

# Silicon Valleys of the Ancient World: Ancient Technology, Metals and Mining



## Dates

June 22 — August 10 , 2020

## Location

Meeting Room: [Zoom link](#)

## Overview

Have you ever wondered how precious metals, jewellery and other metal objects were produced 5000 years ago? Today we are more than used to this material, but Mesopotamia, today's Iraq, is free from mineral sources and right here we witness the birth of civilization. So where does metal come from to make jewellery and weapons? How was it worked or extracted? How was it transported? And how important was it? In these weekly meetings we will see the complicated and possible routes that metal made to reach the rich Mesopotamian elites. Many texts, of different rulers, document this trade which was not only necessary but sometimes was a source of pride for society. Metal is another way in which the ruling elite demonstrates its power and supremacy even over natural resources. What if

even now it were so? What ideas can be associated with the use of metals yesterday and today?

## Structure

In each week's meeting, we will discuss the readings given in the previous week. The group is entirely discussion-based, so you are expected to do the reading and be prepared to discuss any aspect of it in the meeting (of course, things sometimes come up. Meetings are laid back and you are free to discuss as much or as little as you want).

The readings are organized roughly chronologically because this is the most straightforward way of planning the group, but we are not solely interested in developments over time. Most of the readings will concern many topics related to metal from production, to transport to the importance that this material had. For the period covered, a large number of textual sources have not been found, but the reconstruction of these aspects is widely documented by many archaeological finds and studies. On the final day, we will discuss our observations and analyze them together in light of what we have learned.

## Schedule

### Meeting 1 (June 22): Copper as bargaining chip.

Central articles:

- [COPPER AND COMPLEXITY: IRAN AND MESOPOTAMIA IN THE FOURTH MILLENNIUM B.C.](#)
- [Enmerkar and the Lord of Aratta \(full text\)](#)
- [The beginning of copper metallurgy in Oman](#)

Discussion Questions:

- How does copper extracted, processed and transported?
- By what mechanisms- social, economic, political- was copper acquired and processed for consumption?
- How were Oman and Iran (rich in mineral deposits) interpreted in literature?



## Meeting 2 (June 29): Copper as bargaining chip (Iran and Oman).

Central articles:

- [The beginning of copper metallurgy in Oman](#)
- [https://www.youtube.com/results?search\\_query=lead+isotopes](https://www.youtube.com/results?search_query=lead+isotopes)
- [https://www.youtube.com/watch?v=phZeE7Att\\_s](https://www.youtube.com/watch?v=phZeE7Att_s)
- [COPPER AND COMPLEXITY: IRAN AND MESOPOTAMIA IN THE FOURTH MILLENNIUM B.C.](#)

Discussion Questions:

- How was copper transport along the Khurasan road?
- How was copper processed in the fourth millennium BC?
- What is a operative chain?



## Meeting 3 (6 July): Metals trade in Persian Gulf (Iran and Oman).

Central articles:

- [Metals trade in the Persian Gulf](#)
- [Aratta](#)
- [Full text The Lord of Aratta](#)

Discussion Questions:

- Which areas were involved in the metal trade?
- Was there a technological and cultural influence in the Gulf areas?



## Meeting 4 (13 July): Metalworking: Techniques, Procedures and Specialist Terminology.

Central book:

- The book that I enclose is comprehensive of all the production techniques used in antiquity. I am enclosing it entirely out of your curiosity but the pages that will be examined refer to chapter 5. From page 225 to page 237 of the pdf.
- [Metalwork cap. 5](#)

Discussion Questions:

- What are the metal working techniques?
- what are the most precious metals? and how were they processed?



## Meeting 5 (20 July): Metalworking: Manufacturing Processes

### Central book:

- The book that I enclose is comprehensive of all the production techniques used in antiquity. I am enclosing it entirely out of your curiosity but the pages that will be examined refer to chapter 5. From page 225 to page 237 of the pdf.
- [Metalwork cap. 5](#)

### Discussion Questions:

- What are the most used techniques for working gold and silver?
- Why is silver more important than gold?



