The background of the cover features a large, dark, interlocking gear mechanism. On the left side, there is a detailed marble bust of George Mason, shown in profile facing right. The bust is light-colored and has curly hair. The title 'Engines of Education' is written in a white serif font across the top right, partially overlapping the gear mechanism.

Engines of Education

Essays
on the
George
Mason
University
Plaster
Cast
Collection

Engines of Education

**Engines of Education: Essays on the George Mason University
Plaster Cast Collection**

Edited by Christopher A. Gregg, Ph.D.

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Engines of Education:
Essays on the George Mason University
Plaster Cast Collection

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"ALBANI" ANTINOUS RELIEF, LATE 19TH CENTURY PLASTER CAST FROM
ROME, ITALY. GMU CAST COLLECTION.

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PLASTER CASTS FOR GEORGE MASON UNIVERSITY

CAROL C. MATTUSCH

There can be many people to go through to get it all to work, but in the end it can all be worth it...I think that having a supporting group of people behind the project makes the work go smoother and faster.

JOSEPH PETTY

A 14th-century-BCE sculptor's workshop in the Egyptian city of Amarna contained plaster casts taken from life; collectors in ancient Rome owned copies of famous classical statues that were derived from plaster casts; and Michelangelo and his 16th-century contemporaries used anatomical plaster casts in their studios.

There are plaster casts of statues in the palaces of the 17th-century kings of France, and in 18th-century British and European country houses and universities. In London, the Victoria and Albert Museum, founded in the 19th century, has one of the finest collections of plaster casts reproducing ancient to modern works of art. During his campaigns in Europe, Napoleon had plaster casts made of works that he did not appropriate. Many of them were displayed in Paris, others were sent to America in 1806 to be used in drawing classes at the Pennsylvania Academy of the Fine Arts. Later in the century, museums in Chicago, Boston, and New York started cast collections, as did universities across America in the 20th century. Catalogues of European and American cast collections were printed, the casts described and illustrated as if they were actual works of art. Casts were seen as the best way in which to educate the general public about their heritage, and as suitable subjects for art classes.

Three years after New York's Metropolitan Museum of Art opened in 1880, the museum received a bequest from Levi Hale Willard to start a collection of "models, casts, photographs, and other objects illustra-

tive of the arts."¹ It seemed that original works of art would be out of reach for a museum so recently opened. In 1888, Henry G. Marquand requested that casts of sculptures be added to the architectural casts. Between 1880 and 1890, 2,600 casts molded from originals in the great museums of Europe were collected and exhibited in the front hall of the Museum. But the tide turned when funds became available to acquire original works of art, and in 1906, the purchase of casts was halted in favor of original sculptures and reliefs. Indeed, private collectors and public benefactors considered the true measure of a work of art to be in its monetary value, not in its educational merit. During the 1930s, nearly all the Metropolitan's plaster casts were placed in storage, including the cast of a sarcophagus of Johann Cicero, a 15th-century Hohenzollern prince, which had never been uncrated. Some casts of the Parthenon frieze remained on view, their final location being above the escalator to the first floor of the Museum.

In 1949, the Art Institute of Chicago destroyed some of its plaster cast collection, because restoration was expensive, the casts took up a great deal of storage space, and they created a fire hazard. Other educational institutions and museums followed suit, destroying crumbling and blackened casts, but not the Metropolitan Museum. In the 1980s they began to lend casts to colleges and universities across the United States. After 2000, when the Museum realized that they would have to give up their storage space, they gave casts as gifts to academic institutions. Casts that were not given away were auctioned off at Sotheby's in 2006, attracting buyers who were interior decorators, antique dealers, and two George Mason University students.

The entire collection had been stored on the ninth floor of a warehouse in the Bronx, where they were first seen in 2002 by faculty from GMU—Tom Ashcraft (Sculpture) and Carol Mattusch (Art History), later by Ben Ashworth (Sculpture), Lucy Miller (Art History student), and Anna Zacherl (History student). The students' adventure with purchasing the last casts for GMU was described evocatively by the late Lucy R. Miller.

1 *Metropolitan Museum of Art Catalogue of the Collection of Casts*, 1908, (New York: The Metropolitan Museum of Art) vii.

As Lucy Miller and Anna Zacherl put it when they first saw the casts in the warehouse on Feb. 27, 2006, the day before the Sotheby's auction:

In the dim light, shadowy images of disembodied human figures and small ruined buildings came into view. Everywhere, dusty soot-covered plaster statues, portrait-heads, body parts, reliefs, architectural models, and decorative fragments filled rows of shelves and floor space. The time periods they covered ranged from Greek and Roman to Medieval, Gothic, Byzantine, Italian Renaissance, Northern European Renaissance, Baroque, Near Eastern, Far Eastern, and Egyptian. All the casts were in various states of disrepair from almost a century of neglect. They were haphazardly grouped together in lots based upon where they were sitting on the shelves and floor.²

Miller describes the excitement of the opportunity for students to be involved in such an unusual project and articulates the rationale for bringing the plaster casts to the GMU campus:

We arrived at the Bronx late in the afternoon of February 27, 2006, our destination being an old warehouse overlooking the East River, where the Metropolitan Museum of Art had stored their plaster cast collection. Most of the casts were made over a century ago, some never even reaching display status before the museum began replacing them with acquisitions of original sculptures. They were going to be auctioned off the next day at Sotheby's, and we were two women on a mission: hoping to attain more historic plaster casts to add to the collection of George Mason University and to inspire future students. We had learned of the auction in a January 2006 article in *The New York Times*. We were delighted with the gift of plaster casts that the Metropolitan Museum had made to GMU, and though we agreed that the

2 Lucy R. Miller, 2006, "The Last Casts: Neophytes with Good 'Chi'. Part I, The Viewing" <https://plastercast.gmu.edu/part-i-the-viewing>.

casts are reproductions, we knew that skilled craftsmen had made them, and that these are often exact copies of works of art (with the exception of pieces that were restored prior to casting. ...).

And nobody can dispute the fact that these casts are historic, most of them having been made during the 1890s. More fuel to add to our fire: in February an article on *Bloomberg.com* suggested that these casts could help with "a Tribeca loft in need of some decoration, (to) add some instant class, quite possibly on the cheap." Would the Tribeca lofties bother to research the casts beyond Google? The trip was time and money well spent, if we could rescue even one cast for public display, instead of letting it be hidden away in someone's apartment! As students, we recognized that this was a unique opportunity for us to experience the sale of a collection at a major New York auction house, yet we readily acknowledged that we knew nothing about the procedure that was about to unfold. We were ready to take action, our professor had supported the idea, and accommodations were offered by family members on Long Island...

Wandering through the aisles of the Bronx warehouse, we were excited by many of the pieces, but our confidence was waning for any chance of a successful bid the next day. We surveyed the lots, and kept an eye on the competition. Although the casts were invaluable to us, we wondered if our budget could withstand any of the other prospective bidders. As we entered the warehouse, some distinguished-looking men in fine Italian suits exited, slipping into sleek black chauffeured vehicles. Inside, women in full-length minks darted around us, occasionally peering at us over their glasses, likely curious as to why these two jean-clad young women were shrieking with delight at every other cast. The word in the warehouse was that all week long the majority of surveyors had been antique dealers, art dealers, interior decorators,

and museum representatives. Nonetheless, we were determined to make at least one successful bid at Sotheby's, our purpose being the promotion and preservation of history and art history at George Mason University.³

Today George Mason University is the recipient of seventy plaster casts from the Metropolitan Museum of Art, the first of which arrived in 2003 on long-term loan, followed by two more shipments—as gifts—in 2005, and, finally, the purchases of some of our largest casts in 2006. The first casts were kept and restored in an unused back kitchen area on the second floor of SUB II, later renamed The Hub. Between 2003 and 2011, more than twenty students from half a dozen disciplines cleaned, restored, researched, catalogued, and installed most of the casts. There were also participants from outside GMU.

Judy Ozone and Abigail Mack, conservators from the National Gallery of Art, spent a day at George Mason giving a workshop on how to clean plaster casts properly. Having been in storage for sixty or more years, some casts were black with soot or dust, others were brown with discolored varnish or they retained traces of overpaint. There were abrasions and breaks, not to mention stains, writing, cobwebs, and even bits of nests. Following their recommendations, all the casts were vacuumed and brushed gently, and then surface dirt was removed with Mars white erasers. Those casts that had been broken were pieced together by students and repaired by Kreshnik Xhiku, a sculptor and teacher skilled in the arts of making and restoring plasters. He made a new toe for the Barberini Faun, and a horn for the bull in the so-called Ahenobarbus Relief. He also made mounts for installation and helped to move many of the heavy and delicate casts, as did Ben Ashworth, GMU's Sculpture Studio Supervisor. Nick once led students in a discussion that ended in a decision not to fill and thereby conceal a hole that had evidently been made by years of dripping water. From a mold that he took of another plaster, Nick cast concrete replicas that were installed on the Prince William campus and on the Fairfax campus. In 2004, Andrew Zimmerman, a photographer, took detailed black-and-white photographs of the first casts that arrived

3 Miller, 2006, "The Viewing."

at George Mason.

Within about a year, the casts had to be removed from the former kitchen so that the space could be restored. Those casts were installed in Mason Hall, College Hall, the Concert Hall, and SUB II. But more casts were to come, and the later shipments were delivered to a warehouse-sized storage barn in Clifton, whose use was generously given by Art History student LeAnn Brickey. There they were cleaned in pleasant, spacious, and well-lit surroundings.

Students, faculty, staff, and administrators all helped to decide where to install the plaster casts. The most difficult placement to find was for the sarcophagus: the University Libraries did not like the idea of having a sarcophagus in Fenwick; the bottom of a stairwell in another building was turned down as being inappropriate because that was where a student was said to have committed suicide. The actual moving, mounting, and installation of each large cast was accomplished with the help of Ben Ashworth, Nick Xhiku, and colleagues from Housekeeping and Carpentry in Facilities Management. Glass exhibition cases were donated to the Department of History and Art History by Dr. Jerome J. Eisenberg, owner of Royal-Athena Galleries in New York. Labels identifying the casts were produced by GMU's Sign Shop.

The broad spectrum of plaster casts at George Mason reflects the students' areas of interest and professors' areas of expertise. GMU's collection ranges from a 6th-century-BC relief from Persepolis, to 5th-century-BC sculptures from the pediments at Olympia, to a 1st- to 3rd-century-AD Gandhara relief representing the Buddha, to a 12th-century French Romanesque relief showing the baptism of Christ, to a forged 18th-century portrait of Julius Caesar, to the "Torso of Gordon Ross, 1938," seemingly cast from life. A print catalogue of the entire collection was designed by Stephanie LaSpada in 2012. Students wrote a flyer about Plaster Casts on Campus and designed walking tours for distribution to visitors and potential students. The website was designed by Stephanie Grimes and Shellie Meeks and produced by the Roy Rosenzweig Center.

The success of this long-term project in which plaster casts came to reside on the Fairfax Campus rests on those who enthusiastically offered

their energy and labor. I should like especially to thank the following participants in this years-long project:

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Offices at GMU: Auxiliary Enterprises, College of Humanities and Social Sciences, College of Visual and Performing Arts, Department of History and Art History, Facilities Management, Office of University Life, Physical Plant, President's Office, Provost's Office, Roy Rosenzweig Center for History and New Media, Students as Scholars Program.

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ART OR ARTIFACT?

REAPPRAISING THE SLEEPING SATYR PLASTER CAST

CHRISTOPHER A. GREGG

*Casts are engines of education and should not be shown near objects of inspiration. They are data mechanically produced; our originals are works of art.*¹

A visitor to George Mason University's Fairfax Campus might be quite surprised as they take the glass-walled corridor that links College Hall to Buchanan Hall. Dominating a corner between panes of glass and a brick wall, an over life-sized satyr (*faun* to the ancient Romans) reclines in fitful sleep (Fig. 1). Sprawled on a rocky base and cushioned only by an animal skin that would have reminded the classical viewer of the satyr's uncivilized ways, the mythical creature displays a body that is idealized—perfected according to the Greco-Roman perspectives on the masculine form. With the exception of the area of his genitals, which are covered by a fig-leaf, the open pose with splayed legs allows the viewer to appreciate in great detail the toned form of the figure. Only the horse-like tail that erupts from the base of his spine and is visible to the left of his body suggests his supernatural identity. Despite his seemingly innocent sleep, the wreath of grape and ivy leaves in his tousled hair connects the satyr to Dionysus, the Greek god of wine and revelry, and the creases at his forehead suggest that the satyr is having unpleasant dreams while passed out

1 Quote of Matthew Pritchard cited in Walter M. Whitehill, 1970, *Museum of Fine Arts Boston* (Boston: Harvard University Press), 202, from an early 20th century debate at the Museum of Fine Arts in Boston over the inclusion of plaster casts in the galleries of the museum. See also P. Born, 2002, "The Canon is Cast: Plaster Casts in American Museum and University Collections," *Art Documentation: Journal of the Art Libraries Society of North America* 21.2 where the quote is given in full (10).



Fig. 1 The plaster cast of the Sleeping Satyr/Barberini Faun is shown in the breezeway corridor linking Buchanan Hall and Mason Hall on the Fairfax Campus of George Mason University. Photograph by C. Gregg.

from excessive indulgence in the wine-god's drink of choice (Fig. 2).

So, what is this refugee from Greek myth doing on a college campus, sleeping off a Dionysiac bender among the hallowed halls of education? Our satyr is a plaster cast of a work of art variously known as the Sleeping Satyr or the Barberini Faun. The original work (Fig. 3), sculpted in marble, has lived in the Glyptothek Museum (Munich, Germany) since 1820 after being discovered in Rome, Italy, near the Castel Sant'Angelo in the 17th century.² Considered a masterpiece of the ancient Mediterranean sculptural art, the Sleeping Satyr is executed in the Hellenistic style, known for its exploration of altered states like the troubled sleep seen here. Idealized forms, intense emotions (including psychological distress as suggested by the Satyr's furrowed brow) and strong contrasts of light and shadow that intensify its deeply carved forms are also characteristic of this period. The light and shadow chiaroscuro is most evident in both the hair and musculature of the unconscious satyr.³ Equally Hellenistic in character is the reversal presented by the Sleeping Satyr. In Greek myth, creatures such as this were highly sexu-



Fig. 2 Detail of the plaster cast of the Sleeping Satyr/ Barberini Faun. Note the furrowed brow, the tail and the fig leaf. Damage to the lower left abdomen reflects damage to the original sculpture at the time of the casting. The connection point for the post classical replacement left arm is also visible in the upper right. Photograph by C. Gregg.

² Jean Sorabella, 2007, "A Satyr for Midas: The Barberini Faun and Hellenistic Royal Patronage," *Classical Antiquity* 26.2, 219-248. Sorabella describes the post classical history of statue (221) and argues that it should be identified specifically as the satyr described in the myth as captured by King Midas (238 ff).

³ J.J. Pollitt, 1986, *Art in the Hellenistic Age* (Cambridge, UK: Cambridge University Press), 134 and figure 146; Andrew Stewart, 1990, *Greek Sculpture: an exploration* (New Haven, CT: Yale University Press), 207.

alized Dionysiac figures, normally depicted in art and literature as predatory masculine aggressors, chasing nymphs, maenads, and other figures lustily through the woods. Here, the satyr himself is rendered vulnerable and transformed into the object of the viewer's admiring gaze.⁴

This full-size plaster reproduction of the Sleeping Satyr came to George Mason University (GMU) in the early 2000s along with nearly seventy other plaster casts from the Metropolitan Museum of Art (MMA) in New York. The casts had once been a major component of the museum's collection, but they had been put into storage by the middle of the 20th century. Decades of neglect followed, with leaky roofs and other indignities doing substantial damage to many of the over 2600 plaster casts that had once delighted and educated museum-goers in the galleries of the Metropolitan Museum.⁵

Under the direction of Dr. Carol Mattusch (Department of History and Art history, *emerita*), the plaster casts which had been loaned, donated, or—in a few cases—purchased for the university were restored and placed on display across the Fairfax Campus in the years between 2005 and 2010.⁶ More than 30 of these casts were on view in Robinson Hall B, but with the announcement that both Robinson Hall A and B were to be torn down and replaced by a new structure, opening in 2021, it became clear that a new home would need to be found for those casts. Through the generosity and cooperation of Don Russell (University Curator), Cathy Wolf-Pinsky (GMU Facilities Administration), and Michele Greet (Director of the Art History Program), I was given permission to develop a curatorial seminar that would, in part, determine the placement of the former Robinson Cast Collection in the newly opened Horizon Hall.

4 R.R.R. Smith, 1991, *Hellenistic Sculpture: a handbook* (London: Thames and Hudson), 135.

5 The history of the Metropolitan Museum of Art's cast collection is mirrored in many other museums throughout Europe and North America. After a heyday of plaster cast exhibition in the 19th and early 20th century, many casts were exiled to storage. In the case of the Metropolitan Museum of Art, the majority of casts were removed from display at the end of the 1930s and by 1949, nearly all plaster casts had been relegated to storage. After a limited number were re-exhibited in 1958, the casts were once again dismissed from formal viewing by the 1970s. This timeline is discussed by J.V. Noble, 1959, "A New Gallery of Models and Casts," *The Metropolitan Museum of Art Bulletin*, New Series 18.4, 138-143.

6 A brief history of the GMU cast collection is available online at <https://plastercast.gmu.edu/plaster-casts-at-gmu>. See also the Foreword, by C. Mattusch, to this collection.

The students in the seminar worked to create a new catalogue for the Robinson Collection using JSTOR Forum, composed new labels for the casts, and made recommendations on the physical display (placement, label format and color) of the Robinson Collection in its new home. This collection of essays is also the result of our research and exploration of the complicated and fascinating history of the sculptural plaster cast phenomenon.

A critical topic of discussion throughout the seminar was the place of these plaster casts in the subject area of art history. Until the late 19th century, plaster casts like our Sleeping Satyr were often the primary sculptural forms on view in art museums, whether at the Metropolitan Museum of Art, the Boston Museum of Fine Arts or European academic collections.⁷ Even when original works of ancient sculpture were present in the collection, these ancient sculptures in stone, marble or bronze were frequently displayed side-by-side with plaster casts.⁸ The goal was often to set forth a ‘complete’ sequence of the historical development of sculpture by intermingling casts and surviving examples of Greek, Roman, Egyptian or Near Eastern works.⁹ This approach to exhibiting the plaster casts demonstrates that, for a time, these plaster copies were treated as equal to the ancient works of art.¹⁰ To the curators and viewers of the cast collections, the important point was not the authenticity of the image in terms of original or reproduction, but in the aesthetic value that the casts communicated to the audience. Odd though it may seem to a modern

7 On American art museums, see Alan Wallach, 1998, *Exhibiting Contradictions: Essays on the Art Museum in the United States* (Amherst, MA: University of Massachusetts Press), 39-46. On the European collections, see F. Haskell and N. Penny, 1981, *Taste and the Antique: the lure of classical sculpture 1500-1900* (New Haven, CT: Yale University Press), 88.

8 Mary Beard, 1993, “Casts and Cast-offs: the Origins of the Museum of Classical Archaeology,” *Proceedings of the Cambridge Philological Society* 39, 8. Beard notes that casts and original works were ‘jumbled’ together without clear organization at the Cambridge Fitzwilliam Museum in the latter part of the 19th century, reflecting an equivalence of value.

9 Wallach 1998, 48.

10 Beard 1993 argues that plaster sculptural casts in the late 19th century “were treated as objects of beauty in their own right: antique masterpieces. . .to be appropriated and re-displayed within the contemporary aesthetic frame” (11); Wallach 1998 states that in the 19th century, some cast proponents found the experience of viewing them not only equal to but superior to looking at ancient works (46).



Fig. 3 The marble Sleeping Satyr/Barberini Faun in the Munich Glyptothek. Photograph by C. Gregg. Used with permission of the Glyptothek.

audience, aesthetic philosophers in the 19th century argued that the benefit derived from seeing a copy was equivalent to the value of seeing the original of a work of sculpture.¹¹ In short, casts of ancient sculpture—especially classical Greek and Roman works—were believed to imbue the viewer with the desirable characteristics of civilization (from a decidedly European and North American “Western” perspective on culture).¹²

The significance and desirability of plaster sculptural casts, however, began to wane in the late 19th century, and by the midpoint of the 20th century, the ‘cult of the cast’ had been replaced by the ‘cult of the original’.¹³ Here, we can consider the quote that opened this essay. W.M. Whitehall records this as a part of the debate that raged at the Boston Museum of Fine Arts at the cusp of the 20th century. On one side of the argument were those who still saw the plaster casts as critical to achieving the goals of the institution: to educate the visitor and to perpetuate the canon of Western sculpture. This viewpoint saw cast as equivalent to an original work of art. Taking an opposite view, M. Pritchard, the speaker of this quotation, consigns the casts to a subordinate role that is distinct from (and distinctly inferior to) ‘real’ works of art.

What did it mean for Pritchard to call plaster casts ‘engines of education’? The phrasing emphasized the pragmatic and practical merits of using casts: these casts allowed one to see a work of art that was far distant and perhaps unvisitable due to the cost or mechanics of travel.¹⁴ But an engine is the result of a technical process of building. No art historian would ever speak of ‘building a statue.’ Statues are sculpted, shaped, formed, carved—created as opposed to built.

The very precise, mechanical process by which exact copies of ancient

11 R. Comay, 2014, “Defaced Statues: Idealism and Iconoclasm in Hegel’s ‘Aesthetics’,” *October* 149, 123-142. Comay makes this point in her discussion of G.F.W. Hegel’s view of aesthetics, published in the early 1800s (131).

12 This was especially true in the United States, a relatively new nation in the 19th century, which chose to focus on infrastructure and economy rather than art but also found itself wanting to compete with the cultural expectations of its European peers. See Wallach 1998, 46-47; James K. McNutt, 1990, “Plaster Casts After Antique Sculpture: Their Role in the Elevation of the Public Taste and in American Art Institutions,” *Studies in Art Education* 31.3, 158-167; also see Beard 1993, 20.; Born 2002, 10-11.

13 Wallach 1998, 46-51.

14 For the impact of travel on accessibility to art in the late 19th/early 20th century, see Chapter 6, “Reconsidering Casts in the New Millennium,” in this collection.

statues were produced is, in this debate, now being used as a weapon against the casts themselves. If they are the result of mindless production and endless replication, then they lack the quintessential spark of creativity that is supposedly the genius of a sculptor or painter or any other artist.¹⁵ A genius that is born of inspiration rather than technique. In this view, the workman-like production of casts is the province of the technician rather than the artist.

We might wonder what was behind Pritchard and his allies' new way of looking at art that so emphasized the 'original' and dismissed even the highest quality reproductions. As is often the case when discussing style or taste, there is no one singular cause but rather a number of factors conspiring to push those plaster casts out of the gallery and into the leaky warehouses or damp sub-basements. M. Beard has argued that it was the advent of 'modernity' itself that signed the plaster casts' death warrant. New artistic styles like Art Deco, abstraction, and minimalism were all antithetical to the classical notion of idealized human forms so often celebrated in plaster casts. Beard similarly notes that the fall of the plaster cast coincides with the advent of a distinction between popular art and 'art for education.'¹⁶ Simultaneously, archaeology as a discipline and exercise was, quite literally, unearthing more and more works of ancient sculpture in the final years of the 19th century and the first decades of the 20th century. Stone and bronze examples of Greek or Roman sculpture, once relatively rare and quite expensive to obtain, were now more numerous and economically accessible. This situation was aided by the rise of the wealthy museum patron and private collector who would also loan

15 At about the same time this debate was raging at the Boston Museum of Fine Arts, the cast collection at Cambridge University's Museum of Classical Archaeology was undergoing a similar re-evaluation. Once celebrated as works of art, the Cambridge casts were, by the 1910s, consistently referred to as specimens in the 'laboratory' of the archaeological sciences. See Beard 1993, 17. In Oxford University's Ashmolean Museum, plaster casts remained a significant part of the collection throughout the 20th century, contrary to the trend in most museums. However, even at the Ashmolean, the plaster cast was deemed an "apparatus" of scholarship rather than a work of art beginning in the 1890s. See M. Melfi, 2010, "Old meets New: the Oxford University collections of casts from the antique and the new Ashmolean Museum," 23-35, in *Plaster casts of the works of art: history of collections, conservation, exhibition practice: materials from the conference in the National Museum in Krakow, May 25, 2010*, edited by Jean-Marc Hofman (Berlin: de Gruyter), 27.

16 Beard 1993, 22.

works to institutions—especially in the US where families like the Rockefellers, Gettys and Warrens helped to fill the galleries of many museums with original works of ancient sculpture.¹⁷ As the status of originals rose, the reputation of the plaster casts sank.

Given these facts, it is fair to question why we might spend a semester studying the GMU plaster cast collection, why even we should put the cast collection on display. To understand better the benefits of having the casts on view, it is useful to return to our Sleeping Satyr where we can use him as a case study to tease out the complex and often misleading concept of an ‘original’ work of art as well as seeing the continued value of these plaster casts.

To fully appreciate the cast, however, we must begin with the statue from which it was molded. There is no doubt that the marble Sleeping Satyr in Munich is a work of ancient sculpture, but the seemingly simple desire to identify it as either a Greek work or a Roman work reveals an immediate complication. Found in Rome, the style of the statue is definitively Greek Hellenistic. It might have been produced in the Greek East of the Roman Empire and brought to Rome, but it might equally have been sculpted by a workshop in the Eternal City. We have no information on the name of the artist or workshop which produced it to help us classify it further as Greek or Roman. Although it is carved out of Asiatic marble from the Greek East, blocks of stone were frequently transported across the Mediterranean Sea in the Roman period. Geographical considerations aside, scholars of classical sculpture are not even certain whether this statue should be dated to the Hellenistic Period of Greek art (suggested creation dates begin around 230 BCE) or to the Roman Imperial period (specifically, the decades around 130 CE when the Mausoleum of Hadrian, which became the Castel Sant’Angelo where it was discovered, was built).¹⁸

17 Wallach 1998, 50.

18 Smith 1991, 135. Sorabella 2007, 223-224, leans heavily towards a date in the Hellenistic period, going so far as to suggest a narrow range between 230-220 BCE. Despite that, she acknowledges that the work may well date to a later ‘revival’ of the Hellenistic style. However, Sorabella also raises the possibility that the preserved marble sculpture may copy a bronze original from an earlier date (237), thus tangling even further the lines between original (bronze), (marble) copy, and plaster cast reproduction.

Further complicating the discussion are the repairs that were made to the statue after its rediscovery. The right leg of the Sleeping Satyr, which gives it a sexually ‘provocative posture,’¹⁹ is anything but original. Along with the left arm, which is not included on the GMU cast and has subsequently been removed from the Munich Satyr, the leg was created as a replacement after the Sleeping Satyr was discovered in its damaged state. Often attributed to Gian Lorenzo Bernini, noted Italian Baroque sculptor, these new limbs are now thought to be the work of Giovanni Pacetti (1746-1820).²⁰ When the Sleeping Satyr was rediscovered in the 17th century, right leg and left arm were missing, and an artist—likely Pacetti—was subsequently employed to replace the limbs since the taste of the time preferred complete, undamaged works of sculpture for display. Scholars studying the Sleeping Satyr have long realized that these post-classical additions, while visually and technically beautiful, are inaccurate. Specifically, the right foot is higher than it should be and as a result the angle of the right leg is incorrect, giving a more sprawling and revealing view of the faun’s body.²¹

Color, a critical feature of ancient sculpture, is also missing from our Satyr. Scholars now recognize that most marble sculpture from the Greek and Roman periods had at least some polychromy.²² Colored pigments

19 Smith 1991, 135; Sorabella 2007, 224-225, where she summarizes the views of several scholars, one of whom sees “the indecent display of the genitals as indicating lack of self-control,” symbolic of the satyr’s bestial nature.

20 Sorabella 2007, 221-222 and fn. 7, provides a complete discussion of the restorations to the statue. On the broader topic of restoring ancient statues to completeness in the post classical period, see Haskell and Penny 1981, 103.

21 By the early 1970s, the post classical marble arm and leg were both removed from the Glyptothek Satyr. According to J. Sorabella, a plaster cast of the restored leg was ultimately rejoined to the sculpture, but a new left arm was not provided for the sculpture. This plaster leg is the one visible on the Sleeping Satyr today (Fig. 3) while the GMU cast documents Pacetti’s marble limb of the late 18th/early 19th century. See Sorabella 2007, 222 and fn. 8.

