

## **Pandora's pithos**

Andrew Bevan

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### **Abstract**

*Large clay jars have long been popular for both wet and dry storage, but are particularly associated with Mediterranean wines and olive oil. Such 'pithoi' also underpin important historical shifts in social complexity and landscape investment, play prominent roles in Mediterranean social life, and thus offer an excellent opportunity to think about the deeper consequences of container culture.*

In myth and folklore, physical containers—cups, sacks, cauldrons, chests, amphorae, barrels, ships or houses, for example—often play a central role. However, observed over multiple story-tellings, the actual form of these objects sometimes exhibits considerable plasticity. The Holy Grail for instance is a notoriously mutable vessel type across different Medieval and modern accounts, just as it was famously hard to find. Likewise, in the origin myth of medieval Venice, the relics of Saint Mark were smuggled out of Egyptian Alexandria under cover of a layer of pork that local Muslim authorities did not wish to check too closely: in earlier accounts, the container is a local palm-lined, leather satchel (the Alexandrine *sporta*), while later accounts prefer the Venetian wine barrel, as a far more commercially-patriotic object for northern Europeans. If we accept that such objects are not just utilitarian props but often key conceptual metaphors—good for society to think with—then it is unsurprising that their materiality is sometimes reshaped by accident of translation, for new discursive agendas, or for new packaging tastes. 'Pandora's box' is no exception, and it is to the more primordial version of that story's container that this brief paper devotes historical attention.

The Greek myth of Pandora recounts a divine punishment inflicted on humankind for their acceptance of the gift of fire, which had been stolen for them by Prometheus. In late Medieval (early 16<sup>th</sup> century onwards) and modern versions, the container is typically a chest (like a dowry chest) or a small valuables box (a *pyxis*, thereby with extra resonance for those familiar with the 'pyx' used to store the divine host in Christian liturgy). In the best-known telling, Pandora is given the container by Zeus and told not to open it, but curiosity or greed get the better of her and, on opening it, a host of evils is released into the world to beset humans forever. Only 'Hope' (Greek *elpis*, perhaps better 'expectation') remains inside as the lid is closed again, leaving it with an ambiguous future, either trapped or protected. Today, invocations of 'opening Pandora's box' convey a quick moral tale about the risks of too much curiosity or the unintended long-term consequences of ill-judged, short-term actions. However, from the earliest surviving account (~700 BC, Hesiod's *Works and Days* 96-99) right through until at least the 12<sup>th</sup> century AD, the box was consistently referred to as a clay storage jar (*pithos*), thereby invoking a ubiquitous feature of Mediterranean life right up to the near historical present (most recently, Gelichi 2016). Pandora herself is likewise said to have been fashioned directly out of clay and water by the gods, the world's first mortal woman, and Hesiod seizes on this parallel between two clay creatures to develop a personal diatribe against women as the real containers of woe. In other, sometimes earlier accounts, however, the

pithos can be opened without or without mention of Pandora, and either the same or a second jar can be full of blessings (Panofsky and Panofsky 1956).

As Jane Harrison first deftly pointed out more than a century ago (1900), the often-central role for the large-clay storage jar in the release of evil spirits is no accident. For example, Athens held its Anthesteria festival sometime in February or March each year, with three days of activity each named after a particular container: the *Pithoigia*, the *Choës* and the *Chytroi* (roughly, the Jar-Opening, the Jug-Pouring and the Pot-Cooking). The first two days were full of Dionysian celebration, but were also thought unlucky: the *Pithoigia* was both a first opening of wine-pithoi to taste the vintage from last year's harvest and a symbolic release of evil spirits into the world of the living. People chewed buckthorn and covered their house-doors in pitch to ward off such spirits (the latter was also used to drive away spirits during childbirth, and may relate to the internal pitch-covering used on wine pithoi and amphorae to prevent spoilage). The final, third day of Anthesteria saw the return to order and recapture of these spirits. Harrison almost certainly remains correct to have linked the festival with imagery such as **figure 1a**, showing Hermes conjuring winged spirits out of a half-buried pithos, and to have proposed the festival's roots were in underworld ancestor cult (even if seasonal ceremonies of pithos-opening do go back into the Bronze Age, for example Puhvel 1991, 194-99). Both ordinary pithoi and bespoke versions had traditionally been used as coffins in Geometric-Archaic Greece (**figure 1b**, and see below) as they frequently were elsewhere in the Mediterranean. Beyond this, such human-sized vessels have always had complex biographies that overlap with other socially-charged, human-bending categories such as tombs, temporary dwellings, hiding places and prisons (e.g. Diogenes the Cynic philosopher was supposed to have lived in a pithos, later to become a barrel for Medieval audiences; and for a more modern morality tale of pithos-as-prison, see Pirandello 1990 [1919]).



