Cyprus and the Copper Trade

Entanglements

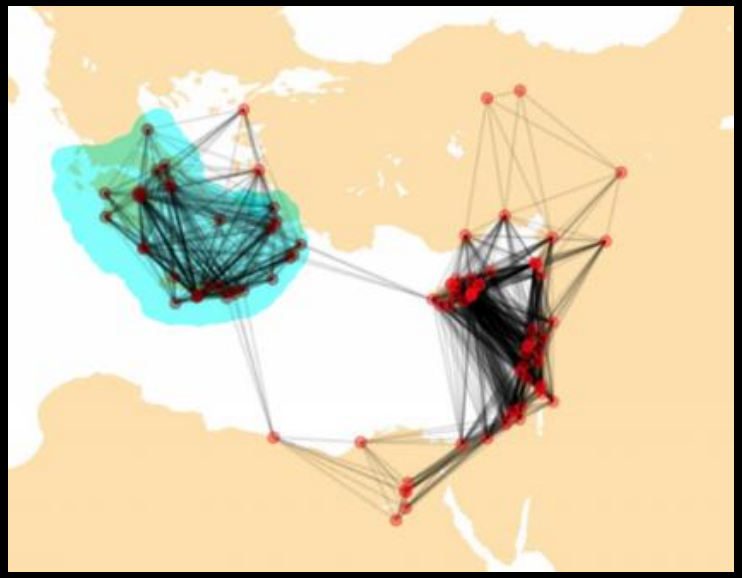
Actor Network Theory

- A relational ontology:
  - How people & things work together
- Builds upon object agency
  - Extends social networks beyond human individual actors to non-human actants
  - Explores the webs of relations between people & the material world

EBA network

ANT

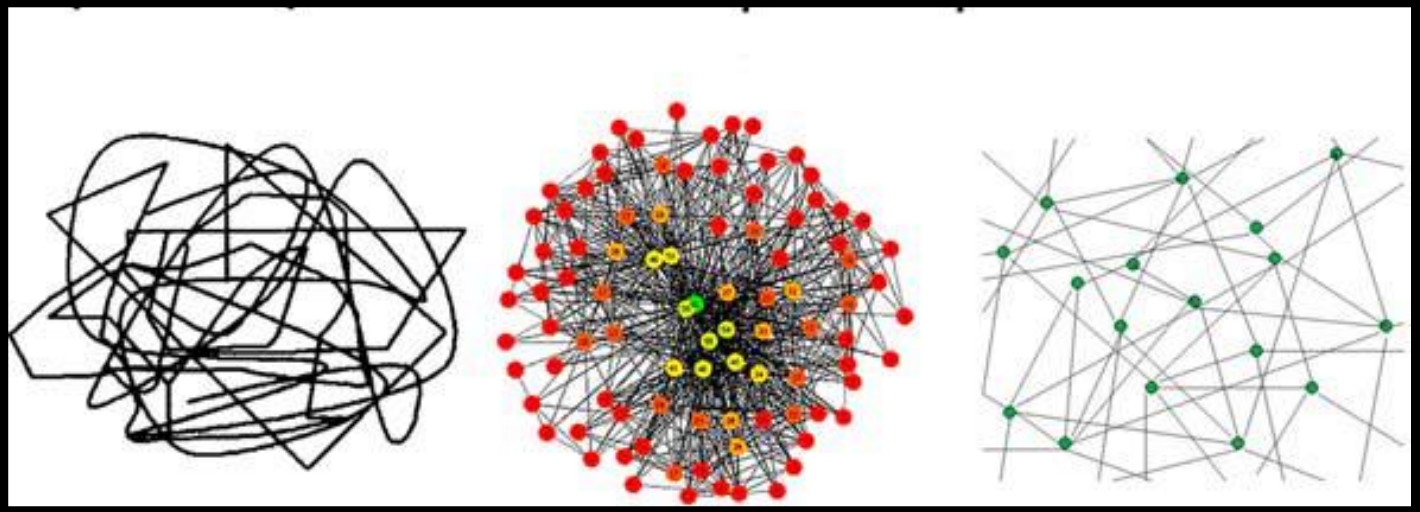
- Actor / actant:
  - Something/someone that modifies a state of affairs & makes a perceptible difference
  - Represented as nodes
- Network:
  - An interactive assembly of actors, group, or 'string of actions'
  - This should leave a physical trace that can be followed & recorded empirically



