The Polychromy of Greek and Roman Art; An Investigation of Museum Practices

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The Polychromy of Greek and Roman Art: An Investigation of Museum Practices

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Introduction

The fact that Greek and Roman sculpture was once brightly painted was the subject of an ongoing debate among art historians since the early nineteenth century. Many museums that display ancient Greek and Roman sculpture overlook the fact that classical artists finished their sculptures with bright colored paint.¹ Due to recent discoveries and advancements in technologies documented by art historians, the remains of paint can now be scientifically and concretely detected on ancient statues. Thus, it is now possible for museums to begin investigating ancient polychromy and reverse the misinterpretation caused by centuries of artists, historians, and the general public believing that Greek and Roman sculptures were white and pristine.

Within the Greek and Roman sculpture galleries at the Metropolitan Museum of Art (MMA) in New York City, this practice is obvious. The white sculptures coupled with the museum's pale marble walls promote a monochromatic aesthetic that began in the Renaissance with the discovery of the Laocoön Group in 1506.² The lack of information on the history of the polychromy of these sculptures in the object labels, the audio guides, and the gallery tours reinforces the galleries' presentation of the white, monochromatic sculptures. The Museum of Fine Arts in Boston (MFA), an institution similar to the MMA in size and although of lesser international renown, also does not...

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¹ The term "classical" is used here to define the artists of the Graeco-Roman era.
address the history of color on their Greek and Roman marbles. Their black painted walls that accentuate the sculptures' whiteness and concentration on sculptural forms are evidence of the MFA adhering to the traditional view that ancient sculptures were created solely with the classical, idealized figure in mind.

In the next four chapters, this thesis will explore Greek and Roman polychromatic history and the changing attitude towards its existence; examine twentieth and twenty-first century scholarship on Graeco-Roman polychromy in an attempt to ascertain why certain museums omit painted sculptural evidence; investigate the practices of the MMA and MFA and compare them to similar institutions and important polychrome exhibitions; and provide an example of an exhibition that would display ancient painting techniques within the MMA. These analyses will demonstrate that the practice of ignoring polychromy in ancient Greek and Roman sculpture neglects an important aspect of classical art, thereby displaying works in ways that never existed in ancient Greece and Rome and distorting the historical character of the ancient world.
Chapter 1

The History of Greek and Roman Polychromy and Its Reception

This chapter will trace the historical changes and receptions of polychromy in order to present a more complete understanding of why museums like the MMA and MFA ignore the presence of color on ancient sculpture. It will begin by reviewing the pertinent Greek and Roman writers on the subject of polychromy and ancient painting practices, followed by an analysis of the changes in style as well as the diminishing acceptance of painted ancient sculptures from the Renaissance through the twentieth century. By examining the history of polychromy, it is clear that most sculptures from ancient Greece and Rome were actually brightly painted.

The Greeks

The idea of color for sculpture was not a new concept in ancient Greece. The ancient Egyptians had used color to paint their walls and statues to create lifelike portraits for millennia. This practice influenced the Greeks, who not only used the same life-giving pigments, but also the same techniques, such as highlighting and underpainting, to produce realistic, yet idealized sculptures. Like the Egyptians, the addition of color to statues made aspects of the figures that were not deeply carved more distinguishable. It also set the statues themselves.

apart from each other, creating a group of distinct individuals instead of a more homogenized assembly of white figures, thus adding a potential narrative element.⁴

Ancient texts reveal not only the fact that ancient artists used paint on their sculpture, but also the processes and colors used by ancient Greek sculptors. The earliest documents on color are the early fifth century poetry of Alcmaeon of Croton, who described the contrasting natures of black and white. In the later part of the century, Empedocles (490-430 B.C.E.), a pre-Socratic philosopher from Sicily, discussed color theory at greater length in his writings. He followed an almost mathematical scheme of primary colors that consisted of black, white, and red and added an important hue called ōchron, which referred to a range of new colors from red, to yellow and green. He linked his four colors to the four elements of the earth, although he did not specify in his writings which colors related to which elements.⁵ Democritus (460-370 B.C.E.), a philosopher from the same period, had his own theories on color. In his texts he mentioned the same four basic colors as Empedocles, white, black, red, and ōchron, but related them directly to natural forms. White referred to smoothness, black to roughness, red to

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⁵ John Gage, Color and Culture: Practice and Meaning from Antiquity to Abstraction (Berkley and Los Angeles: University of California Press, 1999), 12. The exact color of ōchron is unclear: "The late antique commentators on Empedocles, Aëtius and Stobaeus, had it that he followed a Pythagorean scheme of 'primary' colours, adding to black and white red and ōchron, a vague term which has thought to designate a whole range of hues from red through yellow to green and must probably be understood to imply a faded quality in any of them."
heat, and ὀχρὸν to both solidity and emptiness. He believed that by mixing these pigments one could obtain an entire range of colors.⁶

The color theories implemented by Empedocles and Democritus were further developed by the Classical philosopher Plato (424-348 B.C.E.) and his apprentice Aristotle (384-322 B.C.E.) in the fourth century B.C.E. Through them this system became the initial point of all subsequent color systems until Isaac Newton (1642-1727).⁷ Plato's poem on the creation of the earth, called Timaeus, offers the most extensive description of a coherent theory of colors. It introduced the effect that a light ray had on the eye, stating that white was the dilation of a light ray sent out by the eye and black was the ray’s contraction. Plato passed on his theories to Aristotle who, because of his intense interest in development and experimentation, produced a more complete account of color theory spread throughout several documents. In his treatise called On Sense and Sensible Objects he discussed the fact that intermediary colors were created by adding white and black to color mixtures. He identified five transitional colors: crimson, violet, leek-green, deep blue, and grey and yellow, which were classified with white and black. Within his comprehensive doctrines on color theory, Aristotle was partial to a seven color scale that ranged between black and white. In his text called Meteorology, he discussed the attributes of a rainbow and regarded red, purple, and green as the only intermediary colors that were not mixed. He

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⁶ Gage, Color in Culture, 12.
⁷ Ibid.
preferred this septenary color arrangement because of its closeness to musical theory.\textsuperscript{8}

Many Classical artists also recorded their own color theories. While none of the contents of these Greek doctrines survive, their existence is known through other later Roman writers, such as Pliny the Elder (23-79 C.E.). Two treatises, \emph{On Symmetry} and \emph{On Colors}, are attributed by Pliny to the mid-fourth-century B.C.E. painter and sculptor Euphranor (390-325 B.C.E.). Euphranor possessed a reputation for his proficiency in the use of symmetry as a sculptural concept. When color was coupled with the symmetry and three-dimensionality of sculpture, statues became incredibly realistic.\textsuperscript{9} Since Plato and Aristotle believed that the aim of art was to emulate nature, both color and symmetry would have been essential to this imitation. Also, according to Plutarch (46-120 C.E.) in his text \emph{Moralia} from the first century C.E., color was considered more visually stimulating than simple line because it created a life-like illusion.\textsuperscript{10} These writings not only demonstrate that the Greeks considered paint an integral part of realistic sculpture-making, but also that the painting techniques and philosophies used by Greek sculptural painters were well understood by ancient Roman color theorists.\textsuperscript{11}

Pliny's text \emph{Naturalis Historia}, written in 78 C.E., directly discusses the tradition and history of art in Greece and Rome. His chapters focus on materials, artist histories, wall painting techniques, and sculpture. His discussion of

\begin{flushleft}
\textsuperscript{8} Gage, \textit{Color in Culture}, 13.
\textsuperscript{9} Ibid.
\textsuperscript{10} It should be noted that Plutarch was born in Greece and became a Roman citizen.
\textsuperscript{11} Gage, 14-15.
\end{flushleft}
sculptural painting, however, is fleeting because he believed that the ancient Greek writers thoroughly covered the subject. From this statement it can be surmised that painted statues and their history were common and well known during his time. Although he did not concentrate on this subject, he used Roman sculptural practices as a point of reference to convey his preference for the practice of painting stone sculptures, stating that painted statues were "more deserving of respect than gold," which was commonly used by Roman artists, and were "certainly less baneful," indicating that he saw the current Roman sculptural style as visually irritating. When chiding the Roman sculptural practice of leaving luxurious materials unpainted, Pliny said that their ancestors displayed lifelike painted portraits that were meant to resemble living people, and asserted that encaustic (the painting technique that combines pigments with beeswax) was probably perfected by Praxiteles, a famous Greek marble sculptor of the fourth century B.C.E. This textual evidence affirms the idea that it was common practice in ancient Greece to paint statues.

These color methods and theories expounded upon by Plato and Aristotle and briefly discussed by Pliny can be seen in two sculptural examples: the Parthenon sculptures (fig. 1) from the High Classical era (fifth century B.C.E.) and the Laocoön (fig. 2) from the Hellenistic period (late fourth-first centuries B.C.E.). Built on the Athenian Acropolis between 447 and 433 B.C.E. and dedicated to the goddess Athena, the Parthenon (fig. 3) once possessed extensive friezes, metopes,
and pediments containing an array of polychrome sculptural narratives. The pediment directly above the temple's east entrance portrayed the birth of Athena; the west pediment depicted Athena battling the god Poseidon for control of Athens; and the friezes and metopes above the columns displayed scenes of mythological battles as well as processions and festivals, observed by the goddess Athena, patron of Athens. Sculptures from the Parthenon’s friezes, metopes, and pediments were moved to London in the mid-eighteenth century by Lord Elgin. They were studied by London's Society of Dilettanti, who commissioned experts to investigate the traces of color seen on the figures. Upon initial inspection, specialists from the Dilettanti could easily see that the backgrounds of the friezes and metopes were painted blue and red, and the figures' clothing was painted green, red, and possibly yellow, providing evidence of the sculptures' once brightly painted states.