Figure 1. (a) a white-ground oil flask from Attica, Greece showing Hermes Psychopompos ('conveyor of souls') conjuring winged creatures out of, and possibly back into, a half-buried storage jar (~470 BC, height 0.19m; Friedrich-Schiller-Universität Jena Sammlung Antiker Kleinkunst V225, Photo: Dennis Graen); (b) a decorated burial pithos from the Greek island of Mykonos with the earliest known depiction of another famous mythic container, the Trojan horse (~670 BC, height 1.5m; Mykonos Archaeological Museum 2240; copyright Hellenic Republic, Ministry of Culture and Sports, General Directorate of Antiquities and Cultural Heritage/Ephorate of Antiquities of the Cyclades)).

In any case, my goal in introducing the above Archaic-Classical Greek details has been to highlight how this particular container form might have become fairly central to the way a Mediterranean society thought about moral good and evil, resource concentration and dispersal, the living and the ancestors, the changing of the seasons, or food scarcity and abundance. More prosaically, large clay storage jars or *pithoi* (other ancient or modern terms such as *dolia*, *karasi*, *kvevri*, *talha* or *tinaja* could be used too, although they are often more narrowly connected to wine-making) were a technological solution to the problem of dry and liquid storage, and were particularly relevant in the Mediterranean due to the demands of the wine and olive oil industries. What I will seek to make clear in the brief comment that follows is that such a solution was far from the only one available, that its technology spread across the Mediterranean and through time in structured, interesting ways, and that its widespread adoption also opened the lid on a host of longer-term cultural consequences.

Pottery containers have a very deep history as human artefacts among both hunter-gatherer and agricultural societies. However, even just sticking with storage of agricultural foodstuffs, it is clear that pots have always also existed alongside a massive

range of alternatives. Throughout Mediterranean history, for instance, households and large institutions have stored foodstuffs in unfired clay or dung bins, in large or small subterranean pits, by hanging them from house rafters, on raised and/or stilted platforms, in wooden chests and staved barrels, within leather or woven sacks, inside hourglass baskets, etc. (e.g. Peña-Chocarro et al. 2015). We usually underestimate these alternatives because pottery survives so disproportionately in the archaeological record, but any discussion of pithoi nevertheless demands attention to this wider container universe, and a potentially flexible range of storage decision-making (for the latter, Halstead 2014, 157-163). The pithos' closest container links are arguably with pottery amphorae (Bevan 2014): both were specialised forms that evolved (precociously when compared to other parts of the world) alongside the storage demands of Mediterranean oils and wines, but thereafter were used for a wide range of products. The amphora was tuned to the needs of bulk maritime transport, while the pithos was its larger terrestrial cousin, even if we still see many archaeological examples of amphorae used on land and pithoi at sea. Until fairly recently, both pithoi and amphorae were raw data for bureaucratic elites: they are countable, securable, surveillable things and it is no surprise that archaeologists find them intimately associated with jar-sealings, stamped administrator's marks, locked doors and palatial inventory lists.

Pithoi are giants in the pottery world, usually 0.5-2m in height and 100-2000L in capacity, but with lots of variation. A half-metre minimum size threshold is a bit arbitrary on my part, but nevertheless reflects some mechanical limitations of both humans and clay, beyond which there is a socio-economic step-change. A really large pot cannot usually be built from one lump of clay, so is typically made with multiple coils or slabs, sometimes with the aid of a tournette and/or with external bands to reinforce joins. The potting skills required to make such objects, in quantity and consistently, are specialised ones, and the kiln infrastructure required is sometimes considerable. Excellent ethnographies of large-jar potters, especially in Greece and Cyprus (Blitzer 1990; Voyatzoglou 1974; Giannopoulou 2011) suggest that such people are often an economically vulnerable group rather than wealthy, pass down their skills through generations of the same family but sometimes only work seasonally (contributing to agricultural work the rest of the year) and can be itinerant (taking their skills either on a tour of existing consumers or indeed to new opportunities, not least because the demand for pithoi is not necessarily large in any one place). Graffiti on some 4th century BC Greek pithoi suggest prices equivalent to 30-50 days' pay for an experienced labourer, an order of magnitude more than that suggested for black- or red-figure decorated vases, despite the latter being far more esteemed today (Robinson and Graham 1938, 314-316; Johnston 1974), and Roman accounts suggest a similar price range (e.g. Apuleius *Metamorphoses* 9.6.3; Diocletian's *Maximum Price Edict* 15.97), probably reflecting the fact that such large complex vessels could take several weeks to make. Archaeologically-recovered pithoi therefore unsurprisingly exhibit frequent attempts at repair, while historical accounts mention pithoi as consequential items in people's estates, in both cases because such jars were being carefully curated and passed down through generations (Cato *De Agri Cultura* 1.4-5, *Digest* 19.1.26; *Geoponica* 6.3).