22 V. Brinkmann, R. Dreyfus, U. Koch-Brinkmann, 2016, *Gods in Color: Polychromy in the Ancient World* (San Francisco: Legion of Honor, Fine Arts Museum of San Francisco), 27-28. The impetus for color appears to be related to the desire both for more life-like figures and greater legibility of details. Although some works in the Munich Glyptothek’s collection, specifically pedimental sculpture from the Temple of Aphaia at Aegina, have been analyzed for traces of color, the Sleeping Satyr has not been. For the Aegina sculptures, see V. Brinkmann, R. Wünsche, and U. Wurnig, 2004, *Bunte Götter: die Farbigekeit antiker Skulptur: eine Ausstellung der Staatlichen Antikensammlungen und Glyptothek München: Glyptothek München, Königsplatz, 16. Dezember 2003 bis 29. Februar 2004* (Munich:

were applied to the hair, the eyes, the lips and clothing of figures like the Satyr in order to make them more vibrant and lifelike. In some cases, even the exposed skin might have been covered with pigment to provide a more realistic flesh-tone to the cold white marble.²³ Instead, as we see it today, the marble of the Sleeping Satyr sculpture is gray-white and polished to a high sheen. Even this glossy surface may not be authentic to the statue's appearance in antiquity.²⁴ Post-classical restorers in the Renaissance and Baroque periods are known to have buffed rediscovered ancient sculpture to a similar glass-like smoothness to appeal to the tastes of their own age.²⁵

Staatliche Antikensammlungen und Glyptothek), 36-47.

23 For examples of coloration of flesh, hair, and eyes, see Brinkmann et al. 2016, 120 no. 28, *Reconstruction of the Kouros of Tenea*. These features with the addition of richly painted, patterned drapery can be found at 121 no. 29, *Reconstruction of the grave statue of Phrasikleia*. The authors note that a brighter orange-brown color for the flesh would indicate a youth while darker reddish-brown coloration could be used to indicate a male of mature years. If this convention holds true for the Sleeping Satyr, his flesh would likely have been the brighter, more orange tone since his features indicate he is in the prime of his youth (120). In Roman frescos, however, satyrs are seen grappling with female figures—usually nymphs or hermaphrodites—and in these cases the painter has clearly contrasted the female's pale flesh with the darker brown skin-tone of the satyr. The practice follows conventions of gender coloration found in many cultures of the ancient Mediterranean where pale skin was considered a feminine feature and a sign of beauty. Tanned skin, alternately, corresponded to the male's time spent outside of the house in typical masculine pursuits such as war, hunting and politics. Given these considerations, the Sleeping Satyr might have had a pigment coating his exposed flesh that ranged from paler orange to darker brown. Sorabella 2007, 237, posits an original bronze statue as the source for this marble copy of the Sleeping Satyr and suggests that the bronze would have been "golden-colored." For an example of a fresco scene from Pompeii portraying a satyr and a hermaphrodite with the colorations described here, see inventory no. 110878 in the Museo Archeologico Nazionale di Napoli (Naples Archaeological Museum): Stefano De Caro, 1996, *The National Archaeological Museum of Naples* (Naples, Italy: Guide Artistiche Electa Napoli), 165.

24 The degree of polish on the surface of ancient marble sculptures could vary from one area to another and may have been linked to the intended application of color to that particular area. In a study of the marble copy of the *South Slope Head* currently in the Metropolitan Museum of Art, M. Abbe notes that the hair has been finished with a rasp, leaving a rougher texture, while the face itself is finely carved and uniformly polished. I would add, however, that the surface of the face does not reach the glossy sheen that is evident in the Glyptothek Satyr. See Mark Abbe, 2011, "A Roman Marble Replica of the 'South Slope Head': Polychromy and Identification," *Source: Notes in the History of Art* 30.3, 18-24, especially 20.

25 Sorabella 2007, 224, records that contemporary sculptor Peter Rockwell's inspection of the Sleeping Satyr in Munich led him to assert that "[post classical] restorations to the statue have obliterated its ancient surface."

In short, then, even if we were to travel to Munich and visit the Sleeping Satyr at the Glyptothek, we would hardly be seeing him as an ancient audience saw him. Among Pacetti's restorations, the absence of polychromy, and the uncertainty of the surface finish, the obsession with displaying 'originals' seems to lose a bit of its rationality.

To be sure, the plaster cast does obscure some significant features. The surface texture of plaster is rougher than even slightly polished marble. The cast also obscures the seams that otherwise, on close inspection, might cause the viewer to suspect that the right leg and left arm are not original to the work. And, of course, the fig-leaf that is intended to protect from offense is, in its own right, offensive to our seeing the piece as the artist intended.²⁶

The GMU cast of the Sleeping Satyr also rests on a base that was created for it, perhaps by Pacetti, after antiquity. Visiting the Glyptothek today, one would see only a part of the rocky perch on which the satyr reclines; the lower portion is then suspended above a very modern metal frame that is the result of intervention in the early 1970s to remove the post classical additions to the ancient work of art (Fig. 3).²⁷ The previous base, ornamented in stucco, had a square footprint and was decorated with a sequence of both concave and convex moldings. That post classical base also sought to harmonize with the ancient subject matter by including lumpy rock-like elements, plant life—including what seem to be poppies—and a *syrinx* below the right side of the satyr (Fig. 4). The *syrinx*, or Pan pipe, was a musical instrument created by the Greek wilderness god Pan and frequently associated with him. Although it is also associated with other gods and even mortal shepherds, it is not an ancient attribute

26 The use of fig-leaves to cover the genitalia of plaster sculptural casts and protect the sensibilities of viewers (especially, according to the attitudes of the 19th and even early 20th century, female viewers) had a long history. See McNutt 1990, 163. M. Garber touches on the history of placing fig leaves on plaster casts—a reaction to the unabashed nudity of the sculptural replicas that she sees as beginning with Queen Victoria's unhappiness in 1857 when the monarch was gifted a plaster copy of Michelangelo's nude *David*. Garber also points out that the fig leaves often draw attention to, rather than obscuring, what they were meant to hide. See Marjorie Garber, 2017, *The Muses on their Lunch Hour* (New York: Fordham University Press), 58-62.

27 Sorabella 2007, 222 fn. 7. Sorabella notes that some scholars still argue that the post classical stucco base should be attributed to Gian Lorenzo Bernini.

of satyrs.²⁸

In the post classical period, however, the *syrinx* and the myth of the nymph which inspired Pan to craft the first example of the musical instrument had become tangled with bucolic ideals, Romantic poetry and aggressive sexuality.²⁹ From the perspective of the post classical artist who



Fig. 4 Detail of the post classical base in the GMU cast, including vegetation and the cylinders of a syrinx or Pan pipe. Photograph by S. Sheridan. Used with permission.

produced the base and incorporated an image of the *syrinx* onto its decorative elements, the instrument's appearance would have been logical—even if an ancient artist or viewer would have found its presence confusing. Like the replacement limbs, the base reminds us of two important facts concerning plaster sculptural casts. The first is that their form can retain restorations that provide insight into the post-classical periods in which they were produced, recording cultural attitudes or assumptions that are not ancient but modern. The second is that the casts themselves

are now documentary evidence in their own right since the leg and sculpted base with its vegetation and Pan pipes

28 A. Faulkner, 2013, "Et in Arcadia Diana: An Encounter with Pan in Callimachus' Hymn to Artemis," *Classical Philology* 108.3, 231-232.

29 M. Thain, 2016, *The Lyric Poem and Aestheticism* (Edinburgh, UK: Edinburgh University Press), 36.

are no longer on display at the Glyptothek in Munich.

Yet even with these differences, the cast preserves the subtle pits and scrapes from the marble Satyr (most evident on the lower left abdominal area). The articulation of the musculature and the bulging forms of the forehead that are typical of the Hellenistic Baroque are identical to what we would see in Munich. Above all, the sheer scale and volume that the Sleeping Satyr imposes on the space around him achieve what no digital image, slide or photograph can do: the plaster cast makes clear how this statue occupies three-dimensional space, inserting its mythical self into our mundane world.

The obsession with 'original' works of art is undeniable, but perhaps it is time for us to consider how reductive and even counterproductive that binary approach really is. Attempts to identify true originals from antiquity have time and again proved elusive. Take for example the Riace Warriors, a pair of hollow-cast bronze sculptures discovered off the coast of Reggio Calabria, Italy, in 1972. While many scholars have hailed them as original works of the Greek Classical period (5th century BCE), later dates have also been suggested. In the desire to find originals of the Great Masters of the Classical period, however, some scholars have gone so far as to attribute them to Polykleitos or Phidias despite a lack of substantive evidence.³⁰ C. Mattusch, moreover, has argued convincingly that despite the visual dissimilarity between the two nude, male warriors, they were both produced from a single preliminary model. The differences that we perceive were introduced in the modeling of the wax which was then melted out and replaced by molten bronze using the lost wax technique.³¹

As a consequence, even if we were able to attach these sculptures to one

30 Brunilde S. Ridgway, 2005, "The Study of Greek Sculpture in the Twenty-First Century," *Proceedings of the American Philosophical Society* 149.1, 66.

31 Carol C. Mattusch, 2002, "In search of the Greek Bronze Original," 99-115 in *The Ancient Art of Emulation. Studies in Artistic Originality and Tradition from the Present to Classical Antiquity*, edited by E.K. Gazda, *Memoirs of the American Academy in Rome* suppl. Vol. 1. Mattusch describes the process that leads to the 'serialization' of bronzes through the use of a preliminary model and addresses the issues surrounding the Riace Bronzes (111-115). See also Ridgway 2005, 67. Ridgway summarizes the ambivalent position of bronze sculpture by saying, "...by virtue of their technique, [they] straddle the line between original and copy. Types and formulas should be emphasized over the search for a hypothetical prototype. Duplication does not stem from lack of creativity, nor does it always bespeak a famous creation" (70).

of the great names of Classical art, which of the two statues would be *the* original? And if they are both originals, yet born of the same model with only subtle variations in the wax-lined molds to distinguish them, do we need to redefine what we mean by an ‘original’ work of art?³²

This particular question is not restricted to bronze sculptures produced in antiquity.³³ If we consider the many bronzes produced from the casts of the 19th century French sculptor Auguste Rodin, we encounter a similar situation. Rodin’s famous *The Thinker* exists in multiple copies at substantially different scales.³⁴ Some were even produced by his workshop after his death. So, which of these qualify as originals? There has been no attempt to claim only those produced during his life-time are legitimate. Nor does the sequence of production affect the question of whether one version is more original than another. The understanding is that they are equally original—even those produced after his death.³⁵ We might ask, then, what credit belongs to the bronze-casters in the foundry as opposed to the ‘genius’ of the artist since it is foundry workers’ hands that continued to produce admirable works even after the death of the artist.

Much like the question of originals, the preeminent placement of the artist is also a rather nebulous concept, especially applied to antiquity when the Sleeping Satyr was produced. While we have names of Greek masters who created famous and much-admired works in marble and bronze, most of the surviving works of both Greek and Roman statuary are without attribution.³⁶ In antiquity, sculptors were often seen as

32 Mattusch 2002 asserts that neither Riace Warrior should be seen as a copy or a reproduction, but she acknowledges the inherent complexity of ascribing the term ‘original’ when she observes: “[a] single statue may be partly a straightforward copy of a preliminary model and partly an original that was formed in the wax working model” (115).

33 Mattusch 2002, 110, relates the ancient tradition of serially replicated bronzes to the modern example of Frederic Remington’s *The Bronco Buster*, which first appeared in 1894-95 but now has more than 1,000 authorized reproductions in existence. Many of these bronzes were produced decades after Remington’s death.

34 A concise history of the bronze statue in its variations is available through the Musée Rodin, <http://www.musee-rodin.fr/en/collections/sculptures/thinker-0>.

35 This ease of reproduction does cause problems. Unauthorized reproductions of some Rodin works have been identified. It is also true that each legitimately produced version is given a number, and that number distinguishes between pieces cast while Rodin was alive and those brought into being after his death. See Lillian Browse, 1987, “Fake Castings of Rodin,” *The Burlington Magazine*, 129.1017, 807-808.

36 Mattusch 2002, 99.

craftsmen, much like Rodin's unnamed foundry workers. In fact, the largely anonymous³⁷ production of sculpture in antiquity finds parallels in the workshops of plaster cast *formatori*, who produced the casts under discussion here but who are also largely invisible in both history and scholarship.³⁸

Ultimately, faced with these considerations, we may best describe plaster sculptural casts like the Sleeping Satyr as occupying an uneasy place between art and artifact. There is no denying that it is an artifact of a previous era when such copies were used to educate the viewer and convey good taste as well as "good" values³⁹ or stood as paradigms to train

37 J.M.C. Toynbee, 1950, "Some Notes on Artists in the Roman World," *Latomus*, Janvier-Mars 9.1, 49-65, especially 54-57.

38 In the 19th century, the Louvre and the Royal Museums in Berlin founded their own in-house casting workshops: L'Atelier de moulage, founded 1794 in Paris, and the Abguss-Anstalt, later the Museen-Formerie, more commonly called the Gipsformerei, was established by decree of the German Kaiser Wilhelm I in 1815. The *formatori* working for these institutions produced plaster casts of the sculpture in their own collection for sale and distribution, which became a very profitable addition to the work of the museum. Other institutions, such as the British Museum, chose to contract out the work of plaster cast production to independent *formatori*. These private *formatori* workshops functioned as lucrative businesses, supplying casts to museums around the world. Tracking down the *formatori* workshop (much less the individual in charge of a casting) which produced a particular cast in the 19th century is often difficult and sometimes impossible. In 1891, the MMA produced an internal document titled *Metropolitan Museum of Art: tentative lists of objects desirable for a collection of casts, sculptural and architectural, intended to illustrate the history of plastic art*, <http://library.metmuseum.org/record=b1040467>, which listed the casts that the museum hoped to acquire. This document sometimes included the name of the *formatori* workshop from which the museum hoped to obtain the cast but not in every case. For the Sleeping Satyr, the source is given as "Munich Polytech, 17" (30). This likely refers to the Royal Polytechnic School at Munich, which produced plaster casts and would have had ready access to the collection of the Glyptothek Museum in the same city. On the Royal Polytechnic School as a cast producer, see Payne, E, 2019, "Casting a new canon: Collecting and treating casts of Greek and Roman sculpture, 1850–1939," *The Cambridge Classical Journal* 65, 131. Payne also provides a list of "Preferred suppliers of plaster casts" in his Table I, (130). Some scholarly work has been done on particular *formatori* workshops, for example see Peter Malone, 2016, "The Gherardis Castmakers in Paris and Rome," in *In Situ: Revue des patrimoines* <https://doi.org/10.4000/insitu.12712>. On museum casting workshops, see Hans Georg Hiller von Gaertringen, 2019, "Berlin Supplies the World with Gods: The History of the Gipsformerei, Staatliche Museen zu Berlin 1819-2019," 216-225 in *Near life: the Gipsformerei: 200 years of casting plaster*, edited by V. Tocha, C. Haak, and M. Helfrich (Berlin: Prestel), 216.

39 Wallach 1998, 46-47. For the practice of contracting *formatori* at the British Museum, see Ian Jenkins, 1990, "Acquisition and Supply of Casts of the Parthenon Sculptures by

artists⁴⁰ in the intricacies of the human form. The GMU cast of the Sleeping Satyr even retains a record of the (incorrect) restoration of the right leg and the ornate base, which are yet more documentation of post-classical perceptions of the statue. On the other hand, the casts are clearly the work of talented artisans. C. Haak calls the work of *formatori* an “anachronistic art and craft” of incalculable value, noting that even today three years of training are required at the Berlin Gipsformerei for a *formatore* to be certified.⁴¹ Most significantly, however, viewing the Sleeping Satyr cast in person can still be a profoundly impressive moment. The scale, dynamic pose, and even a sense of voyeurism as one watches the unconscious faun struggle with his unknowable thoughts have palpable effects when standing in close proximity to the plaster cast. Would those effects be even more resonant were one viewing the ‘original’ in the Glyptothek? Emphatically, yes.⁴² But the echo still has meaning, and we should not be so quick to dismiss these refugee casts from another era. Instead, we should embrace them as both art and artifact, seeking to find a home for them in our current age.

The tension between copy and original, authentic and replicated, is only one of the themes that revealed themselves over the course of the seminar devoted to recontextualizing—physically and theoretically—the Robinson Cast Collection as it makes yet another move, this time into the profoundly 21st century ambience of Horizon Hall. Although motivated by the pragmatics of a new building and the requirement to move the casts from a structure scheduled for demolition, the seminar comes at a time when interest in plaster casts of sculpture and architectural elements is at a height not seen since the late 1800s. After being displaced and ignored during the majority of the 20th century, the history and display of casts have seen renewed interest since the early 2000s. To name

the British Museum, 1835-1939,” *The Annual of the British School at Athens* 85, 89-114, especially 103-105.

40 McNutt 1990, 158. Ironically, as live models became more readily available for artists and thus reduced the need for casts as instructional models in the latter half of the 19th century, those same casts became central to museums (165-166).

41 C. Haak, 2019, “Preface (1),” 6-7 in *Near life: the Gipsformerei: 200 years of casting plaster*, edited by V. Tocha, C. Haak, and M. Helfrich (Berlin: Prestel), 6.

42 Sorabella 2007, 230, describes in great detail the effect of the marble statue’s dynamic pose as seen from subsequent perspectives in a three-dimensional environment.

only a few instances of this renaissance, the Ashmolean Museum and the University of Padua have re-installed their cast collections in redesigned spaces⁴³; the opening exhibit at Berlin's James-Simon-Galerie in 2019 celebrated the casts produced at the Gipsformerei over the last two centuries⁴⁴; and there was an international conference on plaster and plaster casts sponsored by the British Academy in March of 2021.⁴⁵

The following chapters in this volume deal with other topics that demonstrate why it is still worthwhile to engage with these sculptural casts; they offer avenues of investigation and insights into a varied number of subjects. Chapter 2, "Between Art and Science: The Uses of Plaster Casts Over Time," takes a macro view of the malleable and multifaceted material that has been used in both art and education for thousands of years and argues that the late 19th century saw a significant change in how plaster casts were perceived. Chapter 3, "Sculpture out of Context: The Olympia Casts Case Study," examines the fame of the figures from the architectural decoration of the Temple of Zeus at Olympia, which have been a staple of cast collections since their discovery in the 19th century and are represented by five casts or partial casts at GMU. Taking a micro approach, Chapter 4, "Reading Beyond the Surface: The Lapith Woman Cast," explores the difficulties that arise from viewing a sculpture or

43 For a discussion of the Ashmolean Museum's redesign, see Melfi 2010; for the history of the University of Padua's cast collection, see A. Menegazzi, 2010, "The Museum as a Manifesto of Taste and Ideology: the twentieth-century collection of archaeology and art at the University of Padua," 612-625 in *Plaster Casts: Making Collecting and Displaying from classical antiquity to the present*, edited by R. Frederiksen (Berlin: de Gruyter). Frederiksen's collection of essays is another indication of the attention which plaster casts have received in the new millennium.

44 As R. Cardoso notes, the opening of a major new exhibition space might have been expected to host a more high-profile and eye-catching subject than plaster casts. That casts triumphed over other alternatives suggests that the medium of plaster casts is undergoing a resurgence in the eyes of curators and museum administrators. See R. Cardoso, "Totally plastered: By opening with a low-key exhibition about the humble plaster cast, Berlin's long-awaited new gallery might just be breaking the mold," *Interwoven: the Fabric of Things*, <http://kvadratinterwoven.com/totally-plastered>. The exhibition also generated a substantial and fascinating catalogue of essays: V. Tocha, C. Haak, and M. Helfrich (editors), 2019, *Near life: the Gipsformerei: 200 years of casting plaster* (Berlin: Prestel).

45 The conference was titled, "Ancient plaster: casting light on a forgotten sculptural material." <https://www.thebritishacademy.ac.uk/events/british-academy-conferences/ancient-plaster-casting-light-forgotten-sculptural-material/>

sculptural copy beyond its original cultural context and offers insights into a deeper understanding of the cast in question. Returning to a broader vantage point, Chapter 5: “Showing Antiquity’s True Colors: Sculptural Polychromy’ Past and Present,” revisits the question of seeing sculpture without the color it was intended to have and demonstrates the use of plaster casts in attempting to remedy this situation. The final chapter, Chapter 6, “Reconsidering Plaster Casts in the New Millennium,” offers perspectives on how plaster casts of sculpture have survived their marginalization and have been reintegrated into contemporary culture to the benefit of both the casts and those who interact with them. It is our profound hope that these essays will stimulate your interest and deepen your understanding of the plaster casts both at GMU and elsewhere.

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BETWEEN ART AND SCIENCE: THE USES OF PLASTER CASTS OVER TIME

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Plaster is a versatile material that is found in buildings, decorative details, paintings, and architectural frames called moldings. The history of plaster documents diverse artistic, architectural, medical, and educational uses for the medium. The plaster cast collection at George Mason University (GMU), with its copies of sculpture and architectural elements, is one example of how plaster has been used traditionally. Supporters of plaster sculptural forms like those in our collection moved from viewing them as works of art to specimens for scientific study in the late 19th century.¹ This seems to parallel a broader trend in the 19th century that saw the medium of plaster as a material that was primarily useful for capturing quantifiable and objective data rather than reflecting the aesthetic qualities of beauty or perfection that plaster reproduced. The thematic and chronological roots of plaster as a dynamic material and method of casting are examined throughout this chapter, as plaster moves fluidly between art and science, contributing to many disciplines until a critical juncture in the latter half of the 1800s. A timeline, starting in antiquity and ending in the twentieth century, demonstrates the varied uses of plaster, its wide distribution, and its level of acceptance in the worlds of

1 Mary Beard, 1993, "Casts and Cast-Offs: The Origins of the Museum of Classical Archaeology," *Proceedings of the Cambridge Philological Society*, 39: 1-29. Also see Chapter 1, "Art or Artifact: Reappraising the Sleeping Satyr Plaster Cast" in this collection for further discussion of this trend.

art and science. The chronological evolution also demonstrates the critical shift that occurs on the cusp of the 20th century as plaster and plaster casts took on new roles—and were rejected for others.

Evidence for the use of plaster dates as early as 7500 BCE where it is found at the Neolithic Site of Çatalhöyük, present-day Turkey.² This site exhibits extensive use of plaster as an artistic and architectural medium. Plaster was used for relief sculptures, decorative functions within the architectural environment and in burial practices, which illustrate plaster's domestic and even religious functions.³ Examples of plaster relief sculptures include animal heads and full body animal representations such as spotted leopards. Moreover, such reliefs demonstrate that animals served a symbolic purpose to the people of Çatalhöyük and that plaster, as a material and artistic medium, allowed them to depict these symbols.⁴ While plaster was used as a decorative material, it also served as a building material at this site. Raised platforms and benches built up from plaster are commonly found in the architectural layout of Neolithic houses at Çatalhöyük.⁵ Archaeological excavations have also revealed evidence of two-story buildings with plaster capitals on the upper parts of the building.⁶ These examples illustrate how the people at Çatalhöyük manipulated plaster to create not only artistic symbols, but complex architectural structures. Plaster at this ancient site was used in a variety of ways ranging from the artistic to the cultic to the pragmatic. We continue to see the multitude of uses for plaster in antiquity across civilizations and geography, including ancient Egypt.

Ancient Egyptian culture (approximately 2700 to 300 BCE) also used plaster in a variety of ways. Like the people of Çatalhöyük, ancient Egypt

2 Osman Murat, 2010, *Nomination for the Neolithic Site of Çatalhöyük as World Heritage*, UNESCO <https://whc.unesco.org/uploads/nominations/1405.pdf>, 11.

3 Carolyn Nakamura has suggested that the application of plaster was more than just for the pragmatic function of 'giving shelter and partitioning,' rather it was a religious performance. See Carolyn Nakamura, 2010, "Magical deposits at Çatalhöyük: A matter of time and place?" 300-331 in *Religion in the Emergence of Civilization: Çatalhöyük as a Case Study* (Cambridge, England: Cambridge University Press), 308. There may well be other examples of plaster used in a religious or ritualistic capacity, but that subject is beyond the scope of this essay.

4 Murat 2010, 12.

5 Michael Balter, 2005, *The Goddess and the Bull* (New York: Routledge), 28.

6 Murat 2010, 24, 25.

tians used plaster in art and architecture, but evidence shows that they also utilized the material in education and medicine. The creation of art in Egypt was primarily for religious purposes, particularly related to death and burial.⁷ For example, the mummy case of Paankhenamun, from the Twenty-Second Dynasty (c. 945 BCE), was coated with plaster to create a white background that allowed colorful religious motifs to adorn the case.⁸ Similarly, plaster was also used to cover architectural surfaces and constructions. The re-examination of the Great Aten Temple at el-Amarna revealed that white gypsum-lime plaster had been used to line basins on a strip of ground right in front of the main temple.⁹ The function of these plaster-lined basins is uncertain, but Egyptologist B. Kemp suggests that they “anticipate[d] the grandness of the architecture that lay behind, sometimes with a processional way lined with sculpture.”¹⁰

Beyond its use in art and architecture, plaster was also seen in ancient Egyptian sculptural education. The collection of casts from the Amarna period (c. 1370 BCE) at the Berlin Museum are examples of sculptural plaster casts that were used as teaching aides, serving as mock-ups and as models for apprentice sculptors.¹¹ Lastly, plaster was also associated with the medical practice of immobilizing a broken or fractured limb, and there are Egyptian primary textual sources that describe plaster as a method to close a wound.¹² The different ways that the ancient Egyptians manipulated plaster demonstrates that this material is adaptable in

7 The ancient Egyptian civilization spans from about 2700 to 300 BCE. There were cultural and social changes that modify the style in ancient Egyptian art; however, this paragraph does not seek to examine the changes of style during this extended cultural period. The purpose of this paragraph is to provide examples of the ways plaster was used throughout time in this civilization. For a brief overview of style in ancient Egyptian art and its religious functions, see Emily Teeter, 1994, “Egyptian Art,” *Art Institute of Chicago Museum Studies* 20.1: 15–31.

8 Teeter 1994, 23.

9 Barry Kemp, 2014, “Tell El-Amarna, 2014,” *The Journal of Egyptian Archaeology* 100: 2, 5.

10 There are various theories that debate the function of these plaster-lined basins. Some scholars suggest that they were used to monumentalize the architectural setting. Others suggest that they held water. See, Kemp 2014, 13.

11 I. E. S. Edwards, 1960, “An Egyptian Plaster Cast,” *The British Museum Quarterly*, 22.1-2: 27, 28.

12 Hermann Ranke, 1933, “Medicine and Surgery in Ancient Egypt,” *Bulletin of the Institute of the History of Medicine*, 237-257; 248.

any discipline, whether it is the production of artwork or the science of healing. The popularity of plaster as an artistic medium, educational aide, building and medical material continues in ancient Greece and Rome.

Greek and Roman sculptural plaster casts were used both as a medium for portraiture and as interior decoration. During the conquest of the Greek world by Rome, the Romans¹³ noticed and admired the elaborate Greek sculptures, frequently seizing Greek art as war booty during their invasions and taking the works back home for decorative purposes.¹⁴ The Roman integration and fondness of Greek art is known as the Hellenization of Rome.¹⁵ Starting in the Roman Republic and continuing into the Roman Imperial period, plaster and original sculptural decorations were displayed in Roman private homes and public buildings.¹⁶ Examples of these decorative pieces can be found in the Forum Baths of Pompeii between the years of 62 and 79 CE.¹⁷ The baths contain interior plaster (stucco) relief decorations that cover main sections of the Forum Baths' ceilings in elaborate designs inspired by Greek works.¹⁸ Rome's territorial expansion into the Hellenic world also brought Greek artists to Roman patrons; these Greek artists recreated Greek sculptures, reliefs, and more, using the plaster cast technique.¹⁹ Facilitated by the interconnectedness of the Roman Empire, this art spread to other parts of the world.²⁰ Evidence of this was found in the early 20th century by archaeologists who discovered Hellenistic-era shipwrecks that confirm the sale of plaster casts throughout the Mediterranean and Western world as models for

13 Military officials such as Marcus Claudius Marcellus were delighted to bring Greek sculptures to Rome because he was bringing "pleasurable spectacles" to Rome, but other Roman Senators were not as enthusiastic since they believed this would incite jealousy and cause problems within the Roman social hierarchy. See, Caroline Vout, 2018, *Classical Art: A Life History from Antiquity to the Present* (Princeton, NJ: Princeton University Press), 44-47.

14 Mary Beard, 2008, "Art Collections on the Bay of Naples," *Pompeii and the Roman Villa: Art and Culture around the Bay of Naples*, edited by C. Mattusch, (Washington, DC: The National Gallery of Art), 74.

15 Beard 2008, 74-76.

16 Beard 2008, 74.

17 Ville Hakanen, 2020, "Normative Masculinity and the Decoration of the Tepidarium of the Forum Baths in Pompeii," *American Journal of Archaeology* 124.1: 53.

