

# Di Hu:

## Experiments in Ancient Roman Coin Minting

### **Methodology**

The objectives are to create coinage using ancient roman methods and then to compare the efficiencies of different methods and different silver contents. In other words, I will compare the efficiencies of

- 1) Hot striking silver coins and cold striking silver coins
- 2) Hot striking debased silver coins and cold striking debased silver coins
- 3) Hot striking silver coins and hot striking debased silver coins
- 4) Cold striking silver coins and cold striking silver coins

Efficiency will be determined by how much time it takes to strike 30 acceptable coins from each category (Cold striking silver coins, hot striking silver coins, cold striking debased silver coins, hot striking debased silver coins). I will do cold striking for silver and debased silver coins first. Then I will do hot striking for silver and debased silver coins. I do it in this order to minimize the probability that my dies will shatter. It is not good to strike hot coins and then cold coins because the temperature differences put a lot of stress on the dies.

After striking 30 of a certain type, I will record the time it took by means of a stopwatch. Furthermore, an aide will take down the time it takes me to mint 10 and 20 coins during the process of minting the 30. This will show any difference in the rate of minting depending on the location in time. It will show the effects of tiredness and/or learning.

But before I conduct the experiment, I will have to practice minting the coins to get a feel for how many strikes is acceptable for each method and also practical aspects. I have to do this so that my results won't be skewed by a difference in learning curves. For example, if I went ahead with striking without any practice, my first batch of coins would undoubtedly take much longer than any following batch by virtue of my lack of skills.

Below is a step by step instruction on how to make 30 coins from each category.

Non-debased Silver coins (Cold Striking)	Non-debased Silver coins (Hot Striking)	Debased Silver Coins (Cold Striking)	Debased Silver Coins (Hot striking)
<p>1) Gather necessary supplies: Upper and Lower dies, Anvil, Hammer, coin blanks.</p> <p>2) Set up the work area as shown in the diagram for cold striking.</p> <p>3) (Start recording time here) Take a coin blank from a receptacle that contains the coin blanks.</p> <p>4) Put the coin blank on top of the lower die as shown in the diagram.</p> <p>6) Take the upper die and put it on top of the coin blank with your left hand FIRMLY.</p> <p>7) Strike the top of the upper die with the hammer in your right hand until a clear impression can be made.</p>	<p>1) Gather necessary supplies: Upper and Lower dies (new set), Anvil, Hammer, Tongs, coin blanks, furnace.</p> <p>2) Set up work area as shown in the diagram for hot striking.</p> <p>3) Put a batch of coin blanks (about 50 to account for striking non-acceptable coins) into the furnace for heating.</p> <p>4) Wait until coins are cherry-red hot. Turn down the temperature in the furnace to assure an even temperature for all coin blanks.</p> <p>5) (Start recording time here) Take out one hot coin blank with tongs in both hands and place the coin blank on top of the lower die. Put tongs down.</p> <p>6) Place the upper die on the coin blank firmly with left hand.</p> <p>7) Strike the upper end of the upper die with hammer in right hand a few times until a clear impression could be made.</p>	<p>Same as cold-striking non-debased silver coins.</p>	<p>Same as hot-striking non-debased silver coins.</p>

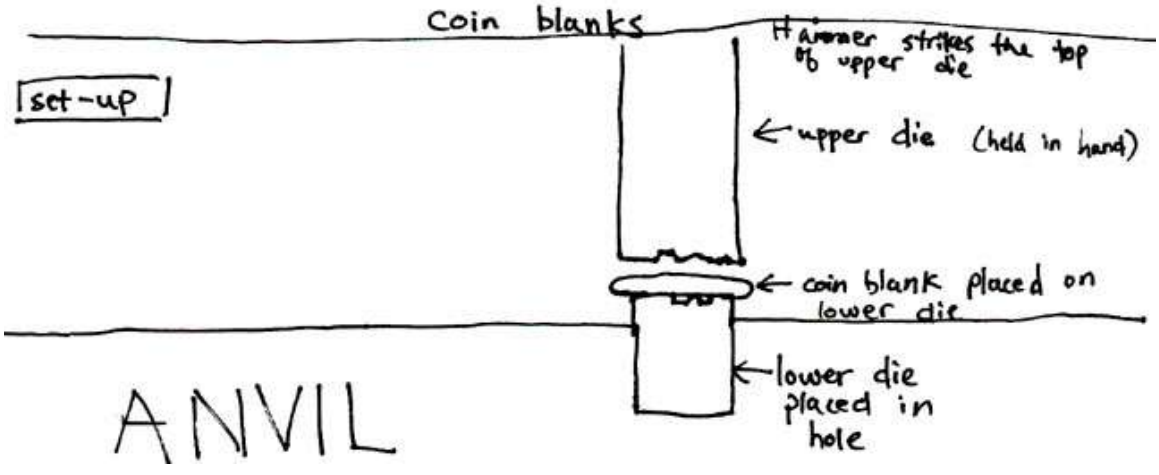
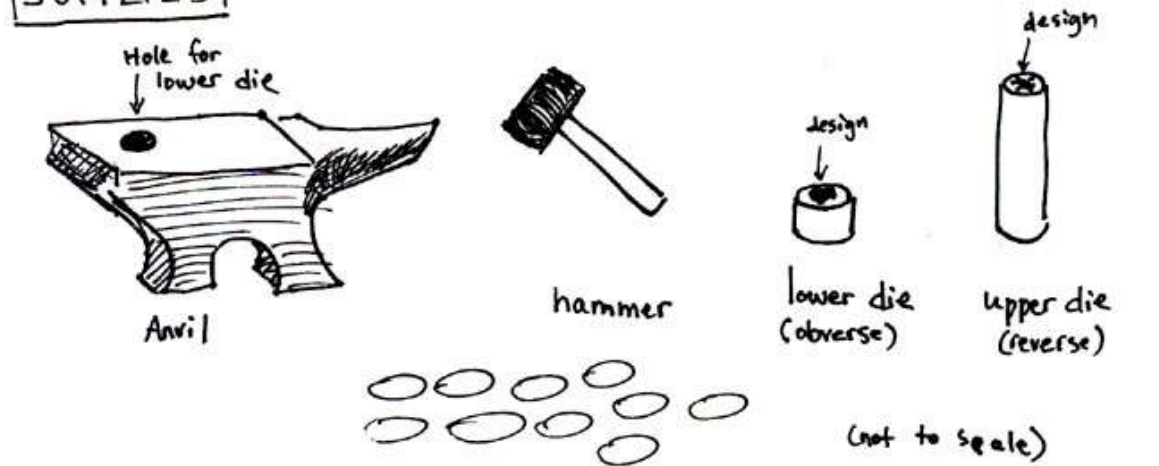
# Methodology Diagrams

