

The Veracity of “Scientific” Testing by Conservators*

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*Solange es Menschen gibt, die Antiken sammeln, wird es auch
Menschen geben, die Antiken fälschen ...* E. Unger 1957: 5

As an archaeologist concerned with studying artifacts made by ancient cultures I have been involved with confronting and exposing forgeries of alleged ancient artifacts, antiquities, for decades.¹ I consider myself to be disinterested, which of course does not mean I am always correct in my conclusions. Though I feel secure that most of my indictments are accurate, I have on several occasions reversed or modified an opinion (viz. Muscarella 2001 [2005]: 180, 181–2, 198, note 4). But I assert with force that there exists a large number, thousands, of forgeries of ancient Near Eastern antiquities in dealers’ shops, museums, and private collections all over the world; and they have been made and sold for more than a century. Following an intense increase in their manufacture after ca. 1950, some scholars have become more alert to the forgery problem, but ignorance and innocence persists, and scholars continue to publish forgeries as genuine ancient artifacts. Too many scholars (and many students) also remain unaware of the magnitude of the forgery issue: the full extent of its prevalence and the modern cultural causes for its existence; and the degree to which forgeries have corrupted our knowledge of the world’s ancient material and spiritual past.

I submit also that among scholars and the public at large there is another crucial related problem about which they remain quite uninformed. This concerns the methods employed to detect forgeries other than the hands-on, direct, visual investigations anchored in the empirical knowledge of archaeologists and art historians, an undertaking usually labeled (sometimes pejoratively) “connoisseurship.” I address here the contentions of some scientists and conservators that their technical analyses and consequent conclusions are based on “objective” scientific analysis, and thus are more accurate than connoisseurship observations, and they are complete, and (in some instances) final rulings.² Scholars, students, and the public are conditioned to believe such claims, that a scholar’s “subjective” investigation must yield to a conservator’s “objective” determination, which is invoked as impartial, regarding whether an alleged antiquity under investigation is ancient or modern, even if the conservator is a paid employee of the object’s owner (viz. McDonald 2006; Spier 1990: 627; and *infra*). And it took me some time to comprehend this perception, to recognize that conclusions submitted in scientific or conservator reports can be as incorrect, or in conflict with conclusions of their colleagues, as are empirical, “connoisseurship” determinations by archaeologists and art historians. Further, some scientists/conservators casually segue from an apparent tech-

nical/scientific analysis into an interpretation or explanation about technical or stylistic oddities or aberrations, issues not strictly within their purview (viz. Muscarella 2000: 7–38, nos. 40, 41 for examples). The assumption that “subjective” stylistic analysis is distinct from “objective” scientific analysis is a false dichotomy – which a number of honest conservators/scientists recognize. The individuals involved in *both* forms of analyses are subject to fallibility, ignorance, and error – as well as personal considerations, which include fear, intimidation, and dishonesty.

Conservators, like archaeologists and art historians, have no magic machines; they are not infallible engineers. J. Spier (1990: 623) put it directly and accurately: “Many technical and scientific studies, however, are not conclusive, especially in determining authenticity, and often appear to be invoked by archaeologists as a desperate appeal to the unattainable, ‘objective’ result rather than as a proper study.” Spier 1990 is one of the few scholars who raise this significant issue in print.³

In addressing this problem, four interrelated matters must be considered. First, and culturally significant, the issue of forgeries of ancient artifacts involves *only* objects that have *not* been excavated by archaeologists at a known site.⁴ Involved are *exclusively* objects that have surfaced in bazaars and in dealers’ shops (all over the world) or offered as alleged family heirlooms, all objects that are subsequently sold and exhibited by collectors and museums. Second, all antiquity dealers and auction houses insist that they never sell forgeries (but they say others do). And *every* antiquity purchased by museum curators or collectors is *ipso facto* claimed by them to be ancient. Third, the skills and the scholarly and scientific knowledge of forgers functioning all over the world cannot be overestimated. Nonetheless, every owner of a challenged antiquity will shout that no forger could have made the antiquity they purchased, as it is too complex to be conceived and then made by a modern artisan. The owner will assert that the antiquity is formally correct (two eyes, a nose, mouth...), and that if there are anomalies, the object is all the more valuable, a rare and thus (financially) a precious original, an *Unikum*, made in a provincial workshop (Muscarella 2000: 18). The reality is that many forgers (and their families) have lifetime jobs for a good reason: museums and private collections are continuously acquiring their productions. In addition to being good artisans – and pertinent to the thrust of the Bochum Conference’s discussion, forgers also monitor scientific reports on age-determination tech-



Fig.1: 3-Dollar bill

niques. And they and their sponsors employ scholars and conservators both for alleged stylistic and scientific analyses and advice, and sometimes to help with creating verisimilitude.