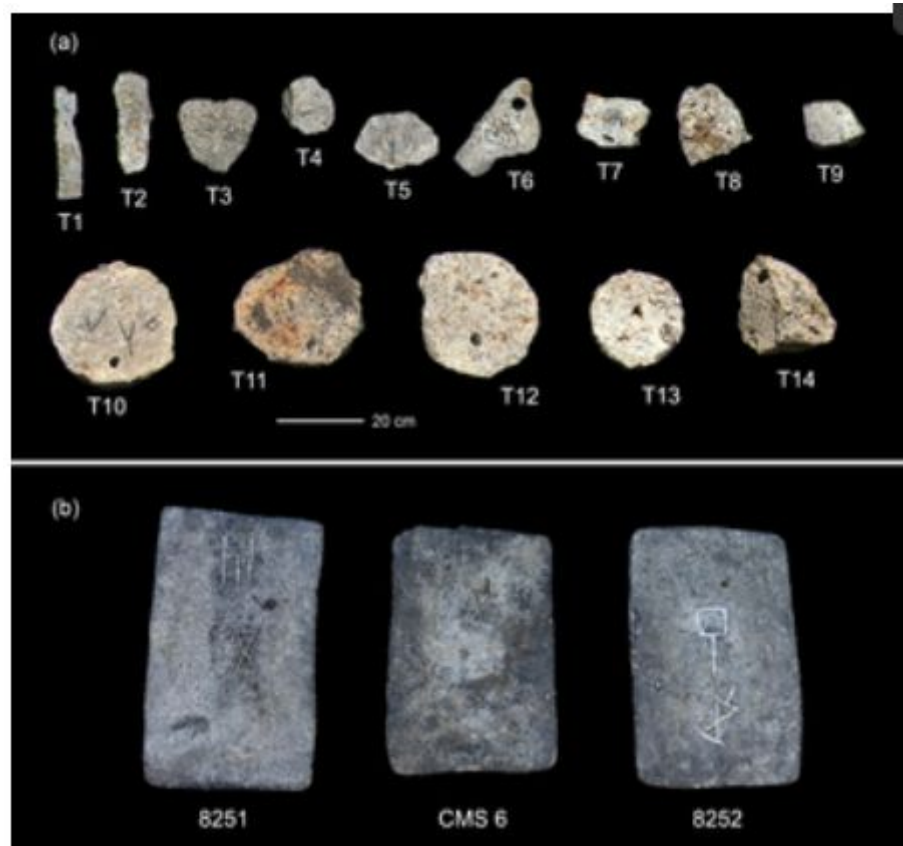
## Meeting 6 (27 July): Metalworking: Silver and Base Metals

### Central book:

- The book that I enclose is comprehensive of all the production techniques used in antiquity. I am enclosing it entirely out of your curiosity but the pages that will be examined refer to chapter 5. From page 225 to page 237 of the pdf.
- [Metalwork cap. 5](#), for this Meeting pp. 234- 249.

### Discussion Questions:

- What are the most used techniques for working silver?
- What are the Base Metals?





## Meeting 7 (3 August): Metalworking: Copper and Base Metals

### Central book:

- The book that I enclose is comprehensive of all the production techniques used in antiquity. I am enclosing it entirely out of your curiosity but the pages that will be examined refer to chapter 5. From page 225 to page 237 of the pdf.
- [Metalwork cap. 5](#), for this Meeting pp. 246- 260.

### Discussion Questions:

- What were the most used metal alloys?
- Is it possible to reconstruct the role of metal workers?



## Meeting 8 (10 August): Iran and the Bronze Age Metals Trade in the Persian Gulf

Central articles:

- [Bronze Age Southwest Arabia](#)
- [On the Importance of Iran in the Study of Prehistoric Copper-base Metallurgy](#)

Discussion Questions:

- Why are Oman and Iran two areas so important for trade?
- what does the use of metal represent for a community?