In terms of technical performance, pithoi are more vermin-resistant and achieve better temperature control than many other pre-industrial food storage solutions. Unlike amphorae, pithoi usually have a large mouth that could be sealed by a flat wood, clay or stone lid, with the contents ladled or scooped out. Globular pithos designs are more

structurally robust and help minimize contact between clay and contents which sometimes improves preservation, but they typically need burying in the ground so essentially are an enhanced form of pit. In contrast, flat-based, barrel-shaped designs can be left free-standing in ordinary rooms, but require careful reinforcement of the vessel walls to avoid catastrophic structural failure. Two or more handles often allow them to be manipulated by several people working together and or trussed and hoisted into place. Pithoi were and are often carefully repaired by their owners and can have use-lives of several decades. As a guide, a small (e.g. nuclear) family might require 1500-3000L of storage capacity to have enough food for a year and some extra to cover a bad year (Halstead 2014, 157-163), so a few larger pithoi would provide a significant contribution to these storage requirements, but rarely all of it. Palaces, temples, castles and monasteries with magazines of tens or hundreds of pithoi highlight how easily such jars enabled capital accumulation for the wealthy, with the oils, wines, cereals and other products in such stores often then being deployed politically, for feasts and for clients. Breaking open, tipping over and/or setting alight such jars in their magazines was a common act of sabotage, to judge from the fire destruction levels of many elite buildings, which is both testament to the iconic nature of such centralized, sequestered storage and the economic and ideological risk it posed.

When the pithos was playing its part in 5<sup>th</sup> century BC Athenian festivals, similar-sized clay storage jars were already well-established in Etruscan Italy, but in contrast just beginning to be made locally in Spain (based on Phoenician prototypes) or southern France (based on Greek ones). So, the mid 1<sup>st</sup> millennium BC marks the culmination of a slow, basin-wide expansion of this storage strategy eastwards across the Mediterranean, playing out over more than three millennia. The early stages of this story exhibit many false starts: as far back as the Neolithic, there are precocious examples of larger pottery vessels (pushing 50cm tall or more), but these virtuoso early efforts rarely coincide with a wider set of changes in storage practice or cultural life. They are therefore worth distinguishing from (a) the incipient but more systematic later efforts we see to produce many such vessels, often during periods of wider Mediterranean cultural contact, increased production of added value liquid commodities, (especially wine, also olive oil) and growing socio-economic complexity, and (b) after that, well-established and enduring pithos cultures in operation basin-wide from the Iron Age onwards. A quick survey across the Mediterranean of exactly when pithoi move beyond the virtuoso rarities (**figure 2**) suggests clear transmission from east to west over a period of three and a half millennia (4000-500 BC). The earliest systematic pithos production goes back at least as far as 4000 BC and linked with sharply increased evidence for wine-making (in the Chalcolithic southern Levant and/or southern Caucasus, e.g. Barnard et al. 2011). By the 3<sup>rd</sup> millennium BC, the pithos idea had spread into Syria and Anatolia, with whole cemeteries of people also buried with re-used pithoi as coffins. In the Aegean, the adoption is slightly later: there are indications that both mainland Greece and Crete are exploring larger pots as a storage option by the Early Bronze Age (~2500 BC), but such items become widespread by the start of the 2<sup>nd</sup> millennium BC, with a move to pithos burial in many places again being a significant indication of a wider container life (demanding altered mortuary practice, such as quick treatment of the body before *rigor mortis* to ensure it fitted into the jar). A further move westwards is visible when pithoi appear across southern Italy, Sicily and the Aeolian islands during the later Bronze Age (1400-1100 BC, often 1-1.25m high and 300-550L), alongside more consistent contacts with the Aegean world. These become strikingly visible on even the smallest southern

Italian farmsteads by the final stages of the Bronze Age (1100-950 BC, De Neef et al 2017), indicating that these were not by this stage just a narrow technology for the hoarding of resources by a few centralized elites. Further west still, although there is perhaps early experimentation with larger pots amongst late phase Argaric communities in south-eastern Spain (1950-1550 BC, occasionally up to ~1m, but typically much smaller), it is striking that there is no clear pithos horizon in France or Spain until much later, with the Iron Age arrival of Phoenician and Greek colonies and clearer evidence for wine and olive oil production.