For the recent exhibition *Gods in Color: Painted Sculpture of Classical Antiquity*, organized in Munich in 2004, and shown in several European cities, as well as Cambridge, Massachusetts, Dyfri Williams, Peter Higgs, Thorsten Opper,

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16 Also known as the Elgin Marbles, these include seventeen figures from the east and west pediments, fifteen (of an original ninety-two) of the metope panels depicting battles between the Lapiths and the Centaurs, as well as 247 feet of the frieze that decorated the horizontal section above the interior architrave of the temple. For more information see: William Hazlitt, *On the Elgin Marbles* (London: Hesperus Press Ltd, 2008).
17 The Society of Dilettanti was founded in 1732 as an elite dining club by the English Grand Tourists group. They took their name from the Italian word *dilettere*, meaning a serious appreciation for fine art, although they were most well known for their parties and promiscuity. For more information on the Society of Dilettanti: Mary Helen McMurran, "The Society of Dilettanti," *Huntington Library Quarterly* 74, no. 1 (March 2011): 140-144.
and Mark Timson conducted their own research on the Parthenon sculptures and created a virtual image of one of the metopes. This image became part of the ongoing project of constructing a "Virtual Parthenon" that will encompass all the pieces and colors of the original structure, creating a multi-level, interactive educational tool. They decided to concentrate on a metope that was split between the British Museum and the National Museum in Copenhagen, and which depicts a centaur fighting a young Lapith warrior (fig. 4). By using a laser, the staff members at the Liverpool Conservation Center were able to recreate the scene in three dimensions without touching the original piece. Not only was the British Museum's New Media Unit able to reconstruct the statue's form from the laser's images, they were also able to examine missing pieces virtually and recreate these parts, forming a whole unified work. In addition, they were able to detect the areas where there had been original pigment, although the laser did not help determine the actual colors used.\(^{19}\) The way in which the Lapith's sandal is depicted indicates the use of paint. The missing details of the laces and flaps show that these details were most likely added through color. The smooth surface of the hair also attests to this practice of applying detail with pigment. Furthermore, painters were able to differentiate between the figures and the metope backgrounds by painting each a different color. By recreating these colors, the conservators revealed details that normally could not be seen on the sculpture's white surface. For instance, the addition of colored eyes completely transformed the figures from blankly staring, ethereal characters, to lifelike individuals.

Likewise, the colored hair and modeled features provided by the addition of polychromy conveyed the savageness of the centaur and the helplessness of the Lapith. These obvious differences and the idea that paint was meant to identify individuals may refute the notion that these statues were merely idealized, a sculptural trait often associated with ancient Greece. For this reason, the Liverpool conservators believed that by recreating even a hypothetical notion of color they could shed light on ancient polychromatic history.

Along with the Parthenon sculptures, statues from the Hellenistic period, like the Laocoön (fig. 2), also retain small amounts of their polychromy. Originally created between 130 and 20 B.C.E., the Laocoön (fig. 2) was discovered in a marble paneled room in Rome in 1506. During the early sixteenth century there were numerous excavations of marble statues from the island of Delos. Paint on these Delian sculptures was remarkably well-preserved due to the city's early destruction in the late Hellenistic period, which resulted in the sculptures only remaining in their intended locations for a brief time. The Laocoön group (fig. 2) was a part of this array of sculptures and therefore it should be assumed that it retained an extensive amount of pigment when it was first uncovered. It is interesting to note that upon the statue's discovery, Pope Julius II (b. 1443-d. 1513) asked the revered Renaissance artist Michelangelo to examine the

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21 Ibid., 113.
23 Brinkmann does not go into detail about the Delos island destruction or where these original sculptures were moved after its demise.
sculpture. Michelangelo remembered that the statue was mentioned in Pliny's *Naturalis Historia*, which noted that the group was "a work to be preferred over everything else, with the respect to both the polychromy and the sculptural elaboration." One would assume that the evidence of color upon the group's discovery and the mention of painting and sculpture in Pliny's text would have been enough to convince an artist such as Michelangelo to see the sculpture as it once was. But instead he created white marble statues that concentrated on sculptural form, rather than polychromy.

Researchers at the Vatican Museum have not discovered any remaining polychromy on the *Laocoön* (fig. 2) figures; however, when the sculpture is seen in older black and white photographs, the contrasts of lights and darks indicate the remnants of the statue's original pigmentation. Brinkmann approximated the original color by using the polychromatic information available through color detected on other Delos statues. The serpents would have most likely been painted in various shades, with their scales differing in hue so that they were distinguishable from the figures' limbs. *Laocoön*, the largest figure who depicts the mythical Trojan priest, would have probably been painted a darker color than his sons. The painted eyes of the sculptures would have conveyed the characters' betrayal and fear more than the blank white stares seen today. Pigments would

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25. Brinkmann, "Statues in Colour," 12-13. Brinkmann retranslated this anecdote due to the statement's inconsistency with Pliny's previous acknowledgement that the *Knidian Aphrodite* claimed the title of the most beautiful sculpture. The previous quote stated that the group was "a work to be preferred over all that the arts of painting and sculpture have produced." Brinkmann's new translation makes the statement concentrate on the incorporation of painting and sculpture, rather than the separate arts of wall painting and statuary.


27. Ibid. Brinkmann does not indicate specific polychrome Delos sculptures that he used to hypothetically reconstruct the *Laocoön's* pigments.
have been used to enhance the plasticity of the cascading drapery, creating a lifelike appearance of falling cloth.

These examples of Greek sculpture show that color was undoubtedly the finishing touch on stone statuary. Even though these works no longer have remaining pigments, by studying ancient texts that illustrate Greek painting processes and other Greek sculptures with preserved polychromy, scholars, art historians, and conservators can visualize the true aesthetic of ancient Greece, a shockingly different appearance than the one commonly considered when imagining the ancient world (fig. 5).

The Romans

The era of the ancient Romans spans the period from the sixth century B.C.E. to the late fifth century C.E. This section will concentrate on the early Roman Empire, which started in the first century B.C.E. and contains the largest collection of painted sculpture. The existence of sculptural polychromy in the Roman world during the two centuries surrounding the Christian era can be seen in the wall paintings and sculptures preserved from Pompeii and Herculaneum. A case in point is the mid-first century C.E. wall painting from the House of Surgeon (fig. 6) in Pompeii, from 55 to 79 C.E., which shows a seated woman painting. Before her stands a colored sculpture, either Bacchus, the god of wine, or Priapus, the personification of Nature, with golden skin and a blue-tinted beard.

\[28\] Ancient texts like those of Pliny the Elder attest to a change in Roman taste. This change moved away from fully polychromatic statues to works with gilded features.
Among existing marble sculptures also from Pompeii is the first century C.E. Venus Lovatelli (fig. 7), which shows pigment preserved on the surface of the figure's falling garments, hair, skin, and eyes.\(^{29}\)

Roman reverence for ancient Greek sculpture resulted in numerous marble copies of bronze and marble Greek statues. Forums, basilicas, and other public spaces were filled with copies of ancient Greek sculptures that were once only seen in dimly lit temples and shrines.\(^{30}\) Although these copies lost much of their original polychromy over time, their depictions in Roman wall paintings as well as scientific investigations of conservators and art historians provide evidence of the array of colors used by Roman artists. Ancient wall paintings, like those seen at Pompeii, show that many Roman marble sculptures were entirely covered in paint or gilding, obscuring the marble surface, while others had limited polychromy, which highlighted eyes, hair, lips, and other details.\(^{31}\) The existence of color in Roman sculpture can also be seen through ancient documents, such as Pliny’s *Naturalis Historia*, which reveal a shift in taste from the ancient Greeks, and show that Romans made unprecedented uses of colored marble. The development of the Latin language also allowed for an expansion of color terminology in the first century C.E. It increased the list of five words for hues developed by Empedocles to over seventy different terms, including sixteen for


red, ten for green, and eight for blue. According to Pliny, however, this divergence from the original style of the ancients had "destroyed the arts" of Roman cities.

In his text *Naturalis Historia*, Pliny stated that Roman dignitaries left "behind them portraits that represent[ed] their money, not themselves." He laments that "at the present time [painting] has been entirely ousted by marbles, and indeed finally also by gold," and that the "display of material [was] preferred to a recognizable likeness of one's own self... The painting of portraits, used to transmit through the ages extremely correct likenesses of persons, ha[d] entirely gone out." Pliny also states that he prefers the Romans' ancestors sculptural style and includes the example of the statue of Jupiter at the Capitol, created by Vulca, the sculptor from Veii, Etruria, in the sixth century B.C.E., which was "regularly painted with cinnabar," and that Pliny revered as a "most splendid image" of a god. While Pliny’s meaning is not entirely clear, after reading these outbursts, one may assume that Romans in the first century C.E. did not color their sculptures and preferred to display them in their original materials. However, the discovery in 1863 of the *Augustus* statue (fig. 8) in Prima Porta, described later in this section, from 20 C.E., with its obvious traces of polychromy, resolves this

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33 Pliny, *Natural History*, 263-65.
34 Ibid.
36 Ibid., 377.
37 Pliny's writings are relatively unclear as to whether or not he is specifically referring to Roman sculptural painting, wall painting, portrait painting, or all three. Scholars such as Susanne Ebbinghaus infer that Pliny is referring to sculpture painting here. Even though the context is unclear, the discovery of Roman marble sculptures with remnants of pigment, such as the *Augustus* statue, makes it obvious that Roman statues were painted.
uncertainty. Pliny's complaints in regards to Roman stylistic changes refer instead to the fact that later Romans preferred the gilding of particular sculptural features rather than fully colored statues.\(^{38}\) Evidence of this is also seen in the Roman poet Lucretius's (99-55 B.C.E.) *On the Nature of the Universe II*, which describes golden sculptures that adorned Roman halls.\(^{39}\)

