Bronze Age pottery from Verona (lower Po valley)

Gabrielle Poulet
Andrea Trameri
Marielena Circiello
Matteo Stangalini
Daniel Popescu
Po river

- a major river in Northern Italy
- almost 700 km long
- forms the alluvial plain where the pottery sherds were found
Places where Bronze Age pottery sherds were found
- often regarded as a syncline, or a dip in the crust due to compression at the edges

- a virtual syncline, a sediment-filled trough that continues also under the Adriatic Sea (Bridges, Michael 1990)

- subject to heavy flooding sediments carried by the river over a high surface area
For an historical and archaeological contextualisation, Bronze Age in continental Greece has culturally been called Helladic.

The scheme is based on the relative datations of pottery.

<table>
<thead>
<tr>
<th>Period</th>
<th>Dates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Early Helladic I</td>
<td>2800-2500</td>
</tr>
<tr>
<td>Early Helladic II</td>
<td>2500-2300</td>
</tr>
<tr>
<td>Early Helladic III</td>
<td>2300-2100</td>
</tr>
<tr>
<td>Middle Helladic*</td>
<td>2100-1550</td>
</tr>
<tr>
<td>Late Helladic I*</td>
<td>1675/1650 -1500</td>
</tr>
<tr>
<td>Late Helladic II</td>
<td>1500-1400</td>
</tr>
<tr>
<td>Late Helladic III</td>
<td>1400-1060</td>
</tr>
<tr>
<td>(Submycenaean)</td>
<td>1060-1000</td>
</tr>
<tr>
<td>Protogeometric</td>
<td>1050-900</td>
</tr>
</tbody>
</table>

Wace-Blegen, 1916-1918
Blegen, 1921, 1928
Furumark, 1941
INTRODUCING MYCENEAN POTTERY: MINYAN WARE

monochrome burnished pottery produced from extremely fine or moderately fine clay. Typical is the polished brilliant surface, an accentuated angularity of shapes.

In each case Minyan ware coexists with matt-painted ware, with painted non polished decoration (geometrical).
LATE HELLADIC: MYCENAEAN WARE

Among the upper mentioned archaeological periodizations, for the Late Bronze Age, age of “Mycenaean” Greece):

<table>
<thead>
<tr>
<th>Period</th>
<th>Dates</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>LHI</td>
<td>1675/50-1500*</td>
<td></td>
</tr>
<tr>
<td>LHIIA</td>
<td>1500-1450</td>
<td></td>
</tr>
<tr>
<td>LHIIB</td>
<td>1450-1400</td>
<td></td>
</tr>
<tr>
<td>LHIIIA1</td>
<td>1400-1350</td>
<td></td>
</tr>
<tr>
<td>LHIIIA2</td>
<td>1350-1300</td>
<td></td>
</tr>
<tr>
<td>LHIIIB1</td>
<td>1300-1230</td>
<td></td>
</tr>
<tr>
<td>LHIIIB2</td>
<td>1230-1190</td>
<td>(destruction lv. in many sites)</td>
</tr>
<tr>
<td>LHIIIC (Early)</td>
<td>1190-1130</td>
<td>new ceramic</td>
</tr>
<tr>
<td>LHIIIC (Middle)</td>
<td>1130-1090</td>
<td></td>
</tr>
<tr>
<td>LHIIIC (Late)</td>
<td>1090-1060</td>
<td>definitive destruction at Mycaene-Tirynth.</td>
</tr>
</tbody>
</table>

*this “high” date is due to a set of C14 established dates from Tsoungiza, which dated back assigned pottery of almost 100 years. Ceramic LHI was also discovered in Thera, evidently before the catastrophic explosion of 1650-1625.
Mycaenean settlement sites appeared in Epirus, Macedonia, Aegean islands, Asia Minor, Levant, Cyprus, Italy, and artifacts have been found also well outside the limits of the Mediterranean world.
Mycenaean stirrup vase, 14th-13th centuries BC, imported to Ugarit. (Ras-Shamra)

Chariot krater, ca. 1400–1370 B.C.; Late Helladic IIIA

Palace style amphora with three large octopuses. Mycenaean cemetery at Argive Prosymma tomb 2. 15cent BC.
SOME ARCHAEOLOGICAL PROBLEMS

• Datation schemes for pottery are reconstructed on stilystical base mainly on analyzing continental Greece contest.
  • exportation
  • authonom developement on local level

• It’s problematic, in archaeology, to assign a cultural behaviour to a defined ethnic group, or population. (ex. Dorians).

• A major lack in Mycaenean documentation is the absence of references on commerce in Linear B script clay tablets. (All the informations must be collected on material culture (“protohistoric/prehistoric studies”).
  • lack of written sources: advantages (objectivity) and disadvantages
  • great help of scientific methods
The aegean type pottery in the sites of Lovara, Bovolone and Terranegra

Recent studies have identified new sites, not far from the Valli Grandi Veronesi, where for the first time the Aegean-type pottery fragments were found in stratigraphic excavations.

The three sites analyzed are:

- Lovara di Villa Bartolomea
- Crosare di Bovolone
- Terranegra di Legnago

Aegean type pottery.
Lovara di Villa Bartolomea

Two major settlement cycles, separated by alluvial deposits of the Final Bronze Age and early Iron Age:

1st cycle: Recent Bronze Age
2nd cycle: Iron Age

It is also excavated part of the necropolis attributable to the Iron Age village.