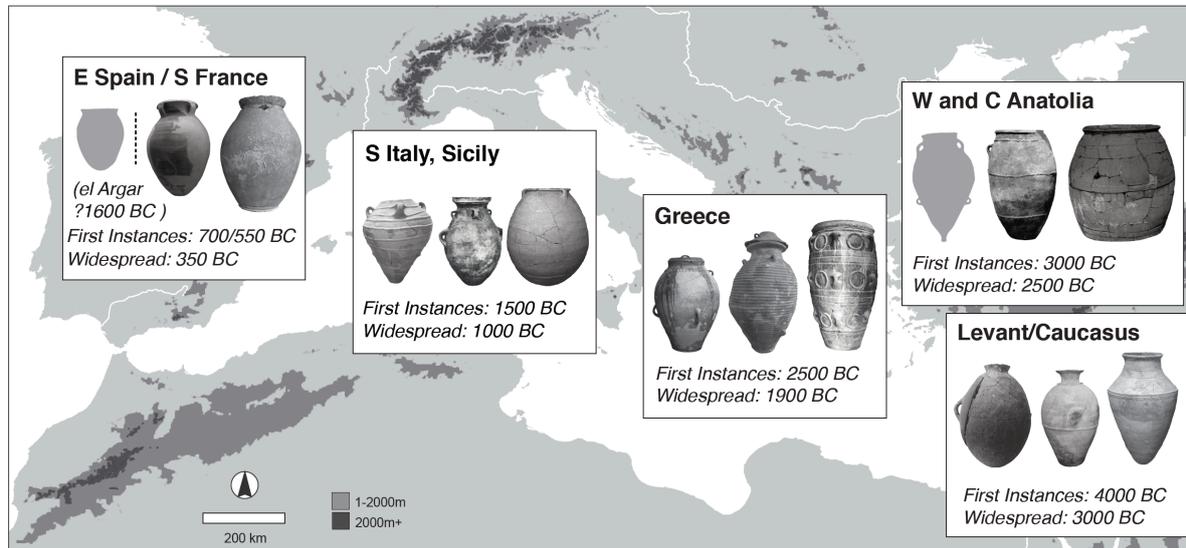


Figure 2. The expansion of pithoi in the Mediterranean (main sources: Artin 2014–2015; Christakis 2005; Lull et al. 2011; Massa and Şahoğlu 2011; Olive et al. 2009; Schiappelli 2015; Nigro 2012; Veca 2014, with further thanks to the Archaeological Museum of Andalusia, the Broglio of Trebisacce Project, K. Christakis, L. Nigro, F. Pivari, M. Py, A. Schiappelli, T. Schneider, C. Veca, P. Warren and T. Whitelaw).

So once the proverbial pithos was opened, either locally or on a pan-Mediterranean-scale, what good or evil spirits emerged? A key point to highlight is that both the westwardly geographic expansion and the Early Bronze Age to Early Iron Age timing very approximately match other, interdependent techno-cultural changes such as the spread of sail-powered ships, pack donkeys, the potter's wheel and intensive wine and olive oil production (Broodbank 2013, 257-584). In fact, most new human storage strategies release almost as many unanticipated new challenges as they provide solutions: to take advantage of this forum and speculate, we might well expect cultural cascades of nested 'enclosure acts', for good or ill, associated with any significant shift in container-based storage. For example, there might be (a) smaller-scale changes in what goes into the container (new selective forces on contents, such as changes to food or drink preparation—which comes first the pitch-lined pithos or the resinated wine?), (b) a distinctive relationship between the new container and the constant reference point provided by the human body (itself both container and possible contents, especially during key moments of transition such as pregnancy, adulthood or death), and (c) fresh challenges about how to scale up ever larger quantities of the new storage devices and secure rates of replenishment (e.g. the nested container sets of sealed jars in locked storerooms in walled houses/palaces within legally-bounded estates within increasingly territorial polities). As Andrew Shryock and Dan Smail argue in their opening paper, containers need not be the only engine of these wider changes—they all clearly reinforce one another—but the pithos is a remarkably enduring, cross-cutting Mediterranean storage solution. Other parts of the world borrow or independently develop a similar

large-jar approach, but there remains a closer, conceptually-deeper, Mediterranean association. Furthermore, the pithos' ability to preserve, cleverly age and accumulate capital-intensive, added-value liquid products is closely associated not only with a pan-Mediterranean diet, but also whole transformed landscapes of production, hyper-commodified sea-lanes and sharper monocultures of olives, wine and grain (to name just the three most salient cultivars). For better or worse, Pandora's 'hope' or 'expectation' is this very forward-looking, speculative, acquisitive feature of container culture: the seed corn kept back or vintage unopened with all of their attendant best-laid plans or fears for the new year. Indeed, at the heart of any kind of human response to long-term accumulation—whether it is to do with sequestering the potential of ancient wine, modern personal data, Medieval manuscripts, Fort Knox's gold, Pharaoh's grain, DRM-enabled digital file formats or nuclear waste—there is often an iconic artificial container, fashioned in impressive or even divine ways, but still full of human frailty and concentrated risk.

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