Identities formed from technology: the case of the Late Bronze Age Mediterranean

Dr Andrea Vianello
a_vianello@hotmail.com

Technological progress has been a constant of human history, to the point of being considered a defining aspect of human beings. Production technologies in some of the oldest cultures could provide immediate advantages that could result in social power as technological products would carry embedded meanings and symbolisms. As more cultures emerged and contacts among different societies increased, technological advancements often became expected and inserted in economic strategies. Social power could be obtained by wealth (existing economic advantage) or political reasoning (prospected welfare or economic advantage). During the Late Bronze Age Mediterranean the transition to an economic world was not completed and socio-political agency can be recognised in material cultures. In particular, the production of technological artefacts helped in constructing social identities; controlling the production meant gaining social power. The human brain, human technology and human cultures appear linked to a point where significant differences in technologies and cultures can be a prelude of changes at cognitive level and eventually produce different (cultural) identities that would have been impossible at an earlier time.

Technology has accompanied humanity from its birth and cannot be separated from the very definition of what a human being is. There are no chronological boundaries regarding technology: the human brain and its cognitive processes are continuously developing, and with them, technology. In our contemporary world, technological progress has become an expected staple, and a firm belief for the future. In archaeology, however, cognitive processes and technological packages (i.e. subsets of technologies and artefacts typical of a given culture) seem very much relegated to the Stone Age world. As civilisations emerged, one might think that “we” appeared. People of “western culture” can often trace their ancestors back to the European Bronze Age; Australian aborigines would be able to go back tens of thousands of years ago. This is the historical period, the one for which we have some memories, or at least we think we have memories, and as a result feelings and strong opinions. Of course, Bronze Age societies as well as any other society chronologically separated by just a few generations will be intrinsically different from our own society, and in our fast-paced world just a few decades can change substantially the core of a society and culture. These are not trivial considerations: evolution has constantly improved our body and our neurological asset, and it certainly did not stop when our historical memory starts. As a result, we cannot assume that all material evidence of technological progress is directly linked to cognitive changes in any but the most ancient and simpler societies, where the chronological detail of the appearance of cognitive and technological advancements hardly permits to distinguish them. Stone and other Palaeolithic tools are projections of ideas, the materialisation of abstract concepts or thoughts.
transformed into matter. Looking at them we can only recognise the potential of the ancient mind, with many uncertainties, and the symbolic potential of many discoveries pushes the “modern” human mind at a very ancient time indeed (Bednarik and Hodgson 2008), perhaps even earlier than the appearance of anatomically modern humans. Thus, it is reasonable to think that elements of the complexity of later societies appeared much earlier than the time when they become recognisable in the archaeological record.

Researching the case of the distribution of Mycenaean pottery and other Aegean-type products across the Mediterranean during the Late Bronze Age has brought me to reflect on the significance and reasons of the many changes that appear during that period. The Late Bronze Age Mediterranean exchange network is now well known in its broad terms (Wijngaarden 2002; Vianello 2005; Bell 2006). Briefly, chronologically it is the first long-distance exchange network encompassing the whole of the Mediterranean; it was connected with other long-distance European and eastern networks; and it was most definitely not controlled by a centralised system. On the southern Italian peninsula, Aegean products appear in the archaeological record since the LH I period and remain visible for a few centuries (the eruption at Thera dates to about 1600 BC). There, especially on the southern (Ionian) and eastern (Adriatic) coasts, an increased frequency in the contacts and a parallel and significant indigenous production separated the coastal settlements from their hinterland and provided the first sign of the breaking up of the widespread Apennine culture. Similar evidence is also present in Iberia, where the appearance of wheel-made Aegean-type pottery is followed by the introduction of indigenous wheel-made pottery, suggesting that with the Aegean-type pottery new techniques arrived. However, the situation in Iberia is not documented as well as that in the southern Italian peninsula.