LBA Networks

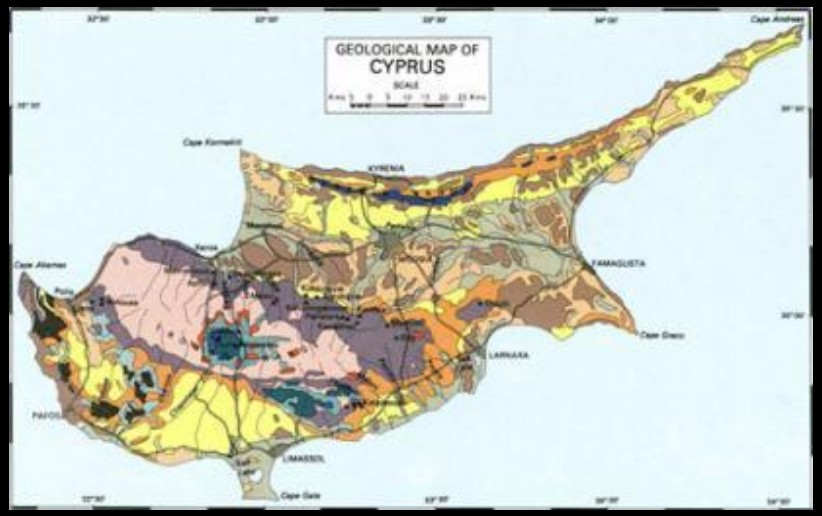
ANT

- Nodes: human & non human entities with agentive capacity
- Webs/nets: how these entities are (inter)connected
- How to understand the distribution & circulation of these entities
- Places emphasis on showing how associations are made & transformed



Cyprus & the Copper Trade

- Cyprus: strategic position
- Mineral wealth:
  - Potential to play key role in BA economic exchanges
- What evidence is there for copper exploitation?
- Where & when do we see Cypriot copper being traded?



"Prehistoric" Background

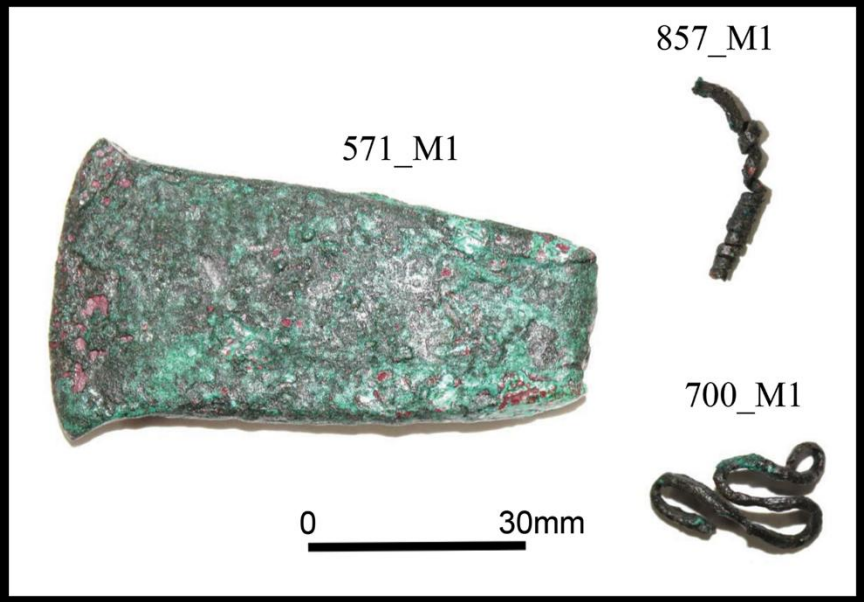
- Middle Chalcolithic period: *c*.3500-2500 BC
  - Essentially still "stone age"
- Procurement of picrolite: associated with early development of copper metallurgy
- Native copper & hammered technology

Copper awl

Picrolite cruciform figurine

Late Chalcolithic/Philia: c.2500-2350 BC

- Transition to EBA: introduction of new social practices from Anatolia:
  - Cattle rearing
  - New Red Polished drinking equipment
  - New copper/bronze tools & weapons
- Copper extraction underpins changes



Copper objects from Chlorakas

Early Bronze Age Metals Trade

- Lead isotope analyses: complex metals trade in EB Mediterranean
- Common metal "currency"
  - Cycladic & Anatolian copper traded as ring ingots
  - Cypriot (& Cycladic) copper as perforated axe-heads
- Primarily (arsenical) copper
  - Tin bronze used sparingly – personal adornment

