

Tusks, Techniques, and Traditions: Ivory Crafting during the Iron Age in the Ancient Near East

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Ex OrienteLuxuria – March 11, 2021*

This presentation is drawn from my PhD research, which is centred on the Nimrud ivories held in the British Museum. Specifically, I am investigating the crafting methods and choices utilised by Iron Age ivory workers through applying a combination of macroscopic and microscopic visual analyses. With my study still underway, this talk focuses on a key aspect that has emerged from my research—and one that is perhaps underrepresented within the scholarship on ivories—centring on how ivory was worked and what particular methods might have been employed for this purpose.

The site of Nimrud, or Kalḫu as it was known to the Assyrians, is a Neo-Assyrian site in northern Iraq, situated some 30 km south of the modern city of Mosul on the river Tigris. The ivories found at Nimrud (and there have been thousands) date from approximately the 9th to the 7th centuries BCE, when they were likely deposited in the various palaces and complexes within the city. The Neo-Assyrians had a ruthless policy of expansion, and we know from their texts that ivory was one of the categories of spoil or tribute that they claimed from the territories and cities they conquered. Therefore, while some of the ivories are perhaps of local Assyrian manufacture, the majority were likely made elsewhere and were brought into Nimrud as part of these campaigns, which is corroborated by the different styles seen in the designs on the ivories and the way they were found stacked in storerooms.

The ivories seem to mostly function as inlays for wooden furniture, such as chairs or beds, with others forming handles for fans or fly whisks, and some are in the form of decorative pyxis and other dishes. They have been made with their own kind of assembly system—utilising mortices, tenons, dowels, and some are roughened on the reverse, perhaps for aiding an adhesive. The ivories are decorated with designs featuring both mythical beasts (e.g., sphinxes and griffins) and real creatures (e.g., deer, cattle, horses, lions, monkeys, and ostriches), along with men, women, and royal personages. Some also display floral or geometric designs, and a smaller number are undecorated. Many of the ivories show signs of once being gilded and/or inset with coloured stones or glass, though it seems that much of the valuable gold was stripped from the ivories, perhaps after they were taken as loot.

Most of the work on these ivories, to date, has focused on understanding the iconography and the style traditions seen in the designs, and then attempting to locate these traditions in time and space. The aim is to pinpoint the cultural and geographical origin of the ivories, as it remains unclear who made them, and where they were produced. Scholars, notably Georgina Herrmann, have attempted to classify the Nimrud ivories, placing them into sets or style groups based on similar features. These groups are then allocated to one of four broader style traditions—Phoenician, North Syrian, South Syrian (or Intermediate), or local Assyrian—that have developed from a study of other art forms and styles found across the wider region.

Rather than adding to the dialogue on this topic in the same way, I am instead using a combination of digital microscopy and scanning electron microscopy to try and improve our understanding of how the ivories were made. Notwithstanding some comments made by Herrmann regarding the kinds of tools that might have

been used on the Nimrud ivories, there is a distinct lack of information on the skills, techniques, and processes that developed around the craft of ivory working, and how and why certain tools were used.¹

The main problem with this area of study is a lack of evidence. Stylistic studies have linked the majority of the ivories to the peoples of the Levantine coastline and North Syria, but neither workshop nor ivory working tool kits have been recovered. This absence reflects the difficulty of both excavating cities along the Levant that are presently populated, and/or perhaps that the sites are in politically unstable regions. The problem is made more complex still by the fact that ivory carvers might have moved around the region for commissions rather than working from a defined location.

To date, the observations on ivory working in regard to the Nimrud ivories are based on broad assumptions and theoretical knowledge. This is not to say that these assumptions are wrong, more that neither observations nor hypotheses have been formulated with a knowledge of the material of ivory or the application of the tools, and neither were tested with experimental work. The identification of tools has hitherto been based on their known function—i.e., saws for cutting, drills for making holes, and chisels for paring away—however, there is little to support such identifications. Within this talk it is suggested that to identify a tool, and understand how it was used by the trace it left, requires an understanding of not only the tool and how it was used (i.e., angle and pressure), but also on the state of the material the tool is moving through. Therefore, it becomes necessary to look to what is known about the preparation of ivory, and how the material responds to working. As a part of my PhD, I have been undertaking experimental work on elephant ivory, and then analysing the results via digital microscopy and scanning electron microscopy, with some preliminary results discussed within this presentation.

The ultimate aim of my project is to generate information capable of informing on both the smaller-scale specifics of ivory crafting, such as how particular features might have been made, and more then broadly, on wider issues of craft production, skill specialisation, and the diffusion of crafting knowledge. Moreover, through finding correlations between the existing data on style, and newly acquired knowledge on working practices, the hope is that my results will then make for interesting comparisons between what is already known of the style traditions, and how these may (or may not) be reflected in the technical details, which ultimately, will diversify our knowledge of the ivories and more broadly of crafting in the Iron Age. This talk covers some of my preliminary results and explains the subsequent hypotheses.

I want to thank the organisers of this conference, and the AHRC (Arts and Humanities Research Council in the United Kingdom) for funding my project, along with thanking my supervisors: Caroline Cartwright from the British Museum and Tamar Hodos from the University of Bristol. I would also like to thank the Departments of Scientific Research and the Middle East at the British Museum for supporting my research.

¹ Herrmann, G., 1986. *Ivories from room SW 37, Fort Shalmaneser*. Ivories from Nimrud (1949-1963) Fasc. 4. British School of Archaeology in Iraq, London, pp. 55-60.