And fourth, pertaining to common perceptions of the academic training and skills of scientists and conservators contracted or employed by private collectors and museums, two issues must be

Fig.2: Hittite Vessel, Cleveland Museum of Art

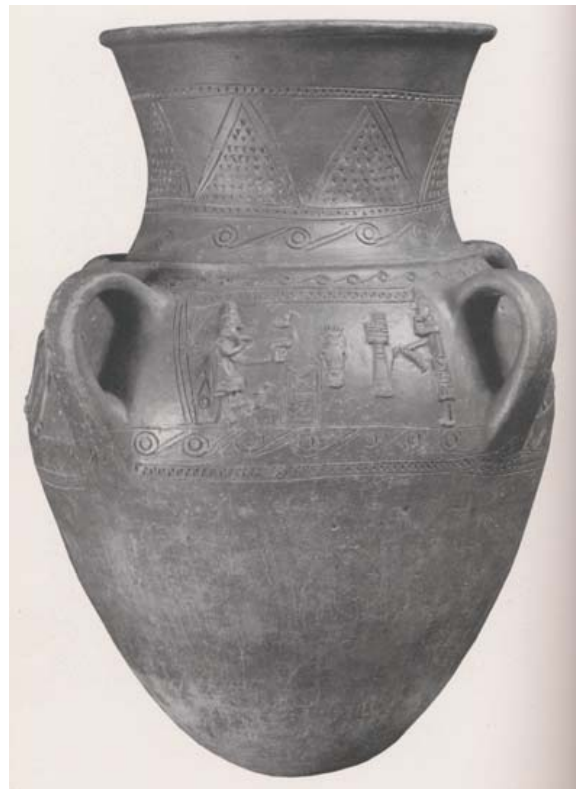


Fig.3: Hacilar Erotic Figure

emphasized. As with archaeologist and art historian connoisseurship studies (Muscarella 2001 [2005] is an example), conservators can honestly err in their conclusions, by ignorance, misinterpretation, or miscalculation.⁵ And not all conservators are fully trained scientists aware of the full range of scientific techniques. More important, because it remains little known and involves a sensitive situation, some conservators are not the disinterested agents that they and their employers proclaim. Some obey the commands (overt or insinuated) of their paymasters (as do some archaeologists, curators and art historians). Some scientists/conservators, when recognizing they are examining a forgery, will avoid conducting a complete examination, omit tests that would demonstrate the object is a modern creation, or will ignore or misstate obvious problems. Succinctly put, they lie or dissimulate (Brent 2000b: 31), and present definite or nuanced conclusions that point to the ancient manufacture of the object: because they do not want to offend their employers. The president of an academic institution defending a large gift of oriental, non-excavated, antiquities that was authenticated by a contracted conservator (her employee) but challenged by others, revealed it precisely: "Authentication is actually a business procedure" (McDonald 2006). This is a rare claim regarding the process.

That these facts remain unknown to some scholars is illustrated by a recently recorded automatic deference to a conservator's conclusion. A reputable art historian had strongly expressed an opinion in

writing that a bronze said-to-be Roman statue in a private collection was a forgery (a view shared by others). When subsequently informed by its owner that the statue had been examined by a laboratory, which report implied that it was ancient, the scholar immediately retracted her indictment, informing the owner that she "saw no reason that you should not accept" the conservator's conclusions.⁶

Some museum-employed conservators are also reluctant to inform their director or curators that they have purchased or accepted as a gift from a donor a forgery. This is indicated by the fact that some museums that exhibit forgeries as ancient artifacts have a conservation department, or hire conservators on contract (McDonald 2006); sometimes they publish their determinations (see also below). I argue that if one has strong negative feelings about a museum object, one should not automatically accept the positive conclusions of a museum-employed conservator regarding an object his/her museum has purchased. The same situation also exists for objects donated by a rich donor. I give an example where a museum scientist suffered when *disagreeing* with a museum curator. This curator believed that one of his (many curators believe what they curate belongs to them) antiquities was ancient, but when someone (not a scholar) publicly claimed it to be a forgery, he publicly accepted the claim. However, when it was subsequently demonstrated by a museum conservator that the object was in fact ancient, and that the curator had been caught making a mistake in public, he actively campaigned to have the conservator fired. The curator then protected himself by creating a special exhibition for the object, stressing how and why he always thought it to be genuine.