Within early Antiquity the need for luxurious sculptures was of primary importance and determined many color preferences. The most valued color used in Roman portraiture, which stemmed from the desire for luxurious art, was purple. This color distinguished images of royalty, noble youths, senators, and gods from other lesser statuary in earlier Roman times. It was reserved for the most revered state officers and was often seen in the form of a purple and gold robe and in strips on the edges of tunics. By the early fourth century C.E., it was solely associated with the emperor.\(^{40}\) Purple was also significant because it was associated with the color red, which represented fire and light, indicating the color of the sun and in turn signifying a divinity. In this way, purple's association with red also connected it to gold, the epitome of reflected light, and the other imperial color of Antiquity.\(^{41}\) Purple is often seen in wall paintings, such as the House of Surgeon (fig. 6) in Pompeii, and pediment statuary, such as the tunic-wearing government officials on the Via di San Gregorio Temple (fig. 9) from 150 B.C.E.\(^{42}\)

\(^{38}\) Gage, *Color in Culture*, 16.
\(^{39}\) Ibid.
\(^{40}\) Ibid.
\(^{41}\) Ibid., 26.
\(^{42}\) Østergaard, "Emerging Colors," 43.
An important example of Roman polychromy is the *Augustus of Prima Porta* statue (fig. 8), one of the most well known of all Roman sculptures. When it was originally discovered in 1863 its pigments were visible, but have considerably faded over time. With a meticulous cleaning in 1999 by the Vatican Museums, the color was revealed once again. Afterwards, the statue underwent a series of color analyses by the Vatican from 1999 to 2002, which resulted in their creation of a life size plaster cast with the sculpture's original color. Pigment was found on Augustus’s armor and garments, as well as on the eyes and lips, but the painter avoided adding color to the skin, which retained the original marble color. This stark contrast between the vibrant reds and blues used on the breastplate and drapery created an otherworldly rather than lifelike aesthetic. By separating this sculpture from other statues through the use of colors associated with the emperor such as red, blue, and purple, the pigments communicate the work’s imperial status. In addition, the deeply carved scenes accentuated by color on the breastplate portray Augustus's diplomatic recovery of the Roman standards lost in 50 B.C.E. by Crassus at the Battle of Carrhae, showing the emperor’s ability to create solutions without the use of violence. This kind of sculptural representation may have been the cause of Pliny's ire because of its lack of a naturalistic quality, a characteristic that Pliny revered.

Another example of imperial Roman polychromy is the bust of *Caligula* (fig. 10), from 39 to 41 C.E., now in the Ny Carlsberg Glyptotek in Copenhagen.

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44 Ibid., 118.
45 Pliny, *Natural History*, 263.
Shown in the *Gods in Color* exhibition created by Brinkmann and Raimund Wünsche, the bust was a prime candidate for the recreation of polychromy because some traces of paint could be seen with the naked eye. Without the use of polychrome-detecting technology, paint was seen on the eyes, (painted lashes and pupils), the hair, the sides of the neck, and the lips. Nevertheless, the conservators of the exhibition recommended that the sculpture be studied further. Through technological investigation more pigments became evident, providing a vivid blueprint of the original color. The discoveries revealed with certainty that egg-tempera paint was applied in the year 40 C.E. and that those colors were consistent with ancient Roman preferences.\(^{46}\)

With these studies and recreations, the issue of whether Rome was comprised of purely white marble buildings and sculpture is moot. The evidence of painted statuary in the ancient world is overwhelming. Unlike the blankly staring, austere figures displayed in the MMA and the MFA, Greece and Rome were filled with lifelike statues that were considered inhabitants of ancient cities.

The Renaissance

The Medieval period in Europe had an array of polychromatic sculptures, mainly on church exteriors and altarpieces. The existence of painted sculpture from this era has not been contested like that of the classical period because many

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pieces still have extensive remnants of color. However, during the Renaissance, the discovery of colorless Greek and Roman sculptures prompted the idea that ancient statues were originally white and pristine. Although painted sculpture was still the norm during the early Renaissance, beginning in the late fourteenth century, the cost of polychromatic works became more expensive than those of uncolored sculpture, which may have added to the change in sculptural style later in the era. In Leonardo's Treatise on Painting he stated, when referring to the creation of sculptures, "the sculptor has only to consider body, shape, position and rest. With light and shade he does not concern himself, because nature produces them for his sculpture. Of color there is none." With this advice, Leonardo studiously ignored the polychromatic developments of the Romanesque era (ninth-thirteenth century), which contained colorful frescoes, stained glass, mosaics, sculpture, and furniture. He rejected the colorful style for what he thought was a purer, more utopian approach to art, arguing that three dimensional forms did not need the added illusion to make them more lifelike. He goes on to say, "with distance and closeness [the sculptor] only concerns himself in part, in that he only uses linear perspective but not the perspective of color which varies in hue and distinctness of outline with different distances from the eye. Therefore

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47 This is probably because the altarpieces remained indoors, away from the damaging elements, and the exterior sculptures were created much later than classical pieces, providing less time for their color to erode. In addition, there are many texts detailing the construction of church exteriors, especially during the Gothic period (twelfth-sixteenth centuries), that mention colorful sculptural exteriors. An example is Abbot Suger's writings on the church of St. Denis (see bibliography).
49 Leonardo's Treatise is a compilation if his writings found in his notebooks over the course of his lifetime. They were gathered together in 1542 by Francesco Melzi and first printed in French and Italian by Raffaelo du Fresne in 1651.
51 Marco Collareta, "From Color to Black and White, and Back Again: The Middle Ages and Early Modern Times," in Gods in Color, eds. Brinkmann and Wünsche, 62.
sculpture has few considerations and consequently is less demanding of talent than painting.\textsuperscript{52} When Leonardo removed color from the creation of statuary, he also devalued sculpture as an art form, showing his preference for the art of painting.

Leonardo had two aims: firstly, he rejected the assumed role of sculpture as solely a function of religious expression. He wanted to introduce a new model of sculpture to the foreground of the art market. Secondly, he also created a new position for sculpture in the future, that of the idealistic aesthetic of the classical era. Leonardo wanted sculpture to not only represent Christian ideals, but also convey classical history.\textsuperscript{53} However, the historical verification he desired was skewed by the discoveries of marble sculptures without their original polychromy. In attempting to recreate the classical masters of the past, Leonardo instead produced a completely new aesthetic that originated during his time and not in the ancient world.

The discovery of the \textit{Laocoon} group (fig. 2) in 1506 and Michelangelo's examination of the work sanctioned the idea that ancient sculpture was monochromatic. Many Renaissance artists, including Michelangelo, began creating sizable monochromatic sculptures to imitate this supposed historical model. The patrons of this aesthetic valued the difficulty of carving and the contours of the classical figures, rather than what they thought to be the relative ease of sculptural painting and modeling. Statuary began to be discussed solely in terms of form, space, and movement, eliminating the use of life giving, painterly

\textsuperscript{52} Brinkmann, "Statues in Colour," 11-12.
\textsuperscript{53} Ibid., 12.
modeling. Historian Vincenzo Borghini (b. 1515-d. 1580) stated that "the strength of a sculptor is in the outline given by the chisel, and if some clumsy [sculptor] in this art uses color, [he] transcends the nature of that art." Overall, sculptural taste shifted in the sixteenth century, turning away from colored sculpture and embracing the supposed purity of white marble used by classical artists.

Nineteenth Century

The belief that ancient sculptures were purely white marble continued until the nineteenth century, when excavations increased throughout Europe and early archaeologists discovered ancient sculptures with traces of color, such as the Augustus of Prima Porta (fig. 8) and Athenian Acropolis votive statues. These discoveries had an enormous impact on the worlds of art history and archeology because of their obvious coloration. The assumption that ancient sculpture was unpainted was contested through color experimentation by artists and sculptors, of the nineteenth century, like John Gibson, who strove to recreate ancient works as they had once appeared.

The debate concerning Greek and Roman polychromy began with Antoine-Chrysostome Quatremère de Quincy (b. 1755- d. 1849) in 1815. Known for combining art historical and archaeological research, Quatremère's arguments

were expressed in his treatise, *Le Jupiter Olympien, ou, l'art de la Sculpture Antique Considéré sous un Nouveau Point de Vue*. This work concerned Phidias’s statue of *Zeus at Olympia* (fig. 11), from 432 B.C.E. in the Temple of Zeus in Olympia, which he found to have remnants of color.\(^{57}\) Through his investigations, Quatremère aimed to create a complete and accurate picture of ancient Greece and Rome. This included exact measurements of the temple, descriptions of the city’s construction found in ancient Greek texts, and the polychromatic remains found on the statue of *Zeus* (fig. 11). Quatremère did not want to recount the beauty, form, proportions, or harmony of the Olympian sculptures; rather, he desired to produce an image of the ancient world that would eradicate the standard beliefs that had been instilled until that point. He stated that "such a re-discovery, far from treating of the intrinsic beauty of the building, has no other purpose than to enable the reader to understand how it was built, and the effect it has on the senses, and to eliminate the prejudices of modern taste towards this type of sculpture."\(^{58}\) He intended to challenge the commonly held beliefs that obscured the polychromatic aesthetics of the ancient world.