Drawn by Di Hu

## Cold Striking

①

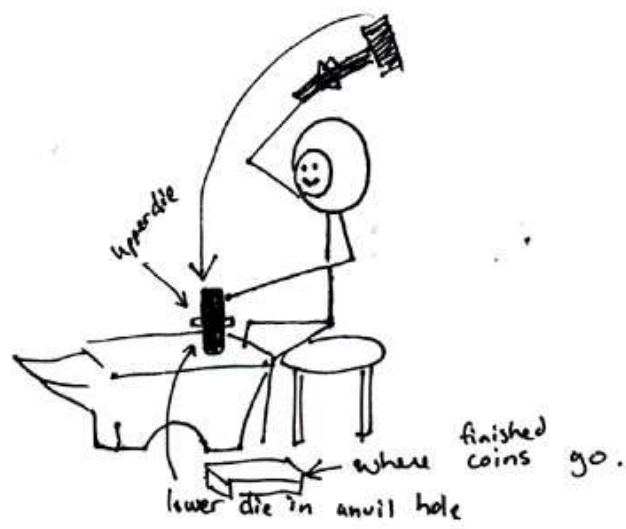
### SUPPLIES



Set-up part II

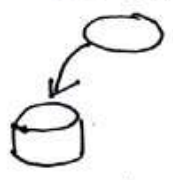
Another View

②



Step-by-step

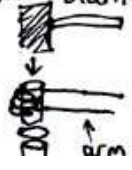
- 1) set-up the above
- 2) put coin blank on top of lower die



- 3) put upper die on top of coin blank



- 4) Hold upper die firmly. Strike the upper die a few times to get clear impression on blank.



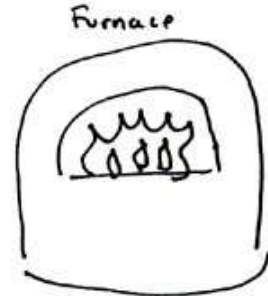
- 5) move to the next coin, repeat

# HOT STRIKING

3

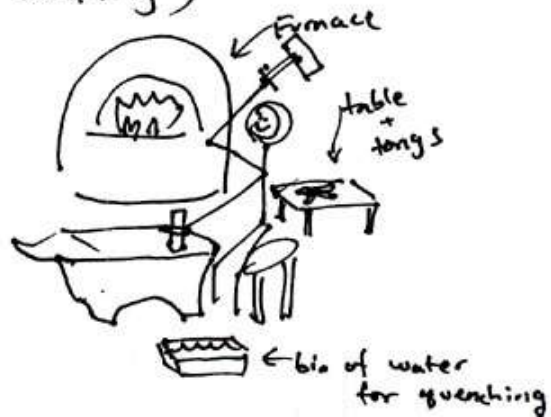
Supplies (see cold striking for further diagrams)

- 1) Anvil
- 2) Hammer
- 3) coin blanks
- 4) Furnace to heat coin blanks
- 5) Tongs
- 6) Upper + Lower dies



Setup

(Same as cold striking)



Step-by-step

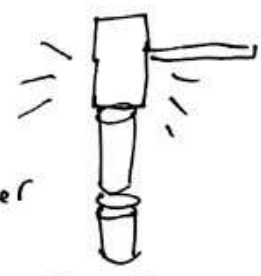
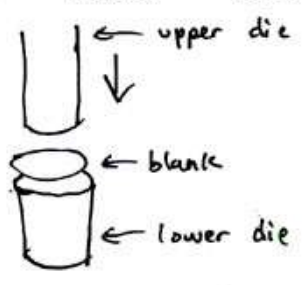
- ① set up above
- ② take a heated coin blank from furnace with tongs



- ③ put heated coin blank on the lower die



- ④ put upper die on heated coin blank



- ⑤ strike the upper ~~die~~ die with hammer a few times to get clear impression onto the coin
- ⑥ Flick coin into water with upper die