I turn to a critique of the various technologies that scientists and conservators employ to determine the authenticity of various materials by presenting a few examples. I begin with an appropriate model, a 3-dollar United States bill in my possession (Fig. 1). Everyone, including foreigners, is aware that no such U.S. denomination exists. But I propose that I could employ a "specialist" conservator who would write a report stating that the paper looks good, the number 3 is in all four corners, there is a president's face in the center; and, to explain the oddities, conclude that the bill was surely printed in a provincial mint. Therefore he sees "no reason to doubt its authenticity." (I am of course being sarcastic, but not formally inaccurate.)

Terracotta: Thermoluminescence (TL) testing is normally conducted by scientists to determine the age of fired terracotta artifacts. For many years it has been acclaimed as a definitive "scientific" technique: "...thermoluminescence testing ... has become the standard method of testing the firing dates of ceramic objects. Nearly all important ancient [sic] ceramics are routinely subjected to thermoluminescence testing to remove any doubts regarding their authenticity"; and one of the "best scientific testing techniques for dating ..." (Meyers 1997: 314; see also Spier (1990: 628) who accepts TL unhesitatingly. The reality is otherwise: TL is by no means as accurate as proclaimed. Some scientists and scholars have known for decades that TL dates are not *per se* precise, that the technique is very complex; and there is a statistical error of +/- % 8.5. Further, at least recently some forgery laboratories have engineered a system of falsifying TL results, so that a forgery baked last week can be treated to reflect an age of millennia. Forgers also make pastiches by bond-



Fig.4: Sotheby's Assyrian Plaque

ing pieces of ancient terracotta artifacts together with modern units, or by adding ground-up ancient terracotta fragments to objects fashioned from locally gathered clay (see also below). TL testing will thereby authenticate the modern creation as an ancient artifact (Brent 2001 a, and b). Forgers *all over the world* know such techniques, as also do scientist-conservators, some of whom consciously ignore them for reasons given above. But not all archaeologists know this.

A said-to-be Hittite vessel in the Cleveland Museum of Art (Fig. 2) is a manifest, embarrassing forgery; it was purchased in 1985, and published as a small photo in 1986 (Muscarella 2000: 143–4, no. 6). I wrote to the museum's curator Arielle Kozloff, who purchased it, requesting that the vessel be TL tested. She responded briefly on a post card that the vessel had been "TLd" before the purchase by Oxford University. After a further request, she sent me the Oxford report, which stated that the vessel was made between 1600 and 300 B. C.



Fig.5: Queen of the Night, British Museum

I contacted the Oxford Laboratory, whose scientist-conservator responded to my questions that the vessel was tested not for the museum but for a dealer, who had sent in the sample, and that the sample had been taken from the base. I should say allegedly taken, for the dealer could have taken a sample from a genuine Hittite vessel, claiming it to have derived from the one subsequently sold to Cleveland. I was also informed by the Oxford conservator that unwitnessed testings and sent-in samples were no longer accepted (compare, however, her statement to the contrary in Brent 2001 b: 31), but the sampling from the vessel's base was defended: "I doubt very much that the base is genuine and that the rest of the vase fake but it is of course a possibility" (on this wrong assumption relating to another ancient-modern pastiche, see Brent 2001 a: 29). My doubts were thus challenged. I sent Kozloff a copy of the Oxford report requesting that she check the base-body construction and take a TL sample from the body; there was no response. And this neo-Hittite vessel is still exhibited in Cleveland to educate students and the public about ancient Hittite culture – because the museum's curator and a scientist-conservator said that it is ancient, than which there can be no higher authority. I had assumed immediately that the ves-

sel's base was the *only* part of the vessel TLd: because soon after TL was developed, forgers began to construct vessels built upon an ancient base. Every forger is cognizant of the curator's code, to never, ever, damage the precious plundered vessel you have purchased – take samples for testing only from the base (some curators are becoming aware of this).

