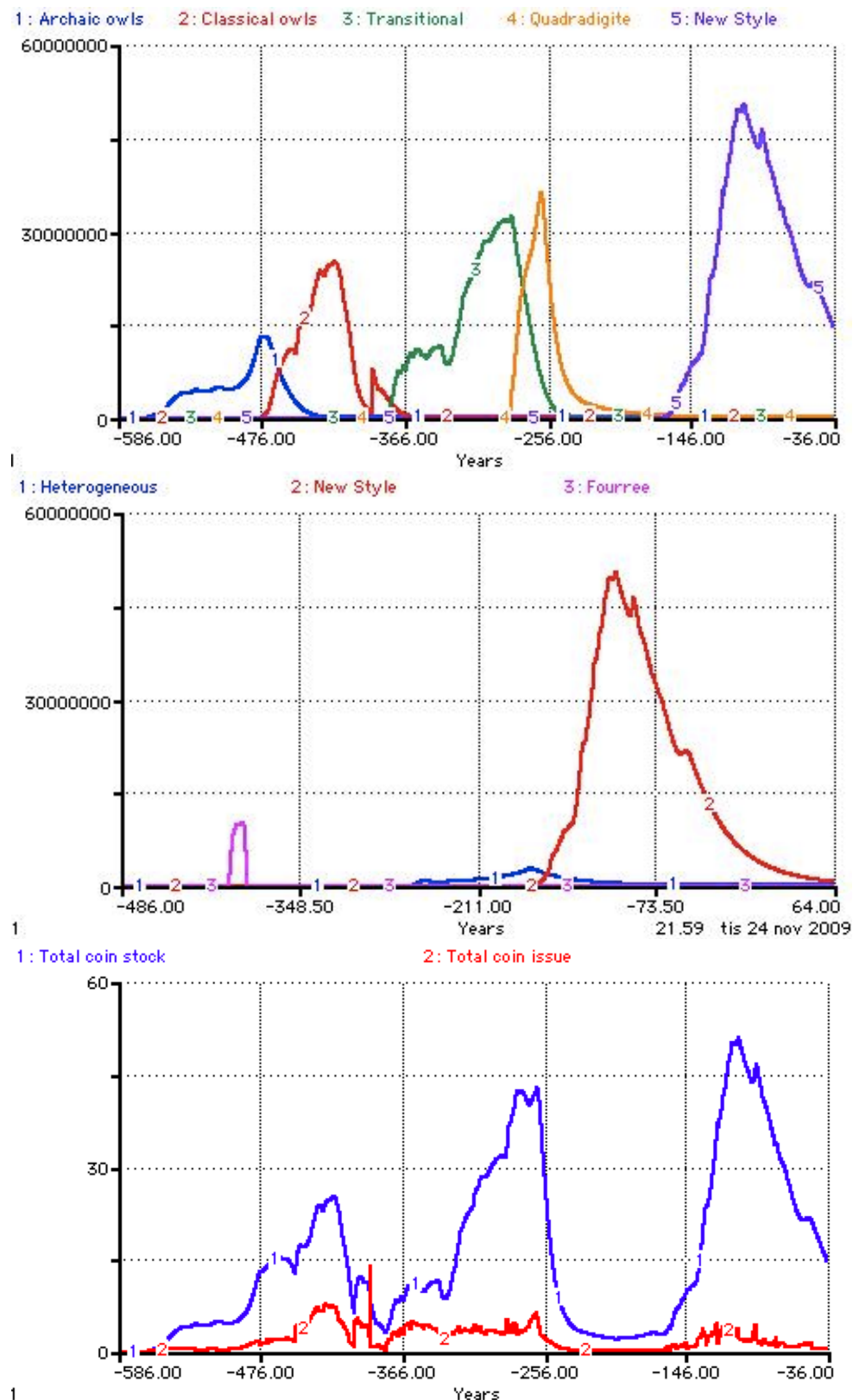


Fig. 8. Estimates of coins in the market in antiquity for the different coin types.