18 Hakanen 2020, 53.

19 Beard 2008, 74.

20 Beard 2008, 74-76.

reproducing sculptures.²¹ A series of plaster disks decorated with relief figures discovered in Begram, Afghanistan, are further examples of Greek-inspired models that reached lands distant from the Mediterranean.²²

The connection is implied by the Greco-Roman style and subject of the scenes depicted on the stucco disks, indicating that they had come from Greek and Roman sources in the 1st century CE.²³ The Roman preservation and international distribution of Greek styles of art foreshadow the artistic forms of Western art in later centuries as well as the role that plaster casts would continue to play in the dissemination of stylistic forms and the shaping of tastes.

For all that plaster was critical in the production and reproduction of artistic material in antiquity, the material was not limited to art objects. From a modern perspective plaster blurred the line between art and science. This ancient material continues to be of use in Europe throughout the Middle Ages (approximately 500 CE to 1450 CE) and the Renaissance (approximately 1300 CE to 1600 CE).²⁴ However, one of the most significant developments in the use of plaster after the 16th century is the mass reproduction of famous artworks in plaster. It is this post-antique tradition that ties most directly to the plaster cast collection on the Fairfax Campus of GMU (Fig. 1). These casts, too, blur the line between the artistic and the pragmatic, and their place to one side of the line or the other has been debated for more than a century.

Sculptural plaster casts of famous artworks gained popularity in 16th

21 Beard 2008, 75-76.

22 Maurizio Taddei, 1992, "An Iranian Subject among the Plaster Casts from Begram? As-saying a Recent Hypothesis," *East and West*, 42.2: 453. Also see, F. Hiebert and P. Cambon, 2009, *Afghanistan: Hidden Treasures from the National Museum, Kabul* (Washington, DC: National Geographic Society), 153-154, 182-185. Hiebert and Cambon interpret some of the plaster medallions from Begram as models for silverware or other metal vessels, demonstrating the diversity of materials whose imagery could be captured and reproduced through plaster.

23 Taddei 1992, 456-457.

24 For an overview of plaster and plaster cast uses in the Middle Ages and the Renaissance see, Eckart Marchand, 2010, "Plaster and Plaster Casts in Renaissance Italy," 49-79 in *Plaster Casts: Making, Collecting and Displaying from Classical Antiquity to the Present*, edited by R. Frederiksen and E. Marchand (Berlin: de Gruyter). The author demonstrates that plaster cast making in the Renaissance was closely related to a wide range of practices from medieval traditions. He argues that it was because of 'these traditions and practices' that the medium and technique were accessible to artists of the sixteenth century (49).



Fig. 1 The plaster cast of the *Portrait Head of Antonia Minor* (formerly called the *Ludovisi Hera*) stands 45 inches tall and is an example of a frequently reproduced Greco-Roman sculpture. Now in the George Mason University collection and displayed in the Johnson Center, the cast comes from the Metropolitan Museum of Art in New York. The two deep gauges on the portrait's right cheek appear to be from water damage suffered while in storage for decades during the mid-20th century. Photo by Stephanie Sheridan. Used with permission.

and 17th century Europe as symbols of wealth and refinement. Aristocrats displayed casts in their homes and gardens, implying a worldly interest in art and other cultures.²⁵ The copies that the aristocrats sought out were mostly Greco-Roman and Renaissance sculptures, setting the foundation for the Western art historical canon that prized ideal proportion, beauty, and naturalistic depictions of humans and nature.²⁶ The demand for plaster copies ignited in Europe and slowly spread to the Americas, creating a rich market for plaster casts. In the early 18th century, in what is now central Germany, the production of sculptural casts increased, and it resulted in low quality products.²⁷ By the end of the 18th century a plaster cast catalogue was published by the Leipzig art dealer Carl Christian Heinrich Rost.²⁸ This catalogue was a result of the competition between the dealers and manufacturers of plaster casts. This demonstrates the extent to which plaster casts were used as a substitute for originals of antique art. This was a trend that would continue in the United States.²⁹ Furthermore, this development emphasizes the economic value of plaster casts in Germany during the 18th century.³⁰

American museums, and by extension the still-young United States, wanted to be viewed as the cultural equals with France, England, Italy, and Germany and their perceived refined cultures. In the 19th and 20th century, cast collections became the backbone of American museum collections. Like the aristocrats of Europe in the 16th and 17th century,

25 For an historical overview of plaster sculpture in Europe, see F. Haskell and N. Penny, 1981, *Taste and the Antique: the lure of classical sculpture 1500-1900* (New Haven, CT: Yale University Press). For specific examples of aristocratic collections see, Thomas Dacosta Kaufmann, 1978, "Remarks on the Collections of Rudolf II: The Kunstkammer as a Form of Representatio," *Art Journal* 38.1: 22. Another source that discusses sculpture as a facet of garden design is Susan Maxwell, 2008, "The Pursuit of Art and Pleasure in the Secret Grotto of Wilhelm V of Bavaria," *Renaissance Quarterly* 61.2: 414-462.

26 Haskell and Penny 1981, 104.

27 Charlotte Schreiter, 2010, "Moulded from the best originals of Rome – Eighteenth-Century Production and Trade of Plaster Casts after Antique Sculpture in Germany," 121-142 in *Plaster Casts: Making, Collecting and Displaying Classical Antiquity to the Present*, edited by R. Frederiksen and E. Marchand (Berlin: de Gruyter), 124.

28 Schreiter 2010, 121.

29 Stephen L. Dyson, 2010, "Cast Collecting in the United States," 557-576 in *Plaster Casts: Making, Collecting and Displaying from Classical Antiquity to the Present*, edited by R. Frederiksen and E. Marchand (Berlin: de Gruyter).

30 Schreiter 2010, 123.

American museums also collected plaster casts of antique art, specifically Greco-Roman and Renaissance sculptures.³¹ The popularity of a relatively small art historical group of casts created a “cast culture” which produced the belief that Greek, Roman and Renaissance sculpture was superior to all other periods.³² American museums could not afford to purchase original artwork from these most admired periods, and this resulted in US museums purchasing casts to fill their collections, satisfying the demand with copies rather than originals.³³ From 1874 to 1904 plaster casts were the central attraction of American museums.³⁴ Museums saw casts as educational tools, both for the public and for artists in training.³⁵ As in previous centuries and cultures, casts once again fulfilled two vital functions, one purely aesthetic and the other practical.

After 1904, however, plaster cast collections began to disappear from the public eye and were sent to storage.³⁶ The final decades of the 19th century and the first of the 20th century represented a critical moment in the history of plaster casts and associated uses of plaster. Ironically, as the sculptural cast was rejected as an object of artistic veneration due to its lack of originality, new uses of the material sought to appropriate plaster’s ability to reproduce an image with near perfection. An example of the fall of the sculptural cast is seen in one of America’s most prestigious plaster cast collections, that of the Metropolitan Museum of Art in New York. The banishment did not only take the casts out of the public eye, but it led to considerable damage to these once-prized artifacts. On

31 Alan Wallach, 1998, *Exhibiting Contradictions: Essays on the Art Museums in the United States* (Amherst, MA: University of Massachusetts Press), 46.

32 Wallach 1998, 48.

33 James K. McNutt, 1990, “Plaster Casts after Antique Sculpture: Their Role in the Elevation of Public Taste and in American Art Instruction,” *Studies in Art Education* 31.3: 158-167. McNutt describes some of the complex social and ideological forces in relation to the educational value of plaster casts in the 18th and 19th century. He argues that since their arrival to the American colonies, plaster casts were recognized as instructional instruments.

34 Pamela Born, 2002, “The Canon is Cast: Plaster Casts in American Museum and University Collections,” *Art Documentation: Journal of the Art Libraries Society of North America*, 21.2, 8.

35 Born 2002, 10.

36 Numerous historical and cultural factors influenced the decline of popularity in sculptural plaster casts. See Douglas C. McGill, January 1 1987, “Plaster Casts of Statues: From Storage and Into Vogue,” *New York Times*, 9. Also see, McNutt 1990, 165-166.

June 5, 1951, an “Interdepartmental Memorandum” at the Metropolitan Museum of Art was sent to a Mr. John Wallace³⁷ from Dr. Dietrich Von Bothmer.³⁸ In this memorandum, Mr. Von Bothmer expresses his concerns about the plaster casts’ storage facilities. He writes: “[t]his storage area cannot be inspected properly as long as the aisles are crowded with casts.”³⁹ This suggests that the plaster casts were neglected to some degree.⁴⁰ Renewed interest in the scholarship of plaster casts has contemporary art historians reexamining these casts as historical and artistic objects while reconsidering their display and conservation. George Mason University’s cast collection, once a part of the Metropolitan Museum of Art’s holdings, as well as this publication, are examples of this renewal of academic interest.

Although plaster sculptural casts had lost their appeal as works of art by the early 20th century, their fall from favor does not mean plaster was unpopular in other disciplines or that casts disappeared from museums entirely. Other disciplines— architecture, mathematics, science and anthropology— sought to use plaster as an objective scientific material to create specimens and models. Even in the fields of archaeology and art history, there was an attempt to treat sculptural casts as empirical evidence rather than aesthetically appealing works of art. Classicist M. Beard presents a case study of this art versus science debate at the opening of the Cambridge Museum of Classical and General Archaeology in 1884.⁴¹ Its founders argued over how a cast museum should function.

37 Mr. John Wallace was the Superintendent of Buildings at the Metropolitan Museum of Art from 1944 to 1954. See Metropolitan Museum: Business administrators building program 1944-1950 (Metropolitan Archives). Also see Metropolitan Museum: Business administrator. 1950-1954. https://www.libmma.org/digital_files/archives/Francis_Henry_Taylor_Collection_b18556760.pdf

38 Mr. Dietrich Von Bothmer joined the Department of Greek and Roman art at the Metropolitan Museum of Art in 1946. To read more about his career and scholarship, see “The Dietrich von Bothmer Fragment Collection,” The Metropolitan Museum of Art. <https://www.metmuseum.org/about-the-met/curatorial-departments/greek-and-roman-art/bothmer-fragment-collection>.

39 Metropolitan Museum. Storage repositories. Various locations. 1951-1952. <https://libmma.contentdm.oclc.org/digital/collection/p16028coll20/id/12661/rec/>

40 Mr. Von Bothmer’s fears appear to have been valid since the Metropolitan casts were in various states of decay when they came to GMU in the early 2000s. See <https://plastercast.gmu.edu/plaster-casts-at-gmu> and Fig. 1.

41 Beard 1993, 6.

The divided faculty wanted the museum to be either a site of great art or an archaeological laboratory with casts as specimens.⁴² The rift over the function of the museum also called into question the status of casts as authentic objects for artistic inspiration or as copies, which emphasized their archaeological role.⁴³ The Cambridge Museum was not an isolated case, as 19th century academics debated the issue of authenticity.

Artifacts and art objects of the 19th century contended with new technologies that could produce factual representations of nature such as photography, the X-ray, and the camera obscura.⁴⁴ Art (particularly sculpture and painting) was the original method for capturing reality but fell out of favor as an objective medium with the advance of technology.⁴⁵ So their findings can be considered accurate and reliable, scientists are concerned with objectivity. Although scientists attempted to keep their discipline separate, science and art interacted frequently. In the 19th century, a group of German sculptors attempted to restore a section of the Olympia pediment, excavated in Greece.⁴⁶ Greek art was in fashion in the 19th century and the discovery of genuine antique Greek sculpture at Olympia was the central focus of the art world.⁴⁷ This experiment was led by a German museum director who had a direct interest in presenting more complete sculptures to the public.⁴⁸ Their experiment utilized a combination of archaeological research, plaster casting techniques, and artistic hypotheses about how the original sculptures were carved. The plaster additions to the Olympia casts created a fleshed-out display that was a hybrid of original sculpture and new plaster work.⁴⁹ It was an

42 Beard 1993, 6.

43 Beard 1993, 14.

44 Lorraine Daston and Peter Galison, 1992, "The Image of Objectivity," *Representations* 40: 81, 96.

45 Daston and Galison 1992, 96.

46 Tobias Burg, 2010, "Building a Small Albertinum in Moscow: Correspondence between Georg Treu and Ivan Tsvetaev," 539-555 in *Plaster Casts: Making Collecting and Displaying from Classical Antiquity to the Present* edited by R. Frederiksen and E. Marchand (Berlin: de Gruyter), 539.

47 For more information on the Olympia pediment sculptures and their plaster casts, see Chapter 3 in this collection, "Sculpture Out of Context: The Olympia Casts Case Study."

48 The museum ended up showing casts from the original Olympia sculptures with modern plaster additions. For more information, see Burg 2010, 539.

49 Burg 2010, 539.

unwieldy project, but the Olympia sculptures were Greek originals, and restoration was worthwhile. The art historical and museum community in the 19th century avidly watched the restoration as interest in original sculpture grew. The use of plaster as a restoration material created a world of display opportunities for museums wondering how to present antique sculptures that were otherwise broken or unrecognizable. Today's art conservators would not turn to plaster, but past museums used plaster to make abstract fragments legible and recognizable to a popular audience.

Plaster is not limited to the production of sculptural replicas; it was quickly adopted by archaeologists in the 19th century. Italian Giuseppe Fiorelli developed a method of plaster casting to preserve animal and human forms buried by the eruption of Mount Vesuvius in 79 CE. His method captured the smallest details, such as facial expressions, physical peculiarities, and folds of clothing. Fiorelli filled the space left by the decomposed body with liquid plaster. After the plaster hardened, the outer shell of volcanic debris was stripped away.⁵⁰ This technique would later be used by Wilhelmina F. Jashemski to examine ancient plant roots in an effort to understand ancient green-spaces. She states, "when ancient roots decayed, lapilli [volcanic pumice stones] gradually filled the cavities" and plaster was poured into the cavity creating a cast of the ancient root.⁵¹ Although she sometimes used cement for larger trees, the process is identical to Fiorelli's. Archaeologists were interested in preserving and reproducing the natural world of the past; they used plaster as a method to achieve this. Plaster was quickly adopted by other science-based disciplines, including architecture, mathematics, anthropology and biology.

Mathematicians and architects embraced plaster as a medium for building scale models and imagining abstract forms. In the 19th and 20th century, mathematicians built plaster models of complex geometric surfaces generated by equations.⁵² The tactility of a model was a way to rep-

50 Gail J. Pendell, 2001, *Changes in Archaeological Theory and the Method as Reflected in Excavations at Sites Around the Bay of Naples* (master's thesis, California State University, Dominguez Hill), 25-27.

51 Wilhelmina F. Jashemski, 1971, "Tomb Gardens at Pompeii," *The Classical Journal* 66.2, 108.

52 Lewis Pyenson, 2018, "Sculpture in the Belle Epoque: Mathematics, Art and Apparitions in School and Gallery," 188-206 in *Being Modern: The Cultural Impact of Science in the Early Twentieth Century*, edited by Bud Robert, Greenhalgh Paul, James Frank, and Shiach

resent something three dimensionally before computer-generated models were possible. These models tested the spatial intuition of students learning geometry. Similarly, architects created scale models in plaster to teach students about buildings that they could not visit, an approach which also allowed them to study the individual components of these buildings. As well as extant buildings, models worked as didactic tools for recreating lost or damaged monuments in great detail. In 1958, the Metropolitan Museum of Art opened a Gallery of Models and Casts to display scale models of Egyptian, Greek, and Roman architecture. Having already jettisoned much of their sculptural cast collection, the Metropolitan Museum designed this gallery explicitly for educational purposes, as an introduction to the art collections on the main floor of the museum.⁵³ They included both reconstructions and archaeological sites replicated in their ruined state so that visitors had an idea of how the architecture existed today and how it may have looked in the past.⁵⁴

One drawback of building models of archaeological remains is that some sites have limited record of the original architecture, yet a reconstruction model gives the impression of certainty. This became a problem during Roman archaeologist Italo Gismondi's plaster reconstruction of Rome in the 1930s. Gismondi planned to replicate the city as it would have looked in the 4th century CE, under the rule of Constantine. The model, often called the *Plastico* of Rome, shows the city in a scale of 1:250, filling up an entire large room at the Museo Della Civiltà Romana (Museum of Roman Civilization).⁵⁵ The largest buildings in Rome have robust ruins, however, the ordinary elements (such as small homes and side streets) have no archaeological remains. Gismondi eventually inserted his own interpretation of 4th century Roman structures into the model, replicating these modules to fill out otherwise unknown urban space.⁵⁶ His interpretation may have been influenced by the new Fascist architec-

Morag (London: UCL Press), 189.

53 J.V. Noble, 1959, "A New Gallery of Models and Casts," *The Metropolitan Museum of Art Bulletin*, New Series 18.4: 138-143; 140.

54 Noble 1959, 140.

55 Victor Plahte Tschudi, 2012, "Plaster Empires: Italo Gismondi's Model of Rome," *Journal of the Society of Architectural Historians* 71.3: 389-390.

56 Tschudi 2012, 391. For example, Gismondi designed a typical Roman domus (house) to act as filler for residential neighborhoods in the model.

tural and infrastructure projects cropping up all over Italy, sponsored by dictator Benito Mussolini.⁵⁷ The model does not distinguish the portions that were reconstructed without evidence, blurring the line between ancient Roman and contemporary Fascist design. Perhaps unintentionally, Gismondi's Imperial Rome made subversive connections to the totalitarian regime of the 1940s that viewers might not be aware of, supporting Mussolini's propaganda of a New Empire. The reconstruction perpetuates inaccuracies and reflects ideals of Fascist Italy rather than the reality of antiquity. To an audience primed to see models as scientific, even objective, didactics the *Plastico* would have given a false impression of accuracy. Plaster casts are not always objective, accurate records of reality; as Gismondi's Rome model demonstrates something like political environment can affect scientific endeavors.

As in archaeology, plaster was popular in natural history because it could record living beings as well as artifacts. Natural history museums used plaster to create casts of their collections, thereby preserving real biological specimens and creating less fragile display objects. (Fig. 2) Plaster was also used to fill in gaps. In the 19th century, plaster dinosaur skeletons at the American Museum of Natural History (AMNH) in New York dazzled visitors with their size.⁵⁸ The AMNH skeletons were rounded out with drafted plaster bones, as 19th century paleontological archaeologists rarely found complete dinosaur skeletons on digs.⁵⁹ The museum staff and scientists made casts of bones based on their analysis of the physiology of the dinosaur and existing bones. The museum staff did not inform the public that the dinosaurs were highly constructed reproductions because dinosaur skeletons were an exciting innovation in museum display: they provided the viewers with an accurate height and scale, creating a visual affect that drawings could not.⁶⁰ As with Gismondi's reconstruction of Rome, plaster allowed for a whole and unfragmented representation to be displayed to the viewer, even if reality was somewhat different.

57 Tschudi 2012, 395.

58 Lukas Rieppel, 2012, "Bringing Dinosaurs Back to Life: Exhibiting Prehistory at the American Museum of Natural History," *Isis* 103.3, 467.

59 This essay uses the word archaeologist because the field of paleontology (the study of dinosaurs) was not yet established in the 19th century. Rieppel also uses the word archaeologist after he explains this distinction. See, Rieppel 2012, 486.

60 Rieppel 2012, 464.

The popularity of this approach is indicated by the fact that *The Scientific American* journal published multiple articles in the 19th century advising museums on innovative plaster casting techniques.⁶¹ From these examples, it becomes evident that plaster opened doors for scientific institutions to replicate delicate objects for display, complete otherwise fragmentary display subjects, and keep the originals safe.



Fig. 2 This photograph documents the museum staff of the American Museum of Natural History, New York, making a plaster cast of a basking shark between 1930-1936. The plaster shark would require less upkeep than a taxidermy specimen. Photograph by Julius Kirschner. Original Number: 59.07(74.71). Used with permission of the American Museum of Natural History.

61 In a November 1893 issue, an article explained how the readers could make their own natural history casts; any object that could be covered in wax could undergo the casting process. The writer assures the reader that the “the microscopic structure of the surface is faithfully reproduced in the cast.” The periodical published an earlier article providing instructions for a method that made casts waterproof and dustproof, another innovation a museum with large cast collections would be interested in. See, *Scientific American*, 1877, “Prize Method of Preparing Plaster Casts That Can be Washed,” 37.18, 280-281; and *Scientific American*, 1894, “How to Make Plaster Casts of Objects of Natural History,” 70.3, 42.

The ability to accurately capture tactile surfaces was also popular in the field of anthropology. Anthropology was a relatively new social science, with academic origins in the late 19th and early 20th century. Victorian era anthropologists believed in social evolution: human societies evolve through a series of stages from barbarism to civilization.⁶² The idea of linear evolution supported the 19th century assertion that European societies were more evolved and at the pinnacle of human development.⁶³ At the height of European colonization, early anthropologists used colonized people as subjects to examine evolution in an effort to substantiate their theories on evolution. Colonized people were perceived to be less evolved and therefore barbarous by white Europeans. Physical anthropologists (those interested in anatomy) used plaster to make life-casts of people's faces, then proceeded to compare the facial features of those populations. Anthropologists profiled native Indonesians in Dutch colonies, indigenous peoples in the United States, and tribal groups in Africa.⁶⁴ Their goal was to create a scientific index of anatomical features by taking measurements and using observations from the plaster casts. This index would be a concrete example of 'mechanical objectivity,' making the unique nature of physiognomy quantifiable.⁶⁵ The troubling history of human classification was abetted by anthropologists who saw their work as a neutral scientific study, rather than racial profiling⁶⁶ (Fig. 3).

Plaster mask making predates anthropology by several hundred years and partakes in the field's discoveries and advancements. There are traces of the existence of death masks in the Roman period, where they may have used them for funerary rites.⁶⁷ The difference between future death

62 Thomas Hylland Eriksen, 2015, *Small Places, Large Issues: An Introduction to Social and Cultural Anthropology* (London: Pluto Press), 14-15.

63 Eriksen 2015, 15.

64 There are numerous examples of plaster casts being used in anthropological racial profiling. The following sources are references by country: The Dutch in Indonesia: F. Sysling, 2016, "Eyes on Race: Photography and Plaster Casting as Knowledge-Making Practices," in *Racial Science and Human Diversity in Colonial Indonesia* (Singapore: NUS Press), 73-100. The US indigenous population: Diane Glancy, 2014, "The Life Casts," *Fort Marion Prisoners and the Trauma of Native Education* (Lincoln, NE: University of Nebraska Press), 38-41.

65 Sysling 2016, 75.

66 Sysling 2016, 73.

67 Marcia Pointon, 2014, "Casts, Imprints, and the Deathliness of Things: Artifacts at the



Fig. 3 This display of plaster facial casts comes from the anthropological expedition of Dutch anthropologist J.P. Kleinweg de Zwann gathered from 1907 to 1910 in the colonized Dutch Indies (what is now Indonesia). Photograph by René den Engelsen, Rijksmuseum, Amsterdam. Open-source image: "Humanities History Journal is made available under the terms of the Creative Commons Attribution 4.0 International License."

masks and Roman death masks is that the Romans used wax rather than plaster.⁶⁸ Physical examples of death masks in plaster appear during the Medieval period with the same purpose of molding the faces of the deceased for funerary rites, which were ceremonies connected to the burial or cremation events.⁶⁹ During the Middle Ages, death masks were more often used for European monarchs rather than for the public.⁷⁰ Discoveries of death casts made for non-royal persons first dates to the mid 1600s which led archaeologists to conclude that during the 17th century funerary rite death masks gained popularity with the broader public.⁷¹ In the 18th century, death masks started to be used as memorial sculptures, a format that continued into the 20th century.⁷² An interesting use of death masks in the 19th century was for phrenological purposes.

Through phrenology, observers would attempt to find patterns between psychological attributes of a person and the societal successes or criminal records of the dead person.⁷³ The rise in popularity of phrenology fueled an interest in creating plaster life masks.⁷⁴ In both death and life masks, the person remains with their eyes closed and maintains a serious facial expression. For this reason, death and life masks are difficult to distinguish due to the same facial pose being used for both types.⁷⁵ Another common use for the life masks was for portraiture, especially to keep the facial features of a person “alive” forever.⁷⁶ Death masks were much more popular than the life masks because of the feelings of fondness and melancholy death masks would provoke.⁷⁷ Death masks captured the person that was no longer there, unlike life masks that simply recorded the features of a person who continued to live life and form new memories.⁷⁸ Though they were used as symbols of remembrance, they

Edge,” *The Art Bulletin* 96.2, 171.

68 Pointon 2014, 171.

69 Sysling 2016, 74.

70 Pointon 2014, 171.

71 Pointon 2014, 171-172.

72 Sysling 2016, 74.

73 Pointon 2014, 171-172.

74 Pointon 2014, 172-173.

75 Pointon 2014, 172.

76 Pointon 2014, 172-173.

77 Pointon 2014, 172-173.

78 Pointon 2014, 172-173.

have a scientific, quantifying quality like plaster casts taken by anthropologists for further phrenological and physiognomic uses in the 19th and 20th century. Yet, they also take advantage of plaster's ability to mimic the subtle, vibrant details of a living figure that had endeared plaster to artists from the Neolithic period onwards.

Long a favored material for sculpture and architecture, the artistic role of plaster casting gave way in the 19th century to the shift from a medium of aesthetic value to plaster as a material of scientific/objective value. As a review of the ever-changing roles of plaster has demonstrated, art and science are two disciplines that have overlapped throughout human history. Plaster allows us to see this intersection far more clearly than most materials. The multitude of uses of casting plaster blurs the lines between what can easily be defined as art or science. Constantly used in the decorative arts, this creative tool and technology have been a part of human history since Neolithic times. Plaster's ability to take any shape and convey accurate details made this material popular across disciplines. Although in the middle part of the 20th century plaster begins to disappear from all disciplines, plaster is seeing a resurgence in the 21st century.⁷⁹ The GMU plaster cast collection is an example of this resurgence. The variety of plaster forms and the diversity of the material's use over time means that there is no one way to study the phenomenon of plaster casting. Different fields and methodological approaches yield different results and enlighten us to different aspects of history or culture, therefore the usefulness of plaster casts as objects for intensive study will continue in many disciplines now and in the future.

79 See Chapter 6, "Plaster Casts in the New Millennium," in this volume.

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SCULPTURE OUT OF CONTEXT: THE OLYMPIA CASTS

CASE STUDY

OLIVIA HOLLY- JOHNSON, LAURA WHITE, AND LINA ZIKAS

What lies buried there in darkness is life of our life. Other divine ordinances may have descended upon earth, foreshadowing a deeper peace than the Olympian truce; yet for us too Olympia is holy ground. Into our world, lit by purer light, we may welcome the enthusiasm, the patriotic devotion...and that overmastering joy which outlasts all the trials of life.¹

George Mason University's plaster cast collection includes five sculptural casts from the triangular pediments from either end of the Temple of Zeus at Olympia's roofing system. From the East pediment are the Old Seer, the Seated Youth 'E,' and the Seer 'L.' From the West pediment are a portion of the Lapith Woman with Centaur, often referred to as Deidameia and Eurytion, as well as a second version of the 'Deidamia' head. This essay examines the history of these Olympia casts and the originals from which they were made. The Olympia pedimental groups include well-known sculptures in the classical canon.² Many collections throughout Europe and the United States included plaster casts of these famous Greek marble works of the 5th century BCE. The popularity of these and other plaster casts has periodically risen and fallen over the past century and a half.³ As the GMU Olympia pediment casts, along with other

1 Quote of Ernst Curtius cited in S.L. Dyson, 2006, *In Pursuit of Ancient Pasts: A History of Classical Archaeology in the Nineteenth and Twentieth Centuries* (New Haven, CT: Yale University Press), 83.

2 A. Patay-Horvath, 2011, "The Complete Virtual 3D Reconstruction of the East Pediment of the Temple of Zeus at Olympia," *ISPRS - International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences*, XXXVIII-5/W16, 53; E.M. Payne, 2019, "Casting a New Canon: Collecting and Treating Casts of Greek and Roman Sculpture, 1850-1939," *The Cambridge Classical Journal* 65 (Dec.), 129-131.

3 A.H. Borbein, "On the History of the Appraisal and Use of Plaster Casts of Ancient Sculpture (especially in Germany and in Berlin) [Zur Geschichte der Wertschätzung und

plaster casts, start a fresh chapter in their new home in Horizon Hall, they illustrate their continuing importance and value as well as providing an introduction of these masterpieces to a new audience. The history of Olympia and its exploration by archaeologists in the 19th century help to explain the prominent place which these sculptures and their casts hold in the discipline of art history.