The Aegean-type pottery is always a tiny minority of the assemblage of any site, and even adding to the count the Aegean-derivative one, i.e. the obvious imitations, the count remains fairly low. But the concurrent arrival of new techniques is very interesting. There is much evidence supporting diffusionist views according to which the Mycenaeans exported superior techniques possibly to control new territories, or perhaps the Mycenaeans were simply functional, unintentional carriers in the transmission of new techniques that were spreading from the east and simply passed through the areas of Mycenaean culture. Yet, this cultural wave of diffusion did not have any centre within the Mycenaean world that could control its diffusion in a coherent, organised way, nor the probable arrival of Mycenaean people and artisans in western territories had comparable effects to the later arrival of the Greeks, who were bringing indeed new technologies and an original culture and intentionally spreading it through colonisation. Thus, leaving aside for now the diffusionist and colonisation-based approached, what is left? Looking at the evidence in greater detail, we can note a few things.

1. The Aegean-type pottery is clearly appreciated by the indigenous people and welcomed.
2. There is a broad diffusion of the pottery, which is consumed by many, even if at first might have been considered as rare exotica or pottery for specialist functions.
3. The function of the pottery itself must have been inextricably attached to some cultural significance, costume or ritual. There is very little evidence for indigenous decorated pottery before or along with the presence of Aegean-type pottery. In short, the Aegean-type pottery rather than replacing adds new types.
4. A long time passes from the inception of Aegean-type pottery to the complete formation of new identities. And imitations and local productions start possibly a century or more after the initial arrival of the pottery.

5. The intensity of cultural, social, economic and technological exchanges with many societies, including several Italic ones, increases exponentially.

At the start of this social and economic process, LH I, the Aegean-type pottery and few other foreign products can be considered exotica, curiosities, that were assembled by local communities as a result of exchanges of needed products. Both in the Aeolian Islands (Sicily) and the southern peninsula, most early pottery is concentrated in central or larger huts, which can be interpreted as communal. Then, new storage systems affect agriculture deeply, and the continued contacts within the exchange network, characterised by the Aegean-type pottery, transform the pottery into the recognisable artefact of that same trade network. The largest part of that pottery circulating among the Italic communities was of indigenous production during the LH III A 2 – C period (Late to Final Bronze Age in the local chronology), and therefore it was no longer possible to consider it in any way as an “exotica”. Indeed several southern Italic societies will continue to produce Mycenaean style pottery even centuries after the Greeks arrive (especially in the region later called Magna Graecia); so much that style becomes part of the culture. After the introduction of new production techniques, new customs, new artefacts and a large exchange network, most Iron Age coastal cultures of southern Italy will emerge from the same basis, remaining in contact and competition. Indeed, a characteristic of the exchange network recognisable by the circulation of Mycenaean style pottery is that it was largely de-centralised and probably aimed at gaining profit through trade. The lack of any serious imperialist or colonising agenda at the periphery of the Mycenaean world made possible for several indigenous cultures to embrace freely new artefacts, and the associated technologies, and make them their own.

From a cognitive point of view, we cannot conclude that any of the people involved in the exchanges were less intelligent than others and that without the arrival of technology packages ready to use from the east nothing would have happened. Yet, nothing in the West Mediterranean was bound to happen as far as we know, had the Italic and Iberian coasts left to tranquil exchanges with just the surrounding people for more centuries. It was the transmission of new and different knowledge that prompted the formation of new identities. And we should not even limit the discussion to artefacts and identities: new whole cultures and civilisations emerged as a result of the exchange network circulating Aegean-type pottery. And these new cultures were not “Mycenaean” or copies of any existing culture: they were new. For this reason, we can present the archaeological evidence as the result of cognitive and social processes prompted by the availability of new stimuli.