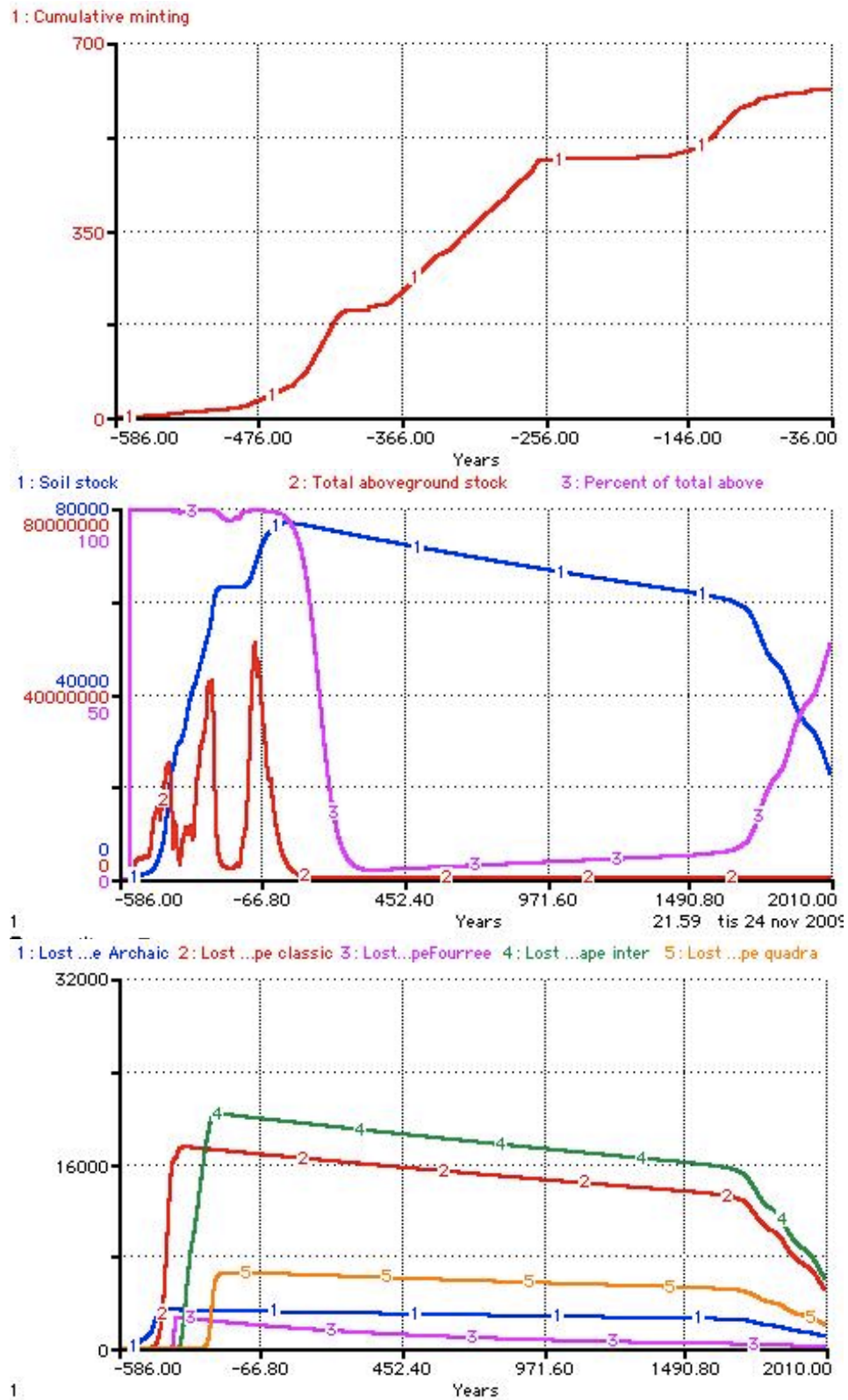


Fig. 9. Estimated cumulative minting volume, the middle panel shows soil stock 586 BC-2010, total above-ground stock and percent of total stock as above ground. The bottom panel shows how the soil stock declines with time as coins are found and deteriorate by corrosion. The fourrees deteriorate faster as they are of copper which has a larger corrosion rate.