A figurine accorded a Hacilar birthplace by its vendor (Fig. 3) was manufactured to be all the more valuable because it depicts neolithic period lovemaking, a rarity (none has yet been *excavated*). It was tested for a Frankfurt dealer in 1967 by a conservator at the Römisch-Germanisches Zentralmuseum in Mainz (Muscarella 2000: 139–40, 449, no. 58), whose statement (written in English) is presented as a scientific report – which was shown to potential purchasers by the dealer. The conservator reported that the loving couple (and another Hacilar forgery made by the same artisan: Muscarella 2000: 139, 450, no. 59) was "tested... by several methods, some of them chemical." Not one of the tests is described, although one would assume that TL would have been the primary test. I quote the conservator's conclusion: "...I do not see any possibility to doubt that both idols are genuine Hacilar works of art...[and] are extremely valuable... [and] absolutely unique" – a perfect example of a conservator obeying and serving his patron's wishes. Indeed, the figurine *is* "unique"; it is an authentic modern Hacilar villager's creation made to be sold, which the conservator's paid-for advertisement is intended to facilitate. These are but two of many scores of Hacilar forgeries housed in museums and private collections in Europe, the United States, and Turkey (Muscarella 2000: 135–141, 434–453).⁷

A terracotta plaque (Fig. 4) recently offered for sale at Sotheby's, New York,⁸ is labeled Assyrian, dated, we are informed, on the basis of TL testing to the "1st half of 1st millennium B.C., or earlier." (!) No details are given, such as who tested it, where, and what specific results were revealed; the announcement itself suffices. It is to my eyes a badly made forgery, a modern \$3 bill forgery (was it radiated?).

A clay plaque (49.5 x 37 cm) depicting a frontally nude goddess in high relief was recently purchased (2003) by the British Museum (i.e. by British taxpayers; Fig. 5). That it was born in the bazaar, and not excavated, is never mentioned in the museum's publications, as such information is considered to be unimportant by museum staff; it most certainly has not been "correctly identified as coming from ancient Iraq" (Collon 2005: 5). First published in *The Illustrated London News* (June 13, 1936) it was soon named *The Burney Relief*, after its vendor, but following its purchase the museum's director baptized it "The Queen of the Night" (Collon 2005: 11). It has recently (casually) been asserted – "soweit ich sehe" – to be ancient (W. von der Osten-Sacken 2002); also by Collon (2005). However, from an analysis of all its cultural and stylistic elements in depth, Pauline Albenda (2005) has argued that the plaque is most probably a forgery. She discusses the plaque's modern history, its many defenders, and an earlier challenger, Dietrich Opitz (in 1937). She has painstakingly demonstrated that *The Queen* is utterly unique in motif, composition, and style, for example no owls are known in ancient Near Eastern art. The British Museum curators cite TL testing (from 1975), which gave a range across 2000 years, 1725–25 B.C., as conclusive evidence manifesting ancient manufacture (such a date range per se is not a negative). Tests were taken from the

rear and front of the plaque: but *not* on the lady's body, which may be a crucial omission. I contend that the plaque is not manifestly ancient, and whether it is a forgery or genuine remains an issue for scholarly discussion (*soweit ich sehe*); More refinements have developed in TL testing, and new testing is therefore mandatory, and also on the body (for one wonders if the body is a modern addition to an ancient terracotta plaque).

In 1953 The City Art Museum of St. Louis, Missouri, purchased a fragmentary four-foot high statuette and labeled it as an Etruscan Diana with a stag (Fig. 6a), and ecstatically proclaimed it to be one of the finest Etruscan works in existence. When purchased it consisted of many broken pieces, considered by the purchaser (and intended by the forger) to manifest its ancient age; subsequently it was assembled by a well-known restorer (see below, Fig. 6b). Published three times as a masterpiece of Etruscan statuary by the museum's director Perry T. Rathbone (who was a specialist in American



FIG. 3. THE TWENTY SMALL FRAGMENTS, WHICH WERE COMBINED WITH THE LARGE FRAGMENT OF FIG. 2 TO PRODUCE THE MAGNIFICENT WORK SHOWN IN OUR COLOUR-PLATE OVERLEAF.