The debate on ancient polychromy not only affected the worlds of art history and archeology, but also that of art. Artists began to question their imitation of ancient idealistic forms and sought to create works that incorporated

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\(^{58}\) Paolo Bertoncini Sabatini, "Antoine Chrysostôme Quatremère de Quincy (1755-1849) and the Rediscovery of Polychromy in Grecian Architecture: Colour Techniques and Archaeological Research in the Pages of 'Olympian Zeus'," (paper presented at the Second International Congress on Construction History, Queens College and Cambridge University, March, 29-April 2, 2006), 395.
the polychromatic history of the ancients. In the mid-nineteenth century, English sculptor John Gibson (b. 1790- d. 1866) imitated the ancient artist Praxiteles by applying paint to his sculptures' surfaces [see *Tinted Venus* (fig. 12)], from 1851-56. In doing this he stated, "The moderns, being less refined than the Greeks in matters of art, are, from stupid custom, reconciled to the white statue. The flesh is white, the hair is white, the eyes are white, and the drapery white; this monotonous cold object of art is out of harmony with everything which surrounds it." He wrote that "the Greek taste was right in colouring their sculpture—the warm glow is most agreeable to the feeling, and so is the variety obtained by it." Although these statements assume that Gibson preferred the color of sculpture to be all-encompassing, he was actually part of the Neoclassical group that favored restrained uses of colors, as seen in his *Tinted Venus* (fig. 12), forgoing the true aesthetic of ancient sculptures. This decision was most likely rooted in the need to cling to the Renaissance notion that white marble was considered ideal.

By the end of the nineteenth century, attempts were made in Boston and Chicago to recreate the effects of color on classical sculpture using painted plaster casts. The MFA held an exhibition in 1891 which attempted to "reproduce the effect of color employed by the Greeks in their marble sculpture." This exhibition followed a previous show that merely displayed plates, water colors, and colored photographs of the remnants of paint seen on ancient sculptures with

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61 Ibid.
the naked eye. In the 1891 exhibition, the painter and archaeologist Joseph Lindon Smith (b. 1863-d. 1950) created colored casts of the *Venus Genetrix* (fig. 13), from 46 B.C.E., and an Olympian statue of *Hermes* (fig. 14) from the fourth century B.C.E., which at the time was attributed to Praxiteles. According to Edward Robinson, author of the exhibition's catalogue, "the steadfastness of Mr. Smith's desire to carry his archaeological data to their logical conclusion, irrespective of modern ideas of color, has, combined with his taste, produced a result in the highest degree educational." The goal of the MFA at this time was to educate the public about the true appearance of ancient Greek works.

A year later in 1892, the Art Institute of Chicago (AIC) also held an exhibition that aimed to portray the polychromy of Graeco-Roman sculpture. Within this particular show, many Greek and Roman pieces were cast and then colored "in a fashion conveying the character of the originals to the eye better than white plaster could possibly do," thereby presenting an accurate portrayal of ancient sculpture. According to Alfred Emerson, the curator of Classical Antiquities of the AIC at the time, this exhibition was meant to show that experimenting with the re-coloration of ancient sculpture would prove more useful than simply discussing the matter. The AIC attempted to imitate exhibitions in Berlin and Boston that recreated pieces in color. Emerson stated that "there [was] no room for discussion" in regards to polychromatic sculpture; "literary testimony and the evidence of archaeology [we]re too strong and uniform

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64 Unfortunately there are no images of these recreations in the Robinson text; the figs. show the unpainted sculptures.
66 Ibid., 31.
to admit of quibble or doubt.” In the end, Emerson thought that the color of these sculptures proved more interesting to study than their forms and postures.\(^{68}\)

**Twentieth Century**

Due to the turmoil caused by the wars of the first half of the twentieth century, the time in which most of the museums in the United States collected ancient works of art, scholars and art historians turned their backs on the issue of color, an idea that had previously been of great interest in the preceding century.\(^{69}\) Following the devastation of World War I, artists moved away from two-dimensional abstracted spaces, shattered compositions, and broken bodies that persisted in **Cubism**, **Futurism**, **Expressionism** and other avant-garde styles of the early twentieth century. Art that was classical and innovative in nature became essential for order during a chaotic time. The restoration and wholeness of the body returned their work to the enduring values of what they thought to be classicism, which became “a language of democratic ideals, beauty and balance, with the power to redeem.”\(^{70}\) Artists sought to create artwork that conveyed a tranquil and pure nature, which they associated with ancient Greek and Roman figures, as opposed to the perceived chaos of the modern world.\(^{71}\)

\(^{67}\) Alfred Emerson, *Catalogue of a Polychrome Exhibition: Illustrating the Use of Color Particularly in Graeco-Roman Sculpture* (Chicago: Knight, Leonard & Co., 1892), 8.

\(^{68}\) Ibid., 8.

\(^{69}\) Brinkmann, "Statues in Color," 11.


\(^{71}\) Ibid.
Of the several significant artistic manifestations during this period, the Parisian avant-garde’s dreamy poeticism of antiquity from artists like Pablo Picasso is the most telling of the early twentieth century’s view on how classical art once appeared. Picasso was the premier and most prolific practitioner of the wartime revival of classicism.\textsuperscript{72} In his work *Woman in White* (fig. 15) from 1923, Picasso completely eliminates bright colors, leaving only small traces to indicate the sitter’s hair, skin, and seat, supposedly (and ignorantly) imitating the bleached surfaces of classical antiquity. Picasso’s reason for this was to create a picture that reflects a figure in reverie and peacefulness, the opposite of the tumultuousness often felt in times of war.\textsuperscript{73} Another classicizing example by Picasso is his *Bust of a Woman, Arms Raised* (fig. 16) portrait from 1922. In this piece the palette is restricted to black, white, and gray. The raised arms and sculptural nature of the figure allude to classical caryatid figures (temple columns shaped like women), such as the Erechtheion’s Porch of the Maidens on the Acropolis (fig. 17). The raised arms and downward gaze of Picasso’s *Woman* (fig. 16) reflect the ancient caryatids’ act of holding up a ceiling and looking down from upon high.\textsuperscript{74}

**Summary**

Through this investigation, it is not only obvious that Greek and Roman sculptures were once painted, but also that these colors added realistic and

\textsuperscript{73} Ibid., 21.
\textsuperscript{74} Ibid.
individualizing qualities to a figure’s form. The evidence for this exists in ancient Greek and Roman texts, wall paintings from Pompeii, and even the ancient sculptures themselves, when closely investigated. However, because the Renaissance and the early nineteenth century only encountered white, monochromatic pieces, with very little recognizable polychromy, it is understandable why this history was lost. The opinions on whether or not ancient sculpture was painted, which alternated between the nineteenth and twentieth centuries, show that it was hard for scholars to accept color on ancient statues that had been seen as white and pristine for hundreds of years. It is possible that this resistance persists in the minds of museum professionals and art historians today, creating the dilemma that many museum-goers falsely associate ancient Greece and Rome with white marble.

In the next chapter this paper will analyze the writings, contributions, and research of scholars beginning in the 1940s and continuing to 2010. These examinations will show that color detection is definitely possible, but it will also hypothesize as to why institutions like the MMA and MFA continue to ignore the existence of ancient polychromy in classical Greece and Rome.
Chapter 2

Modern Scholarship on Greek and Roman Polychromy

The issue of polychromy in ancient Greece and Rome may have had little attention from scholars over the years because the technology of detecting color on ancient sculptures was not perfected until the 1990s. According to curators Gisela Richter and Vinzez Brinkmann, it could also be that most institutions and art historians are content to adhere to the white sculptural norm established by Renaissance artists. They have suggested that this is because the monochromatic appearance of ancient sculpture is familiar to many museum professionals and audiences. Consequently, museums are not eager to challenge the traditional views held by many of their visitors. This chapter will analyze modern scholarship on the issue of Greek and Roman polychromy to show that adherence to this tradition has never been historically correct.

Gisela Richter: Early Greek Polychromy

As the curator of Greek and Roman Art at the MMA from 1931 to 1948, Richter and her team often attempted to recreate ancient sculptures' original colors through visual and historical investigation. Richter worked closely with the MMA’s collection of sixth century B.C.E. Attic gravestones, which were painted

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76 This team consisted of the Curatorial and Conservation departments at the MMA, including Chief Conservator Lindsley F. Hall.
using a vivid palette of colors that included blacks, greens, reds, and blues, colors that were consistent with Egyptian and Minoan polychrome statues. Although the palette also included yellow, because of the marble's light shade, this color was the hardest to trace without the technology that exists today. Richter could see that by the fifth and fourth centuries B.C.E. the Greeks’ palette had expanded to include naturalistic colors and a varying gradation of modeling through light and shading, enhancing the curvatures of the figures.77 Richter derived this information solely through observation and references to ancient texts.

During Richter's time, the issue of color on naked skin was heartily debated.78 Although traces of color were obvious in the hair, eyes, drapery and other decoration of ancient Greek figures, the skin usually never bore signs of polychromy. Therefore, according to Richter, many historians argued that not all ancient Greek statues were fully colored, since many were depicted nude. However, Richter and conservator Lindsley F. Hall discovered that the skin of the figures on the Attic gravestones was most likely flesh colored. On the Gravestone of a Warrior (fig. 18), from 535-525 B.C.E., a charioteer was only partially colored and therefore could not be fully recreated. Through further investigation, Hall found that the division between the charioteer's tunic and skin did not contain small incised lines, which were used by ancient artists to divide areas of different colors. This suggests that the two areas may have been separated by tonal differentiation. Richter and Hall deduced that since charioteers were depicted with

77 Richter and Hall, "Polychromy in Greek Sculpture," 234.
78 She mentions this in her report on the Attic gravestones, but does not mention who specifically was debating the issue.
white tunics on many black-figured amphorae, and the tunic and skin were not divided, this charioteer's tunic was most likely white and his skin was painted a nude skin tone that left no visible traces. This conclusion, along with a tradition of colored limestone sculptures from Crete, convincingly demonstrated that early Greek sculptures of men were never left unpainted.\textsuperscript{79}

Richter also noted that the ancient Greeks used differentiating colors to identify gender on amphorae. In the seventh and fifth centuries B.C.E., black-figured Athenian and Corinthian vases depicted women with pure white skin and men with black. In wooden panels from the sixth century B.C.E., women also had white skin, whereas men and boys were brown-skinned. Archaic terracotta vases depicted women with white skin and men with yellow or brown flesh. On statues most women were clothed and therefore the little remaining marble, which indicated their skin, was not treated.\textsuperscript{80} This may have indicated taste, or merely an apparent way to differentiate the sexes. Richter states that “By the fourth century, however, when nude statues of women were common and a naturalistic rendering had taken the place of the earlier conventions, it seems likely that the flesh of women was regularly tinted.”\textsuperscript{81} Whatever the case, it is obvious that coloration was the practice in ancient Greece.