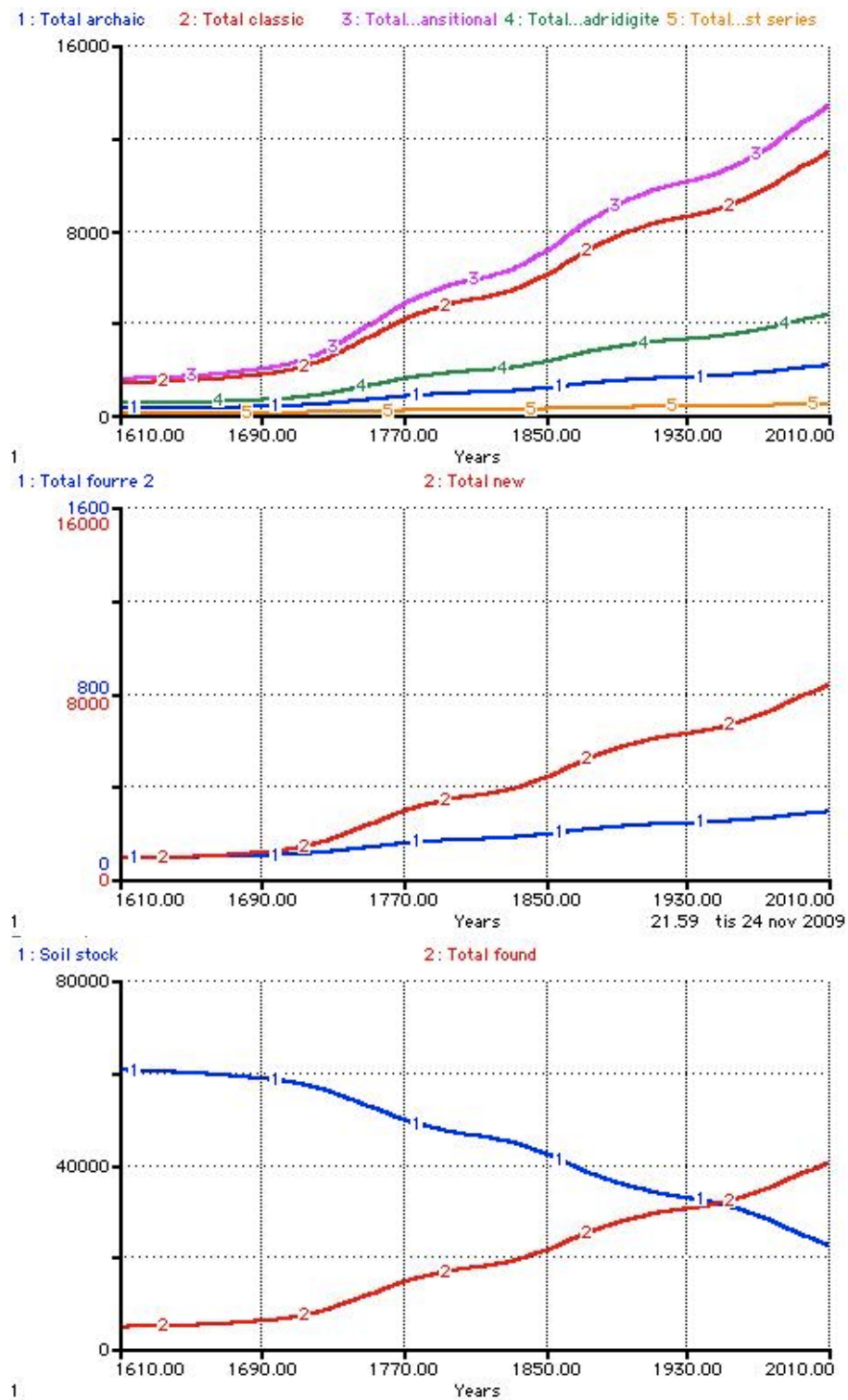
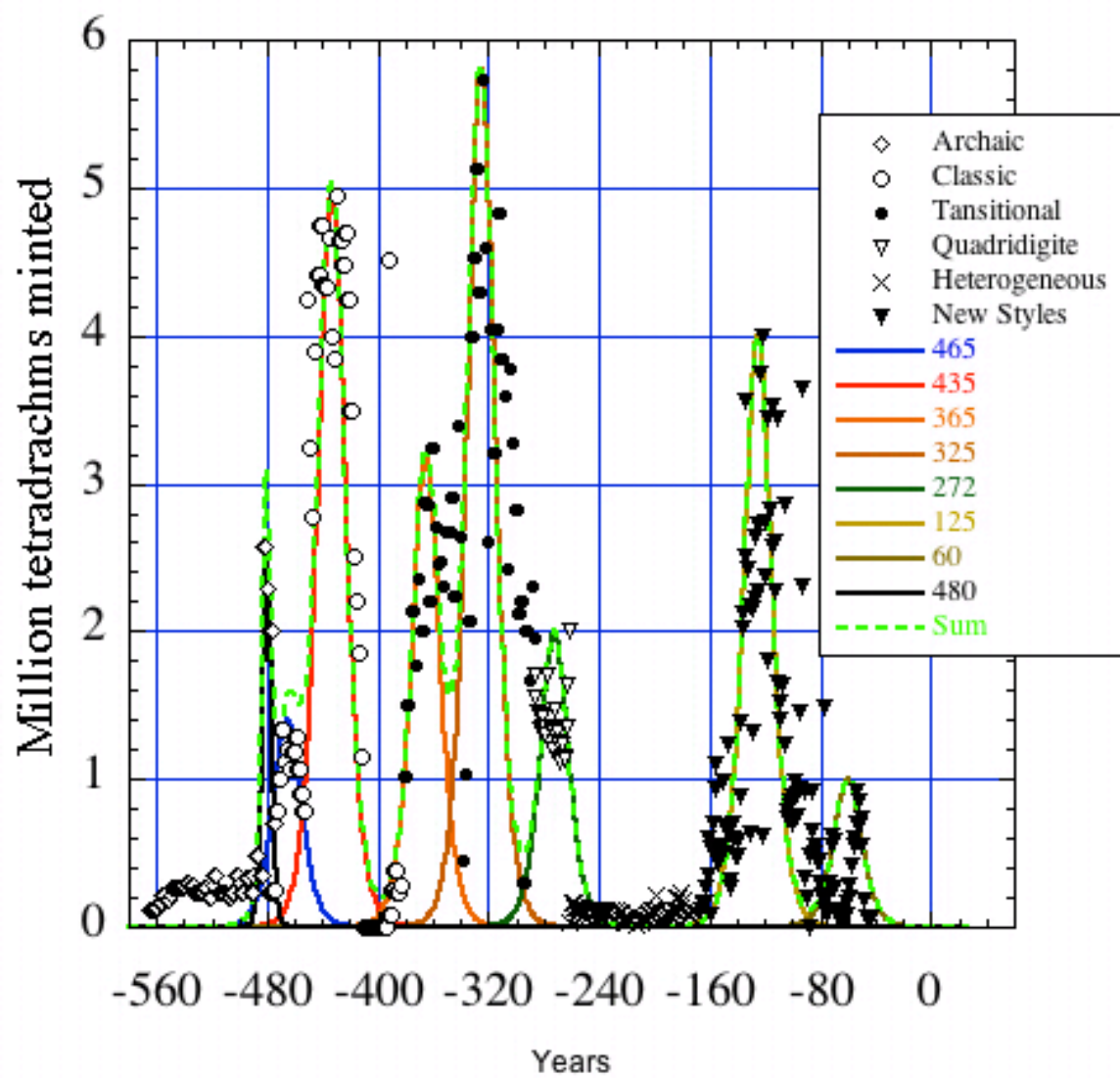


Fig. 10. The amount of tetradrachms available above ground as a function of time between 1610 and 2010 for the different coin types, and at the bottom, the development of the soil stock and the total number found.