Fig. 6a,b: Diana, St. Louis Museum

art!), it was subsequently defended *à outrance* by him and another director, also "by hundreds of scholars" (of American art?), and presumably the museum's conservation department. In 1968 it was TL tested at two laboratories (Oxford and the University of Pennsylvania), where both gave its age as ca. 40 years old. Rathbone was correct in one respect, it was made in Italy, in the early 1870s by Alceo Dossena (Muscarella 2000: 24).

Gold: Some scientists who examine alleged ancient gold artifacts claim that they can detect the percentage of helium particles present, the higher the amount the earlier the date. But the percentage of helium in gold is small, and difficult to determine. There is also reference to patina surface analysis and use of a binocular micro-scope to distinguish ancient from modern-made gold artifacts (Meyers 1997: 316). But a conservator (personal communication) vigorously rejected this claim as insufficient, subjective, and also noting that it omits a crucial test, that for surface depletion, which is easy to detect. This test employs a methodology that determines surface depletion of the silver and copper trace elements, and is reliable and



Fig.7a,b: Vessels,NW Iran,MIHO Museum

I am informed not easy (or possible) to fake. No conservator can conduct an examination on a gold object and declare as scientific fact that it is ancient without explaining the analytical techniques used.

Ulrike Löw (1998: 346–354) and I (Muscarella 2000: 37–8, nos. 40, 41) have argued that based on style and manufacture analysis, several electrum vessels (two are shown in Fig. 7a, and b), purchased in a bazaar, sold as from “western Iran,” and curated in the MIHO Museum in Japan are probably modern forgeries.⁹ They were apparently made in the same workshop, and deviate significantly in style and manufacturing techniques from known excavated examples (from Markik in “northwestern Iran”). My condemnations were made *pace* a scientist’s interpretation that they were genuine (Meyers in *Ancient Art* 1996: 177–8), and that unparalleled manufacturing techniques indicate that the vessels are even more ancient than known excavated examples, although this contention lies outside the scope of a conservator’s competence (Löw’s perceptive indictments were made prior to Meyer’s 1996 comments).

Silver: A cast silver plate, once in the Schimmel collection (Fig. 8), can be considered a forgery on the basis of the animal’s execution and style (Muscarella 2000: 60, no.4, 336). Schimmel sent it for authenticity analysis to the laboratory in Mainz (the same mentioned above regarding the Hacilar figurine, although a different conservator wrote the same meaningless type of report). When the report was shown to me, I was surprised (I was innocent then) that there was no mention of inter-granulation or corrosion, etc. But the conservator claimed *ipse dixit*: “Es gibt keinerlei [sic] Argumente gegen die Echtheit der Silberschale ...” Notwithstanding this authoritative, “objective” conclusion, another scientist examined it subsequently and presented definitive evidence that the plate is a modern construction. Two conservators, two analyses, and two utterly different conclusions.

Recently surfaced, a silver forgery of a griffin vessel (Fig. 9; not a rhyton as it has been labeled) is generously equipped with three funnels, one in an unsuitable place for an ancient object, but appropriate in the modern world. It is a failed attempt by its modern creator to make it look ancient Iranian (probably from the well-known Kalmakarra Cave plunder); he did succeed, however in making it look modern Iranian.¹⁰ Purchased by a Metropolitan Museum of Art Trustee, Paula Cussi, for ca. one million dollars, the griffin was confiscated by the United States Department of Homeland Security (on a legal technicality); and the purchase price was subsequently returned by the vendor (H. Aboutaam). I was informed by a reliable source that three (not one or two) conservators authenticated the vessel as ancient.¹¹ We eagerly look forward to reading these reports.

Bronze: Some facts are pertinent: forgers are unable to reproduce difficult-to-detect corrosion and patina, and inter-granulation testing is mandatory. And data can be manipulated. Some time ago I

Fig. 8: Silver Plate, Schimmel Collection



Fig.9: Griffin Vessel

was given a conservator’s report prepared for a collector, about an object that I believe is a forgery, but which the report claimed was ancient. Because the patina information was vague, I showed it to another conservator, who read it, laughed, and told me: “The conservator omitted a crucial test which would surely have determined whether or not the object was ancient. He must have done this consciously, knowing the piece to be a forgery, because he did not want to upset his employer – a common practice.” I had sensed (intuited) that something was wrong with the report, and my colleague confirmed that I was correct.