Even before the physical construction of the temple that was decorated by the architectural sculptures under discussion here, the site of Olympia had a rich association with Greek mythology. The cult of Pelops, King of Elis, had ancient origins at the sanctuary, perhaps even beginning earlier than the cult of Zeus at the site.⁴ In one of the site's mythological origin stories, it is said that the gods took part in the original Olympic games and thus formed the code of laws, or *agnothesia*, that the athletes followed before the fabled flood of Deukalion.⁵ The more common origin myth of the games takes place after this mythical flood occurred, and it is this story that we find reflected in the temple decoration. In this myth, Pelops challenges King Oinomaos⁶ to a chariot race for the hand of Oinomaos' daughter, Hippodameia.⁷ Regardless of which version of the myth is followed,⁸ Pelops wins the race and the Olympic games are born from

Verwendung von Gipsabgüssen antiker Skulpturen (insbesondere in Deutschland und in Berlin)]" in *Les moulages de sculptures antiques et l'histoire de l'archéologie. Actes du colloque international Paris, 24 octobre 1997*, edited by Henri Lavagne and François Queyrel (Geneva 2000) 29–43, trans. Bernard Frischer, Digital Sculpture Project: Casts, <http://www.digitalsculpture.org/casts/borbein/index.html>; D.C. McGill, January 1, 1987, "Plaster Casts of Statues: From Storage into Vogue," *New York Times*.

4 H. Kyrieleis, 1997, "Zeus and Pelops in the East Pediment of the Temple of Zeus at Olympia," *Studies in the History of Art* 49, 13.

5 C.C. Perkins, 1879, "Olympia as It Was and as It Is," *American Art Review* 1.2: 70.

6 Oinomaos can also be spelled Oenomaus. In the text of this essay, we will refer to the character as Oinomaos.

7 J.M. Barringer, 2005, "The Temple of Zeus at Olympia, Heroes, and Athletes," *Hesperia: The Journal of the American School of Classical Studies at Athens* 74.2, 216.

8 In some versions of the myth, Pelops has the divine favor of Poseidon, who gifts Pelops winged horses to use during the race. In other versions, Pelops cheats by replacing the wheel spokes of Oinomaos' chariot with wax plugs in order to win. Depending on one's interpretation of the myth, the themes of the East pediment can be read differently. It is unlikely that the Eleans would have appreciated the version of the myth in which Pelops cheats since he was their hero and founder of the games. Cheating at the Olympic Games was forbidden and punishable, so it would have been unusual for the pediment to promote the act, especially

this competition.

The founding myth's focus on King Pelops of Elis likely reflects a political reality. For much of its historical life, the sacred site of Olympia was managed by Elis, a small polis (Greek city-state) about 19 miles distant from the sanctuary. Pisa, another neighboring city, also competed for control of the shrine during the Archaic period (600-480 BCE)⁹ due to its prestige and income. The Eleans ultimately gained total control in 471 BC when Elis defeated Pisa in war.¹⁰ Under the patronage of Elis, the Temple of Zeus, as we know it, was then constructed on this site using the funds and spolia¹¹ from this conflict.¹² The sculptural decorations in the pediment and elsewhere on the structure date to this phase of building.

Pausanias, a Greek traveler and geographer, chronicles the sculpture of the Temple of Zeus during the 2nd century CE in his book, *Description of Greece*, one of the only primary sources to provide specific details about the temple. Pausanias confirms the shift in control of the sanctuary, observing “[t]he temple and the image [of Zeus on the interior] were made for Zeus from spoils, when Pisa was crushed in war by the Eleans, and with Pisa such of the subject peoples as conspired together with her.”¹³

when athletes took an oath of fair play in front of a statue nearby. However, since Oinomaos has been acting contrary to *dike* (justice) and Pelops is the instrument of his punishment for *hybris*, the message of the pediment might be a reminder of the consequences of disobeying the wishes of the gods. See Barringer 2005, 218-225 and Barringer 2012/2013, 40.

9 M. Emerson, 2018, *Greek Sanctuaries and Temple Architecture: An Introduction* (New York: Bloomsbury Academic), 60.

10 Emerson 2018, 60.

11 Spolia is the term given to sculpture and other decoration that is repurposed from older monuments and placed in newer monuments or temples. Oftentimes, spolia was taken as a sign of victory in military campaigns and then displayed or used to fund new monuments.

12 Emerson 2018, 60.

13 Pausanias, 1898, *Pausanias's Description of Greece*, trans. James George Frazer (New York: Biblio and Tannen), 5.10.2-10. Pausanias narrates the East and West pediments as follows, “To come to the pediments: in the front pediment [East] there is, not yet begun, the chariot-race between Pelops and Oenomaus, and preparation for the actual race is being made by both. An image of Zeus has been carved in about the middle of the pediment; on the right of Zeus is Oenomaus with a helmet on his head, and by him Sterope his wife, who was one of the daughters of Atlas. Myrtilus too, the charioteer of Oenomaus, sits in front of the horses, which are four in number. After him are two men. They have no names, but they too must be under orders from Oenomaus to attend to the horses. At the very edge lies Cladeus, the river which, in other ways also, the Eleans honor most after the Alpheius. On

The temple, built between 470 and 457 BCE, was constructed according to the tradition of the Doric style.¹⁴ It was rectangular with 6 columns in the front and back, and 13 on the sides, creating the proportions typical in Classical temple design. Doric columns have plain, unadorned column capitals that rest directly on the floor of the temple (stylobate) with no base. The Doric order was considered a sturdy, more masculine style that was characterized by its strength and stolid appearance, appropriate for the purpose of impressing visitors and expressing the character of Zeus.¹⁵ At the narrow ends of the building lie the pediments, located in the triangular space above the columns and framed by the sloping sides of the roof. Both pediments were decorated with figural sculpture; further decoration came in the form of *acroteria*, sculptural forms that were found atop the central peak of the pediments. The West pedimental sculptures narrate a battle called the Centauromachy, fought between the Lapith Greeks and the Centaurs,¹⁶ while the East pedimental sculptures, according to Pausanias, depict the preparations for the mythical chariot race between Pelops and Oinomaos.¹⁷ It is possible that this scene was chosen to allude to the war between Elis and Pisa, in which case Pelops was synonymous with the victorious Elis and Oinomaos represented the

the left from Zeus are Pelops, Hippodameia, the charioteer of Pelops, horses, and two men, who are apparently grooms of Pelops. Then the pediment narrows again, and in this part of it is represented the Alpheius. The name of the charioteer of Pelops is, according to the account of the Troezenians, Sphaerus, but the guide at Olympia called him Cillas. The sculptures in the front pediment are by Paconius, who came from Mende in Thrace; those in the back pediment [West] are by Alcamenes, a contemporary of Pheidias, ranking next after him for skill as a sculptor. What he carved on the pediment is the fight between the Lapithae and the Centaurs at the marriage of Peirithous,” whose name is also transliterated as Pirithous. In the text of this essay, we will refer to the character as Pirithous. Pausanias continues: “In the center of the pediment is Peirithous. On one side of him is Eurytion, who has seized the wife of Peirithous, with Caeneus bringing help to Peirithous, and on the other side is Theseus defending himself against the Centaurs with an axe. One Centaur has seized a maid, another a boy in the prime of youth. Alcamenes, I think, carved this scene, because he had learned from Homer’s poem that Peirithous was a son of Zeus, and because he knew that Theseus was a great grandson of Pelops” (Pausanias 1898, 5.10.6-8).

14 Emerson 2018, 65.

15 Emerson 2018, 65.

16 See Chapter 4, “Reading Beyond the Surface: The Lapith Woman Cast,” in this collection.

17 Barringer 2005, 216.

defeated Pisa.¹⁸ This allusion is fitting as Pelops was the mythical king and hero of Elis and Oinomaos was the king of Pisa.

Identification of the figures in the eastern pediment (Fig. 1 with lettered figures), as well as the overall arrangement of the figures is complicated by the erratic description introduced by Pausanias, as he seems to make errors.¹⁹ C. Marconi interprets Pausanias's description as placing Oinomaos [G]²⁰ on the viewer's left of the central figure of Zeus [H], followed by Sterope [F], Myrtilos [E], the four horses [D], a groom [B], a Seer [C], and the personification of the river Kladeos [A]. From the viewer's right of the central figure, Pelops [I], Hippodameia [K], the charioteer of Pelops [L], the horses [M], a Seer²¹ [N], a groom [O] and the personification of the river Alpheios [P] fill the space to the far corner.²²

These statues were executed in the early Classical style, otherwise known as the Severe style. B. Ridgway concludes that the age of the Severe Style is characterized by the generation of workers who were active in Greece between 480-450 BCE.²³ A Panhellenic style, the Severe style was fairly consistent across the Greek world once it was adopted. As described by Ridgway, subjects are characterized as paragons of simplicity, strength, vigor, rationality, self-discipline, and intelligent thought.²⁴ These values are conveyed through clear-cut proportions, the contrapposto stance paired with other dynamic poses, unornamented clothes, and emotional facial expressions that focus on some faraway target or are averted away from the gaze of the viewer.²⁵ Interest in more complex emotional expres-

18 Barringer 2005, 229.

19 C. Marconi, 2014/2015, "Pausanias and the figural decoration of Greek sacred architecture," *RES: Anthropology and Aesthetics* 65/66, 190.

20 Lettering systems for the pedimental figures vary among scholarly sources. Here, the letters refer to our Fig. 1.

21 The Seers [C and N] likely represent the oracular families from the area, the Iamidai or the Klytiadai. See Barringer 2005, 223.

22 Marconi 2014/2015, 190.

23 B.S. Ridgway, 1970, *The Severe Style in Greek Sculpture* (Princeton, NJ: Princeton University Press), 3.

24 A. Stewart, 2008, "The Persian and Carthaginian Invasions of 480 B.C.E. and the Beginning of the Classical Style: Part 2, the Finds from Other Sites in Athens, Attica, Elsewhere in Greece, and on Sicily; Part 3, the Severe Style: Motivations and Meaning," *American Journal of Archaeology* 112.4: 602.

25 Stewart 2008, 602.

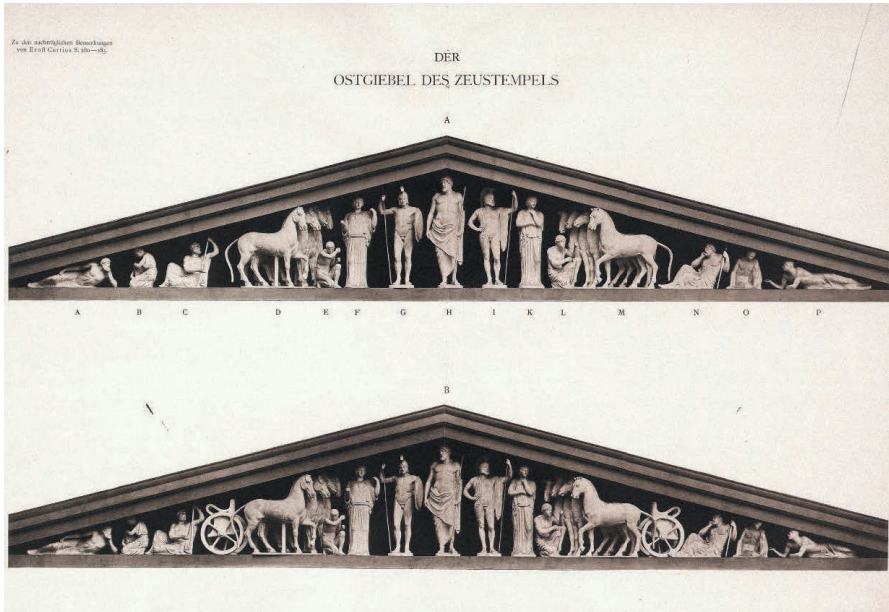


Fig. 1 This drawing reproduces the most common reconstruction of the East Pediment at the Temple of Zeus at Olympia as described by Pausanias and reconstructed by E. Curtius. This reconstruction helps with understanding the associated myth and illustrates characteristics of the Severe style.

Source: Heidelberg University Library, “Olympia: die Ergebnisse der von dem Deutschen Reich veranstalteten Ausgrabung (Textband 3): Die Bildwerke von Olympia in Stein und Thon — Berlin, 1897,” 300. Image used with Permission.

sion led to an interest in bodily motion as emotions are usually interdependent with movement, which leads to the specific characterization of figures in narrative scenes.²⁶ As the Classical style further developed, elements of the Severe style were no longer used; for example, the emotional involvement reflected in facial expressions was replaced with an all-purpose generalized facial type, often described as serene.²⁷ In the East pediment, the horrified expression on the Old Seer (Fig. 1, sculpture N) is a frequently cited example of emotional expression in the Severe Style. The drapery on the figures highlights the stance or contour of the body

²⁶ Ridgway 1970, 10.

²⁷ H.C. Hallet, 1986, “The Origins of the Classical Style in Sculpture,” *Journal of Hellenic Studies* 106: 80.

beneath through its irregular grouping of folds and simplicity in form²⁸ (Fig. 1, sculptures F and H). While Greek style continued to evolve in subsequent centuries and the sanctuary itself came under Roman control with the rest of Greece in 146 BCE, these Severe style figures continued to be seen in the context of the Olympic Games and during general site use for the life of the sanctuary.²⁹ In 394 CE, Theodosius I forbade all pagan rituals, bringing an end to the Olympic Games. With this decree, the sanctuary was effectively abandoned until later excavations in the late 16th and early 17th centuries.³⁰

The French theologian and scholar Bernard de Montfoucond seems to have been the first to express the idea, in a letter to the Archbishop of Corfu in 1723, of a large-scale campaign to unearth the sanctuary of Olympia.³¹ In 1766, the English antiquarian Richard Chandler, guided by Pausanias' descriptions of Greece, went to Olympia and found the remains of the Doric style column capitals and the walls of the ruined Temple of Zeus.³² Two years later in 1768, the German art historian, Johann Joachim Winckelmann, had a dream to excavate at Olympia and find hidden antiquities, but he was never able to fulfill this desire.³³ Such was the allure of the ancient sanctuary that many scholars and dilettante travelers alike tried to uncover buried treasures on this site at Olympia, including antiquarians William Martin Leake, William Gell,

28 Ridgway 1970, 8, 19.

29 Some of the buildings in the sanctuary were demolished by the Eleans to build a wall around the Temple of Zeus to protect it from an attack by the Herulians in 267 CE. A portion of the site fell into disuse after a few of the secondary temples were demolished as a defensive tactic. See K.R. Wright, 2005, "Ancient Olympia Floods and Sedimentation," *Water Resources IMPACT* 7.3, 17.

30 When the site was abandoned in 394 CE, the floodwalls that held back the rivers Kladeos and Alpheios were no longer maintained. After a series of major floods and earthquakes, the temple and surrounding areas were buried under 16 to 26 feet of sediment, causing this once famous place to be forgotten. See Wright, 2005, 17.

31 P. Monceaux and V. Laloux, 1889, "RESTAURATION DES FRONTONS D'OLYMPIE," *Revue Archéologique* 14, 42.

32 Monceaux and Laloux 1889, 42; E.H. Cline and G. Fawkes, 2017, *Three Stones Make a Wall: The Story of Archaeology* (Princeton, NJ: Princeton University Press), 172.

33 S.L. Marchand, 1996, *Down from Olympus: Archaeology and Philhellenism in Germany, 1750-1970* (Princeton, NJ: Princeton University Press), 80; Monceaux and Laloux 1889, 42.

Louis-François-Sébastien Fauvel and François Pouqueville.³⁴ In 1829, the scholar and architect Guillaume-Abel Blouet led *Expédition Scientifique de Morée* (the French Scientific Mission to the Morea) and partially excavated the Temple of Zeus over a six-week period. However, the French archaeologists were not successful in finding the pedimental sculptures from the Temple of Zeus.³⁵

Undeterred by the French failure, Germany was determined to excavate at Olympia and recover these treasures, even if the discovered objects had to remain in Greece.³⁶ In 1874, the contract named the Olympia Convention was signed by the German and Greek governments, giving permission to Germany to excavate at Olympia. In exchange, Germany received the right of being the first to publish and photograph the archaeological finds. In addition, the German excavators were given permission to make and export plaster casts of any artifacts from the Olympia excavations that they desired.³⁷ They also held an exclusive power to sell plaster casts of the objects found.³⁸ As becomes apparent below, this agreement has a direct bearing on the five Olympia casts on display at GMU.

Sponsored by the German government under the guidance of Kaiser Wilhelm I and supervised by the classicist Ernst Curtius, archaeologists excavated the site from 1875 to 1881.³⁹ This large-scale excavation employed many experts from various fields, including a group of thirteen archaeologists and architects.⁴⁰ In October of 1875, guided by Pausanias's accounts, the German excavators found the pedimental sculptures from

34 Monceaux and Laloux 1889, 42.

35 During this military-scientific expedition in 1829, the temple of Zeus at Olympia was measured and partially reconstructed. Very quickly there followed numerous publications for study that began appearing in 1831. See Monceaux and Laloux 1889, 43-46, 85. Further, according to these authors, the French excavators uncovered fragments of the carved metopes from the Temple of Zeus, which were transferred to the Louvre Museum in Paris. See Monceaux and Laloux 1889, 88-92.

36 Germany was allowed to excavate for five years on the site of Olympia, but German excavators were not allowed to remove any material. See E. Robinson, 1896, *Museum of fine arts, Boston. Catalogue of casts: Part III, Greek and Roman sculpture, by Edward Robinson* (Boston: Houghton, Mifflin and Co), 56; Dyson 2006, 84.

37 Marchand 1996, 84.

38 Robinson 1896, 53.

39 F.N. Bohrer, 2011, "Edges of Art: Photographic Albums, Archaeology, and Representation," *Studies in the History of Art* 77, 227.

40 Robinson 1896, 53.

the Temple of Zeus.⁴¹ Buried where they had collapsed only several feet in front of two end facades of the ruined temple,⁴² these sculptures finally were brought to light. The German scholar Ernst Curtius, who dedicated his whole life to recovering these lost sculptural works,⁴³ could finally celebrate the achievement of finding these statues. When the twenty-one sculptures from the eastern pediment were unearthed, eight still had their heads. The western pediment also had twenty-one sculptures, thirteen of them with heads. These pedimental compositions were to some degree still intelligible from where they fell, and the arrangements of the figures could be restored in their fundamental details.⁴⁴

This sculptural decoration of the Temple of Zeus, since its rediscovery, has been celebrated by many scholars. As Curtius noted, these ancient sculptures, as pedimental statues, were the grandest products of Greek sculpture.⁴⁵ The quotation by Curtius that begins this chapter reflects the almost mystical esteem in which these works were held in the 19th century when they were recovered. Heralded by the scholars at that time as the most important discovery in the history of art, they are over life-size⁴⁶ and made of Parian marble, thus would have been very expensive to produce. They date before the age of Pheidias (c.480-430 BCE), which has traditionally been considered the high point of ancient Greek art, but the sculptures are early Classical statues that have been deemed superior

41 E. Curtius, 1880, "Discoveries at Olympia," *North American Review* 131.289, 486-88.

42 Monceaux and Laloux 1889, 85. The authors further explain that during Justinian's reign, in the Byzantine period (6th century CE), a Christian town was built on the site, with a structure occupying the foundation of the Temple of Zeus. The thick fortification wall, built from reused fragments of architecture and sculptures, preserved many important artifacts from the ancient sanctuary of Zeus. Among them were fragments of the pedimental sculptures of the Temple of Zeus, unearthed during the German excavations. See Monceaux and Laloux 1889, 40-41.

43 Dyson 2006, 83.

44 Curtius 1880, 487. Since these pedimental sculptures were found during the German excavations, subsequent scholarship has debated the placement of certain figures in the original composition of the pediment. This on-going scholarly debate will be discussed below in the text.

45 Curtius 1880, 487-88.

46 The cast of Apollo from the West pediment is measured at 330cm (approximately 10.8 feet) tall. Even today, this cast is available for sale at the Gipsformerei in Berlin. "Apoll - Zeustempel in Olympia." *Online-Katalog Der Gipsformerei Berlin*, www.gipsformerei-katalog.de/sammlungsgebiete/antike/31/apoll-zeustempel-in-olympia?number=R-01820.

to ancient Greek works of the precious Archaic period.⁴⁷ Since these sculptures were found well preserved and acclaimed as among the most important works of ancient Greek artists, they were quickly included in the text books on Greek art.⁴⁸ Study and publication of these pedimental sculptures from the Temple of Zeus also advanced knowledge of classical antiquities, which was the foundation of a higher education in Germany at that time.⁴⁹

German architect Johann Friedrich Adler, who was part of the team of excavators at Olympia, designed a museum that was built to display the recovered archaeological material on the site at Olympia.⁵⁰ In May of 1887, the Zingros Museum, named after a generous Greek donor, was prepared to house the art objects that were found during the excavations.⁵¹ It also provided the opportunity for comprehensive study, restoration and exhibition of the temple's pedimental sculptures. Studied by the same team of scholars who participated in the excavation, the pedimental compositions from the Temple of Zeus were displayed in the museum's exposition to show viewers how the sculptural figures were arranged in their original context.⁵²

As part of the scientific work, the full report of the excavations at Olympia was collected by these German scholars-excavators into five text volumes accompanied by illustrations and maps.⁵³ Furthermore, the Olympia albums were created with the proposed re-creations of this ancient site and its sculpture.⁵⁴ Later works included a photographic album that was part of a "scientific" report,⁵⁵ providing a fresh perspective for the study of these important sculptures by other scholars. L. Marchand

47 Curtius 1880, 488; Monceaux and Laloux 1889, 24.

48 Patay-Horvath 2011, 53.

49 Marchand 1996, 85. For more information the role of plaster casts in education, see Chapter 6, "Reconsidering Plaster Casts in the New Millennium," in this collection.

50 Dyson 2006, 84.

51 Monceaux and Laloux 1889, 47.

52 J.P. Barron, 1984, "ALKAMENES AT OLYMPIA," *Bulletin of the Institute of Classical Studies* 31, 199.

53 Bohrer 2011, 227.

54 Bohrer 2011, 227.

55 These albums were printed at the Dresden firm "Römmeler and Jonas." See Bohrer 2011, 230–31.



Fig 2 From the early days of photography, this late 19th century photograph captures the large-scale excavation at Olympia by German archaeologists as they unearthed the remains of the Temple of Zeus, with its early classical pedimental sculptures, resulting in one of the greatest discoveries in art history.

Source: Wikimedia Commons contributors, "File:Curtius Olympia 1 t05.jpg," Wikimedia Commons, the free media repository, https://commons.wikimedia.org/w/index.php?title=File:Curtius_Olympia_1_t05.jpg&oldid=529215681 (accessed April 1, 2021).

notes that these excavation publications sold out quickly,⁵⁶ indicating the intense interest surrounding the pedimental sculpture at the site. As a reward for their effort, the German scholars were allowed to make plaster casts of the artifacts that they desired.⁵⁷ Additionally, they were permitted

⁵⁶ Marchand 1996, 91.

⁵⁷ The museums of Berlin sent the sculptor Richard Grütner to Olympia, where together with his team he took the moulds of all important finds from the excavations. See Hans Georg Hiller von Gærtringen, 2019, "Berlin Supplies the World with Gods: The History of the Gipsformerei, Staatliche Museen zu Berlin 1819-2019," 216-225 in *Near life: the Gipsformerei: 200 years of casting plaster*, edited by V. Tocha, Christina Haak, and Miguel Helfrich (Berlin: Prestel), 221.

to transport a few sculptures of bronze and many pieces of painted architecture to Berlin.⁵⁸ In October of 1878, the plaster casts of some of the sculptures unearthed during excavation at Olympia, including those of the pedimental statues of the Temple of Zeus, were available for visitors to study in the special exhibition at the Campo Santo in Berlin.⁵⁹

During these German excavations, numerous detailed accounts were written by individual experts; later scholars studied and used these reports as evidence in interpreting this ancient sculpture.⁶⁰ Among them was a specialist account on the sculpture by Professor Georg Treu, who was the on-site excavation director.⁶¹ As one of the leading experts on the history of Greek sculpture, Prof. Treu was also the Director of the Albertinum Museum in Dresden.⁶² Under his supervision, missing parts on the pedimental sculptures were restored in plaster, made distinctive due to its pale color, and were used to provide a sense of the pedimental groups as they would have appeared in antiquity.⁶³ Since the original marble statues were found broken and with pieces lost, these experiments gave a fuller, more complete impression of the two groups of pedimental sculpture in reconstruction.

In 1891, Prof. Treu offered to have plaster casts from these restorations, which were done in Dresden, to be made at the plaster casting workshop⁶⁴ in Berlin for the New York Metropolitan Museum of Art's (MMA) collection.⁶⁵ These copies of the Albertinum reconstructions were unique, because they showed complete forms of the Olympia

58 Monceaux and Laloux 1889, 47.

59 J. Henderson, 1878, "The Olympia Exhibition in Berlin," *Antheneum Journal of Literature, Science, The Fine Arts, Music, And The Drama* (London, England: 1830), 2619: 664.

60 Robinson 1896, 54.

61 Marchand 1996, 87.

62 Metropolitan Museum of Art (New York, N.Y.), 1892, *Report of Committee to Members and Subscribers, February 1, 1892* (New York: Metropolitan Museum of Art), 23.

63 Metropolitan Museum of Art 1892, 24.

64 In 1882, the sales catalogue appeared for the first time marketing casts from the sculpture found during excavations; the casts were produced exclusively by the Gipsformerei in Berlin. See von Gaertringen 2019, 221. In 1891, the Gipsformerei moved, for the purpose of holding the large mould collection and to accommodate larger projects requested by museums, to the new establishment in Charlottenburg, Berlin that is still active today. See von Gaertringen 2019, 223.

65 Metropolitan Museum of Art 1892, 24.

sculptures. Other institutions, such as the Boston Museum of Fine Arts, displayed the statues with missing parts, as the original marbles would have appeared in the museum at Olympia.⁶⁶ The restored casts from the Albertinum Museum in Dresden were special within the cast collections, and therefore were desired by institutions like the MMA in New York.⁶⁷ These full-size plaster reproductions of reconstructed groups of the two pediments were made in the Gipsformerie (the plaster casting workshop) of the Berlin Museum and traveled from Germany to New York in 1897.⁶⁸ Displayed as part of MMA's cast collection in the same year, these casts were accompanied by illustrations and photographs of the excavation site, instantly amplifying the interest in the museum's cast collection and classical art. These illustrations also provided a better understanding of the original sculptures' setting and offered examination of the fragmentary condition of the original statues. Additional illustrations provided visuals of the restoration of the Temple of Zeus.⁶⁹ The restored full-size plaster casts of the pedimental groups of the Temple of Zeus at Olympia were placed at the two ends of the large hall in the MMA,⁷⁰ imitating the sculptures' original setting on the Temple of Zeus, and, together with the extensive illustrations, reminding any visitor about their value in the museum's cast collection.

Prior to the 19th century discovery of the Olympia sculptures, cast collections of other art objects were already in vogue.⁷¹ But the German discovery of the Olympia sculptures generated new excitement. Not only were these pedimental sculptures influential to the way Greek and Ro-

66 Robinson 1896, 54. For example, the Head of Seer 'L' in the GMU cast collection reproduces the surviving upper portion of the head, but it also shows the lower half of the face with a beard. All of the facial elements below the eyes are the result of the Albertinum reconstructions by Treu.

67 Metropolitan Museum of Art 1892, 25.

68 Metropolitan Museum of Art, 1871, *Annual Report of the Trustees* (New York: The Metropolitan Museum of Art), 17.

69 Metropolitan Museum of Art, 1910, *Catalogue of the Collection of Casts*, Second edition with supplement (New York: The Metropolitan Museum of Art), vi.

70 Metropolitan Museum of Art 1910, vi.

71 For more information on the history of casts prior to the late 19th century, see Chapter 2, "Between Art and Science: the Use of Plaster Casts Over Time," in this collection; F. Haskell and N. Penny, 1981, *Taste and the Antique* (New Haven, CT: Yale University Press), 79-91.

man art—and the casts of ancient artworks—were received and interpreted from the late 19th century on, they also caused debates that are on-going even today. Why did these sculptures become such an important part of the shifting canon of classical art? One reason is that up until the late 19th century, there were very few Greek originals to be seen.⁷² Most “originals” were actually Roman copies or emulations of vanished Greek sculptures. Although casts had long been seen as satisfactory substitutes, by the late 19th century original Greek sculptures, such as those unearthed at Olympia, were met with great enthusiasm.⁷³ As a result of the agreement between the Germans and the Greek government, plaster casts of the Olympia sculptures were easily available, at a price.⁷⁴ As museums and universities hastened to add these new casts to their collections, the tight tradition of the established cannon began to loosen.⁷⁵ Sculptures such as those on the Olympia pediments were now added to lists of desired casts, including in America. For example, the MMA specified all of the sculptures from both Olympia pediments in their list of most-desired copies.⁷⁶

Institutions around the world adopted a narrative in which casts from original works were used for the improvement of public taste.⁷⁷ Another role for casts concurrently emerged. Scholars and universities began to see them mainly as educational tools. Casts were important for the study of art since it was unlikely at the time that students would ever see many originals. At the same time, the newly developing field of archaeology used casts as “laboratory specimens.” The tension caused by these differing views on the value and use of casts created a “delicate balance” between art and science.⁷⁸ M. Beard points out that the two views about

72 Haskell and Penny 1981, 122.

73 C. Vout, 2018, *Classical Art: A Life History from Antiquity to the Present* (Princeton: Princeton University Press), 185.