Richter and Hall's examinations were based on their own observations, careful study, and the assessment of ancient texts, like Pliny the Elder's \textit{Naturalis Historia}, demonstrating that evidence of ancient polychromy

\textsuperscript{79} Richter and Hall, "Polychromy in Greek Sculpture," 235-36.  
\textsuperscript{80} Ibid., 237.  
\textsuperscript{81} Ibid.
was apparent even during the early part of the twentieth century. Richter referred
to the objection of colored works as "natural," because the copying of Greek
sculptures in white stone, instigated by Renaissance artists, had a long history in
the minds of art historians.\textsuperscript{82} She also stated that “the idea of painted statues
somehow filled people with horror, and only after the evidence in its favor had
become overwhelming did the supporters of white, unpainted sculpture give up
their case.”\textsuperscript{83} Richter proclaimed that scholars could no longer ignore the
mounting evidence that suggested polychromy in ancient works. She believed that
investigating the color of these sculptures and reconstructing them with color
could shed light on a part of Greek culture that is little known.\textsuperscript{84}

**David Batchelor: “Chromophobia”**

In a more recent text on polychromy, David Batchelor comments on the
general rejection of color in Western society in *Chromophobia* from 2000.\textsuperscript{85} In his
text, Batchelor argues that "colour has been the object of extreme prejudice in
Western Culture," and that many people assign color to an impure body.\textsuperscript{86}
According to him, people do this because white is often associated with purity and
they fear contamination. He asks an interesting question in his chapter on
chromophobia: if color is not important in regards to art and architecture, why is it

\textsuperscript{82} Richter and Hall, “Polychromy in Greek Sculpture,” 233.
\textsuperscript{83} Ibid.
\textsuperscript{84} Ibid.
\textsuperscript{85} Although this text provides a detailed explanation of color phobia based on "stories" beginning
in the nineteenth century, it is not a scholarly art historical book and mostly describes Batchelor's
opinions supported by textual evidence.
rejected so forcefully? This exclusion of polychromy often makes one think about color even more, according to Batchelor. For example, the barring of painted sculpture in the Neoclassical era was meant to "rescue a culture and lead it to salvation," but in retrospect made color an important feature of the movement.  

Batchelor describes two ways in which this fear of color manifests itself: the first is by associating it with a "foreign body," normally in feminine, oriental, or vulgar forms. In this form color is unknown and therefore induces fear, according to Batchelor. The second is by relegating color to the superficial, nonessential world. This causes it to become an unimportant aspect, unworthy of significant contemplation. "Colour is dangerous, or it is trivial, or it is both," as Batchelor sums up. An example of such prejudice can be seen in Grammaire des arts du dessin, published in 1867 and written by Charles Blanc, critic, color theorist, and Director of the Arts in France: "The union of design and colour is necessary to beget painting just as is the union of man and woman to beget mankind, but design must maintain its preponderance over colour. Otherwise painting speeds its ruin: it will fall through colour just as man fell through Eve."  

In this passage Blanc adheres to Batchelor's theory in two ways: he associated color with a feminine body and emphasized color's subordination to the masculine discipline of design, and his reaction was typical of someone experiencing color

87 Batchelor, Chromophobia, 22.
88 Ibid., 23.
89 Ibid.
phobia. According to Batchelor, Blanc's reaction showed that he saw color as a constant "threat" that could be the "fall of culture" if allowed to go unchecked.

Vinzez Brinkmann: Pigment-Detecting Techniques

Art historian and conservator Vinzez Brinkmann has done extensive research on the issue of polychromy. Not only has he detected colors on the surfaces of ancient sculpture in his role as a conservator, he also developed an exhibition that included plaster casts, which duplicated the original pigment of ancient statues. He believes that since classical sculptures and temples gained their intended effect through the use of color, the lack of information on this subject has hindered art historians and general viewers' understanding of them. Because of this absence, artists inspired by classical sculpture, such as Renaissance sculptors, have depicted incorrect imitations of Greek and Roman works.

Brinkmann's main contribution to the world of ancient polychromy was his development of pigment-detecting technological practices. His three main tools were microscopy, raking light, and UV florescence and reflection. A microscope can detect small amounts of color and determine the original hues of oxidized or dirt-ridden pigments on the surface of sculptures. Raking light, when

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90 Batchelor, *Chromophobia*, 23.
91 Ibid.
92 This exhibition, called *Gods in Color: Painted Sculpture of Classical Antiquity*, is described in full in the third chapter.
93 Brinkmann, "Research," 21.
shone from the side of a statue through a narrow aperture and in high concentration, can be used to determine small, incised lines, and reveal the relief left behind on the stone by weathered color. Brinkmann frequently used this method in the early 1980s, determining further evidence of lost pigment missed by microscopy. This method also allowed him to capture color traces in photographs. UV florescent and reflective light can illuminate color shadows, portraying polychromed areas that can be seen by the naked eye, but appear much sharper when looking at an ultraviolet photograph. The florescence of the marble, possibly caused by bioluminescence, or the glow of microorganisms and humic materials on the stone's surface, is a result of varying pollution density and surface erosion. This luminescence makes once painted areas of marble appear in ranging degrees of brightness. With the use of UV reflectance photography, a supplement to ultraviolet florescence, the ghost of pigmentation can be revealed.

In evaluating the findings of each of these pigment detection methods Brinkmann was able to determine the exact formation of polychrome decoration manifested in ornamentation and painted garments, as well as the stylistic relationship between ancient painters and sculptors. By analyzing an object in terms of style, date, and iconography, Brinkmann concluded that the painted details allowed for new interpretations of ancient sculptures.

95 Brinkmann, "Polychromy," 23.
97 Brinkmann, "Polychromy," 23.
98 Ibid. Unfortunately he does not give an example in this particular essay of how he used this technique specifically; however his plaster recreations in the Gods in Color exhibition, discussed below, show the outcome of his scientific investigations.
Mark Abbe, Leon Levy Foundation Fellow and scholar at the MMA from 2005 to 2011, has comprehensively researched polychromy in the ancient world, specifically on Roman sculpture. Some of his most recent research has been to detected pigmentation on Roman marble copies of Greek originals, such as the Roman replica of the *South Slope Head* (fig. 19) from the mid- to late first century C.E., which copies an original Greek sculpture from the late fourth or early third century B.C.E. in the National Archaeological Museum in Athens.99 This Roman head is a part of the MMA's permanent collection and was noted in 1954 to have remnants of red in the hair, eyes, and corners of the mouth.100 It should be noted that although this figure is on display at the museum, its label, the audio guide, and the guided tours do not mention its color remnants.

In Abbe's analysis of the head, he states that, among all the existing copies of the *South Slope Head*, the MMA's sculpture "highest-quality replica of the group and the only example reported to preserve ancient polychromy."101 Abbe described the carving techniques as "loosely modeled with a flat chisel and rasp in an imprecise planar manner with little three-dimensional depth," with "no internal definition except for a number of small incisions made with the edge of the chisel."102 This irregularity created by a rough area provided the perfect surface

100 Ibid.
101 Ibid.
102 Ibid., 18-19.
for the application of polychromy. Further evidence is the contrast of these inexact surfaces to the meticulously worked and polished facial features.\textsuperscript{103}

Abbe not only used naked eye observations, but also examined the surface of the marble with a microscope. Under a 200x magnification, Abbe found that the replica also had remnants of metallic gilding, along with the red pigment.\textsuperscript{104}

Through continuing investigation, Abbe discovered the order in which pigment was applied to the surface of the head. He states that a "yellow-ocher pigment" was first applied to the surface of the marble throughout the hair. This was used to prepare the marble surface for gold leaf, which is seen in patches in the hair. The fillets were then painted with the red pigment that left behind visible traces. Some of the gold leafed regions also retain red pigmentation, which seems to reside on top of the metallic material. Abbe's conclusion is that the red pigment is an indication of some sort of ancient "overglazing" technique on the gilding.\textsuperscript{105} This overglazing was used to create deep shadows, producing a more dynamic and lifelike surface than the shallow carving allows. The gilding also seems to separate individual strands of hair, creating an even more detail-oriented work of art. Although this technique was subtle, it would have drastically changed the character of this sculptural fragment.\textsuperscript{106}

Abbe also found some pigmentation on the finely crafted facial features although they are even fainter and more ambiguous than the remnants left in the hair. The eyes and mouth also retain the red coloring seen in the hair. Under high

\textsuperscript{103} Abbe, "'South Slope Head,'" 20.
\textsuperscript{104} Ibid.
\textsuperscript{105} Ibid., 20-21.
\textsuperscript{106} Ibid., 21.
magnification these areas do not show any other coloration. Abbe believes that here the red polychromy is a form of underpainting, but because no other pigmentation exists it is impossible to determine whether the flesh was colored more extensively. The polished surface of the face may also indicate that the Roman sculptor utilized the translucence of the original marble, and only hinted at a skin tone with a light pigment.107

The combination of gold and polished flesh indicated a particular Roman sculptural style called chryselephantine, which was usually used to depict images of the gods and was meant to invoke a feeling of epiphany in a viewer.108 Without the polychromy of these types of sculptural models, however, these statues would not have had the same impact on Roman citizens in the first century C.E., indicating that color was an essential part of the experience that statues were meant to convey.