Also to be acknowledged is that information derived from *excavations* can result in important changes in knowledge about ancient

Fig.10a,b: Berlin Bronze Head



Fig.11a: Berlin Stonehead



Fig.11b: Puzur-Ishta Head

metal alloys: viz. we now know that brass – an alloy of copper and zinc – existed for centuries before the Roman period. Since the 1960s we now know that the Phrygians made brass in the 8th century B. C., and earlier excavated examples have been identified.¹² Hitherto, some genuine antiquities were innocently condemned as forgeries solely because of the presence of zinc.¹³

A said-to-be Sumerian bronze head (Fig. 10) came to my attention in 1985 via J. Riederer of the Staatliche Museen in Berlin; it has been labeled ancient by two scholars (Strommenger 1994: 125, note 1). I replied that I believed it to be a forgery; Riederer agreed. In 1987 a conservator from another Berlin museum (Museum für Vor- und Frühgeschichte), whose curator had purchased it, declared in an in-

Fig.12: Bronze Heads





Fig. 13a, b: Breastplate, Land of the Bible Museum

adequate report that it was ancient (Born 1987). Soon after E. Strommenger, the wife of the museum's curator, published it as ancient (Strommenger 1991).¹⁴ In the same year, Riederer published a report explaining clearly why it is a manifest forgery (see also Riederer 1994: 262-5); although this report was rejected by Strommenger (1994: 125), citing scientific analysis (by H. Born?). In Muscarella 2000 (162, no. 22, 474) I declared it a forgery. Thus, we have two conservators and four scholars disagreeing on its age, in a classic science vs. connoisseurship confrontation. All are equally fallible. In 1974, a photo of a stone head was sent to me by a dealer in Beirut (Fig. 11, left; Muscarella 2000: 161, 470, no. 14). I suggest it is a badly made forgery – a copy of the head of Puzur-Ishtar; his torso was excavated in Babylon, but the head was later recovered from a dealer (Fig. 11, right). In 1985, Riederer sent me a photo of a bronze head excavated in a Berlin bazaar, and which I recognized to be an exact copy of the Beirut stone head (Fig. 12, left; Muscarella 2000: 161, 471, no. 16). In 1988, Riederer sent me a photo of another bronze head, a copy of the 1985 bronze head, also from a German dealer (Fig. 12, right; Muscarella 2000: 161, 471, no. 15). One bronze head is in Berlin, the other in Stuttgart. Riederer's 1991 publication

demonstrates that the two bearded heads are modern creations. In 2000 I published both heads as forgeries (Muscarella 2000: 161, nos. 15, 16, 471). Thus again, at least two conservators (possibly more) and several scholars disagree with these examples regarding the issue of ancient vs. forgery. Stone: Here there is much controversy about age determination techniques, which are difficult to understand for a non-scientist. If cleaning is recognized, when did it occur? Can we determine if it resulted from chemical or mechanical action? We often hear "this weathering must have taken many centuries to develop" or such weathering or the presence of lichen "could not have been developed in a laboratory." Spier (1990: 630) perceptively wondered (regarding the Getty Museum stone kouros) whether forgers could successfully fake de-dolomitising, which activity was in fact demonstrated to exist shortly thereafter (*New York Times* August 4, 1991: 25; Riederer 1994: 274; Lapatin 2000: 47). Concerning the presence of calcium oxalate, considered significant for age determination, does it occur only from natural aging, or can it be produced by modern immersions in oxalic acid (Lapatin 2000: 50)? From discussions with conservators, however, it seems that oxalic acid has no value for

age determinations for marble and limestone. One cannot accept any claims that cite the above as manifest evidence of old age for a stone artifact.¹⁵ The Getty kouros is a good example of the problem. (Lapatin 2000 is a good summary of the purchase process and conservator attempts at analysis and authentication involving this kouros.)