Copper ingots

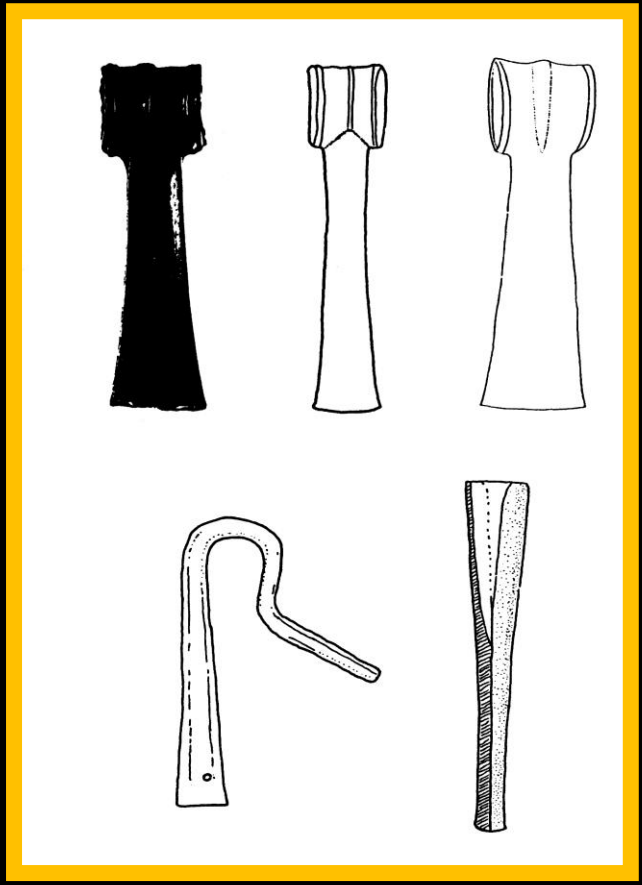
Copper Trade in the MBA

- 18th-17th century BC:
  - Mari & Babylonia archives
  - Alashiya exported (mountain or refined) copper or bronze
- MC II-III Cyprus: small scale regional metalworking industry
  - Usually arsenical bronzes
  - Alambra: occasional tin bronzes

EC-MC metalwork, Alambra

MC III-LC I Burials

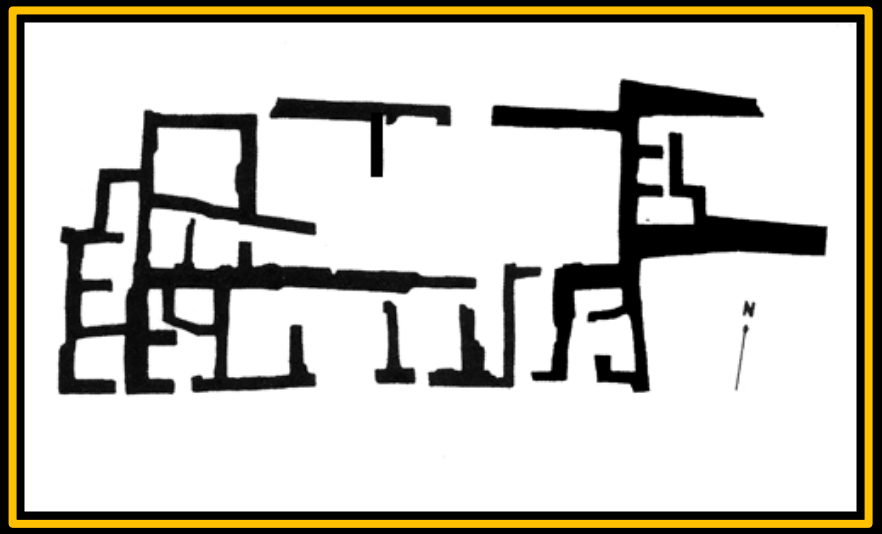
- Warrior burials:
  - Socketed axe-heads
  - Bronze belts
  - Stone maceheads
  - Horse burials
- Near Eastern symbols of power & kingship:
  - Consuming the exotic
- Source of power & wealth lies in control over copper resources