Summary

With these testaments to the existence of polychromy in the ancient world, either through naked eye observations, studies of ancient texts, and/or scientific methods, modern museums should no longer ignore the fact that Greek and Roman sculptures were originally painted. However, as seen in the next chapter’s case studies on the MMA and MFA, this disregard for ancient polychromatic history continues in some revered American museums.

107 Abbe, "'South Slope Head,'" 21-22.
108 Ibid., 22.
Chapter 3

Museum Practices and Exhibitions

The MMA and the MFA are two museums that generally ignore the remnants of color on many of their sculptures. This suggests their adherence to the traditional preference of white marble ancient sculptures, despite the MMA's background of polychromatic investigation and the MFA's history of polychrome exhibitions. In the next chapter this thesis will review and analyze the current display practices in the Greek and Roman sculpture galleries at the MMA and MFA.

The Metropolitan Museum of Art

The MMA's extensive collection of Greek and Roman sculpture spans almost 800 years. The Mary and Michael Jaharis Gallery (fig. 20) and the Leon Levy and Shelby White Court (fig. 21) contain the highlights, which range from the sixth century B.C.E. to the second century C.E. While the original Greek works have a brown-reddish tint, making them look soiled to the naked eye, but providing evidence that they were once painted, the Roman marbles tend to be white and smooth. This is possibly due to the subtle painting styles perfected by Roman artists in the first century C.E., often only adding pigment to hair, eyes, and lips, which was removed through vigorous cleaning in the Renaissance era.110

109 Examples of each are noted later in this section.
It should be noted that the polychromatic investigation of Roman copies of Greek originals is ongoing and little can be said on the topic as of yet.\textsuperscript{111} In the early twentieth century the museum's staff made the decision to restore the sculptures. Therefore, many of them have modern plaster additions in the forms of legs, torsos, arms, etc.; these are noted in grey on the object labels (fig. 22).

There is no mention of polychromy in these two key sculpture galleries. Even the accompanying audio guide and gallery talks lack information about the original color.\textsuperscript{112} The only time the MMA addresses the issue of color on this floor is in the side galleries surrounding the main Jaharis gallery collection: through brief wall labels, like with the fifth century B.C.E. limestone Amathus Sarcophagus (figs. 23, 24, 25, & 26), mentioned later in this chapter; in the audio guide, which mentions that the Marble statue of a kourus (fig. 27) from 590-580 B.C.E. was originally painted, but does not give any further details; and in the gallery tours, where the tour guide was very reluctant to give more information on the issue of color display in the Greek and Roman galleries.\textsuperscript{113} According to Joan Mertens, current Curator of Greek and Roman Art at the MMA, "The Greek and Roman Department takes great interest in questions concerning the polychromy on its sculpture. The research has advanced extremely quickly in recent years; when our galleries were beginning to be renovated in the 1990s,

\textsuperscript{111} Art historian Clarissa Blume, with her research on the Hera of Pergamon, will be the first to develop concrete results on this topic. However, the study of the striding Diana of Pompeii, a copy of an Archaic Greek kore figure by a Roman sculptor, by Brinkmann, Ulrike Koch-Brinkmann, and Henrich Peining, has revealed that the robes worn by this figure are decorated in a contemporary late Hellenistic, early Imperial Roman painting style.

\textsuperscript{112} Guided tour, Metropolitan Museum of Art, March 20, 2011; audio guide Metropolitan Museum of Art, March 9, 2011.

\textsuperscript{113} She passed it off as the "curator's choice" to exclude color information on most pieces.
much less information was available."\textsuperscript{114} However, the array of scholarly research shows that even without the use of today's technology, as with Richter's investigations, it is obvious that ancient sculpture was painted. The MMA's decision not to pursue the issue of polychromy appears at odds with their mission "to collect, preserve, study, exhibit, and stimulate appreciation for and advance knowledge of works of art that collectively represent the broadest spectrum of human achievement at the highest level of quality, all in the service of the public..."\textsuperscript{115} It does not serve the public to mostly ignore a principle part of history.

In the 1990s, the MMA began an investigation into restoration practices of the early 1900s, which was recounted by art historian Dorothy Abramitis. Through this study, the museum's staff recognized that all restorations demonstrate conscious choices on the part of the museum.\textsuperscript{116} The opening of the newly renovated Greek and Roman galleries presented the museum with an opportunity to assess the conditions, structural states, and visual veracity of ancient works that had previously been restored.\textsuperscript{117} Decisions to alter restored or cleaned works were carefully considered not only due to the fact that many restorative efforts were necessary for structural support, but also because, according to Abramitis, these restorations were considered to have historical

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\textsuperscript{114} Meghan Combs, email message to Joan Mertens, Curator of Greek and Roman Art at the Metropolitan Museum of Art, May 13, 2011.
\textsuperscript{117} Ibid.
\end{flushright}
value. Ultimately, it was agreed that the audience should experience the original ancient surface, without the presence of "speculative restorations." This article demonstrated that the MMA was concerned with the truthful appearance of their ancient sculptures, yet the exploration of the works' undeniable polychromatic pasts was neither considered nor included.

Even though the MMA fails to address the use of color in the more frequently visited Jaharis and Levy-White galleries, they do not ignore it completely. In an essay written in 2001, conservator Elizabeth Hendrix discusses the polychromatic investigation and restoration of the fifth century B.C.E., limestone *Amathus Sarcophagus* (figs. 23, 24, 25, & 26) from 1999 to 2000. This piece is located on the second floor of the Greek and Roman galleries in the Archaic Cypriot gallery, and dates from the second quarter of the fifth century B.C.E. As the room's focal point, this work draws viewers' attention not only because of its central placement and size, but also because of its accompanying wall text (figs. 28, 29, 30, 31). After Hendrix and her team cleaned the surface of the piece, they revealed the extensive pigments used to create lifelike images on the work. The wall labels concentrate on this discovery and a description of its scenes. Because of the obvious remains of paint on the sculpture, the museum illustrated the sides of the sarcophagus "based on traces of pigment that have been

118 Abramitis, "Statue of an Old Woman," 35.
119 Ibid.
120 Standing in the Archaic Cypriot gallery for an hour I noticed most people go straight towards the sarcophagus.
identified." Hendrix states that this restoration would allow the museum to better understand the sarcophagus overall. The wall text includes a key that lists the different colors used on the sarcophagus, such as Egyptian blue, azurite blue, terre verte green, cinnabar red, and the original limestone (fig. 32). Besides entirely reconstructing the piece, the color drawings give the visitor a clear idea of the sarcophagus's original polychromatic state.

Hendrix and her team used scientific tools, housed by the museum, similar to those used by Brinkmann in his Gods in Color exhibition, described below. The identification process employed polarizing light microscopy, X-ray fluorescence spectroscopy, Fourier-transform infrared spectroscopy, X-ray diffraction, and energy dispersive X-ray spectrometry. Through these methods, Hendrix was able to identify with certainty the remaining pigments on the original stone.

This case study reveals that the MMA possesses and has knowledge of pigment detection equipment and practices, which they have used to uncover paint on archaic, limestone works of art that reside in their auxiliary Greek and Roman galleries. However, in witnessing the austere whiteness of the sculptures in the main Jaharis and White halls, it is obvious that this technology has yet to be

124 Polarizing light microscopy is the use of a microscope in conjunction with polarized light waves, which illuminate areas of carving more clearly. X-ray fluorescence spectroscopy is used to analyze elements or chemicals left on the stone and identify them as pigment. Fourier-transform infrared spectroscopy is a techniques used to obtain an infrared spectrum of a solid or liquid left behind on a sculpture's surface. X-ray diffraction is used to determine the structure of the microscopic grains in the stone and therefore measure the size, shape, and internal stress of small regions on the sculpture. Lastly, energy dispersive X-ray spectrometry is used to analyze the elemental and chemical characters of a sample of marble or limestone.
125 Hendrix, 49.
used on the classical Greek and Roman figures. The Boston MFA’s Greek and Roman galleries have a similar installation that also overlooks the polychromy of later Greek and Roman sculptures.

The Museum of Fine Arts, Boston

The MFA in Boston arranges its Greek and Roman galleries by era, beginning with their earliest ancient works on the first level and the later pieces on the second level. On level one of the Archaic Greek galleries, in the George D. and Margo Behrakis wing (figs. 33 & 34 in orange), there resides the one piece in which ancient polychromy is briefly mentioned: the *Sphinx from a grave monument* (fig. 35), from 535-530 B.C.E. The audio guide states, "Both the sphinx and its pedestal were originally painted. The pedestal still has traces of color," but does not elaborate on the piece further.\(^\text{126}\) However, this sculpture had been previously studied for its polychromatic remnants by George Chase, Curator of Classical Art at the MFA in the 1940s, and conservator William Young. In 1945 Chase wrote a small overview concerning this specific piece, stating that black pigments remained on the hair; blue, green, black, and red on the wing feathers; and red and green on the breast feathers, along with red and black on the capital itself.\(^\text{127}\) He also stated that "this use of simple colors applied in purely decorative fashion is in accord with the Greek practice in the Archaic period. It was only at a

\(^{126}\) Audio guide, Museum of Fine Arts in Boston, May 10, 2011.

much later time that a wider range of tones was employed and more realistic color
effects were attempted. But there can now be no doubt, in view of the evidence on
many monuments, that Greek statues and reliefs were brilliant with color." In
1946 he wrote another account, after the newly acquired work was put on display,
which went into further detail about the colored decoration. Although these
accounts are brief and do not compare to the extensive research of Attic
gravestones undertaken by Richter, they show that the MFA and the MMA have
similar histories: each once had a curator in the 1940s who did not deny the
polychromatic history of ancient Greece and each institution has since turned
away from displaying this practice.