74 Metropolitan Museum of Art 1892, 23-24.

75 Payne 2019, 115. According to Payne, this established canon generally included the Apollo Belvedere, Laocoon, the Antinous Belvedere, and the Venus de Medici, among other famous sculptures.

76 Metropolitan Museum of Art, 1891, *Tentative Lists of Objects desirable for a Collection of Casts, Sculptural and Architectural, intended to illustrate the history of Plastic Art* (New York: The Metropolitan Museum of Art), 15-16.

77 Payne 2019, 115.

78 Vout 2018, 201. See also Chapter 2 “Between Art and Science: the Use of Plaster Casts Over Time” in this volume.

cast collections “stood uneasily side by side, gradually leading to debates about the status of plaster casts.”⁷⁹ Were they actual works of art themselves or specimens for study? Beard argues that casts became “particularly powerful symbolic tools for defining and policing the boundaries on and across which they sat.”⁸⁰

In the late 19th and early 20th centuries, the status of plaster casts began to shift. A new modern world had emerged, in which it was easier to travel and gain access to originals in classical collections. As more originals were acquired, copies became less desirable. Movements such as Impressionism brought about a new appreciation for “the play of light” on original sculptures, with plaster casts looking dull by comparison.⁸¹ Casts in many institutions were gradually moved into storage, given away, or destroyed.⁸² The MMA relegated their cast collection, including our Olympia sculptures, to a “leaky storehouse,” where they sat decaying for many years.⁸³ More recently, in the late 20th and early 21st centuries, there has been a resurging interest in casts. For example, beginning in the 1970’s part of the MMA’s collection was rescued by the Queen’s Museum in New York City, which restores and conserves casts in return for keeping them in a long-term loan arrangement.⁸⁴

From the time of their discovery, the East pediment sculptures from Olympia have generated debates of their own, which continue even now. Seeds for debate were planted back in the 2nd century CE, when Pausanias recorded his observations at Olympia. As one of the only sources of information about the Temple of Zeus’ pedimental sculptures, these observations are extremely valuable. However, according to C. Marconi, Pausanias made several interpretive mistakes involving figural identification that affected the reception of the sculptures in later centuries.⁸⁵ The

79 M. Beard, 1993, “Casts and Cast-offs: The Origins of the Museum of Classical Archaeology,” *Proceedings of the Cambridge Philological Society* 39, 3.

80 Beard 1993, 6. For more discussion on this topic, see Chapter 1, “Art or Artifact: Reappraising the Sleeping Satyr Plaster Cast,” in this collection.

81 Borbein 2000, <http://www.digitalsculpture.org/casts/borbein/index.html>.

82 J.V. Noble, 1959, “A New Gallery of Models and Casts,” *Metropolitan Museum of Art Bulletin*, New Series 18.4, 139.

83 McGill 1987.

84 McGill 1987.

85 Marconi 2014/2015, 191-193.

first “mistake” concerns the sculpture of Zeus, which Pausanias identified as a statue of Zeus to which the other figures are making offerings. C. Marconi feels this is a misinterpretation that fails to see the sculptor’s innovation in portraying the god Zeus attending the chariot race in person. The second “mistake” is in not identifying the two seers, making it impossible for later scholars to provide an identification. Pausanias’ third error, according to C. Marconi, was in identifying the figure of Apollo at the center of the West pediment as Pirithous, whose wedding feast is being portrayed. C. Marconi follows the current scholarly argument that this central figure is indeed Apollo. Since there was no prior tradition of portraying Apollo in this Centauromachy, it was another of the sculptor’s innovations that Pausanias overlooked.⁸⁶

The figural arrangement on the East pediment has also been debated since the excavations. The sculptures were reduced to fragments by a 6th century CE earthquake, with some fragments later used in other buildings,⁸⁷ creating a challenge for piecing together the exact sculptural arrangement. One of the most recent approaches for analyzing the East pediment has been to create a virtual 3D reconstruction. This technology builds on earlier research done using life-size 3D plaster cast of the statues,⁸⁸ which had been expensive to produce and difficult to move around.⁸⁹ The results of this study were not able to definitively pinpoint the exact arrangement. However, it is possible to see the most likely candidates. The 3D scanning technology makes research easier and shows an on-going interest in the Olympia sculptures.⁹⁰

Despite the benefits of this type of 3D modeling, such digital images can never provide the experiential impact of a plaster cast. Perhaps, then, it is not so surprising to see the continuing importance of the Olympia and other casts in places such as the University of Cambridge, where their museum’s cast collection is still used for teaching and is also appreciated

86 Marconi 2014/2015, 191-193. For more on the Centauromachy, see Chapter 4 “Reading Beyond the Surface: the Lapith Woman Cast,” in this collection.

87 Patay-Horvath 2011, 54.

88 Patay-Horvath 2011, 53.

89 Patay-Horvath 2011, 54.

90 For more information on current and future technology involving plaster casts, see Chapter 6, “Reconsidering Plaster Casts in the New Millennium,” in this collection.

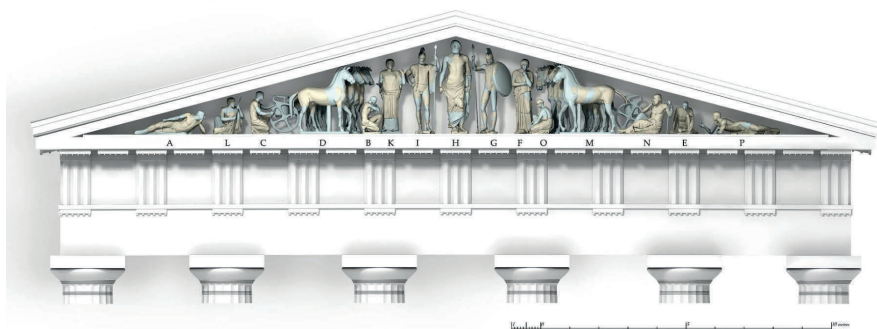


Fig. 3 This image shows the most probable arrangement of the figures on the East pediment based on virtual 3D reconstruction efforts carried out in 2009. The technology used in this project was better able to manipulate the figures than life-sized plaster casts used in the past in trying to determine the original sculptural arrangement. Source: Patay-Horvath, A. 2011. “The Complete Virtual 3D Reconstruction of the East Pediment of the Temple of Zeus at Olympia.” ISPRS - International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences, XXXVIII-5/W16, 55. Attribution: Int. Arch. Photogramm. Remote Sens. Spatial Inf. Sci., XXXVIII-5/W16, 53–59, 2011. <https://doi.org/10.5194/isprsarchives-XXXVIII-5-W16-53-2011>© Author(s) 2011. This work is distributed under the Creative Commons Attribution 3.0 License.

by the public.⁹¹ According to the museum, “every cast tells two stories. One ancient. One modern.”⁹² This concise observation emphasizes how, although casts had fallen out of favor in the past, their value is now being rediscovered. At the recently renovated Ashmolean Museum at Oxford, a cast of the Olympia Apollo stands two-stories high inside the entrance, a visually stunning reminder of its importance to late 19th and early 20th century scholarship in “defining an Early-classical, pre-Parthenonic style of Greek sculpture.”⁹³ The separation of the Apollo from its historical context in the museum display also prompts the continuation of old

91 “Museum History,” Faculty of Classics, University of Cambridge, <https://www.classics.cam.ac.uk/museum/about-us/museum-history>.

92 “Museum History,” Faculty of Classics, University of Cambridge, <https://www.classics.cam.ac.uk/museum/about-us/museum-history>.

93 M. Melfi, 2010, “Old meets New: the Oxford University collections of casts from the antique and the new Ashmolean Museum,” 23-35, in *Plaster casts of the works of art: history of collections, conservation, exhibition practice: materials from the conference in the National Museum in Krakow, May 25, 2010*, edited by Jean-Marc Hofman (Berlin: de Gruyter), 27.

debates concerning the use of casts,⁹⁴ another indicator that plaster casts have not outlived their usefulness. An unusual example of the current resurgence in cast popularity is found in James Perkins' huge cast collection. Perkins, who deals in the restoration of historic British buildings, has a passion for plaster casts. Throughout his large home, which is now also a museum, Perkins juxtaposes casts from various time periods. His entryway holds two sculptures from the West pediment of the Temple of Zeus, with additional Olympia sculptures in other rooms.⁹⁵

As for the original Olympia sculptures from which these casts were taken, they are well cared for at the Archaeological Museum of Olympia. In 1982 a newly built museum replaced the Zingros Museum that had initially housed them.⁹⁶ The Archaeological Museum was then renovated in 2004 to meet modern museological standards, with improvements made to organization, lighting, and ventilation.⁹⁷ The originals are carefully maintained in this updated museum, just as the GMU casts of these sculptures will be protected in Horizon Hall. As the GMU Olympia casts are dusted off for their new display, the next chapter in their history begins.

The sculptures and casts from the Temple of Zeus at Olympia have had a long history. From inception and burial, to their rediscovery and modern display, to their role in the debate between art and artifact as casts. Society has observed them for nearly 1000 years – more than 800 in their original ancient context and 150 years out of context as archaeological objects, art, and casts. The viewers of the Mason Olympia casts are brought into close proximity with this history as they gaze at the plaster work that was produced in Germany, directly from the originals at Olympia, bridging and telescoping the wide gap of both time and geographic distance between the Sanctuary of Zeus and Fairfax, VA. The ever-changing interpretation of the role of casts in modern society has created

94 Melfi 2010, 27.

95 J. Perkins, 2010, "Living with Plaster Casts," 627-634 in *Plaster Casts: Making, Collecting and Displaying from Classical Antiquity to the Present*, edited by Rune Frederiksen and Eckart Marchand (Berlin: De Gruyter), 629-630.

96 "Archaeological Museum of Olympia History," Hellenic Ministry of Culture and Tourism, http://odysseus.culture.gr/h/1/eh152.jsp?obj_id=7126.

97 "Archaeological Museum of Olympia History," Hellenic Ministry of Culture and Tourism, http://odysseus.culture.gr/h/1/eh152.jsp?obj_id=7126.

a complicated relationship with these sculptures. But there is more value in them than just relics of the casting craze or as teaching tools. Through them, sculpture can be examined in ways that may no longer be possible, either due to damage to the ancient piece or a lack of accessibility to the original sculpture. Casts bring greater accessibility to the world of art, as seen in the George Mason University cast collection.

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READING BEYOND THE SURFACE: THE LAPITH WOMAN CAST

ALLISON CIMINO, PIA DESANGLES, AND EMILY EPPARD

We need to understand how sculpture shared the world with the Greeks, not simply as an illustration of a figure or myth, not simply as an artifact, but as a source of bodily excitement and spatial organization.¹

The quotation above exemplifies the importance of understanding the cultural context of the artwork that is produced in another time by a different civilization. On casual viewing, a modern audience may reach a very different interpretation of the subject than either the artist intended or the original audience might have expected. Most importantly, while viewing ancient works of art, the viewer must separate themselves from their own modern perception and take the initiative to understand what is happening from the viewpoint of the culture that created the work of art. This is known as viewing artwork without a modern-day lens. Understanding the proper context of a work of art is crucial in obtaining an evidence-based interpretation. When it comes to the display of art, there are key elements that should take priority, including the details of the works of art themselves, whether original or a plaster cast, and the communication of proper cultural context in which they were produced. Displaying works of art without the proper context can create controversy and miscommunication. An example of this occurred just a few years ago on the Fairfax Campus of GMU, involving a plaster cast that had been on display and was later removed from the Johnson Center. This occurrence demonstrates the necessity of understanding the original intentions

1 Michael Hatt, 2013, "In Search of Lost Time: Greek Sculpture and Display in Late Nineteenth Century England," *Art history* 36.4: 770.

behind a work of art since the values of that time period, its artist and its original audience are embodied in the object.

The situation involved the plaster cast of an ancient Greek sculptural group, known as the *Lapith Woman* group (Fig. 1), which was displayed near the library on the second floor of the Johnson Center. This is a building that students from all over the campus visit to study, research, hang out or grab something to eat before heading to their next class. The *Lapith Woman* cast drew the attention of students and initiated the need for many conversations surrounding the display of art. The students held the opinion that the *Lapith Woman* cast promoted a tacit approval of sexual violence. Glancing at the cast without understanding its context, one can understand why the students might have reached that conclusion, as what appears to be a man is grabbing a woman by her left breast in a forceful manner while she attempts to elbow him in the face to free herself.

The cast was removed from the Johnson Center in response to student concerns, but in consultation with the Art History program and the Office of the University Curator, the administration decided that the *Lapith Woman* cast would be placed back on display in the Art and Design Building. The rationale behind this decision was that provocative works of student art, which focus on a variety of subjects including imagery that elicits strong reactions from viewers, are often on display in that building. Because of the range of topics depicted in art displayed in the Art and Design building, there is an expectation that a viewer might be challenged by images that they might find disturbing or even offensive in another context. Along with the move to a space more appropriate to the subject matter of the cast, the decision was made to develop a fuller array of didactic material to accompany the cast so that viewers would be better informed on the history and cultural meaning that underlies the piece. The hope is that this deeper understanding of the artwork will allow modern viewers to appreciate the original intentions behind the *Lapith Woman* imagery, even if they are still made uncomfortable by it. By taking this course of action, the University held fast to its mission of education and avoided what might be interpreted as an act of censorship.



Fig. 1 *Lapith Woman*, plaster cast reproduction, No.2 Mason Plaster Cast Collection. Original sculpture from the West pediment of the Temple of Zeus at Olympia, Greece, 470-456 BCE. Photograph courtesy of George Mason University.

The topic of censorship has and always will play a major role in the display of art works throughout many different institutions, whether it be a museum or a university. How the subject of censorship is approached depends specifically on the institution and the codes which they follow. George Mason University offers a pertinent summary of its policy on the official webpage discussing free speech:

Being exposed to competing perspectives is essential for questioning our assumptions, testing our beliefs, and refining our knowledge. Our goal as a community must be to create an environment where we can engage in difficult and challenging conversations with civility and mutual respect,

where confronting opposing ideas and perspectives becomes an opportunity to learn from and with each other.²

In the context of this passage, the administration makes clear that the University does not condone the censorship of artwork. Instead, the goal of the institution is to provide a foundation on which individuals are able to learn about various subjects, even when those topics might clash with one's personal beliefs or attitudes. By both re-displaying and introducing more detailed information about the *Lapith Woman* cast, the University fulfills one of its core missions: to educate through a dialogue of cultural exchange, even when the culture under discussion is thousands of years in the past.

The discussion of the *Lapith Woman* can begin with an acknowledgment that without a full and careful explanation, the piece is difficult to understand at a glance—or even after repeated viewings. There are three specific obstacles facing a viewer of the cast on campus. The first is that the plaster sculptural cast is based on a work of art that carried specific cultural connotations and meanings to its ancient audience. These meanings are no longer readily apparent to most viewers unless they have taken certain classes or have an independent background in classical Greek culture. The second complicating factor is that this excerpted pair is, in its original form, only a small part of a much larger group that told a unified story as part of the architecture of the Temple of Zeus at Olympia (Fig. 3).³ Attempting to understand that narrative from two characters is difficult, at best. Finally, adding to the difficulty in reading those two figures is the simple fact that the GMU cast is only a partial cast that does not even show the entirety of the two figures. This quotation copies only the head and upper body of a male and female, leaving out vital clues to their identity and making it even less likely that a casual viewer would recognize the source material for the plaster cast (Fig. 2).

2 Free Speech at Mason. Retrieved April 03, 2021, from <https://www2.gmu.edu/about/mason/university-policy/free-speech-mason>.

3 The sculpture group decorated the triangular space called the pediment, located at the western end of the Temple of Zeus at Olympia. The pediments at east and west occupied the space below the sloping sides of the roof and above the columns surrounding the temple. For a fuller discussion of these pedimental sculptures, see Chapter 3, "Sculpture out of Context: the Olympia Casts Case Study," in this collection.



Fig. 2 This plaster cast reconstructs the group of Deidamia and Eurytion (Figures H and I) from the West pediment at Olympia in miniature. The cast was created at the Gipsformerei der Staatlichen Museen in Berlin, 1890-1900. Currently on display at Cornell University; the original sculptural fragments are on display at the Olympia Archaeological Museum, Greece. ARTSTOR https://library-artstor-org.mutex.gmu.edu/asset/SS33844_33844_31981500

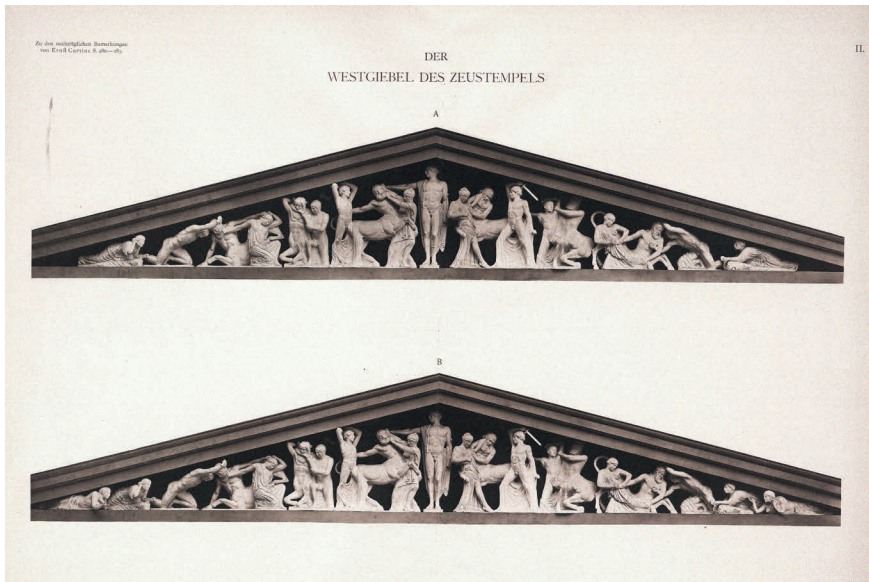


Fig. 3 Reconstructions of the Temple of Zeus at Olympia's West pediment, courtesy of the Heidelberg University Library, <https://digi.ub.uni-heidelberg.de/diglit/curtius1897a/0319>. Public domain. From *Olympia: die Ergebnisse der von dem Deutschen Reich veranstalteten ausgrabung*. Ernst Curtius and Friedrich Adler. Berlin: Verlag van A. Asher & Co. (1897).

To begin to fully understand the meaning behind this cast, one must realize that this is not in fact a man assaulting the woman, but a mythological creature known as a centaur. This half-man, half-horse being is familiar in Greek mythology where it is quite in their character to behave in such a violent, uncivilized manner. This plaster cast is not glorifying sexual violence but is depicting a dramatic moment in the story of a wedding among a group of ancient Greeks known as the Lapiths. The ancient Greeks would have viewed this disruption at the wedding feast as a terrible event and the display of the Lapith story would have served as a warning of the dangers of sexual violence and loss of self-control as portrayed by barbaric monsters found in Greek myth. The message of this cast is to highlight the barbarity of sexual violence and to reject such actions as counter to civilized behavior, not to promote it.

While the complexity and nuances of this story would have been familiar to both Greeks and Romans in antiquity, the interwoven stories that underpin this image are likely lost to a modern viewer. The convoluted and highly symbolic myth begins with the exile of a king of the Lapith Greeks named Ixion and the birth of the centaurs through this deeply flawed human. In Greek mythology Ixion was the first man to murder a kinsman, who was visiting him and under the protection offered to all guests.⁴ The neighboring tribes shunned Ixion, and he was forced into exile for his violation of the guest-host relationship. Eventually, Zeus, supreme god of the Greeks, took pity on Ixion and received him as a guest at the home of the gods on Mount Olympus. Ixion, however, lusted for the Greek goddess Hera, the wife of Zeus, and attempted to violate her in the home of his host, demonstrating his lack of self-control and his continued willingness to break the relationship between guest and host, which the Greeks considered sacred. Hera and Zeus deceived Ixion to test his integrity, shaping the cloud nymph⁵ Nephele into the likeness of Hera and sending her to lie beside a sleeping Ixion. True to his uncivilized character, Ixion failed Zeus' test and impregnated Nephele, whom the Lapith king thought was the real Hera, the wife of his host and goddess of marital fidelity. Beyond exposing Ixion's corrupt nature, there would be long-running consequences to the joining of Ixion and Nephele. No normal, civilized offspring could be expected to come from such an unnatural union that so clearly violated critical concepts of loyalty, fidelity and trust within both the domestic and divine spheres of Greek civilization.⁶

The child born of Ixion and Nephele was Centaurus. Deformed and hunched over, Centaurus was shunned by other humans so that he retreated to the wilderness of Mount Pelion. Centaurus mated with the mares that grazed on the foothills of Mount Pelion, fathering the mythical centaurs. The resulting race of centaurs are half-man and half-horse;

4 Timothy Gantz, 1996, *Early Greek Myth: A Guide to Literary and Artistic Sources*, Vol. 2 (Baltimore, MD: Johns Hopkins University Press), 718. Ixion murdered his father-in-law Deioneus, who was expecting gifts from Ixion when he gave away his daughter. Deioneus was invited to collect, but when he arrived, Ixion pushed him into a pit of fire.

5 Mark Morford, Robert J. Lenardon, and Michael Sham, 2014, *Classical Mythology*, 10th ed. (Oxford, New York: Oxford University Press), 800. A nymph is a beautiful, idealized goddesses of wood and stream and nature, often the objects of love and desire.

6 Morford, Lenardon, Sham 214, 122.

the upper portion of the centaur consists of a human male head and torso, joined at the waist to the body and legs of a horse.⁷ Centaurs are commonly portrayed in art and myth as primordial beasts, considered mindless and without reason. In contrast to the civilized Greeks, centaurs were wild, impulsive beings.⁸ The irony, of course, is that their forefather Ixion was a human. The symbolism, though, is clear: Ixion defied Greek cultural norms and violated sacred laws. His union with Nephele resulted in a creature that reflected his savage and corrupt (human) nature – the deformed Centaurus. The children of Centaurus, then, carried both Ixion’s tainted blood and the blood of actual wild animals. In this manner, the centaurs are constructed in Greek mythology as the ultimate symbolic opposition to civilized behavior.

Creatures that so thoroughly represent the antithesis of Greek culture were obvious adversaries for Greek heroes to fight. A centauromachy is a battle between centaurs and Greeks, the suffix “-machy” meaning “a fight or battle.”⁹ Thus, the term “centauromachy” directly translates to “centaur battle.” In Ancient Greece, the centauromachy embodied the concepts of order and civilization pitted against barbarism and chaos.¹⁰ On the side of order were the Greeks and, in the case of a centauromachy, the side of chaos was represented by the centaurs. In the symbolic language of Greek myth, this conflict reflected the constant struggle between civilized and barbarous behavior. Because the centaurs were descended from a Lapith Greek, however, it was also a warning of what might hap-

7 Morford, Lenardon, Sham 2014, 379.

8 Jan N. Bremmer, 2012, “Greek Demons of the Wilderness: the Case of the Centaurs,” 25-53 in *Wilderness in Mythology and Religion: Approaching Religious Spatialities, Cosmologies and Ideas of Wild Nature*, edited by Laura Feldt (New York: de Gruyter), 29.

9 Timothy Gantz, 1996, *Early Greek Myth: A Guide to Literary and Artistic Sources*, Vol. 1 (Baltimore, MD: Johns Hopkins University Press), 1, 145. The lost epic *Titanomachia* related the battle between the Olympians and the Titans. The *Gigantomachia* is an account of the battle between the Olympians and the Giants (giganeis). The compound Greek word “kentaumachia” is made up of “kentauros” (centaur) and the Greek suffix “-machia” (from *machē* meaning battle). The term “centauromachy” is derived from this Greek compound word, in the same fashion as the cosmic conflicts against Titans and Giants. Each of these battles represented a conflict between order and chaos, with rationality versus emotionalism and civilization standing against the violence of nature.

10 Thomas H. Carpenter, 1991, *Art and Myth in Ancient Greece: a Handbook* (London: Thames and Hudson), 166.

pen if the rules of civil conduct and sacred law were abandoned even by agents of order.

A popular centauiromachy in Greek mythology occurs at the wedding feast of the Lapith king Pirithous to Deidamia, also known as Hippodamia.¹¹ Pirithous could hardly exclude his closest neighbors from the invitation list,¹² though the centaurs' presence could also be attributed to their ancestral ties to the Lapith tribe. At the wedding feast, the centaur Eurytion, fueled by lust and/or wine, attempted to abduct the bride:

“For one, most brutal of the brutal brood,
Or whether wine or beauty fired his blood,
Or both at once, beheld with joyful eyes
The bride, at once resolved to make his prize.”
(Ovid, Ovid's *Metamorphoses* 12.308-311)

Spurred on by Eurytion's misbehavior, the other centaurs in attendance leapt up and began grabbing the young Lapith boys and women. The Roman poet Ovid incorporated the events of the Lapith wedding feast into his extended poem, *The Metamorphoses*, calling the centaurs “the cloud-begotten race, half-man, half-beast” and describing them with language like “monster” and “bestial kind”¹³ while his text proclaims the Greek fighters as “warrior”¹⁴ and “hero.”¹⁵ Throughout Ovid's text, the contrast of rational, civilized Greeks and savage, primitive ‘other’ appears, such as with the comparison of weaponry; the centaurs fought

11 Bernard Ashmole and Nicholas Yalouris, 1967, *Olympia: The Sculptures of the Temple of Zeus* (London: Phaidon), 17.

12 Ashmole and Yalouris 1967, 17.

13 Ovid, *Metamorphoses* 12.294; 12.326; and 12.314. <https://mythopedia.com/roman-mythology/texts/metamorphoses/book-xii/#the-skirmish-between-the-centaurs-and-lapithites>. For the Latin text, see <http://www.perseus.tufts.edu/hopper/text?doc=Perseus%3Atext%3A1999.02.0029%3Abook%3D12%3Acard%3D210>

14 Ovid, *Metamorphoses* 12.391.

15 Ovid, *Metamorphoses* 12.332. The original Latin text of Ovid's work reflects the different connotations reflected in the English words used in translations of the event. At *Metamorphoses* 12.258-261, Ovid also describes the centaur Gryneus ripping the stone top stone from an altar and using it as a weapon to kill Lapiths, adding the profaning of a sacred site and offending the gods to the list of brutal crimes committed by the centaurs in this battle.

with branches of pine trees¹⁶ and boulders¹⁷ while the Greeks wielded swords.¹⁸ Primitive weapons of opportunity are taken up against the products of civilized metalworking technology. In this particular centauromachy, the Lapith people were victorious in defeating the centaurs and expelling them from Thessaly.¹⁹ Civilization overcomes savagery.

The *Lapith Woman* cast under discussion here is taken from a section of the centauromachy on the West pediment²⁰ of the Temple of Zeus at Olympia (Fig. 3). Although dating four centuries before the Roman poet Ovid's birth, the writer and the pediment tell the same story: the ill-fated wedding feast of Pirithous and Deidamia. The bride, shown in the GMU cast, is being assaulted not by a man but by the centaur Eurytion described in the literary source (Fig. 2).²¹ Here, we can begin to understand the modern reactions to the cast. It is a violent scene, with a name-less woman assaulted by a bearded aggressor. But the cast does not include the equine portions of the centaur; his horse-body is absent, removing a key sign that this event belongs in the realm of Greek mythology.

The remaining 19 figures from the temple's western pediment are also absent when we consider the GMU cast, further diminishing the chance of understanding the whole story from this limited excerpt. The remaining figures give depth and clarity to the myth. Within the context of the pediment, the woman takes on a name: Deidamia (or Hippodamia in some versions). The groom Pirithous' place in the narrative also takes on expanded significance. His ancestry varies in Greek mythology; he is either the son²² or grandson²³ of Zeus or the son of Ixion.²⁴ Any of these ancestral ties make his placement appropriate on this temple, which was the most important shrine to the king of the Olympian gods.²⁵

16 Bremmer 2012, 35.

17 Gantz 1996, 278.

18 Ovid, *Metamorphoses* 12.506

19 Gantz 1996, 278.

20 Ashmole and Yalouris 1967, 7. The pediments of the Temple of Zeus at Olympia are large spacing, measuring eighty feet in length and over ten feet tall in the center, while narrowing towards the corners.