Wood: Dendrochronological examination of wood remains is universally employed to date archaeological sites, and is considered to be one of the major chronological tools. In recent years, however, it has been extensively researched, which resulted in vigorous criticisms about matters of which archaeologists have been unaware. The critics have raised essential technical and scientific issues that must be comprehended before one accepts dendrochronology-derived dates: the cross-dating of trees across continents, the use of different tree species for ring comparisons, the lack of bark on a specimen and its consequences for accurate dating, and further, awareness that the analysis functions on a floating chronology. There is an additional and equally significant problem with dendrochronological dating, namely the demonstrated re-use of wood in ancient times, which economical and preservative activity is still practiced in the modern Near East, viz. reuse of all wooden parts such as wooden beams, frames, etc., that are removed from a structure after an earthquake and transferred to a newly built structure. A perfect example of reuse of wood in antiquity is documented at Gordion, where in one Destruction Level building (CC3) three wood beams were recovered that had been cut 400 years earlier than another sample here;¹⁶ and a beam that had been cut 6200 years ago was recently discovered in a Black Sea Turkish modern-day house (Keenan 2002: 232; idem 2006: 11–12). All of which adds up to the reality that archaeologists definitely do not have a straightforward system, one providing unambiguous date determinations (see viz. Keenan 2002: 232–3, idem 2006; James 2002: 18; Mielke 2006). Dendrochronological dating seems not to be usually employed with artifacts, but when such analysis is used, because of the above reasons it could not *per se* date an excavated or an unexcavated artifact.¹⁷

A note on restorers: restorers normally work for dealers and collectors, some believing they are reinstating to its original form an ancient artifact. Forgers, however, often damage their creations to give them a sense of age and verisimilitude, and then employ restorers as launderers to restore the modern-made breakages in modern-made artifacts. Some restorers do this knowingly, as normal business, but I knew one utterly honest but innocent man, Joseph Ternbach (Muscarella 2000: 24), who did not know he was given forgeries to restore by dealers and collectors. Among the forgeries he was deceived into "restoring" were the St. Louis Museum Diana (Fig. 6); the Land of the Bible Museum bronze breastplate (Fig. 13; Muscarella 2000: 181, 499, no. 25), and a gold copy of the Seven Brothers animal-headed vessel (Fig. 14; Muscarella 2000: 54, 319, no. 21).

*This paper has been modified from the original lecture format to suit a written paper. It is essentially the same paper delivered in Bochum, with additions and bibliography. (The Bochum Conference was one of the most vigorous and open-minded I have ever attended. Frankness and a willingness to share different, even

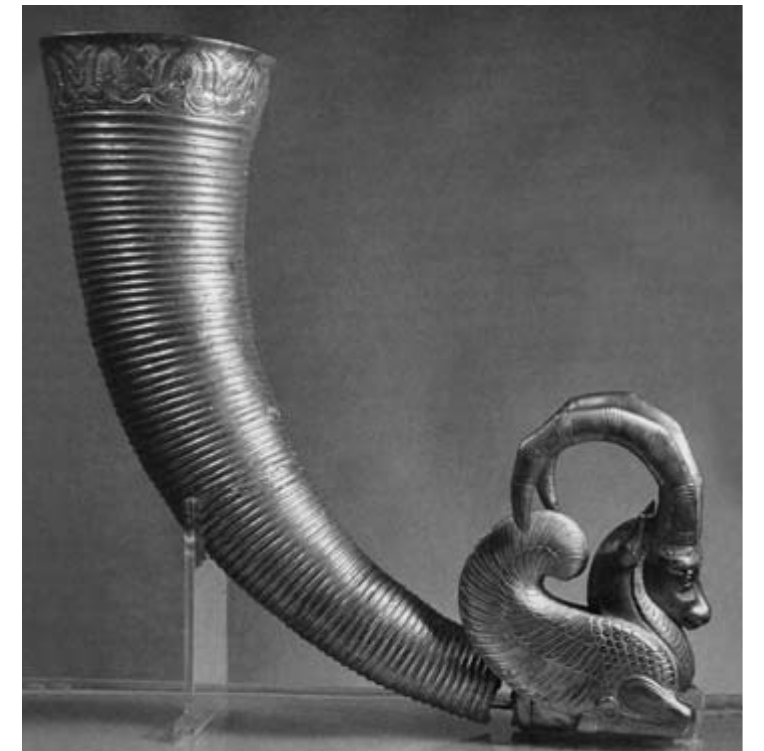


Fig. 14: Gold Copy of the Seven Brothers animal-headed vessel

opposing views frankly and as colleagues prevailed throughout: thanks to our hosts, Alexander and Silke von Berswordt, and their helpful assistant, Hilke Wagner). I wish to thank two conservators and a scholar for reading this paper and making valuable suggestions – and for correcting and modifying some scientific misunderstandings on my part.

