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Review

# The prehistoric individual, connoisseurship and archaeological science: The Muisca goldwork of Colombia

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ABSTRACT

Unlike art historians, archaeologists rarely make systematic attempts at attributing artefacts to individual artisans – they stop at the broader category of 'provenance regions' or 'technical styles'. The identification of archaeological individuals, however, allows detailed insight into the organisation of workshops, knowledge transmission, skill, and the tension between individual and social agency. This paper reviews the potential of archaeological science methods to identify individual artisans through the study of material culture. Focusing on the Muisca votive goldwork of Colombia, it combines stylistic, chemical and microscopic analyses to identify idiosyncratic motor habits, material selections and artistic preferences that allow the identification of individual makers and manufacturing events. The results are informative of the internal dynamics between the Muisca technological tradition, religious behaviour and craft specialists. We conclude by outlining the potentials and challenges of science-based archaeological connoisseurship in other contexts.



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## 1. Introduction: identifying individual artisans in prehistoric arts and crafts

Studies of archaeological material culture often search for patterns in the shape, style or decoration of artefacts, or in other traits that require instrumental characterisation such as their microstructure or their chemical or isotopic composition. The groups of objects thus classified are subsequently given behavioural explanations. For example, metal artefacts with the same isotopic signature are thought to derive from the same source, and those with the same style are assigned to a particular cultural affiliation; ceramics revealing similar composition, temper and firing regimes are assigned to a particular workshop. With suitable contextual and chronological information, these heuristic groups of objects can be used as the basis to reconstruct broader phenomena such as fluctuations in the provision of raw materials, exchange of goods, or the changes in technology, morphology or other style preferences that result from evolution in sociocultural or economic structures.

In art history studies, 'schools' or traditions are also defined on the basis of traits shared by several creations, typically seen as resulting from a combination of learning traditions and, in some cases, patron or customer preferences. However, it is far more common for art historical studies to single out individual artists within broader traditions. Individuals are sometimes identified by their signatures, but attributions are more reliably based on a combination of specific techniques, materials, or gestures that are taken as characteristic of a particular artisan. As such, for example, an unsigned painting can be assigned to a particular artist, a signed one revealed to be a fake, or a single painting can sometimes be shown to be the result of a master and several less skilled assistants that were tasked with the creation of less important parts of the work.

Such 'attribution studies' have a long history in art history, and a key component of them has been 'connoisseurship' – the largely subjective 'eye' or intuition of a few well-reputed art critics who could identify unsigned works and assign them to famous artists. In the 19th century, Giovanni Morelli (1892–3) developed his "scientific method" (Wollheim, 1973), which strived to define more consistent criteria for attribution studies (see also Berenson, 1902). Among other features, Morelli focused on the execution and style of incidental details of human representations often repeated by artists, such as ears and hands, as characteristic of individual artists. As these body parts were accessory details of the artwork, artists "involuntarily" used "habitual modes of expression" that left diagnostic, recognisable peculiarities (Morelli, 1832: 75, quoted in Wollheim, 1973: 194). In spite of the fame of the 'Morellian method', art history attributions have remained strongly subjective and reliant on the 'good eye' and skilful rhetoric of a few connoisseurs (e.g. Opperman, 1990; Carrier, 2003). Only in recent decades has 'technical art history' gained some momentum as a new, less biased form of connoisseurship: with the use of instrumental analyses that characterise raw materials and technical practices, art historians can more confidently identify two works made by the same hand, or discern different stages in the creation or modification of an art piece. Associated to this change is also the growing quest for technical art history to be less concerned with the aggrandisement of individual artists (and their market value) and more with a humanistic, contextual understanding of art materials and practices (e.g. Ainsworth, 2005; Hermens, 2012). In this quest, technical art history could find much inspiration in archaeological studies of technologies.

Archaeology has a much stronger tradition of success at integrating empirical data in the study of humanistic questions related to past technological practice, agency, or human–environment interaction – to name but a few relevant areas. It is therefore surprising that relatively few studies of archaeological material culture have placed the focus on the individual, beneath the broader class of 'makers' or 'craftspeople' and their community-wide 'technical styles' (for possible reasons, see Thomas et al., 2009). A notable exception to this pattern might be the attribution work of Sir John Beazley (1956, 1963, 1971) and Kurtz and Beazley (1983) with Archaic and Classical black- and red-figure vase painting – but this approach, in line with that of Morelli, was much more art historical than archaeological, as is the more recent work on Cycladic marble figurines (Getz-Gentle, 2001; Getz-Preziosi, 1987). Perhaps of more interest here is the work of Olivier (1967) identifying scribal hands in Linear B tablets – a study that would be superbly enhanced today by crossing this information with a materials science-based study of the clay substrate (e.g. Goren et al., 2011). A landmark publication was the collective *The Individual in Prehistory* (Hill and Gunn, 1977), which tried to formalise a method to identify individuals in different media but perhaps fell short of connecting with broader theoretical concerns (e.g. reviews by Bayard, 1978; Kaplan, 1980). Fifteen years later, Christine Morris tried to be more explicit about not only the method but also the questions that attribution studies in archaeology might help resolve, however her publication attracted equally mixed reviews (Morris, 1993 and replies therein). More recently, Thomas et al. (2009) revisited the subject to usefully explore the challenges and potentials of identifying individuals for archaeologists of all theoretical persuasions. Although there are examples of individual-centred studies ranging from clay figures (e.g. Morris, 1993) through pottery (e.g. Van Keuren, 1999) and textiles (Marcus, 2015) to carved glyphs (Van Stone, 2001), it can be argued that only studies of knapped-stone artefacts have retained a sustained concern with individual knappers or 'moments in the past' (e.g. Cahen et al., 1979; Whittaker, 1987; Pigeot, 1990; Gamble and Porr, 2005; Watts, 2013).

The identification of individual artisans allows finer grained studies of the organisation of workshops, or of the influence of paradigmatic makers in shaping schools and fashions (be it through direct transmission to apprentices, or through object copy by imitators). More generally, studying individual craftspersons or artists in their context provides insight into the complex dynamics that can take place between the individual agency, skill and freedom of an artisan, and the constraints imposed by limitations in human perception and skill, the learning context, resource availability, craft organisation, patron requests and broader sociocultural structures. As such, the potential of these types of studies is warranted (for further discussion, see especially Crown, 2007; Hodder, 2000; Knapp and Van Dommelen, 2008; Morris, 1993; Plog, 1977; Thomas et al., 2009; Watts, 2013; White, 2009; Whittaker, 1987).

Analytical instruments enhance the sight of researchers looking for individuals in the artefacts they made, as they allow them to increase the resolution and analytical precision with which they can observe some traits, or even to record traits that would otherwise be unobservable. Yet, as far as we are aware, no-one has previously explored explicitly the role of materials science in studies of contextualised archaeological individuals. There are practical examples, however, where analyses have allowed such attributions, for example in Rehren and Kraus's (1999) identification of a short-lived and idiosyncratic metallurgical technique that was most likely the 'secret' of an individual artisan. With growing and deserved prominence, Ian Freestone has championed a focus on 'the batch' – the output of an individual production event –, as an analytical category that may be identified through chemical analyses and allows higher-resolution insight into the organisation of production and consumption than usually afforded (Freestone et al., 2009a, 2009b, 2010; see also Blackman et al., 1993; Bezúr, 2003). In a similar vein, an ongoing study of the Terracotta Army