Socketed axe, Dali *Kafkallia*

MC III-LC I Copper Production

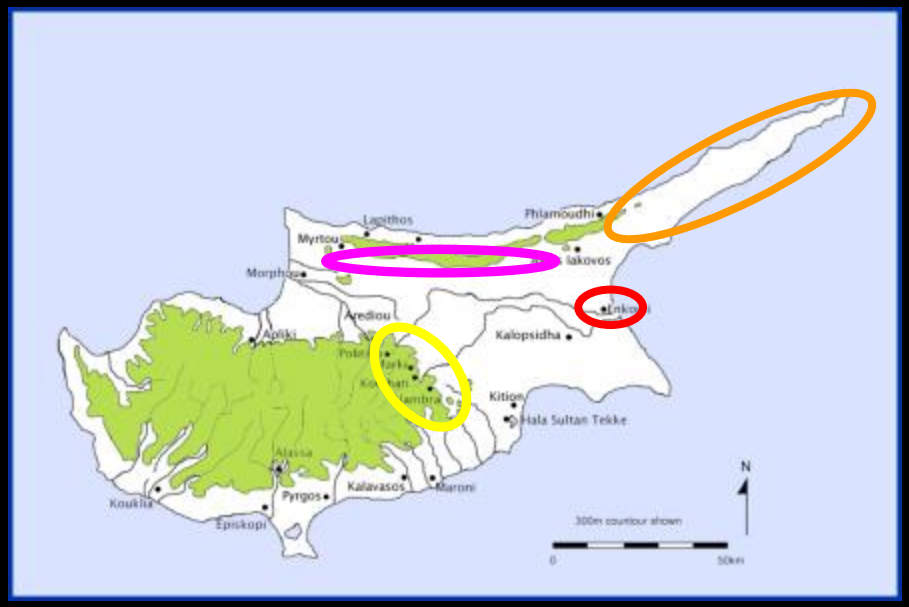
- Enkomi: dominated by monumental building:
  - Centralised control over copper production
  - Production of wheelmade pottery & seals
  - Writing
  - Wealthy burials
- Elite control of copper production for trading purposes



Enkomi fort

MC III-LC I Copper Production

- Forts: new feature in Cypriot landscape
- Location suggests strategic communication points:
  - Key role in protection of movement of copper to new coastal sites
- Centralised exploitation of copper controlled by new coastal sites:
  - Procurement, processing, distribution, exchange



LBA Cyprus

Mining Sites

- Mining & primary smelting of the sulphide ores
- Debris: furnace conglomerate & slag
- Two sites identified:
  - Politiko *Phoradhes*: 16th century
  - Apliki *Karamallos*: 13-12th century

Politiko *Phoradhes*

Metallurgical Production

- Secondary smelt (of furnace conglomerate) at urban centres
- Extensive finds of by-products:
  - Copper slag, furnace fragments, crucibles, tuyères
- Temple control over metallurgical production
- Also ingots for export & finished artefacts

University of Cyprus: Experimental archaeology

Metallurgical Production

- Craft production in urban centres:
  - Tools & weapons for daily use
  - Luxury items for temple votives, burials & international gift exchange
- To what extent can we identify attached specialists?

Four-sided bronze stand (International Style?)

LC II- LC IIIA

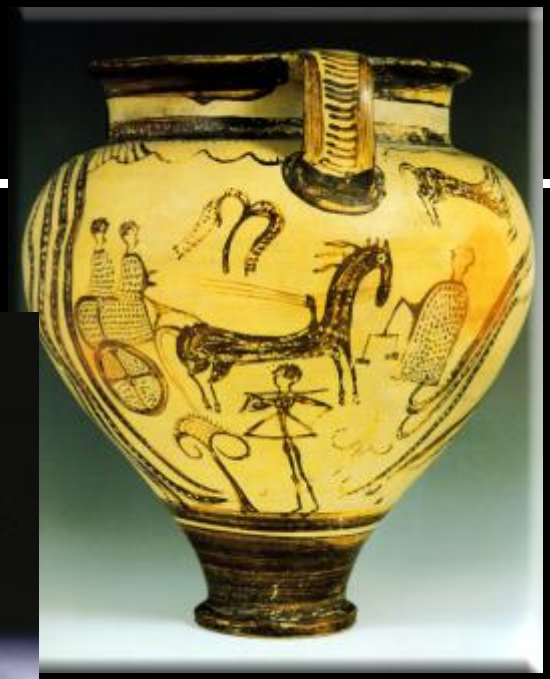
- Height of Cypriot copper production
- LC IIC: hemispherical bronze bowl = sign of wealth/status
- Development of distinctive bronze-working tradition:
  - Figurines
  - Tripod stands
  - 4-sided (wheeled) stands

Hemispherical bronze bowl

Religion and Copper

- Control of copper production at several sanctuaries
- Representations of ingots:
  - Miniature votive ingots
  - Bronze stands: ritual processions
  - Possibly depicted on seals
  - On Mycenaean pictorial kraters
- Knapp: manipulation of religious ceremony & symbols to legitimise control of copper industry