The late Bronze Age village presents:
- 5 stages of settlement;
- settlement surrounded by an embankment;
- 7 huts;
- plans of fireplaces;
- row of holes for poles along the walls.

**Vessel repertoire**: massive presence of elements influenced by Subapennine tipology.

**Aegean pottery type**: layer on the recent phase of the Bronze Age.
Crosare di Bovolone

- Protostoric settlement
- Medieval settlement (Prato Castello)

What was came to light:
- ordered network of buildings;
- canals;
- wells;
- fences;
- two wells excavated within two tree trunks;
- necropolis of the middle and Recent Bronze Age.

Chronologically, the site is located between an advanced stage of the Recent Bronze Age and the early Final Bronze Age.

Vessel repertoire : identity of the vascular forms with those of the Recent Bronze Age:
- absence of Subapennine handles;
- presence of individual elements, which are characteristic of successive phases;
- bronze fibulae.
Terranegra di Legnago

Such as in Lovara case two following settlements were identified:
• one of the Recent Bronze Age;
• one of Iron Age.
The layer of abandonment that separates them is of the Final Bronze Age and early Iron Age.
The settlement of the Bronze Age was marked by a bank and a ditch outside, probably connected with a watercourse.

Have been retained:
• residential structures;
• post holes along the walls;
• remnants of levels of use due to restructuring of the huts

Vessel repertoire: more affinity with the region of the Adriatic peninsula rather than the terramare area.
Archaeometrical analysis for the investigation of production techniques

Italian ceramic production in the Recent Bronze Age and early Iron Age

Pre-wheel techniques (hand-forming)

Samples from the sites of Bovolone, Lovara and Terranegra:

- thin sections
- macroscopical investigations
- chevron-type microtexture
- symmetrically-zoned-structure of the ceramic wall: “sandwich-type”

hand-forming
A collection of Aegean Pottery found in Verona region.
FONDO PAVIANI

Closed shape alabastron
EXPANSIVE GOODS
IMPORTED
(WINE, PURFUMS, OILS)

Open shape crater
NICE WARES
STATUS SYMBOL

craft activities, related with amber and glass

Terminal of large commercial routes
FRATTESINA

TERMINAL OF EXCHANGE BETWEEN NORTH AND EAST

FORECOMER OF SPINA, ADRIA, AQUILEIA, VENEZIA
CERAMICS SHARDS

- CLASSICAL ARCHAEOLOGY
- SHAPE
- DIAGNOSTICAL SHARDS (NECK, LIP, FOOT, ETC)
- UNDIAGNOSTICAL SHARDS (BODY SHERDS)
- INSIDE PASTE
- MAKING OF
- DECORATIONS
- BAKING METHODS
IMPORTANCE OF STRATIGRAPHY

- LET'S EXCAVATE!
ARCHEOMETRY ON CERAMIC

main problem: heterogeneous

- MICROSCOPE
  - Texture
  - Clasts

- XRAY-difractometer
  - Percentage of single element

• clue on provenance, making method.

Clue on provenance

Assumption: (at least low) standardized production
2002 chemical analysis on Aegean shards of the low Po Valley

- Mycenean wares produced in Apulia
- Mycenean wares produced in Greece
- Local Imitations

RESULTS
Some point needed of further study

According with Vidale Massimo
(“Ceramica e archeologia”, Carocci 2007)

- Ceramic alteration during time
- Elements concentration inside a single ware
- Construction of a corpus with statistical analysis.
Petrographic analysis of the pottery sherds

- The sherds can be divided into two major groups (with or without grog). The ones with grog (17%) have either no inclusions at all or distinctive clasts mostly derived from a fossil-rich limestone.

- Clasts from all pottery sherds are either sedimentary/metamorphic or igneous. The first ones are represented by mica schist/quartzite fragments, calcite, rare sandstone and micrite and clay accretions, along with grain fractions of quartz, orthoclase, plagioclase and muscovite/biotite.

- Igneous clasts and feldspar are quite frequent and include distinctive rock types such as rhyolite and/or trachyte.
The majority of the sherds are fine textured and dense, but some are also coarse, mainly those with fossils. There are also some porous sherds. (David et al)

Small amounts of coloured glass particles may be present in some sherds.
The matrices of locally made pottery all share a common feature, having originated within well-sorted fluviatile deposits, which are abundant in large depositional basin such as the lower Po valley (fine granular calcite, bioclasts, small concretions of calcareous ooze, or fragments of micrite). This can be an indicator of local provenance.

Mycenaean pottery sherds have been found, with a composition resembling the pottery made in Greece, suggesting a trade route (Jones, Vagnetti et al).
Bovolone

Grog and bioclasts

Oxidation and reduction zones

Orientation of the texture
Calcite rich sherd
Oxidation and reduction zones (sandwich structure)

Fabrica dei Socci
Summary

- The pottery sherds were found near Verona, in the lower Po valley.

- Bronze age pottery: locally made and imported Aegeo-Mycenaean.

- Different compositions and structures with grog, clasts (calcite, mica, feldspar, rock fragments, fossils) and glass.

- The paste of local vessels contains alluvial sediments that indicate this provenance and Mycenaean vessel resemble more those made in Greece rather than the ones made in Italy.