The archaeological evidence suggests that the cognitive abilities of people are usually superior to the standard average verifiable in artefact production at the same time (e.g. one can easily think of the many challenges faced by our ancestors in the dispersal out of Africa and the relatively modest evidence provided by lithic tools). However, it is also evident that cognitive abilities only improve when a substantial number of people enters in contact and start to stimulate each other towards some goals (both voluntarily and involuntarily, such as respectively the production of fine decorated pottery and the formation of new social identities). Like for neurons in the brain, which fire when connected and stimulated, so people can produce significant cultural “outbursts” when connected and stimulated by new conditions or challenges. The Late Bronze Age exchange network just
provided such conditions and was instrumental to significant changes in the Mediterranean and European societies. Indeed it is the connection of very distant people that astonishes more than anything else: the extent of the “Mycenaean” network reached approximately the same extent of the later Roman Empire, but it did so much faster and without previous contacts. The Roman Empire might be seen as the final step of the cultural process that started the cultural coalescence of many different communities, and eventually ended with a full political merging. The end result was never a single culture, but an assemblage of diverse cultures all connected and largely founded on the same basic ideas, cultures which we now recognise as Aegean influenced cultures.

According to this perspective, we cannot interpret any significant step evident in the archaeological record and associated to cognitive processes, be it the cave art at Cosquer Cave or the introduction of the Levallois technology, directly to some cognitive improvement to be localised in the brain. Essential neurological changes should have happened before any event visible in the archaeological record. Brain plasticity and the resulting behavioural plasticity of humans are sufficient to improve human efficiency in many contexts and prolonged use of certain areas of the brain will drive neurological evolution and ultimately produce neurological changes that we can currently detect (Allen 2009: 120-147). The sudden connection, direct or indirect, of previously separated people and more importantly of their cultures represents a sufficient change in the typical cultural environment that would have fired up some neurological changes without these being immediately evident in the morphology of the brain. What we see in the archaeological record is the collection of improvements in cognitive abilities burst out at particular socio-political moments/events; several rapid cultural changes can have an effect on the brain as well as on knowledge and eventually lead to substantially new cultures or technologies. The human brain, human culture and technological packages are strictly interlinked and significant changes, usually chronologically distanced in the archaeological record, can be often linked across the three variables. Thus, the Late Bronze Age exchanges and derived cultural changes should be linked to the new identities and cultures that emerge in the Iron Age and these probably prompted some change at neurological level as well, which made possible more complex civilisations than the previous ones.

This can be seen even to the contemporary world. In our time, the socio-political pressure on science to solve problems and the expectation of constant technological progress make it appear as if contemporary humans have an incredible ability to innovate and change unshared with our ancestors, but in reality much modern progress is due to the fact that science has become a belief, and all answers are expected from it, whereas in previous times science and technology were only part of the acceptable tools to explore the cosmos. There may be more pressure on technological advancements today, and such pressure may lead up to neurological changes, but it is critical to understand that such pressures happened also in the past and always triggered similar responses. Thus, keeping in mind that evidence of improved or new cognitive abilities can appear at any time anywhere in the world, what we learn from the simpler prehistoric technology can be the basis for the study of technology at any time. In addition, the Italic case focusing on identities formed after a cultural and technological stimulus should also force archaeologists to reconsider some of the early evidence. For instance, is cave art understandable as art for art’s sake from the very beginning, or is it a new form of expression prompted by the gathering of new communities and the basis of new rituals? Both perspectives are largely affected by debates in Aesthetics and Art Theory around 1900 (Palacio-Pérez 2010) and all interpretations on symbolic advancements should be better linked to
technological progress and eventually neurological changes. Cognitive approaches to prehistoric technology will be able to expand our understanding, but we should be aware that simple equations rarely work when the subjects are human beings and therefore it would be wise to study human cultures, technologies and brains as linked entities.

References


Wijngaarden, Gert Jan van. 2002. *Use and appreciation of Mycenaean pottery in the Levant, Cyprus and Italy (1600-1200 BC)*. Amsterdam: Amsterdam University Press.