21 Ashmole and Yalouris 1967, 18.

22 Morford, Lenardon, Sham 2014, 121.

23 Ashmole and Yalouris 1967, 17

24 Morford, Lenardon, Sham 2014, 122.

25 Ashmole and Yalouris 1967, 17. The central position in the pediment is identified as

The central group of the pediment consists of the main characters in the story. Apollo, a god representing order, self-knowledge and the arts developed by civilized culture,²⁶ dominates the middle of the composition, standing taller than any of the other figures, which is appropriate since he is the only god present. The primary figures to the right of Apollo are Eurytion attempting to abduct Deidamia and Pirithous, a microcosm of the struggle between order and chaos. To the left of Apollo are an unnamed centaur gripping the bride's female companion and the Greek hero Theseus attempting to free her, who also attempts to preserve the civilized ritual of the wedding.²⁷ The outer sculptural figures in the pediment consist of a mixture of battling centaurs and Lapiths, each sculpture posed lower than the previous as the pediment descends outwards to the corners. The juxtaposition between all these struggling figures resulted in a dynamic rendition of the Battle of Lapiths and Centaurs.²⁸

The prominence of the centauromachy myth on a major Pan-Hellenic monument like this temple, which was sacred to all Greeks, raises the question of why such a brutal story was appropriate to decorate the sanctuary of Olympian Zeus. In Greek culture, as in many civilizations, mythological depictions reveal social values. We can, however, only understand their message by studying the story and the art in their original

Pirithous by Pausanias, though Ashmole and Yalouris as well as the majority of subsequent scholars argue that it is the god Apollo. The central figure of a pediment is usually awarded to an Olympian deity. Although Pirithous was often said to be descended from Zeus, this does not warrant him being given the central placement. Note that there are several modern transliterations of this Greek name: Pirithoos, Peirithous, and Perithous are among the others encountered in modern texts.

26 Ashmole and Yalouris 1967, 17. The central position in the pediment is identified as Pirithous by Pausanias, though Ashmole and Yalouris as well as the majority of subsequent scholars argue that it is the god Apollo. The central figure of a pediment is usually awarded to an Olympian deity. Although Pirithous was often said to be descended from Zeus, this does not warrant him being given the central placement. Note that there are several modern transliterations of this Greek name: Pirithoos, Peirithous, and Perithous are among the others encountered in modern texts.

27 Ashmole and Yalouris 1967, 17-19.

28 Mary Emerson, 2018, *Greek Sanctuaries and Temple Architecture: An Introduction* (London: Bloomsbury Academic), 76. Art historian Mary Emerson talks about the carefully conceived composition of the West pediment, pointing out that the way the groups of fighters are entangled and juxtaposed provides a dynamic and exciting depiction of the battle.

sociocultural context.²⁹ Scholarship on Greek art, traditionally focused on artistic developments and styles, has been increasingly directing its attention to the context of manufacture and function of the artwork.³⁰ In archaeological terms, context refers primarily to the find-spot³¹, but more broadly to “the circumstances that form the setting for an event, statement, or idea, and in terms of which it can be fully understood,” as the *Oxford English Dictionary* defines it.³² The object is no longer seen as an isolated work of art but as the product of social, political, and economic forces. It is in this isolation that misinterpretation and confusion grow, as illustrated by the *Lapith Woman* plaster cast at GMU. Thus, a work of art has to be studied within the framework of the society that made it.³³ What follows is an evaluation of the broad social context surrounding the *Lapith Woman* in fifth-century BCE Greece.

According to the classical scholar J.J. Pollitt, the Temple of Zeus was “the most important architectural project in Greece during the Early Classical Period.”³⁴ Pollitt explains that the Elean Greeks built the Temple of Zeus between 470 and 456 BCE in the aftermath of two recent victories: the Eleans over the nearby Greek city of Pisa for the control of the sanctuary and the Greeks over the Persians in the Persian Wars.³⁵ Thus, this temple’s entire monumental sculptural program has been often read as a celebration of those triumphs. The East pediment showed the preparation for the chariot race between the Elean ruler Pelops and the mythological king of Pisa, Oinomaos. The story tells how Pelops won his bride

29 Judith Barringer, 2008, *Art, Myth, and Ritual in Classical Greece* (Cambridge, UK: Cambridge University Press), 2.

30 Diana Rodríguez Pérez, 2017, *Greek Art in Context: Archaeological and Art Historical Perspectives* (Abingdon, Oxon: Routledge), 1. This book is the product of the International Conference on Greek Art in Context, organized at the University of Edinburgh in April 2014. Its aim was twofold: to address the problem of defining and determining context from a theoretical point of view and to explore how considering context affects the interpretation of the material culture of ancient Greece from the Dark Age to the Hellenistic Period.

31 Rodríguez Pérez 2017, 5. Rodríguez Pérez emphasizes that the archaeological “find-spot” it is not given but constructed – or reconstructed – by the archaeologists.

32 Rodríguez Pérez 2017, 5.

33 Rodríguez Pérez 2017, 7.

34 J.J. Pollitt, 1972, *Art and Experience in Classical Greece* (Cambridge, UK: Cambridge University Press), 32. See also Chapter 3, “Sculpture out of Context: the Olympia Casts Case Study,” in this collection.

35 Pollitt 1972, 32.

Hippodameia by racing against her father, a wicked king that resorted to trickery to defeat the contenders.³⁶ The West pediment displayed the Battle of Lapiths and Centaurs discussed above, a mythological event often interpreted as symbolic of the triumph of the rational Greeks over the “barbaric” Persians. In *Know Thyself: Western Identity from Classical Greece to the Renaissance* (2018), Ingrid Rosellini explains that describing the Persians as arrogant, superficial, and morally deficient individuals served to create the image of rational Greeks.³⁷ From the Persian Wars onwards, Rosellini asserts, Greeks started to define themselves in contrast to a “barbaric Other, who threatened to pollute with its effeminacy the virile integrity of Hellenistic ethos.”³⁸ Nancy Tersini sees these two sculptural plans together as a morality play in two acts: the East pediment, the enactment of *hubris* – Oinomaos’ self-pride – and in the West, Apollo restoring *dike* (justice) on behalf of his father Zeus in the center of the composition.³⁹

Another popular interpretation of these pediments relates to activities in the sanctuary of Olympia, namely the Olympic Games. Thus, many scholars believe the Temple of Zeus’ architectural sculptural program was designed to address the athletes and visitors to the site. The chariot race on the East pediment, for instance, makes a direct reference to the first chariot race considered as the mythic origin of the games. Pelops, the race winner, gave his name to the Peloponnese and was the Olympic games’ founder, especially the competition of the chariot race.⁴⁰ Furthering the association of the sculpture with the athletic competitions held nearby, some scholars see the centauremachy figures’ active poses as wrestling and boxing⁴¹ postures in complete alignment with the overarching theme of

36 Emerson 2018, 72. Emerson relates that Oinomaos, reluctant to let his daughter Hippodameia marry, challenged any suitor of hers to win a rigged chariot race against him; the penalty for losing was immediate death. Already thirteen suitors had lost their life when handsome Pelops arrived and Hippodameia fell in love, 72-73.

37 Ingrid Rosellini, 2018, *Know Thyself: Western Identity from Classical Greece to the Renaissance* (New York: Doubleday), 60.

38 Rosellini 2018, 60

39 Nancy Tersini, 1987, "Unifying Themes in the Sculpture of the Temple of Zeus at Olympia," *Classical Antiquity* 6.1, 149

40 Emerson 2018, 72.

41 Barringer 2008, 29. The author points out that one centaur has a distinctive cauliflower ear, a common injury in boxing and wrestling, which differs from the normal, undamaged

the Olympic Games.⁴² Furthermore, the West pediment faces the palestra where wrestling and boxing took place, which has prompted the reading of the Battle between Lapiths and centaurs as a cautionary tale for the athletes. They should strive through rigorous physical training and avoid excesses and indulgences: follow the victorious Lapiths' example and not the out-of-control centaurs.⁴³ With its brightly colored over-life-size figures,⁴⁴ the centauromachy scene would have certainly been a striking sight,⁴⁵ even more so because the West pediment imagery represented innovation in many ways.

First, this was the first time the Battle of Lapiths and Centaurs myth had been seen in architectural sculpture.⁴⁶ Second, this was the first and only time that Lapith women were shown in such a prominent way, as actively engaged in the battle.⁴⁷ And third, archaeologist B. Cohen states that this sculptural group displays the "earliest preserved exposed female breasts in a monumental sculpture of ancient Greece."⁴⁸ B. Cohen explains that when the Temple of Zeus was built, the female nude was not yet a "proper subject for Greek art."⁴⁹ At the time, Greek art had indeed shown female nudity and sexuality in vase painting. But, as Larissa Bonfante asserts, the women depicted in these art forms were prostitutes

ears of the Lapith youth on the pediment.

42 Emerson 2018, 73.

43 Emerson 2018, 76.

44 For more about polychromy in Greek sculpture, see Chapter 5, "Showing Antiquity's True Colors: Sculptural Polychromy's Past and Present," in this collection.

45 Ashmole and Yalouris 1967, 8. Based on the pigment preserved on some metopes, these authors state that all the figures were painted in bold colors favoring red and blue (26).

46 Barringer 2008, 25. Barringer states that, although the myth is mentioned by Homer and known from earlier vase painting, the earlier objects do not make reference to the combat at the wedding. In Greek myth, there are two major conflicts involving Greeks and centaurs: the struggle at the Thessalian wedding of Perithous, and the hero Herakles's fight with Pholos and the centaurs. Here, the presence of women under attack and Herakles' absence clearly indicates the wedding scene (23-26).

47 Beth Cohen, 1997, "Divesting the Female Breast in Classical Sculpture," 66-92 in *Naked Truths: Women, Sexuality, and Gender in Classical Art and Archaeology*, edited by Ann Olga Koloski-Ostrow and Claire L. Lyons (London: Routledge), 72. This classical archaeologist argues that, although women were later typically included in centauromachy scenes, they were not portrayed as present and engaged in the battle prior to the Olympia composition.

48 B. Cohen 1997, 72.

49 B. Cohen 1997, 66.

and not respectable women who were always "...protected from the sun, from men's eyes, and from the evil eye by dresses and mantles that covered them from head to foot."⁵⁰ Bonfante remarks that the exception to this rule was the case of mythological women depicted partially naked to convey their vulnerability and weakness.⁵¹ The disheveled Lapith women exemplify this category. By exposing the Lapith women in this way, the centaurs are displaying their own savagery since it violates proper social behavior and embarrasses the women in addition to the physical assault that they are suffering.

Since the Temple of Zeus was the first place where the Battle of Lapiths and Centaurs was shown in monumental sculpture, this sight would arguably have impacted visitors and athletes entering the sanctuary of Olympia. But a male's reaction would not have been necessarily adverse; as Ada Cohen reminds us, amongst battle and hunt, rape was one of the most common artistic themes in Greek culture.⁵² A. Cohen further points out that the prevalence of rape and violence in ancient Greek visual representations served to signal messages of masculine strength and endurance in contrast to female weakness and their perceived need of protection.⁵³ As P. Chrystal puts it, ancient Greece was a patriarchal society "run by men for men."⁵⁴ Then, it is safe to say that the Temple of Zeus's pedimental sculpture, like many other monumental sculptural programs, was undoubtedly designed to convey the virtues and values expressed in Greek literature addressing the male audience.⁵⁵ Male visitors and athletes entering the sanctuary would have identified themselves with the (male) Lapith heroes protecting the Lapith women's honor by defeating the oversexed and out-of-control beasts. But what would the female

50 Larissa Bonfante, 1990, "The Naked Greek," *Archaeology* 43.5, 33.

51 Bonfante 1990, 33.

52 Ada Cohen, 1996, "Portrayals of Abduction in Greek Art," 117-135 in *Sexuality in Ancient Art 1: Near East, Egypt, Greece, and Italy*, edited by N.B. Kampen N. B. Kampen and B. A. Bergmann (Cambridge, UK: Cambridge University Press), 117.

53 A. Cohen 1996, 117-118.

54 Paul Chrystal, 2017, *Women in Ancient Greece: Seclusion, Exclusion, or Illusion?* (Oxford, UK: Fonthill Media Limited), 10.

55 Eva Stehle and Amy Day, 1996, "Women Looking at Women: Women's Ritual and Temple Sculpture," 101-116 in *Sexuality in Ancient Art 1: Near East, Egypt, Greece, and Italy*, edited by N. B. Kampen and B. A. Bergmann (Cambridge: Cambridge University Press), 101.

audience have thought about this sculptural work?

The classical scholars Eva Stehle and Amy Day try to answer this question by examining the centauromachy scene, particularly the *Lapith Woman* sculptural group, using women's rituals as a framework to interpret the mythological theme.⁵⁶ These authors assert that Greek women grew up hearing mythological stories and would have been aware of the Battle of Lapiths and Centaurs. Therefore, at first glance they might not have had an unfavorable reaction to this depiction. But Stehle and Day add that as women took a closer look at this pediment, they must have experienced contrasting emotions. On the one hand, the female audience would have welcomed seeing women attempting to defend themselves, something unusual in visual representations of Greek myths.⁵⁷ By the mid-fifth century BCE, Greek women were used to hearing stories and seeing images of Cassandra, the legendary king of Troy's daughter, as "a defenseless woman with her drapery slipping down her body and about to be raped."⁵⁸ In contrast, Stehle and Day describe how Deidamia elbows the centaur in the face as she tries to pry his clutching hand away from her waist. However, these authors claim that once these women viewers noticed the centaur grabbing the Lapith woman's breast, they would have felt "shame of the violation of her body and angry at the sculptor who demeaned a 'respectable' woman by making her a sexual display."⁵⁹ More importantly, the female audience would have been furious with the centaurs, the brutal, foreign creatures interrupting Perithous and Deidamia's marriage. After all, in ancient Greece's patriarchal society, marriage and childbirth were events of paramount importance in Greek women's lives.⁶⁰

It is important to understand all of these aspects of the culture from which this sculpture—and so, ultimately, the plaster cast—is derived. It is true that the ancient Greeks have provided the world with various ele-

56 Stehle and Day 1996, 102.

57 Stehle and Day 1996, 106.

58 Susan Woodford, 1993, *The Trojan War in Ancient Art* (Ithaca N.Y: Cornell University Press), 111. Woodford explains that Cassandra represents the archetype for this situation in which the victim is a partially naked woman about to be raped.

59 Stehle and Day 1996, 107.

60 Stehle and Day 1996, 105.

ments that influence modern day society, spanning various areas from art to politics. This would extend to the topic of sexual violence as well. In order to promote the safety and wellbeing of women, Greek myth often used motifs that would warn women about the dangers they may face when coming in contact with the opposite sex. The manner in which this topic was made to be more palatable was to move away from sexually aggressive humans and fashion these attributes into barbaric and uncivilized creatures such as centaurs. In ancient Greece, *Greek* societal rules did not condone this type of sexual aggression since such action was a sign of primitive, savage behavior that the 'other' engaged in. Therefore, the savage and barbaric behavior depicted in the cast was not a behavior that was in any way held up as a positive example, but rather a behavior that was depicted in myths that contained savage creatures, such as the centaur.⁶¹

The complexity of the story illustrated in the centauiromachy from the West pediment at Olympia has made it an intriguing subject for scholars, but this same intricacy and depth of detail complicates the scene's reading for a modern audience. This is especially true when two partial figures are extracted from the larger whole and put on display isolated from the clues that would allow for easy identification. Removing 'complicated' imagery from public view, however, is rarely ever the proper response. As an institute for higher learning GMU should never shelter its students from an education derived from factual elements of a foreign culture. The University remains true to its policies in placing the *Lapith Woman* cast back on display in a space that is familiar for artwork that depicts an array of challenging topics. It is true that sexual violence is a deplorable aspect of human life, however, by hiding these past depictions of such violence, how are we to learn and grow as a society? The *Lapith Woman* cast will be re-installed in the Art and Design Building on campus with a new, more informative label and elaborated didactic information. This will include

61 Gods and goddesses in the Greek world do abduct individuals in myth, but there seems to be a clear distinction between what is acceptable for an Olympian and what is approved for mortals. A. Cohen 1996 points out that abduction/rape scenes like those involving the goddess Persephone can have metaphorical or allegorical meanings related to fertility, cosmic cycles of growth or transition points in the life of a young woman or young man (118). Cohen also observes that there were legal consequences for rape in Greek cities like Athens, so that human civic law defined such action as contrary to civilized behavior (130-131).

graphics of the full scene of the West pediment centauromachy, so that viewers can fully understand what they are looking at. The University's decision to continue displaying the *Lapith Woman* cast not only aligns with its core values to oppose censorship, but also reinforces the central function of the university: to educate so that "...we can engage in difficult and challenging conversations with civility and mutual respect, where confronting opposing ideas and perspectives becomes an opportunity to learn from and with each other."⁶² It is no secret that societal progression is only caused by the study and observation of uncomfortable past events. Considering the topic of sexual violence in society, depictions such as the cast of the *Lapith Woman* can serve to illustrate how humans must continue the struggle to conduct themselves in a humane manner and not as the barbaric centaurs of Greek myth.

62 Free Speech at Mason. (2021). Retrieved April 03, 2021, from <https://www2.gmu.edu/about/mason/university-policy/free-speech-mason>.

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SHOWING ANTIQUITY'S TRUE COLORS: SCULPTURAL POLYCHROMY'S PAST AND PRESENT

MATTHEW GREMBOWITZ AND SARAH HASHEM*

Polychromy is the practice of applying different colors of pigment to objects with the intent of adding design or decoration. These objects can include but are not limited to sculptural figures and architectural elements.¹ Many ancient Greek and Roman sculptures, as well as architecture, were painted in bright colors. But time's removal of color exposed the pale marble underneath and obscured much of the original details. Typically, the sculptures of human figures would have the eyes, hair, and clothing painted in detail. It was known for certain by the late 19th century that polychromy was a feature of ancient Greek and Roman sculpture and architecture.² However, until the inception of various scientific methods for analyzing the traces of pigment, scholars were limited to studying what they could see in relatively rare cases of preservation.³ Most museums and art history textbooks contain a predominantly

* Supplemental text and references added by Christopher Gregg.

1 V. Brinkmann, 2017, "A History of Research and Scholarship on the Polychromy of Ancient Sculpture," 13-25 in *Gods in Color: Polychromy in the Ancient World*, edited by V. Brinkmann, R. Dreyfus, and U. Koch-Brinkmann (San Francisco: Legion of Honor, Fine Arts Museum of San Francisco), 16. In the context of this paper, *polychromy* is the use of pigment to add color to stone sculpture or architectural elements.

2 Brinkmann 2017, 14.

3 S. Zink with H. Piening, 2009, "Haec aurea templa: The Palatine temple of Apollo and its polychromy," *Journal of Roman Archaeology* 22, 109. In the context of a field project dedicated to digitally reconstructing the Palatine Temple of Apollo in Rome, Zink and Piening analyzed its surviving marble architectural fragments for remains of pigments. By means of

monochrome selection of classical sculpture and architecture. This has an impact on the way we view the material culture produced in the ancient Mediterranean world. The assemblage of whiteness serves to create a false idea of homogeneity across the Mediterranean region in the period of classical antiquity. This fixation on pure white sculptural and architectural forms was sustained by art historians of the 19th and 20th centuries despite an increasing body of knowledge on the subject of polychromy. The goal of this essay is to offer insights into the blatant disregard towards polychromy in scholarship,⁴ while educating our audience on the subject itself.⁵

Additionally, as an extension of the 2021 Curatorial Seminar on the GMU Plaster cast collection, we seek to illuminate the unique value of plaster casts in understanding the impact of polychromy on ancient works of art. Chromatic reconstructions of an original work, made with

ultraviolet spectrometry in combination with architectural documentation and 3D computer modeling, it was possible to reconstruct the intricate color scheme. Although much of the surface area of the temple was left brilliant white Luni (Carrara) marble, polychromy was strategically applied to all the column capitals, entablature and door frame in order to highlight those elements, especially when viewed from afar. Gilding was applied to the Corinthian capitals while yellow, ochre, brown, blue, dark red, brown, bright red and green were used to highlight other architectural features. Carved details on the door frame, including a griffin and tripod motif, were distinguished in colors that would allow the low relief to stand out more clearly (114).

4 Brinkmann 2017, 25, laments that despite an increase in knowledge based on scientific evidence, polychromy of ancient sculpture and architecture is largely absent in textbooks and even in university curricula focused on antiquity.

5 According to S. Bond, one of the most influential art historians in the establishment of this idea was Johann Joachim Winckelmann. He produced two volumes recounting the history of ancient art in the late 18th century, which were widely read and came to form a foundation for the modern field of art history. These books celebrate the whiteness of classical statuary as the quintessence of beauty, citing examples like the Belvedere Apollo. O. Primavesi, however, points to numerous passages in Winckelmann's *The History of Art in Antiquity* where the scholar acknowledges and even seems to praise polychromy in ancient sculptures. Primavesi views Winckelmann as one of the earliest proponents of polychromy in European studies of ancient art. See S.E. Bond, 2017, "Why We Need to Start Seeing the Classical World in Color" in *Hyperallergic*. <https://hyperallergic.com/383776/why-we-need-to-start-seeing-the-classical-world-in-color/>; O. Primavesi, 2017, "The Discovery of the Polychromy of Ancient Greek Sculpture," 69-77 in *Gods in Color: Polychromy in the Ancient World*, edited by V. Brinkmann, R. Dreyfus, and U. Koch-Brinkmann (San Francisco: Legion of Honor, Fine Arts Museum of San Francisco), 71-72.

plaster casts,⁶ leave the original sculptures untouched while recreating the polychromatic effects of the pigment on a three-dimensional replica. The combination of color, mass and multiple perspective viewpoints allows a modern viewer to perceive these objects in a way that is closer to the artist's original intention. V. Brinkmann notes that "[o]nly by experimenting on three-dimensional volumes using the ancient painting materials and techniques can solutions be found to previously unexplored problems."⁷ It is our hope that through this essay we can begin to shift the modern audience's appreciation of these works closer to the reception that they would have received from ancient Romans and Greeks.

Originally, views of polychromy were only based on the historical descriptions of temples and statues found in the works of ancient authors.⁸ Pliny the Elder, a Roman scholar and statesman, includes in his *Natural History* an in-depth discussion of the making and use of pigments for painting sculptures.⁹ Although the pigments discussed by Pliny might apply equally to painting fresco or statuary, a passage from Plato's *Republic* makes the painting of sculpture irrefutable for the Greek world of the classical period:

Suppose, then, that we were painting a statue and someone came up to us and started to criticize us, saying that we had

6 Brinkmann 2017, 20. Synthetic marble or special plaster that includes finely ground marble dust are also being used for the process of casting and recoloring sculpture. Although the use of plaster casts has been common in recent polychromatic experiments, J. Pollini is critical of this since, in his view, the pigments interact with the plaster to produce a false sense of color. He prefers digital polychromatic reproduction, but this removes from consideration the effects of mass and volume on the appearance of the sculpture. See J. Pollini, 2015, "Some observations on the use of color on ancient sculpture, contemporary scientific exploration, and exhibition displays," 901-910 in *Interdisciplinary Studies on Ancient Stone*, ASMOSIA X vol. 2, edited by P. Pensabene and E. Gasparini (Rome: "L'Erma" di Bretschneider), 903-904.

7 Brinkmann 2017, 20.

8 Brinkmann 2017, 16. Antoine Chrysostôme Quatremère de Quincy produced a compilation of ancient texts referencing the paint of buildings and sculpture and coined the term "polychromy" as early as 1815, in his series of lithographs of recreations of the color on Classical Sculpture.

9 V. Brinkmann, U. Koch-Brinkmann and H. Piening, 2017, "Ancient Paints and Painting Techniques," 87-97 in *Gods in Color: Polychromy in the Ancient World*, edited by V. Brinkmann, R. Dreyfus, and U. Koch-Brinkmann (San Francisco: Legion of Honor, Fine Arts Museum of San Francisco), 87, referencing Pliny, *Natural History*, 35.29-50.



Fig. 1 This reconstruction of the Treu Head (Reconstruction study 2014, Catalogue No. 62) gives a sense of the extensive polychromy found on ancient sculptures. The skin, lips, eyes, hair, and eyebrows are all detailed in a variety of color, enlivening the marble. The image shows the right side of the face in the early stages of painting, with the final polychromy evident on the left. Photo by Vinzenz Brinkmann. From Brinkmann, Vinzenz, Renee Dreyfus, and Ulrike Koch-Brinkmann. 2017. *Gods in Color: Polychromy in the Ancient World*. San Francisco: Legion of Honor, Fine Arts Museum of San Francisco. Used with the kind permission of F. Schlingmann, Department of Digital Collections, STÄDEL MUSEUM, Frankfurt am Main (www.staedelmuseum.de).

not applied the most beautiful colors to the most beautiful parts of the statue; because the eyes, which are the most beautiful part had been painted black rather than purple.¹⁰

The criticism is not that the statue is being painted, but that the sculpture was not painted with sufficient beauty! Clearly, the expectation in the early 4th century BCE when Plato composed this anecdote was that statues would be painted—and painted well with bright colors like purple. This tradition continued into the Roman period.¹¹

Early instances of scholars coming face-to-face with surviving examples of polychromy are documented at Pompeii and Herculaneum in the 18th

10 Plato, *Republic* IV 420C5-d1, transl. C.D.C. Reeve, quoted in Primavesi 2017, 69.

11 V. Brinkmann and U. Koch-Brinkmann, 2017, “On the Polychromy of Ancient Sculpture,” 27-51 in *Gods in Color: Polychromy in the Ancient World*, edited by V. Brinkmann, R. Dreyfus, and U. Koch-Brinkmann (San Francisco: Legion of Honor, Fine Arts Museum of San Francisco), 46.

century. Buried by the volcanic material from the eruption of Mount Vesuvius in 79 CE, the resulting preservation allowed for pigments to endure—until exposed to the air, at which point they immediately began to degrade.¹² Physical evidence of polychromy was also rediscovered at the excavation site of the Athenian Acropolis in Greece, where certain sculptures and architectural elements, buried under the ground of the sanctuary, preserved some of their original coloration.¹³ The areas of the artifacts with their polychromy remaining allowed scholars to extrapolate the presence of pigmentation onto those portions of the marble missing paint. This extrapolation, combined with the artifacts themselves that retained color, led scholars to produce a variety of theoretical models that illustrated polychromatic schemes in classical art. After the excavation of the Acropolis, a number of schools of thought on the matter of polychromy arose. Some historians, such as Gottfried Semper¹⁴ took the position that all buildings and statues, without exception, were covered in colorful pigments; the other major position was that polychromy was limited to the application of blue, red and white on a smaller scale. This second theory of polychromy was developed by Franz Kugler and later expounded by Adolf Furtwängler. This theory was based almost entirely on the personal tastes of said art historians rather than on the preserved evidence.¹⁵ Personal taste has long colored the study of polychromy.

In addition to the personal discourse between modern scholars, the misreading of ancient sculpture by Renaissance artists has contributed to the neglect of polychromy as topic in scholarship and museological circles until the last several decades. In Medieval art, color had been thought to give life to sculpture; without it, it was felt that sculpture could not stand on its own artistically.¹⁶ In the Renaissance period, although sculptors understood statues in antiquity were painted, they sought change from the Medieval continuation of this approach.¹⁷ They wanted the form of

12 Brinkmann 2017, 14; Primavesi 2017, 69-71.

13 Brinkmann 2017, 15.

14 Brinkmann 2017, 16.

15 Brinkmann 2017, 16. Kugler's model of polychromy included gilding. In both Kugler and Furtwängler's models, the majority of surface area was left unpigmented.

16 F. Fehrenbach, 2011, "Coming Alive: Some Remarks on the Rise of 'Monochrome' Sculpture in the Renaissance," *Source: Notes in the History of Art*, New Series 30.3: 50.

17 Brinkmann 2017, 13.

the sculptures to create the entirety of the artist's expression without the influence of paint.¹⁸ Promoting the idea of the monochromatic, faded and colorless classical Greco-Roman sculpture gave support to their own unpainted statues as equal in stature to the works of the ancients. Thus began the (incorrect) tradition that Classical sculptures were finished without pigment and meant to be viewed in their monochrome form.