Bronze stand



Zeus krater

Votive ingot

LC IIC-IIIA

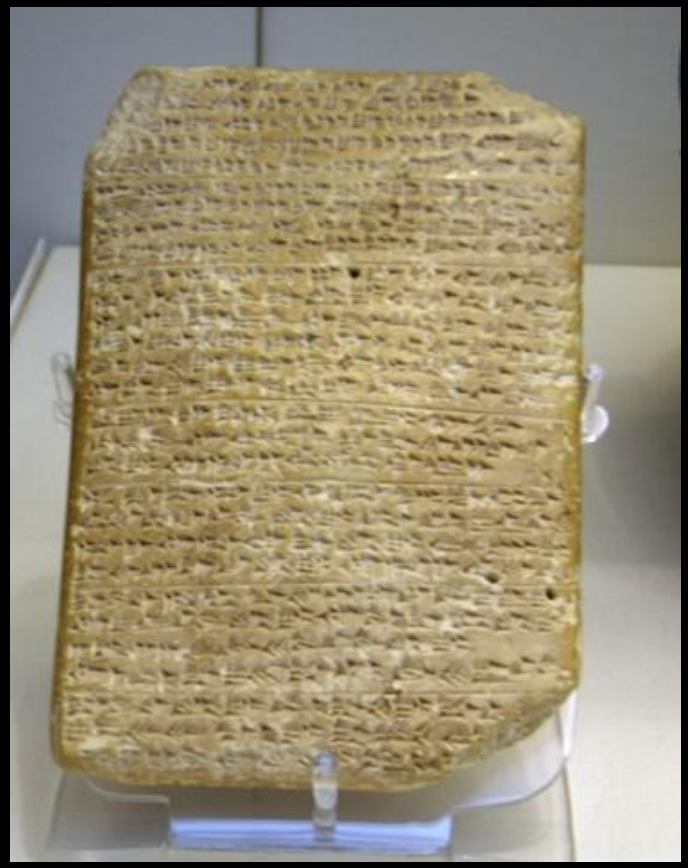
- Two bronze statuettes standing on miniature ingots:
  - Male protective deity & female fertility deity
  - Overseers & protectors of the Cypriot copper industry

Ingot god

Bomford statuette

Copper Trade: LBA Texts

- Annals of Tuthmosis III:
  - Lists tribute of copper ore from *a-si-ja*
- 14th century Amarna archives:
  - 8 letters from King of Alashiya
  - Gifts always include copper (typically 100-500 talents)
- 13th century: Hittite archives
  - "they have brought the copper & bronze from Alashiya, from Mount Taggata"



EA35: Hand of Nergal

Archaeological Evidence for Trade

- Copper & tin were the basis of the LBA metals trade
- Does this circulate as commodity or gift?
- What is the source:
  - Prior to 13th century no evidence for trade in Cypriot copper
  - Ingots from LM I Crete: non-Cypriot origins
  - Also those illustrated on Egyptian 18th Dynasty tomb paintings?

Copper ingots from Ayia Triadha

Archaeological Evidence for Trade

- Traded in standardised ingots
- Widely distributed throughout Mediterranean
- Lead isotope analysis indicate Cypriot source from 13th century BC

Mediterranean

Copper ingot from Cyprus

Egyptian Faience Bowls

- Concentration of Egyptian faience bowls in LC IIC-IIIA
- Marsh bowls popular in temples of Hathor associated with mines:
  - Colour & iconography suitable for Lady of Mefkat (turquoise)
- Hathor protectress of mining & acquisition of raw materials from abroad

Faience bowl from Enkomi

Hathor & Copper

- "Since Hathor was so closely identified with copper-mining… the unusual concentration of her cultic equipment in copper-producing Cyprus is unlikely to be fortuitous" (Peltenburg 2007: 384)
- Proliferation of Hathor-related objects on Cyprus at end of LBA:
  - Period associated with breakdown in palace trade & more widespread access to luxury products
- Popularity of Hathor bowls:
  - Local metal producers aware of the benefits of invoking cult of Hathor to ensure continued prosperity of copper production (during period of change)

Summary

- Late integration of Cyprus in trading networks but in second millennium becomes pre-eminent for copper
- Texts imply this exchange dates back to the MBA in Near East
- Definite part of Amarna exchanges
- Cypriot copper widespread throughout Mediterranean from 13th century:
  - Gift exchange or commodity trade?