In the first gallery on level one, most of the marble sculptures reside along
the back wall (fig. 36). The tinted surface of these marble pieces resemble those
of the MMA's collection; however, the walls of the gallery are painted black,
which detracts from the visibility of their remaining pigment and intensifies the
whiteness of the sculptural works. The wall labels, audio guide (excluding the
Sphinx mentioned above), and tour guides do not suggest the use of ancient
pigments that were once used to decorate these figures. On the second level of the
museum, the Greek galleries continue adjacent to the vast room with Roman art
and sculpture. The first gallery consists of Greek marble sculptures and Roman
copies of Greek bronzes, similar to the Jaharis gallery arrangement at the MMA.
The gallery's walls are painted white so that a visitor can see the slight color
variations in many of the sculptures (fig. 37). There are five original Greek

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129 Ibid., 4.
marbles within this gallery and many more Roman copies, none of whose accompanying wall labels mention polychromy. The audio guide focuses on construction and subject matter, avoiding the subject of color completely. The vast Roman art gallery seems to hold the focal points of the MFA's ancient collection, as it is the central area (fig. 34, gallery 213). The room contains marble sculptures, ranging from the earlier Imperial period, until the later fourth and fifth centuries. However, the tonal range is monochromatic, emphasizing the sculptures' forms rather than their painted history.

On the other side of the Roman gallery, the museum has a hallway consisting of Greek and Roman marble sculpture (fig. 38), ranging from the classical Greek period to the later Imperial Roman era. The hallway is painted black, the same as the first level gallery, again emphasizing the whiteness of the sculpture, such as the Head of a Woman (fig. 39), from the third to the second centuries B.C.E. However, some of the more monumental works in this hall are placed in such a fashion that the light makes the traces of color visible, such as with the Woman from a funerary naïskos (fig. 40), from 330-325 B.C.E. The sculpture's label describes it as reflecting the "Athenian fashion for extremely luxurious grave markers at the end of the fourth century B.C.;" however, it only discusses the use of the object as a decorative feature on a funerary monument and not the traces of polychromy.¹³⁰ According to the MFA's website, this kind of sculptural presentation is meant to show "the many approaches of Classical artists

¹³⁰ Museum Label for the Woman from a funerary naïskos, Boston, Museum of Fine Arts, 10, May, 2011.
to the human form." \(^{131}\) It also states that "the statues in this gallery embody the idealized beauty for which Greek and Roman art is known." \(^{132}\) The continuing belief that unpainted sculptures were an aspect of the ideal form according to ancient artists demonstrates the depth of polychromatic repudiation in museum practice.

The audio guide for this section of the museum also reflects the institution's disregard for the color of the ancient world. As previously stated, the only object where the audio guide mentions color is the Sphinx (fig. 35), and it is otherwise scant in its discussion of color as well as its inclusion of ancient Greek works in general, concentrating instead on Imperial Rome. In the Archaic Greek gallery on the first level, only the Sphinx (fig. 35) and the Grave stele of a mounted warrior (fig. 41), from 490-480 B.C.E., are referenced in the audio tour. In the Greek gallery on the second level, only the Three-sided relief (fig. 42), from 470-440 B.C.E., and the Grave marker in the form of an oil bottle (lekythos) (fig. 43), from 390-380 B.C.E., are mentioned. None of the sculptures in the Greek and Roman hall on the second level are discussed in the audio tour. \(^{133}\)

Although these cases are disheartening, the MMA and MFA do not represent the standard practice of museums. The travelling exhibition Gods in Color: Painted Sculpture of Classical Antiquity that originated in at the Ny Carlsberg Glyptotek in Copenhagen, and the temporary exhibition, The Color of Life: Polychromy in Sculpture from Antiquity to the Present, at the J. Paul Getty

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\(^{132}\) Ibid.

\(^{133}\) Audio guide, Museum of Fine Arts in Boston, May 10, 2011.
Museum in Los Angeles are examples of instances in which museums embraced the history of painted Greek and Roman sculpture and recreated the polychromy of the ancient world.

Exhibition: *Gods in Color: Painted Sculpture of Classical Antiquity*

The array of past research and documentation about painted stone, bronze, ivory, and gold sculpture undermines the traditional notion that white marble and purity of form were typical characteristics of classical antiquity. Archaeological and scientific observations point in the same direction, providing art historians with enough information to create believable reconstructions of the colored ancient sculpture. The exhibition *Gods in Color: Painted Sculpture of Classical Antiquity*, curated by Vinzez Brinkmann and Raimund Wünsche, recreated intensely colored plaster casts of Greek and Roman sculpture. The show began in the Munich Glyptothek in Germany in 2003, where it remained until 2004, and came to the United States through the Arthur M. Sackler Museum, part of the Harvard University Art Museums, in 2007.¹³⁴

The idea for this exhibit arose in 1981, when an abundance of scientific evidence was found by Volkmar von Graeve's research program at the Ludwig

Maximilian University in Munich, Germany, which concentrated on tracing color in ancient sculpture.\textsuperscript{135} Through their discoveries, the exploration of detecting polychromy through scientific means began in full. Art historians no longer had to rely on the primitive method of detecting color through historical texts, Roman paintings, and naked eye observations. In 2005, the Stiftung Archäologie was organized in Germany to promote further archeological and art historical research pertaining to discovering color on ancient sculpture.\textsuperscript{136} Although Brinkmann and Wünsche attempted to recreate full-scale models that represented the original color of statues from Attic Greece to the early Roman period, the reconstructed colors were not exact because of the extent of pigment loss, which made it impossible to concretely identify individual hues. However, through this exhibition and further investigation using a scientific approach, they hoped to obtain a clearer view of the colors of the ancient world.\textsuperscript{137}

The exhibition, containing 20 colored casts and 35 original statues, not only focused on conveying the aesthetic of the ancient world, with plaster recreations ranging from Archaic Greece, the early Classical period, and Imperial Rome, but also the scientific means by which these tinted figures were discovered and reconstructed. Through his pigment detecting methods, described in chapter two, Brinkmann was able to find absent colors on 20 sculptures within the exhibition and create casts with an accurate portrayal of original polychromy. Such casts included the \textit{Peplos Kore} (fig. 44 & 45) from 520 B.C.E., the \textit{Archer}.

\textsuperscript{136} Ibid.
\textsuperscript{137} Ibid.
'Paris' (fig. 46 & 47) from the Aphaia Temple in Aegina, from 480-90 B.C.E., the 
Cuirass-Torso (fig. 48) from the Athenian Acropolis, from 470 B.C.E., the 
Alexander Sarcophagus (fig. 49 & 50) from 320 B.C.E., the Head of a Boy with 
Victor's Fillet (fig. 51) from 20 C.E., and the Head of Emperor Caligula (fig. 10) 
from 37-41 C.E.\textsuperscript{138}

This exhibition and its main theme of uncovering polychromy have been 
received with awe and shock. One reviewer, Eti Bonn-Muller, wrote an article in 
Archaeology on this "groundbreaking" exhibition.\textsuperscript{139} Bonn-Muller stated that the 
color of these works made her focus on different aspects of the sculptures rather 
than the original white stone. She noticed individual facial features, such as curled 
hair, expressive eyes, and voluptuous lips, instead of the vacant, severe gaze many 
ancient figures possess. The addition of color made the works more human and 
alive and not as ideal and otherworldly as they appear when white.\textsuperscript{140}

In the exhibition's catalog, Brinkmann states, "Since the artistic works 
achieved their real and intended effect by means of coloring, this also means a 
serious loss in understanding them."\textsuperscript{141} Brinkmann and Wünsche envisioned ideas 
that had been stated by Richter almost seventy years previously, especially that by 
displaying ancient works as they truly appeared, a more complete picture of 
ancient culture is revealed.\textsuperscript{142}

\textsuperscript{138} These specific sculptures' analyses were sustained by the Stiftung Archäologie, mentioned 
above, which is why they were chosen for this exhibition. 
\textsuperscript{139} Eti Bonn-Muller, "Carved in Living Color," Archaeology 61, no. 1 (2008), accessed March 3, 
\textsuperscript{140} Ibid. 
\textsuperscript{141} Brinkmann, "Research," 21. 
\textsuperscript{142} Ibid.
Brinkmann and Wünsche were not the only curators to present an innovative exhibition about color. The Getty Museum organized an exhibition called *The Color of Life: Polychromy in Sculpture from Antiquity to the Present* from March 6 to June 23, 2008, curated by Roberta Panzanelli, Senior Research Specialist at the Getty Research Institute; Kenneth Lapatin, Associate Curator of Antiquities; and Eike Schmidt, Associate Curator of Sculpture and Decorative Arts. The show included polychromatic information on ancient and European sculptures spanning four millennia, showing their lifelike quality created by colored hair, skin, and eyes, and producing an aesthetic not often associated with sculpture, especially classical. The recreations of ancient statues also showed the pigments used on clothing, skin, or other areas of the works that differentiate between royal and divine figures. Within the context of the Getty Villa, a reconstructed Roman villa with painted decorations, the classical sculptures portrayed the polychromatic style of the Greek and Roman world.143

This exhibition borrowed some figures from Brinkmann and Wünsche's *Gods in Color* show (which ended the previous year), such as the *Head of Emperor Caligula* (fig. 10) and its colored cast. Lapatin said that although the surface of the bust seemed weathered, traces of paint could still be seen, like reds on the flesh, black in the hair, and yellow on the nose.144 He also stated that "the