Two hundred and fifty years after the Renaissance, the philosopher of aesthetics Georg Wilhelm Friedrich Hegel (1770-1831 CE) unveiled the "universal idea" of linear upward progress in Western art from Greece to the present.¹⁹ In Hegelian philosophy, the Universal Idea posits that Art History and thus Art itself progresses towards a singular ideal truth. "Progress," in this view, comes and goes in waves, reaching high points during the Classical Greco-Roman period and the Italian Renaissance. Furthermore, this perfection is only achieved in Western art. Inherent problems of the concept of the "West" aside, the notion of continuous progress in humanity's artistic pursuits ascribes an arbitrary standard of beauty to multiple civilizations. Hegel's ideas about ancient Greece, which were the basis of the now-ubiquitous model of art history as a progression²⁰ towards a point of perfection, can exist only if polychromy does not. The Universal Idea, the perfection that Hegel's model of art history progresses towards,²¹ is "exemplarily manifested" in the "congealed light"²² of monochrome sculpture: perfectly elegant and an embodiment of the spirit of greatness worked in marble. As scientific evidence and preserved pigment attests, this aesthetic philosophy simply does not reflect the actual appearance of most Greek and Roman sculptures at the time of their creation. This monochrome ideal contributes to

18 P. Reuterswärd, 2000, "The Breakthrough of Monochrome Sculpture During the Renaissance," in *Konsthistorisk Tidskrift*, New Series 69.3/4: 128

19 D. Price, M. Hatt and C. Klonk, 2006. *Art History: A Critical Introduction to its Methods* (Manchester, UK: Manchester University Press), 26. The first stage of Hegel's history of art reaches its peak in ancient Egypt. His second stage reached its peak in Classical Greco-Roman sculpture; the third stage reached its peak in the Renaissance.

20 Price, Hatt and Klonk 2006, 22.

21 Price, Hatt and Klonk 2006, 24.

22 R. Comay, 2014, "Defaced Statues: Idealism and Iconoclasm in Hegel's 'Aesthetics'," *October* 149, 134. Hegel considered the Classical sculpture "essentially unpainted," despite being fully aware (from Plato's writings and contemporary archeological evidence) that these statues *were* painted in antiquity.

the notions of total, sterile whiteness that might appeal to modern minimalist aesthetics but does not offer the modern viewer the opportunity to see ancient works as they were intended.

Of the various theories on color schemes used in Classical antiquity, several were created in reaction to the perceived “garish” look of total polychromy.²³ Early exhibitions of scale reproductions using this painting scheme, such as the one put on by museum curator Edward Robinson in Boston and Chicago during the late 19th century,²⁴ were met with much debate.²⁵ Furthermore, after the World Wars and the birth of the “White Box” framing method, the inherent minimalism and visually “efficient” beauty of the unpainted versions of the statues took precedence in scholarship over studies supporting polychromy.²⁶ A “White Box” approach to an exhibit would be to place the art in a monochrome, visually unstimulating context. The monochrome versions of Greco-Roman sculpture easily fit into this chromatically minimalist scheme. Dually supported by the old masters of the Renaissance and current trends in the standard of beauty, the originals have been consistently presented as monochromatic. Certainly, there would never be any consideration of altering the ancient statues, but even the suggestion of polychromy is absent from most labels and other didactic materials in museums. This absence of discussion amounts to tacit institutional support for a modern audience inclined to think of white sculpture as the standard classical form.

Far from seeing Greco-Roman sculpture as assemblages of bland white figures, the current view in classical scholarship is that most of the surface areas of marble sculpture was painted in Greek and Roman antiquity.²⁷

23 Brinkmann 2017, 15.

24 Brinkmann 2017, 19. Another exhibition was held in Dresden and Berlin by George Treu around the same time (Brinkmann 2017, 16-19).

25 Brinkmann 2017, 16.

26 Brinkmann 2017, 16. Brinkmann describes this as a “Traumatized Aesthetic”; by his analysis, the chromatic intensity of polychromy was too near to the ornamental style of the generation of Germans that had participated or otherwise failed to intervene in the war crimes of WWII, causing a reactionary embrace of minimalism in the next generation of scholars.

27 Amalie Skovmøller, 2014, “Where Marble Meets Colour: surface texturing of hair, skin and dress on Roman marble portraits as support for painted polychromy,” 279-297 in *Greek and Roman Textiles and Dress*, edited by M. Harlow and M.-L. Nosch (London: Oxbow Books), 279.

Surfaces that were not painted were usually textured to take advantage of the marble's natural color, which was especially effective at reproducing life-like imitations of textiles.²⁸ A. Skovmøller notes that resistance to such extensive polychromy for the last several centuries is rooted both in the culturally established view that white marble is aesthetically pleasing, but also in disbelief that a costly material such as marble would be concealed beneath pigments.²⁹ This scholar argues, however, that ancient sculptors chose different marble types precisely because of the effects that could be achieved by layering color over marbles of different hues, crystalline structures, luminosity, and grain-size. She terms this interaction a 'symbiosis' and asserts that through these interplays, more naturalistic effects could be achieved.³⁰ The view of polychromy that results from recent scholarship argues for an overwhelming presence of color that a modern audience might characterize as garish, but this is quite clearly a contemporary opinion. The goal should be to understand these works of art as they were originally intended to be seen.

This, moreover, is where plaster casts become integral both to the study of polychromy and to changing current viewer attitudes towards polychromy in sculpture. As copies, casts are spatially perfect replicas of the original marble sculpture. While the casts carry none of the chemical traces of the original paint and their very whiteness has, in the past, made them attractive substitutes for marble, they can serve as three dimensional canvases on which to reproduce polychromy on a large scale. By adding pigments to casts as recreations of the originals, there is no damage to the original, and at the same time the audience can see vividly an approximation of the original work. Adding polychromy to the casts allows for a new evaluation of famous sculpture. It is a way of easing the audience into an unfamiliar (and, perhaps, undesired) way of looking at the work of art. Exhibitions such as *Gods in Color* and its predecessors have opened

28 Skovmøller 2014, 289-290, discusses a Roman toga (traditionally white wool) as an example.

29 Skovmøller 2014, 279.

30 Skovmøller 2014, 280; 287; 293. Skovmøller provides as an illustration the head of a female in white marble from the Roman period (2nd century CE). Scientific testing indicates two thin layers of pigment—yellow and reddish brown—on the marble cheeks. The combination of these pigments with the fine-grained marble would have created a pinkish/orange complexion that we might think of as 'fair' (285).

a conversation about the influence of these underlying ideas in today's museum environment and in the modern perception of the Classical Greco-Roman past.

Gods in Color, a physical exhibit touring the world from 2003 to 2017, recreated the appearance of select ancient statues with their original pigments based on historical and scientific evidence and employing plaster casts as the colorized models.³¹ These polychromatic plaster reconstructions were displayed side by side with the original statues, now largely devoid of visible color. Included in this essay are illustration of three recreations from this exhibit. Early 19th century polychromy research utilized artifacts with large sections of visible paint preserved, such as Fig. 3, a figurine of a young woman from South Italy. In Fig. 3, the detailed decoration of the dress is preserved, as is the hue of the figurine's dress, body and hair. Compared to the restored Fig. 2, a statue of a Persian horseman from the Acropolis of Athens, the figurine seems almost untouched by color. The Horseman, displayed in the sun for centuries and then buried underground, retains traces of his pigmentation, but it is entirely yellowed and bleached of finer detail over large areas of the marble. Through an assortment of novel types of physical research, such as x-ray fluorescence analysis and ultraviolet visible absorption spectroscopy, researchers are able to detect unseen organic pigments without destroying them in the process. X-ray fluorescence (the emission of secondary x-rays from target material that has been bombarded with such radiation) and UV spectroscopy (the analysis of what bands of radiation are blocked by the target material when shining different frequencies of UV light on it) leave the paint comparatively untouched while detecting a great deal more pigmentation than can be seen by the naked eye.³² The information about the original color scheme gathered from this research gives scholars and the public alike a greater understanding of the colors used in ancient

31 See the exhibit catalogue *Gods in Color: Polychromy in the Ancient World*, edited by V. Brinkmann, R. Dreyfus, and U. Koch-Brinkmann (San Francisco: Legion of Honor, Fine Arts Museum of San Francisco). Both the catalogue and the exhibition explore the appearance of ancient Roman and Greek statues with added polychromy. Extensive use of colorized plaster casts offers dynamic images of sculpture long considered beautiful for its monochromatic whiteness.

32 Brinkmann, Koch-Brinkmann, and Piening 2017, 89.



Fig. 2 The upper image shows a plaster cast reconstruction of the Persian Horseman with polychromy applied; the lower image shows the marble sculpture as it appears today, with darkened and indistinct traces of original color preserved. Catalogue No. 37. Photos taken by Dieter Rehm (top image) and Vinzenz Brinkmann (bottom image). From Brinkmann, Vinzenz, Renee Dreyfus, and Ulrike Koch-Brinkmann. 2017. *Gods in Color: Polychromy in the Ancient World*. San Francisco: Legion of Honor, Fine Arts Museum of San Francisco. Used with the kind permission of F. Schlingmann, Department of Digital Collections, STÄDEL MUSEUM, Frankfurt am Main (www.staedelmuseum.de).



Fig. 3 Terracotta figurine of an elaborately dressed young woman. The different layers of drapery show preserved pigment. Marble sculpture would have been treated in a similar fashion. Catalogue No. 56. Photo by Ruhl and Bohrmann. From Brinkmann, Vinzenz, Renee Dreyfus, and Ulrike Koch-Brinkmann. 2017. *Gods in Color: Polychromy in the Ancient World*. San Francisco: Legion of Honor, Fine Arts Museum of San Francisco. Used with the kind permission of F. Schlingmann, Department of Digital Collections, STÄDEL MUSEUM, Frankfurt am Main (www.staedelmuseum.de).

sculpture.

A more recent exhibition from 2020, *Chromophilia*, put on by New York's Institute of Classical Architecture and Art, explores the full visual potential of polychromy in ancient Classical sculpture through the addition of motion and color to three plaster casts via photo editing.³³ In this approach, digital artist Gary Carsley uses modern technology to engage the viewer:

Chromophilia operates...as a virtual intervention into the digital avatars of 3 plaster casts of Roman copies of even older lost Greek work [the Discobolos, Sleeping Ariadne, and Demeter Ludovisi] For this project these three casts have been animated using techniques that imitate filter apps such as Modiface and Pixaloop that younger audiences use every day in manipulating images for their social media feed. The brightly coloured treatments as well as being historically accurate open the past up to the present in a way that looks familiar to a contemporary audience.³⁴

Carsley further notes that “[t]ime and thereafter a false premise stripped away the original colour of Western Classicism’s remaining artefacts, obliterating the polychromy that linked them to the world’s other ancient cultures and civilisations.”³⁵

While some of the flamboyant palettes used in *Chromophilia* may have little relationship to the colors used on the marble originals, they posit a polychromy so radically different from the monochromatic version that the median between these two options—the historically supported palettes seen in *Gods in Color* and Carsley’s more artistic approach—seems commonplace in comparison. *Chromophilia*’s color scheme sometimes takes from Andy Warhol or other Pop artists of the 20th century.³⁶ This extreme approach, however, offers a recontextualization of the no-longer

33 A. Burchmore, 2020, “Bringing Colour to Forgotten Histories in Gary Carsley’s ‘Chromophilia,’” *Art Monthly Australasia*: <https://www.artmonthly.org.au/blog/chromophilia>.

34 Gary Carsley, *Chromophilia* Artist Statement: <https://www.classicist.org/assets/images/general/C-H-R-O-M-O-P-H-I-L-I-A-FINAL.pdf>

35 Carsley 2020 Artist Statement.

36 Carsley 2020 Artist Statement.

monochromatic casts in a chromatic language the modern audience will understand as vibrant and appealing.³⁷ As with all interpretations of how these artworks should be presented, this exhibit adds itself to the greater conversation of how those works are perceived by the public. By not “recreating the past in living technicolor” but rather seeking to create a modern analogue to the “multicoloured splendour of their ancient models,”³⁸ *Chromophilia* adds an interactive viewpoint on the function of polychromy to a body of scholarly research and text that might be less easily accessible to a contemporary audience.

The purpose of polychromy in antiquity was not just decorative. In most instances the colors chosen were used to signify the status of the figure in the sculpture or the status of the patron. Within the broad corpus of polychrome artefacts and paintings of ancient Greece, a class of infrequently used painting materials may be referred to as “precious”³⁹ considering their extraordinary visual properties, their intrinsic material value, their remote geological source, the complexity of the manufacture and preparation process, and finally the symbolic values they may have conveyed within a broader cultural context. In a number of cases, when polychromy is still preserved on prestigious artefacts, there is a predilection for the use of uncommon pigments. Usage of these seems to reflect the overall value and meaning attached to those objects painted, signifying high social status or function as a component of ritual display. In Fig. 2, the reconstructed lozenge pattern on the Persian horseman adds a lifelike quality to the retelling of the Persian War, a theme of so many sculpture groups at the Acropolis. The saturation and brightness of color befit its context as part of a sacred temple. These uncommon pigments

37 Participants in the Curatorial Seminar had diverse opinions on Carsley’s choice of color palettes in *Chromophilia*. Some found the choices unattractive, others found them pleasing; but it was universally understood that the vivid colors were intentionally bright and followed the artist’s preference rather than trying to recapture the ancient color palette that has been generated through scientific study of Greco-Roman sculptures. On ancient color palettes and pigments, see Brinkmann, Koch-Brinkmann and Piening 2017, 90-97. See also Zink and Piening 2009, 122.

38 Burchmore 2020.

39 The use of the word “precious” here is meant to explain the scarcity or rarity of the materials used to produce colors. The more precious a material is usually directly corresponding to a high price. In turn, wealthier patrons would be able to access art with more precious colors.

are especially seen in sculptures enshrined in temples.⁴⁰ Observing this pattern, it can be seen that certain colors indicated wealth in ancient Greek society. During the High Classical period of Greek art, painterly techniques used to create illusions of depth were applied to sculpture as well in an effort to make them more life-like or more legible to the viewer.⁴¹ In Fig. 1, the traces of pigment show color was used to add depth to the eyelids, lips and eyebrows through color, rather than relying solely on sculptural depth. The reconstruction is shown in stages, first in the base color of that area of the sculpture, and then with finer details added. Applied in layers, additional complexities were used to help the statue come to life.

Colors used in polychromy added an additional level of meaning to the sculpture that we have now lost. Some colors, such as bright blue, could only be achieved with the use of rare materials. Lapis lazuli was one of the only pigments that could achieve a deep and saturated ultramarine blue. The only other source of this color was Egyptian Blue, a compound of calcium and copper that was both cheaper than lapis and sold in a variety of lower quality grades.⁴² Egyptian Blue was produced exclusively by Egyptians, who kept the recipe secret. For a statue to include blue pigmentation in ancient Greece, the colorant thus had to be imported from afar. Its use, either sparingly or lavishly (sometimes comprising the entire background of a relief) opens possibilities for discussions about the patron and the context.⁴³ In other situations, Egyptian Blue was used in concert with other bright colors to depict the clothing of the peoples to the east of Greece—Persians, Scythians, and Lydians. Artifacts of these

40 H. Brecoulaki, 2014, "'Precious Colours' in Ancient Greek Polychromy and Painting: Material Aspects and Symbolic Values," *Revue Archéologique*, New Series 1: 3–4.

41 Brinkmann and Koch-Brinkmann 2017, 30.

42 M.S. Tite, M. Bimson, and M.R. Cowell, 1987, "The technology of Egyptian blue," in *Early Vitreous Materials*, edited by M. Bimson and I.C. Freestone (London: British Museum Occasional Paper 56). Skovmøller 2014 observes that traces of Egyptian Blue are also frequently found on the 'skin' surfaces of Roman statues. Far from meaning that the figures were blue in color, it seems that the pigment was layered or mixed with other colors to give a more convincingly realistic appearance to the flesh (282).

43 Brinkmann, Dreyfus and Koch-Brinkmann, 2017, 124 no. 33. Specifically, the background of the east frieze of the Siphnian Treasury at Delphi (525 BCE) was painted as a solid blue field across which the polychromatically detailed figures from mythology acted out their narratives on this side of the structure.

other peoples confirm that the pigments and patterns the Greeks used to depict them in art were accurate and would have identified them as people of those lands to an ancient observer.⁴⁴ Color, in this way, becomes iconographic or symbolic for certain cultures or ethnicities. These are just a few potential uses of polychromy. Getting a sense of the original color scheme of ancient works of art gives us another aspect of Ancient Greek and Roman art to consider, helping modern people get a better sense of the artistic “tastes” of the time and revealing yet another mode of communication between artist and audience—a mode that is lost without polychromy.

The stark effect the presence—or absence—of polychromy has on a sculpture can be seen in the reconstruction of the *Persian Horseman* from the Athenian Acropolis (Fig. 2). By allowing us to view the Horseman in monochrome and polychrome side by side, the illustration alone begins to reveal how much is lost with the lack of color. The finer details of the leggings are not legible in the monochrome state. The colored leggings allow us to read the depth of and better discern the figures and design. This would have also been especially visible with the sun gleaming off the colors and their varnish,⁴⁵ making them extremely vibrant. The sun on unpigmented, white marble would be refracted brightly, making details harder to read. V. Brinkmann and U. Koch-Brinkmann summarize eloquently the tremendous importance of re-introducing polychromy into our understanding of ancient sculpture:

...the ability of color to produce or clarify connections of form and content gives it an important role in reliefs and in sculptural groups: color helps emphasize individual figures, illustrates the relationships between the figures and elucidates the dramaturgy of the composition as a whole. Color can even produce the optical effect of extending three-dimensional space. Everything was designed with color in

44 Brinkmann and Koch-Brinkmann 2017, 33.

45 Brinkmann, Koch-Brinkmann, and Piening 2017, 96. Experimentation supports Vitruvius’ testimony (from *The Ten Books of Architecture*, 7.9.3) that sculptures were polished before and after painting, giving the pigments a smooth sheen.

mind, and the message inherent in a sculpture was completed through polychromy.⁴⁶

Scientific evaluation of sculptures from antiquity are also making clear that color was used for more than just animating the physical form of the human body. On the famous *Peplos Kore* from the Greek Archaic period (c. 530 BCE), UV fluorescence and raking light have revealed that the female figure's garment was enlivened with painted elements to suggest fine embroidery: a running spiral, lotus motif, miniature mounted riders and animals from both nature (lion, boar and ibex) as well as myth (sphinx).⁴⁷ On the early Hellenistic *Alexander Sarcophagus* (c. 320 BCE), the battling Greeks and Persians have different skin tones and vividly painted clothing. Moreover, some of the Persian soldiers carry shields that are decorated with intricately painted scenes, as a vignette of a royal audience in the Persian court depicted in miniature (less than two inches in diameter).⁴⁸ Finally, as scholars begin to look for color on sculpture, seeming oddities are now being explained. For example, a famous sculpture from the Villa of the Papyri in the Roman period (before 79 CE) includes the Greek god Pan. In the *Pan and She-Goat group*, Pan is shown with his usual hybrid form, including a shaggy goat-like face and furry legs. Traces of reddish-brown and dark brown pigment remain on the 'hairy' portions of the sculpture. The back of the god's head, however, appears uncharacteristically smooth. It has been suggested that paint—or perhaps a combination of paint and stucco—might have completed the treatment of the fur on the skull.⁴⁹

Plaster casts offer an attractive conduit for exploring the multivalent impact of color on sculptural forms. Although the display of plaster casts of ancient sculpture and architecture has been in decline for the last century, these replicas offer an exciting avenue for further study and teaching

46 Brinkmann and Koch-Brinkmann 2017, 30.

47 Brinkmann and Koch-Brinkmann 2017, 37-38.

48 Brinkmann and Koch-Brinkmann 2017, 44-45 and figs. 2.40, 2.41.

49 F. Antonelli, J. Pollini, and S. Cancelliere, 2017, "A brief note on the archeometric study of two sculptures in the Gabinetto Segreto of Naples Archaeological Museum: the 'Pan and the She-goat' and the 'Bikini Venus'," *Archaeological and Anthropological Sciences* 9.4, 686. The Venus statuette's eponymous bikini is applied using gilding, which the authors characterize as "garish" (687).

of ancient polychromy. Whether new casts are produced and color added directly or casts form the basis for digital colorization (as in the *Chromophilia* exhibition), these detailed, scale replicas provide a strong foundation on which to build a greater understanding of ancient polychromy. The purpose of plaster casts was originally to recreate great Greek and Roman sculptures to share with a wider audience who otherwise may not have access. Prior to the proliferation of plaster casts, the only way to see these masterpieces was to travel to Europe to see them for yourself. The United States institutions did not have the kind of money to spend on art of this caliber, so plaster casts proliferated as a replacement. These casts were relatively inexpensive and more easily attainable.⁵⁰ Interest in plaster casts in the United States was initially a function of art education, which used them as models, then as an effort to elevate the taste of an average American.⁵¹ Since the beginning of the 20th century, plaster casts have steadily decreased in use as both teaching tools and as displays in museums.⁵² Many collections have been placed permanently in storage. Some collections, such as the collection gifted to George Mason University by the Metropolitan Museum of Art, have been donated entirely to other institutions. However, they are still just as useful for teaching and inspiration today. Rather, the plaster casts are a wonderful learning tool in the field of polychromy.

Rooted in the early Aegean Cycladic period (2400-1000 BCE),⁵³ polychromy was once the standard for all Greek and Roman finished sculpture.⁵⁴ The addition of color performed a variety of functions and

50 P. Born, 2002, "The Canon Is Cast: Plaster Casts in American Museum and University Collections," *Art Documentation* 21.2: 8

51 J.K. McNutt, 1990, "Plaster Casts after Antique Sculpture: Their Role in the Elevation of Public Taste and in American Art Instruction," *Studies in Art Education* 31.3: 158-167.

52 Born 2002, 9.

53 Brinkmann, Dreyfus, Koch-Brinkmann 2017, 158 nos. 72-73, "Reconstruction of a Cycladic figure, 2006." The original marble statuette dates ca. 2700-2400 BCE. On the figure, scientific testing has identified red pigment outlining the mouth and dotting the cheeks in three parallel rows. Blue/black pigment provided eyebrows, outlines and pupils for the eyes and hair on the upper edge of the forehead and down the back of the head. Polychromy in the Aegean Bronze Age and early mainland Greek tradition of sculpture were certainly influenced by Near Eastern and Egyptian civilizations. See Brinkmann and Koch-Brinkmann 2017, 27.

54 Brinkmann and Koch-Brinkmann 2017, 27.

was an essential part of the information the art conveyed to viewers. As millennia passed, the brightly colored, richly decorated surface of Classical sculpture became, to many scholars of art throughout history, aesthetically displeasing. Renouncing polychromy in sculpture as a distraction from the virtue of the form, Leonardo da Vinci found painting sculpture unnecessary⁵⁵ and looked to the sun-bleached sculpture remaining in view from ancient Greece and Rome for inspiration. Hegel, the creator of the progressive model of art history, had either misread or intentionally ignored the textual evidence for the purposes of furthering a narrative of purity and light. Chromatically represented as the color white, this “congealed light” was a defining trait in the linear progression of Western art that he invented. An aggregate of misreadings and misinterpretations (intentional and otherwise) from the initial ‘rediscovery’ of Greco-Roman sculpture in the Renaissance to today, has created the illusion of monochromatic classical sculpture. It is this illusion that forms the basis of the broader cultural view that elevates the whiteness of the form to a standard of beauty that gets embraced as an ideology.⁵⁶ However, without color, these statues are missing large portions of the information that they can provide about the classical world and its art. There are still a number of questions that remain to be answered concerning polychromy in sculpture: what binding materials were used, how were pigments mixed to produce different tonal values of color and how did the layering of paint on marble transform the colors which now are only preserved in trace amounts.⁵⁷ Using new scientific research methods to gather more evidence and plaster casts to recreate these artworks in approximation of their original form and pigmentation, the modern art museum and scholarly community can further shift the perception of Classical sculpture back to its true colors.

55 Brinkmann 2017, 13.

56 Bond 2017 argues that, historically, this emphasis on the whiteness of Greco-Roman sculpture has played into white supremacist and nationalistic propaganda and ideologies around the globe.

57 Skovmøller 2014, 281-286. A long-term research project run through the Ny Carlsberg Glyptotek in Copenhagen, Denmark, seeks to answer these questions. The progress can be seen at <https://www.trackingcolour.com>.

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CHAPTER 6

RECONSIDERING PLASTER CASTS IN THE NEW
MILLENNIUM

CECILIA KLIMON AND PAOLA TORRICO

Since their conception, plaster casts have had a unique relationship with educational and cultural institutions where their use reached its peak in the 1890s and early 1900s.¹ For American museums in the 19th century plaster casts allowed their visitors access to the unattainable collections that European museums possessed. Plaster casts were in such demand by American museums that the Metropolitan Museum of Art listed 2,067 items in *The Catalogue of the Collection of Casts* published in 1908.² Since the height of their popularity in the late 19th century, plaster casts have been pushed aside by institutions to focus on the changes brought about by modern advancements in technology³ and travel.⁴ However, in the present-day plaster casts have found a new sense of value because of their use in education, the arts, and politics; after decades of neglect, casts have redefined their place in institutional realms. Plaster

1 P. Born, 2002, "The Canon Is Cast: Plaster Casts in American Museums and University Collections," *Art Documentation: Journal of the Art Libraries Society of North America* 21.2, 8.

2 J. V. Noble, 1959, "A New Gallery of Models and Casts," *The Metropolitan Museum of Art Bulletin* 18.4, 139.

3 W. M. Freitag, 1979, "Early Uses of Photography in the History of Art," *Art Journal* 39.2, 117-118.

4 B. Dupont, A. Gandhi, and T. Weiss, 2012, "The Long-term Rise in Overseas Travel by Americans, 1820-2000," *The Economic History Review* 65.1, 145.

casts have even found significant purpose at George Mason University and will continue to have value in the future despite spending nearly a century as outcasts in most institutions.

Plaster casts ultimately fell out of favor because of developments in the fields of technology and travel. The rise of industry after the 19th century led to the phenomenon of the American millionaire, who used their new economic status to donate to American institutions in a show of public philanthropy.⁵ Plaster reproductions of artwork, however, were not sufficiently impressive for this new class of patron. M. Holler argues that these American millionaires were obsessed with the tradition of patronage developed in the Renaissance Europe. Entranced by this image-boosting opportunity many of the elite went overseas to collect original pieces of art by “Old Masters.” These pieces then trickled down into American museums as loans, donations and bequests.⁶ The Industrial Revolution also meant major technological advancements which offered new tools for artists to use. The modern use of photography as an art form was made popular in 1900 by French photographer Eugène Atget⁷ whose work not only captured Parisian architecture but added artistic value to photography.⁸ After photography became legitimized in the art world, W. Freitag suggests this mechanical means of capturing an image also aided museums and other cultural institutions. They could easily reproduce art in a standard format since photography could “make copies that do not interpret”⁹ as it was a mechanical process that recreated the work of art. The photographic process differs from plaster casting techniques, Freitag argues, because casts were unique production from the original piece, made by hand and potentially introducing individual characteristics in the reproductions.¹⁰ Casts also, of course, require more space, more time

5 M. Curti, Judith Green, and Roderick Nash, 1963, “Anatomy of Giving: Millionaires in the Late 19th Century,” *American Quarterly* 15.3, 416-17.

6 M. J. Holler and Barbara Klose-Ullmann, 2010, “Art Goes America,” *Journal of Economic Issues* 44.1: 92.

7 W. Benjamin, 2006, “The Work of Art in the Age of Mechanical Reproduction,” *Media and Cultural Studies: Keywords*, 26.

8 D. Travis, 1978, “The First Century of Photography,” *Bulletin of the Art Institute of Chicago* (1973-1982) 72.1, 6-7.

9 Freitag 1979, 118.

10 Freitag 1979, 117. While there may be some truth to this assessment of casts, see Chap-

for production and incur greater expenses as a result of these factors than photographs do.

Since the decline of plaster casts as a major component of their collections, museums have embraced not only photography but other recent technologies—specifically investing in websites and digitizing images of their collections as those new technologies became more reliable and interwoven with modern life.¹¹ These websites and digitized collections make it easier to view accurate images of the original piece of art. By making museum collections widely accessible in this online format, physical reproductions in plaster have fallen out of favor since they are bulky and plaster casts can be fragile.¹² Plaster casts also require expensive conservation and preservation work to maintain them, which makes them less desirable to have in a collection, due to the perpetual added costs to the institution.¹³ Instead of diverting money towards unwieldy and maintenance-heavy casts, museums have been able to continually increase investments into their websites because of the rates of visitor ship and the revenue they receive from them. For example, the Metropolitan Museum of Art's (MMA) Annual Report in 2010 reported: "40 million people visited the site, a 15 percent increase over last fiscal year."¹⁴ Furthermore, the MMA's online resources generated "more than \$11 million in revenue," which was a substantial increase from the previous year.¹⁵ The

ter 1, "Art or Artifact? Reappraising the Sleeping Satyr Cast," in this collection where a description of a sculptural cast reveals even the small details of the damaged marble surface have been captured in the plaster. This level of accurate detail argues against these idiosyncrasies being a real concern. Furthermore, the use of molds made from the original means that there are only limited opportunities for individualizing characteristics to be introduced.