¹ Muscarella 2000, and bibliography on pages: 223–224; for use of the words artifact and antiquity, see p. 17.

² Some individuals involved in testing antiquities are primarily scientists, and call themselves scientists or scientist-conservators; others, more involved in art history but who also have some scientific training call themselves objects conservators. I use both forms here.

³ His article contains a balanced discussion of the merits both of traditional connoisseurship and scientific analyses and disagreements and discrepancies between them, recognizing the problems with both methods. He supports the former more than the latter with some reserve – as I myself have done, and he correctly notes that too much unexamined reliance has been assumed for the latter; see also pp 626, 628. His report on a fragmentary forged torso, alleged

through a connoisseurship study, to be close in style to the Getty kouros, is less satisfactory.

- ⁴ For exceptions see Muscarella 2000: 181, no. 24, and page 215, note 61, where I refer to the “salting of objects into sites” by excavation workmen, also mentioned by Unger 1957: 6.
- ⁵ A number of participants at the Bochum Conference noted that conservators recognize this, inferring I was speaking the obvious. But indeed, non-scientists/conservators do not know this: because few conservators openly write or speak about such matters.
- ⁶ Suzan Mazur “The Odyssey of Stuart Pivar’s Roman Bronze Boy,” on the Internet: SCOOP, December 22, 2006: 7–9; see again Spier 1990: 627.
- ⁷ Conservators have no monopoly on authenticating Hacilar figurine forgeries. James Mellaart, the excavator of Hacilar, authenticated forgeries of Hacilar figurines (Muscarella 2000: 140, nos. 60, 61). I also have written and verbal records that Mellaart authenticated as genuine a number of figurine forgeries that he was shown by dealers and collectors in the United States.
- ⁸ December 6, 2006: no. 97. Also quoted is a report from an alleged scholar of ancient Near Eastern art.
- ⁹ T. Kawami published them as genuine and ancient in *Ancient Art* 1996: 26–31, and Miho Museum Southwing, Miho Museum 1997: 51–2, nos. 10, 11; she mentioned but ignored the lack of excavated parallels.
- ¹⁰ The object remains unpublished, although photographs are available on the Internet.
- ¹¹ For a record of one conservator involved see Jean D. Portell, “Art Crimes and Conservation...,” *American Institute of Conservation News*, 330: 6: 8.
- ¹² A. Steinberg et al, in Rodney S. Young, *Three Great Early Tumuli*, Philadelphia, 1981: 286–288.
- ¹³ Compare the conclusions of J. Riederer, “Die Erkennung von Fälschungen kunst- und kulturgeschichtlicher Objekte aus Kupfer, Bronze und Messing durch naturwissenschaftliche Untersuchungen,” in *Berliner Beiträge zur Archäometrie*, 2, 1977, 85–95.
- ¹⁴ Here repeating a previous defense of two forgeries purchased by her husband: Muscarella 2000: 136–7, 438, 439, nos. 13, 14.
- ¹⁵ As for example, the eager acceptance by W. G. Lambert concerning methods employed at the University of Georgia, U.S.A. that allegedly authenticate alleged ancient stone artifacts (N.A.B.U, 2004, 3: 61).
- ¹⁶ P. Kuniholm “Dendrochronology and Radiocarbon Dates for Gordion and other Phrygian Sites,” *Source VII*, 3/4, 1988: 6, 8. Unfortunately for archaeological accuracy, Kuniholm and his Gordion colleagues have ignored this crucial reuse documentation in their later conclusions about Gordion chronology: by using the recovered beams in the destruction level as well as one in the Early Phrygian fortification wall as evidence. Keenan and James present a strong critique (Mielke less so) of Kuniholm’s analyses and conclusions regarding the dating of sites from recovered wood. Note also Keenan 2006 (13–16) for a rejection of the recent dendrochronological dates announced for Assiros in Macedonia by Kuniholm et al. These dates demand a re-dating of the Proto-Geometric period to the early 1st millennium B.C., a major upward chronological adjustment for that period. See also J. Yakar’s acceptance of the Assiros dendrochronological analysis and its early chronology proclaimed in the same volume as Mielke 2006 (1–19).
- ¹⁷ See for example its use in determining the age of European furniture in “The Getty, A Renaissance Cabinet Rediscovered” posted on the Internet. I of course have no opinion on this item (I owe the reference to Mark Rasmussen).

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