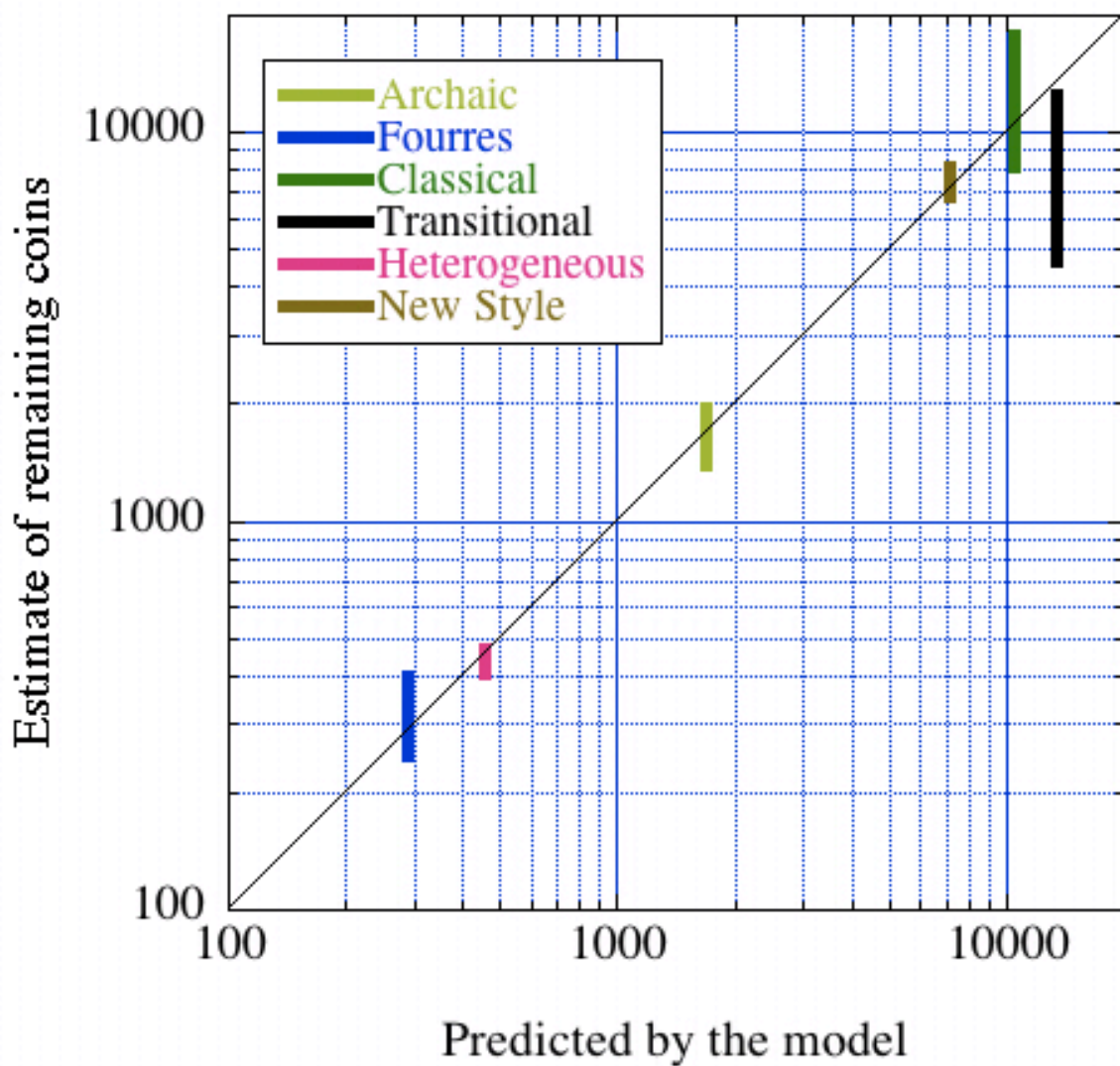


Fig. 11. How well does the TETRA model work? This diagram shows the result of test made on independent estimates of above ground number of coins by Seltman (1924) and as can be deducted from the data of Starr (1973), Mattingly (1997), Thompson (1961, and Flament (2007). See Sverdrup (2010) for more detail and a catalogue with comments.