11 C. C. Clerkin and B. L. Taylor, 2021, "Online Encounters with Museum Antiquities," *American Journal of Archaeology* 125.1, 165-67.

12 E. Macaulay-Lewis, 2021, "Making the Met, 1870–2020: A Universal Museum for the 21st Century," *American Journal of Archaeology* 125.2, 328.

13 A. Kłosowska and M. Obarzanowski, 2010, "Plaster Casts in the Collection of the National Museum in Krakow and Conservation Issues," 103-115 in *Plaster casts of the works of art: history of collections, conservation, exhibition practice: materials from the conference in the National Museum in Krakow, May 25, 2010*, edited by Jean-Marc Hofman (Cracovie: Musée National de Cracovie), 103-105.

14 Annual Report for the Year of 2009-2010, New York, NY: U.S. The Metropolitan Museum of Art: 7 (MMA Archives).

15 The MMA's online resources revenue had a 12% increase from 2009 to 2010. See Annual Report for the Year of 2009-2010, 7 (MMA Archives).

2021 National Gallery of Art's Congressional Budget Request showed the printing and reproduction services budget was \$292,000, demonstrating the enhanced role that digital reproduction plays in museums.¹⁶ The report also detailed a heightened interest in adding more funding for the Gallery's online presence. The National Gallery of Art presented a total amount of \$1.45 million to be spent solely on IT Art Care services and software to enhance the museum's website with an additional \$1,262,000 for IT equipment.¹⁷ The recorded visitor ship of museum websites and their continued institutional investment into digitized collections cements the important role image-capture technology has played in museums.

In the 21st century, museums have found other ways of physical reproductions beyond either photographs or casts. S. Garfinkel explains 3-D printing as "an additive process whereby deposits of a suitably mutable material... are built up on a platform and solidified layer by layer to create three dimensional forms"¹⁸ creating reproduction of a museum's object by using "computer models constructed with computer-aided design (CAD) software or captured from scans of preexisting objects" meaning the reproduction will be accurate if the software or scan is also accurate.¹⁹ Museums are using 3D printing to create reproductions of select pieces from their collection, however the current state of 3D printing technology does not easily allow for bigger pieces in collections to be digitally reproduced since larger objects "cannot be printed in one piece."²⁰ Smaller objects, on the other hand, can be faithfully reproduced by this technology. For example, the Smithsonian Museum of American History has made 3D printed versions of Abraham Lincoln's death mask which

16 Fiscal Year 2021 Congressional Budget Request, Washington, DC: U.S. The National Gallery of Art: 19. <https://www.nga.gov/content/dam/ngaweb/notices/Financial%20Reports/fy2021-budget-request-national-gallery-of-art.pdf>

17 National Gallery of Art Fiscal Year 2021 Congressional Budget Request, 19-22.

18 S. Garfinkel, 2017, "Dialogic Objects in the Age of 3-D Printing: The Case of the Lincoln Life Mask," 206-218 in *Making Things and Drawing Boundaries: Experiments in the Digital Humanities*, edited by Sayers Jentery (Minneapolis: University of Minnesota Press), 206.

19 Garfinkel 2017, 206.

20 M. Helfrich, 2019, "Preface," 8-9 in *Near Life: The Gipsformerei 200 Years of Casting Plaster*, edited by Christina Haak, Miguel Helfrich, and Veronika Tocha New York (Berlin: Prestel Publishing), 9.

S. Garfinkel points out are each “a copy of a copy of a copy” yet remain virtually identical to the original.²¹ Many institutions, like the British Museum, are selling the reproductions created with 3D printing in their gift shops or online.²² Historically, museums had sold plaster casts to their patrons like the British Museum who “from 1838... included lists of casts available to purchase in the endpapers of its catalogue.”²³ This change indicates that 3D printing has taken over yet another role that plaster casts used to fill. The Metropolitan Museum of Art has been investing in 3D printers and software to add an interactive element to their exhibitions, encouraging photography of certain pieces so that visitors can use online programs to make their own copy of the artwork.²⁴ Although museums are shifting focus to 3D printing M. Helfrich notes that plaster casting is “far more accurate in the rendition of minute details than their digital alternatives. This is to do with the great number of steps required by the digital casting process” demonstrating that plaster casts are still a useful and valuable form of reproduction.²⁵

The other modern advancement that led to the decline in plaster casts was travel. C. Endy asserts that traditionally travel had only been seen as an activity for the “upper- and affluent middle class” of society, especially for Americans looking to travel in Europe in the late 19th/early 20th century.²⁶ The longing that wealthy Americans had to travel to Europe

21 Garfinkel 2017, 206.

22 D. Pett, 2017, “A New Dimension in Home Shopping,” British Museum Blog, Trustees of the British Museum: <https://blog.britishmuseum.org/a-new-dimension-in-home-shopping/>.

23 J. Larkin, 2016, “All Museums Will Become Department Stores: The Development and Implications of Retailing at Museums and Heritage Sites,” *Archaeology International* 19, 112. The Gipsformerei cast workshop in Berlin has profited from the production and sale of casts. See Hans Georg Hiller von Gaertringen, 2019, “Berlin Supplies the World with Gods: The History of the Gipsformerei, Staatliche Museen zu Berlin 1819-2019,” 216-225 in *Near life: the Gipsformerei: 200 years of casting plaster*, edited by V. Tocha, Christina Haak, and Miguel Helfrich (Berlin: Prestel), 217-219.

24 The former senior manager of the MMA’s MediaLab provides a guide for individualized 3D printing to the museum’s visitors in which is listed several CAD programs as well as a kit to build a personal 3D printer. See Don Undeen, 2013, “3D Scanning, Hacking, and Printing in Art Museums, for the Masses,” Met Museum, The Metropolitan Museum of Art: <https://www.metmuseum.org/blogs/digital-underground/posts/2013/3d-printing>.

25 Helfrich 2020, 9.

26 C. Endy, 1998, “Travel and World Power: Americans in Europe, 1890–1917,” *Diplo-*

had been reinforced by the concept of the Grand Tour as a standard diversion for European elite. S. Hom describes this 18th – 19th century custom as “a multi-year journey that was undertaken by young, wealthy men who were either aristocrats or members of the bourgeoisie, predominantly from Britain and Germany.”²⁷ The purpose of the Grand Tour “was an aesthetic education,” meaning the traveler would visit European cities, cultural institutions and archaeological sites to study the collections of art.²⁸ The Grand Tour, which focused on gaining an education through travel to experience first-hand “the finest specimens of art and architecture,”²⁹ created the framework of modern travel at the turn of the century when Americans started to explore the “old cities, villages, cathedrals, and museums” in Europe.³⁰ In their article Dupont, Gandhi, and Weiss maintain that early twentieth century American travel overseas was dominated by the elite.³¹ However, they argue it was not long until travel became cheaper and easier after World War II when the shift from “propeller to jet propulsion” made flying to Europe incredibly fast.³² Along with jet planes, there were improvements in the hospitality and touring industry that made travel increasingly accessible.³³

Today travel is accessible to a majority of the American population. According to European Travel Information and Authorization System, in the first two decades of the 21st century the percentage of Americans

matic History 22.4, 565.

27 S. M. Hom, 2015, *Beautiful Country: Tourism and the Impossible State of Destination Italy* (Toronto: University of Toronto Press), 85. Americans—and female travelers from both sides of the Atlantic—did eventually participate in the Grand Tour phenomenon, but American reactions to the sites on the Tour were not necessarily the same as their European counterparts were. For a sampling of American attitudes to the Grand Tour, see M. Reinhold, 1985, “American Visitors to Pompeii, Herculaneum, and Paestum in the Nineteenth Century,” *Journal of Aesthetic Education* 19.1, 115-28.

28 Hom 2015, 85.

29 R. Sweet, 2012, *Cities and the Grand Tour: the British in Italy, c.1690-1820* (Cambridge, UK: Cambridge University Press), 3.

30 Endy 1998, 579.

31 Dupont, Gandhi and Weiss 2012, 165.

32 Dupont, Gandhi and Weiss 2012, 152.

33 “Among those were improvements in hotels and restaurants abroad, the publication of guide books, the growth, and evolution of the package tour industry, improvements in the ability to acquire necessary foreign currencies, government subsidies, and the proliferation of official tourist offices,” See Dupont, Gandhi and Weiss 2012, 153.

possessing passports more than doubled from 16% to 40%. Their data also suggest that U.S. passports are actively being used: “in 2016 twelve million Americans traveled to Europe.”³⁴ The advancements in tourism at the beginning of the twentieth century created an affordable and more accessible industry of travel, which opened the European art collections up to the world. As a consequence, these changes significantly diminished the need for plaster casts in American museums to replicate great works of art that reside overseas. Improvements in travel advancements in combination with the technologies described above, including photography, the internet, and 3-D printing—which produces a streamlined process of accurate small-scale reproductions of artwork—proved to have a dramatic impact on the importance of the plaster sculptural cast. This resulted in the disappearance of plaster casts from museums over the course of the 20th century and into the new millennium since their displays had taken up a large portion of exhibition space and they were viewed as more expensive to keep but less accurate than photographs or recent 3-D models.³⁵

In the 2000s, plaster casts began to demonstrate, however, that their use can go beyond the educational realm to serve as a channel for expressing a political agenda. The Parthenon Marbles (also referred to as the Elgin Marbles) are a collection of Classical Greek marble sculptures that decorated the Parthenon, Temple to Athena Parthenos, on the Acropolis located in Athens, Greece. Depicting mythological subjects and processional scenes, the sculptures were created (447–438 BCE) under the Athenian leader Pericles to celebrate the Greek victory over the Persians.³⁶ While their creation was initially a symbol of Athenian patriotism, the Parthenon Marbles now raise controversial questions surrounding colonialism and the restitution of cultural property.

In the early 19th century, Thomas Bruce, Seventh Earl of Elgin and British Ambassador to the Ottoman Empire, used his position and power

34 “Top European Countries Visited by Americans - ETIAS for U.S. Citizens,” 2020, ETIAS for Europe, ETIAS.US: <https://www.etias.us/top-european-countries-visited-by-americans/>.

35 Garfinkel 2017, 206.

36 Y. Hamilakis, 1999, “Stories from Exile: Fragments from the Cultural Biography of the Parthenon (or ‘Elgin’) Marbles,” *World Archaeology* 31.2, 306-308.

to remove some of the Parthenon Marbles and take them back to England.³⁷ While Elgin's initial intention was to obtain casts and drawings from some of the sculptures to decorate his mansion in Scotland, in 1801 Elgin obtained an official decree from the Ottoman Empire, which controlled Athens in the 19th century, to remove the sculptures and transport them to England. Only a few years later, the marbles were sold to the British Museum to pay off Elgin's personal debts.³⁸

Since the late 1960s, the government of Greece has argued for the return of the Elgin Marbles on the basis that the Ottoman rulers of Athens had no right to distribute Greek patrimony. For years, the British Museum's argument against the repatriation of the Parthenon Marbles was that Greece lacked a suitable location to house and care for the marbles.³⁹ Greece's solution to the problem was the construction of the five-story new Acropolis Museum, completed in 2009 and set adjacent to the Acropolis in Athens.⁴⁰ Overlooking the ancient ruins of the Parthenon, the new Acropolis Museum displays both the original marble sculpture left behind by Lord Elgin as well as plaster casts of the pieces currently on display at the British Museum (Fig. 1).⁴¹

The decision to display the bright white plaster casts next to the aged and patinated original marbles paints a stark contrast for visitors (Fig. 2). The emphatic absence of so many surviving fragments directly suggests that the 'missing' pieces of sculpture should be repatriated to their place of origin and reunited with those portions still in their native geographic setting. In showing this disparity between the real marbles versus the plaster casts, the exhibition strategy visibly demonstrates that the two collections of sculpture—one in London, one in Athens—are incomplete without one another. It also cleverly visualizes the idea that a vast majority of these marbles are not in their home country where they should

37 Hamilakis 1999, 307.

38 Hamilakis 1999, 308.

39 J. M. Beresford, 2015, "Museum of Light: The New Acropolis Museum and the Campaign to Repatriate the Elgin Marbles" *Architecture MPS* 1.7, 1.

40 S. Poggioli, October 19 2009, "Greece Unveils Museum Meant For 'Stolen' Sculptures." *NPR*: <https://www.npr.org/templates/story/story.php?storyId=113889188>.

41 For a discussion of the Parthenon casts at the British Museum in London, see Ian Jenkins, 1990, "Acquisition and Supply of Casts of the Parthenon Sculptures by the British Museum, 1835-1939," *The Annual of the British School at Athens* 85, 89-104.

be, but are rather in a foreign country. According to archaeologist Naya Charmalia, “[e]verybody understands at once what is missing, because if you say numbers, you can’t understand, but you can see how many are missing.”⁴²



Fig. 1 South-West corner of the frieze of the Parthenon © Acropolis Museum, 2009, photo. This photo shows the south-west corner of the Parthenon frieze currently on display at the Acropolis Museum in Athens. This demonstrates the contrast between the original marbles and the marble plaster casts and shows the frieze as it would have been displayed at the Parthenon. Image used with the permission of the Acropolis Museum, Athens, Greece.

42 Poggioli 2009, <https://www.npr.org/templates/story/story.php?storyId=113889188>.



Fig. 2 Fragment of the block V of the East frieze of the Parthenon, Acr. 855 © Acropolis Museum, 2012, photo: Socratis Mavrommatis. This photo shows a fragment of Block V located on the East frieze of the Parthenon. This particular photo highlights the original fragment of the block placed with the plaster reproduction. Image used with permission of the Acropolis Museum, Athens, Greece.

The Greek government also uses the issue of natural light to help convey the benefit of repatriation of the Parthenon Marbles. They argue that the amount of natural light that the marbles get in Athens is different than that of London, and thus affects how the marbles are understood by museum viewers. By placing plaster casts of the Elgin Marbles alongside the original marbles bathed in natural sunlight at the Acropolis Museum, visitors are able to see how the marbles would have been perceived in ancient Athens. This approach offers “politicians and activists seeking the repatriation of the Elgin Marbles a potent weapon wielded to great

effect.”⁴³

In addition to displaying the Elgin Marbles, the British Museum has profited from them by producing plaster reproductions, which could then be purchased by institutions or individuals. As each block was found in the Acropolis or surrounding areas, British agents would arrange for the specific blocks to be identified and then molded into casts. The British Museum had plans to display the casts in the basement of the London Museum, however, these plans were never carried out due to lack of space. Instead, the British Museum sold casts to various institutions abroad (such as the Ecole des Beaux Arts, the Louvre, among many others). When the British Museum decided to remold the Parthenon sculptures, the request for casts began to increase.⁴⁴

In the latter half of the 19th century, the plaster casts of the Parthenon Marbles were produced by an independent *formatore* (plaster caster) named Domenicho Brucciani on behalf of the British Museum.⁴⁵ In a list of desired plaster casts published internally by the Metropolitan Museum of Art in New York in 1891, the goal of displaying a reproduction of 300 feet of the Parthenon Friezes’ original 450 feet was established. The MMA document stipulates that the majority of this frieze cast was to come from Brucciani and the British Museum. The cost per ‘slab’ of the frieze at the time was 1 £ British sterling at the time.⁴⁶ The GMU cast collection includes two such slabs—numbered XXXI and XXXIX—that come from the MMA and, thus, from Brucciani/the British Museum. Both slabs depict a portion of the horse-mounted figures that originally decorated the North side of the Parthenon Frieze (Fig. 3).

Greece’s use of plaster casts to establish their argument of repatriation of the Parthenon Marbles is a potent example of how this type of

43 Beresford 2015, 4. Issues of repatriation aside, both casts and original marbles from the Parthenon are missing the color that would have been added to most, if not all, Classical sculptures. On polychromy in ancient sculpture, see Chapter 5, “Showing Antiquity’s True Colors: Sculptural Polychromy’s Past and Present,” in this collection.

44 Jenkins 1990, 103-105.

45 Jenkins 1990, fn. 64 and 108-110.

46 Metropolitan Museum of Art, 1891, *Tentative List of Objects Desirable for a Collection of Casts, Sculptural and Architectural, intended to illustrate the History of Plastic Art* (New York: Metropolitan Museum of Art), 21. This document is available through the MMA online archives.

sculptural cast can be used to convey a particular political agenda. The new Acropolis Museum utilizes plaster casts of the Parthenon Marbles to physically make evident to viewers that although they have plaster casts of the originals, nothing will ever compare to the original Parthenon Marbles. Plaster casts serve as valuable educational tools to teach museum-goers about the Parthenon Marbles that are not held in the Acropolis Museum's collection, but they also highlight that the marbles deserve to be in their original location as they are a patrimony of Greece. Despite having the resources and dedicated space to exhibit the Marbles in the Acropolis Museum, England still refuses to return the sculpture to Greece.⁴⁷

Not only do plaster casts serve as helpful aids to convey a specific political agenda, they can also serve as educational tools in places that lack the resources to display expensive original works of art. The use of plaster casts in underprivileged schools where there is an absence of art programs or lack of exposure to the arts can play a significant role in art and cultural education. In the 1920s, American educator and sculptural artist Lorado Taft facilitated the use of plaster casts in Chicago public schools. Along with the Chicago Chapter (known as the Public-School Art Society), Taft helped organize thirty-five casts for schools (total cost of \$500). Casts included reliefs, busts, and statues, some of which were full sized. Taft created plaster casts of various blocks from the Parthenon frieze and made them available to students for a small fee.⁴⁸ While the lack of exposure to arts can be detrimental, Taft demonstrates an approach through which a broader audience can have access to works of art regardless of their socioeconomic background.⁴⁹ Some people have the ability to travel and come face to face with some of the world's most renowned masterpieces, that is not always the reality for the majority of people who

47 Poggioli 2009, <https://www.npr.org/templates/story/story.php?storyId=113889188>.

48 J.M. Musacchio, 2014, "Plaster Casts, Peepshows, and a Play: Lorado Taft's Humanized Art History for America's Schoolchildren," *The Journal of Aesthetic Education* 48.4, 17–37.

49 Among all public high schools in the U.S., only 88% of schools offer courses in at least one of the four main art disciplines (visual art, dance, theater, and music). In private schools, the disparity is greater. Only 63% of private schools offer any art instruction. See Kenneth Elpus, 2020, "Access to art education in America: the availability of visual art, music, dance, and theater courses in U.S. high schools," *Arts Education Policy Review*, 5. <https://www.tandfonline.com/doi/abs/10.1080/10632913.2020.1773365>



Fig. 3 Parthenon Frieze slab 39. February 2021.

From the GMU collection of plaster casts, this is a section of the Parthenon Frieze (slab XXXIX North). The original, in Pentelic marble, was sculpted between 447-438 BCE in the Classical style. The cast was produced in London by D. Brucciani in association with the British Museum. It was purchased by the Metropolitan Museum of Art, New York, in the 1890s and came into the GMU collection in 2005 along with a second Parthenon Frieze slab (XXXI North). Both casts will be on display in Horizon Hall. Image used with the permission of the George Mason University Curator's Office.

live in underprivileged areas in the U.S. and those who live in less affluent countries around the world. Although Taft's idea to enhance art education through plaster casts was 100 years ago, it is certainly an idea worth revisiting and perhaps reviving in less privileged parts of the world where art education is close to non-existent in school programs.

One of the authors of this essay grew up in Bolivia and can state from personal experience that as a child, there was a lack of art education and little or no exposure to fine art. The educational system primarily focused on mathematics and sciences in hopes to raise future doctors, dentists, and lawyers. Class field trips were centered around aquariums, recycling plants, and historical monuments. While there are various museums throughout Bolivia, most, if not all, focus on pre-Columbian archaeology and history. In order to get exposure to classical European art, one must travel to other surrounding Latin American museums or visit Europe, which for economic reasons is not feasible for most.

The ability to use plaster casts to enrich art education in countries like Bolivia could offer a chance for future generations to learn about art the same way as someone growing up in the US would. Because sculptural plaster casts are easier to reproduce than marble reproductions, this would allow for the plaster casts to be easily distributed throughout various museums in Latin America. Additionally, the cost of producing plaster casts could serve as an investment in the long run. According to Christie's, a renowned auction house, the price of an original 19th century sculpture by Jean-Baptiste Carpeaux (1827-1875) is between \$8,000 - \$340,000 USD.⁵⁰ However, the Caproni Collection (a sculpture reproduction workshop that is currently in operation) creates and sells plaster reproductions of famous works with prices ranging from \$65 - \$3,600 depending on the size of the cast.⁵¹ This not only establishes plaster casts as a more affordable educational tool, but also serves as evidence of the value that the plaster casts can add to a country's educational and cultural systems.

In recent years, moreover, the popularity of plaster has rapidly in-

50 Christie's, *European Art*, 21 April 2021. New York: Christie's. <https://www.christies.com/auctions/classic-week>.

51 Caproni Collection Sculpture Reproductions, *Collections*, 29 April 2021. <https://www.capronicollection.com>.

creased among contemporary artists, confirming that plaster is the “new” design medium of the moment. Stephen Antonson, a New York based furniture designer creates custom sculptures, furniture, and light fixtures out of plaster with prices starting at \$1,800. His sculptural Earle Chandelier, made from an armature of steel and covered in plaster, is considered a favorite among architects and designers.⁵² The ancient material is preferred by many artists due to its flexibility and simplicity: “[y]ou can sculpt it, paint it, color it, tint it, sand it, even carve it” says Antonson.⁵³ Michael Bruno, founder of the popular online furniture store 1stdibs.com confirms plaster is a lucrative medium in that several designer plaster pieces were being sold to collectors for up to \$50,000. Bruno emphasizes the future of plaster and states: “I think it’s always going to be popular on some level. It’s clean; it’s modern. If you have a white room, it looks great. If you have color, it looks great.”⁵⁴

Contemporary artists such as Jeff Koons and Kiki Smith also integrate plaster in their sculptural works. In his series *Gazing Ball*, Jeff Koons recreates plaster casts of ancient sculptures and combines them with glass spheres to “comment on transience of human existence and the transformative power of such knowledge.”⁵⁵ By merging the plaster casts of ancient works of sculpture (such as the Farnese Hercules and Barberini Faun, among many others) with more contemporary objects such as glass, Koons visibly demonstrates the adaptability of plaster casts in contemporary art.⁵⁶ It is no longer considered an out-of-date medium but has an important role for modern artists. Kiki Smith, inspired by the frailty and vitality of life, uses a combination of plaster, wood, and metal to create her surrealist inspired sculptures.⁵⁷ The use of plaster in contemporary art

52 M. Guralnick, 2015, “The Master of Plaster: Stephen Antonson’s Sculptural Lighting” *Remodelista* 4. <https://www remodelista.com/posts/stephen-antonson-plaster-lighting-and-furniture-brooklyn-new-york/>

53 M. Owens, 2011, “White Magic,” *Architectural Digest* 68.5.

54 M. Mistry, May 24 2012, “White Market; Adaptable and Simple, Plaster Might Just Be the Design Medium of the Moment,” *WSJ: The Magazine from the Wall Street Journal*. <https://www.wsj.com/articles/SB10001424052702303610504577418852757125784>

55 E. Anapur, 2016, “The Many Different Faces of Plaster Sculpture,” *Widewalls*. <https://www.widewalls.ch/magazine/plaster-sculpture>.

56 C. Vout, 2018, *Classical Art: A Life History from Antiquity to the Present* (Princeton, NJ: Princeton University Press), 223-224.

57 Anapur 2016, <https://www.widewalls.ch/magazine/plaster-sculpture>.

helps continue to reinforce the importance and validity of plaster casts, giving clear evidence that it is not a forgotten medium. Both Koons and Smith demonstrate that plaster casts are no longer considered an ancient medium, but they also have an important role for modern artists.

Matthew Darbyshire, a contemporary British artist who reproduces ancient figures such as Hercules in modern materials, provides his view on the continued importance of these quotations from classical art:

I like that Greek and Roman sculpture is virtually ingrained in our minds and, therefore, devoid of novelty. This enables people to register the symbolism of my work quickly, get over it, and explore the mere intrinsic attributes of form, physicality, material, process and patina. My work uses easily recognizable symbols (Hercules as the ultimate symbol of power; Venus [the Venus de Milo] as the ultimate symbol of beauty; the Doryphoros as the ultimate symbol of vigor etc.) and I use them much the same as I might a water cooler to epitomize or represent cleanliness and vitality; a cat, domesticity; or a Dyson vacuum-cleaner, technology.⁵⁸

Although trading plaster for polystyrene and silicone in his work, Darbyshire reinforces the idea that Greek and Roman sculpture is easily recognizable by most viewers regardless of any prior education on the matter. This appeal to a mass audience, along with classical sculptures' continued prominence, makes evident the importance and the benefits of having both Greek and Roman plaster casts here at George Mason University.

However, the interest of plaster casts and ancient sculpture is not exclusive to contemporary artists such as Koons, Smith and Darbyshire. Academic institutions such as George Mason University have asserted the importance of plaster casts and their continued relevance in art by featuring them in the built environment of the Fairfax Campus. In the 21st century, plaster casts have found a new home at George Mason University; from 2003-2006 GMU obtained over seventy plaster casts from the

58 Vout 2018, 223 and figures 9.3-9.4.

Metropolitan Museum of Art. The effort to conserve and incorporate the casts into the university landscape was led by Dr. Carol C. Mattusch (*emerita*), who was the Mathy Professor of Art History at GMU. This project was centered on restoring, repairing, and researching the plaster casts since they arrived at the Fairfax, VA campus in a state of disrepair. This initial phase of work also found display spaces for most of the casts, primarily in Robinson Hall which housed the Department of History and Art History. Finally, Dr. Mattusch's group published a website about this project.⁵⁹

It has been over a decade since the displays of GMU's plaster cast collection have been updated. However, in the spring semester of 2021 Robinson Hall has closed and many of the plaster casts are moving into the newly constructed Horizon Hall. Our class led by Dr. Christopher A. Gregg, professor of Art History, is curating a new exhibition for the plaster casts. We have been continuing the research started in 2003, cataloging the casts in a database, writing labels for individual pieces, and determining new display locations for the Robinson Hall casts in the newly opened Horizon Hall. As a class, we cannot wait for George Mason University's collection of plaster casts to have a prominent place on campus. During this project our class has learned about the important role of plaster casts in art history and, as we have demonstrated in this essay, that plaster casts still have value today. Despite changes in technology and travel, plaster casts did not disappear. In the 21st century plaster casts have found a renewed importance in art education, been revitalized in modern art, and been used by institutions to make a political statement. They also offer the potential to educate future generations on works of art from many cultures and times, since the GMU cast collection includes copies not only of Greek and Roman works but also casts from the Medieval and Renaissance periods of Europe as well as works of Gandharan sculpture from the area of modern Afghanistan-Pakistan. It is our hope that through the exhibition of these works we display the artistic aspects of GMU's plaster casts and simultaneously engage viewers in a larger con-

59 D. Cook, L. Hargrove, L. Miller, H. W. Obiechina, and Kristin L. Ware, 2006, "Plaster Casts at GMU," George Mason University Plaster Cast Collection, George Mason University: <https://plastercast.gmu.edu/plaster-casts-at-gmu>.

versation about art and its reproductions in history, politics, education, and contemporary culture.

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“Casts are engines of education and should not be shown near objects of inspiration. They are data mechanically produced; our originals are works of art.”

-MATTHEW PRITCHARD (1904 CE)

Under the direction of Carol Mattusch (Department of History and Art history, emerita), seventy plaster casts which had been loaned, donated, or — in a few cases — purchased for George Mason University from the collection of the Metropolitan Museum in New York were restored and placed on display across the Fairfax Campus in the years between 2005 and 2010. More than 30 of these casts were on view in Robinson Hall B. With the announcement that both Robinson Hall A and B were to be torn down and replaced by the recently inaugurated Horizon Hall, it was clear that the Robinson Hall Collection of architectural and sculptural casts needed to be re-evaluated.

A Curatorial Seminar directed by Christopher Gregg, in the Art History Program of the Department of History and Art History, spent the Spring semester of 2021 researching the casts, writing new labels, creating an updated digital catalogue and designing an exhibition program for the Robinson Collection's display in Horizon Hall. The essays in this volume are the result of the scholarly work undertaken by the undergraduate and graduate students in the seminar.

The essays deal with a variety of topics related to plaster casts and demonstrate the many reasons why it is still worthwhile to engage with these sculptural and architectural casts. They offer avenues of investigation and insights into a number of subjects both past and present. The authors examine the changing perception of plaster casts, from works of art in their own right to mechanical reproductions that were characterized as ‘specimens’ in a more scientific view of the world.

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