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143 Panzanelli, et al., *Color of Life*, xi.
ancients would have considered a white marble statue unfinished… these statues were lifelike and they were intended to represent an absent person or god, and so color was an incredibly important part of their composition.¹⁴⁵ Other sculptures used in this exhibition also displayed obvious traces of color used by the ancient Greeks. *Head of a Greek God* (fig. 52) from 325 B.C.E., a piece from the Getty's permanent collection, shows traces of red paint on the hair, pink on the face and lips, and blue on the figure's stylized beard. The use of unnatural colors suggests that this figure was otherworldly and most likely the god Zeus, who was often referred to as "blue bearded" in poems by Homer.¹⁴⁶ The exhibition also displayed works from various countries, mediums, and time periods in Europe, combating the view that colored sculptures tended to be "gaudy," and tracing the history of polychromy from the Medieval period through the Renaissance and up into the modern day.¹⁴⁷

This exhibition was greatly appreciated by the public and the media in an adulatory review written by Holly Myers, journalist at the *Los Angeles Times*. Myers stated that the history of polychromy had been rejected for centuries, even though mounting evidence, beginning in the nineteenth century, strongly pointed to the existence of color on ancient sculptures. The exhibition at the Getty, however, brought this issue to the public eye and created a "valiant and persuasive case" for the existence of polychromy in ancient art.¹⁴⁸ Although the space was

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relatively limited for the expanse of artwork, ranging from the fourth century B.C.E. to 2002, the objects, according to Myers, were so "exquisite" that the room size went mostly unnoticed.\footnote{Myers, "Classical Art's True Colors," 121.}

This exhibition accomplished the same goal as Brinkmann and Wünsche's *Gods in Color* through its display of ancient Greek and Roman art in its original painted form and in its historical context. By extending the investigation and drawing attention to masterfully painted sculptures throughout the centuries, the Getty has also pointed out the importance of polychromy in the long history of art.

**Summary**

With this chapter’s analyses, it can be seen that the MMA and MFA often neglect the historical polychromy of many of their well-known sculptures. The Glyptothek and Getty exhibitions are excellent examples of how these institutions could alter their practices. If the MMA and MFA were to create similar exhibitions to those of Brinkmann and Wünsche and the Getty, they would be able to correct their current refusal to acknowledge Greek and Roman polychromy. By concentrating on their Greek and Roman statues, which would most likely have the greatest influence on visitor emotions when seen in bright colors, they could not only attract a large crowd of curious museum goers, but also shed light on an ignored portion of art history.
Chapter 4

Exhibition of the MMA’s Polychromatic Permanent Collection

One way the MMA could call attention to the colorful ancient world, avoid the loss of relevant historical information, and fulfill its mission would be to create an exhibition similar to Brinkmann and Wünsche’s *Gods in Color* and the Getty Museum’s *The Color of Life*. Through this exhibition, the museum's art historians and conservators could study the remnants of color on their own Greek and Roman sculptures using the technology employed by Brinkmann and Wünsche and exhibit the actual vision of ancient artists. They could also keep the reconstructed painted copies of ancient works created for this exhibition and display them in the permanent collection galleries alongside their originals, which in turn would preserve the knowledge of ancient Greek and Roman polychromy. By creating a special exhibition, in Gallery 199 off the Bothmer Gallery II (fig. 53) and displaying the rich color of the classical world, the MMA would pay homage to the rightful history of Greek and Roman sculpture and thus achieve the ideals expressed in their mission statement.

The Exhibition

For the show, Gallery 199 would be split into four different rooms using the movable walls available within the space (fig. 54). To begin the exhibition, an introductory text would be placed on the right-hand wall upon entering the
gallery. To prepare the viewer for the shock of seeing well-known monochromatic works brightly decorated, the wall text would reflect the colors of ancient times, with the background in a deep red and the text a bright gold (fig. 55). Next to the introductory text the visitor would encounter two small amphorae (figs. 56 & 57), introducing the viewer to the colors of ancient Greece. The first gallery would contain six ancient Greek amphorae and kraters ranging from the eighth to the fourth centuries B.C.E., such as the two Terracotta Kraters (fig. 58 & 59) from the eighth century B.C.E. These storage jars would display the types of decorative styles used by the ancient Greeks and give visitors a historical context in which to place colored ancient works, preparing them for the imminent shock of color as they enter the next gallery.

In the next gallery, the viewer would see Greek marbles from the Mary and Michael Jaharis Gallery (fig. 20). As a transitional piece, the South Italian Wall Painting (fig. 60), from the mid-fourth century B.C.E., which has retained its polychromy, would be displayed on the wall upon entering the second gallery. Next to this piece the gallery introductory label, in the same style as the exhibition introductory text, would state that due to the practice of Renaissance artists, who recreated ancient works found without their original coloring, a general misconception has arisen that Greek and Roman sculptures' quintessential quality is their monochromatic nature. Next, in the same gallery, the exhibition of Greek statuary would begin with the original sculpture on one wall and its color copy opposite. The room would begin with the Marble statue of a woman (fig. 61), from the 2nd half of the fourth century B.C.E.; the Marble statue of a woman (fig.
62), from the late fourth century B.C.E.; the *Marble and limestone statue of an attendant* (fig. 63) from the late fourth or third century B.C.E., and their colored casts. Flanking the doorway exiting this gallery would be the *Marble akroterion* (fig. 64), from 350-325 B.C.E., and its colored plaster cast. By placing the original sculptures and polychromatic casts against separate walls within the gallery, the visitor would experience the difference between the typical aesthetic of Greek sculpture today and the colored pieces that existed in ancient times. The text within the Greek and Roman figural sculpture galleries would be sparse, going against MMA tradition, leaving the viewer to see rather than read about the color of ancient Greece and Rome. Besides the introductory text, the only information given by the figures' wall labels would be a few details on the depicted subject, leaving the polychromatic history to the audio guide and videos present in the gallery space.

The area outside the small room next to the second gallery would have a wall label describing how the pigments on the sculptures were discovered, what paints were used then and now, and what kinds of colors the Greeks and Romans preferred. Inside this small room there would be videos showing the different color detection processes, such as microscopy, raking light, and UV fluorescence and reflection. There would also be informative videos depicting the recreation of the colored sculptures, starting with artists creating the casts and the painting process. With these videos visitors would see the scientific evidence that points to color on ancient Greek and Roman statuary.
In the third gallery, the show would continue with color recreations of Roman marbles from the Leon Levy and Shelby White Court (fig. 21). The introductory text would be on the right side of the entrance to the gallery. This room would have the same composition as the Greek gallery, with the marble originals against one wall and their color counterparts across the room. The sculptures in this gallery would be the *Marble Statue of a Youthful Hercules* (fig. 65), from 68-98 C.E., the *Marble Statue of a Bearded Hercules* (fig. 66), from 68-98 C.E., and the *Marble Statue of Dionysus leaning on an archaistic female figure* (fig. 67), from 27 B.C.E.-68 C.E. Because of their size and position these statues dominate the Levy-White Court and would therefore presumably have the largest impact when seen recreated with polychromy. On either side of the entrance leading out of the gallery would be the *Marble fragment of the Great Eleusinian Relief* (fig. 68), from 27 B.C.E.-14 C.E., and its color cast. The wall text would also be limited in this room, carrying over the theme from the Greek sculpture gallery.

An audio guide, providing specific information on each of the original and reconstructed pieces, would accompany the exhibition. Its content would focus on the style of painting, colors, and techniques used in the original pieces. A curator would introduce each work along with experts discussing the technical aspect of finding the pigments and recreating the sculptures. This way, the visitor would be able to look at the colored piece and listen to a description, rather than averting their eyes to a wall label. Offering the audio guide free during the exhibition would ensure that visitors fully experience polychromatic ancient art.
By displaying the museum's permanent Greek and Roman sculptural collection along with their colored counterparts and retaining the plaster casts, this exhibition would allow the MMA to explore and demonstrate the aesthetic of ancient Greece and Rome and eliminate the white, monochromatic appearance often associated with classical sculpture.
Conclusion

After considering each of the themes and analyses embarked upon in the chapters above, it is evident that the rejection of an ancient Greek and Roman polychromatic history creates an erroneous alternative aesthetic associated with the classical style. The examination of important Greek and Roman texts, which mentioned the colorful statues of the ancient past, and the analysis of ancient painting techniques showed that sculpture painting was an integral part of ancient Greek and Roman art. The changes in these styles through the Middle Ages undoubtedly led to the lack of acknowledgment of an ancient polychromatic past that existed in the Renaissance and persisted into the twentieth century.

Evaluating the practices of curator Gisela Richter and conservator Lindsley F. Hall from the 1940s illustrated that polychromy detection was possible, even in the early twentieth century. The rejection of color by Western society, expounded upon by David Batchelor, indicated that the modern day view of white polished marble in conjunction with classical statuary is a difficult perspective to overturn. The scientific pigment detecting techniques, perfected by Vinzez Brinkmann and utilized by Mark Abbe, demonstrated that polychromy can concretely and scientifically be identified on ancient sculptures, making it impossible to ignore.

The Metropolitan Museum of Art and the Museum of Fine Arts in Boston both exclude color associated with their classical-style sculptures, seen in the center of their Greek and Roman sculpture collection. Comparing their practices
to exhibitions and institutions that purposefully incorporated historical Greek and Roman polychromy confirmed that these renowned museums are perpetuating an aesthetic established in the Renaissance, which is not in keeping with their mission statements and also negates an important aspect of history. Suggesting a special exhibition, specifically designed for the MMA, not only reveals the inaccuracies and misrepresentation inherent in the MMA and MFA's Greek and Roman galleries, but also provides a detailed solution to the problem. By correcting these mistaken practices, the MMA and MFA will present a more accurate understanding of the ancient past.
Fig. 1: Parthenon Pediment cast, colored. Original: 447-433 B.C.E., marble.

Fig. 2: The Laocoön group, 130-20 B.C.E., marble.
Fig. 3: The Parthenon
Acropolis, Athens, 447-433
B.C.E.

Fig. 4: Parthenon, South
Metope, computer generated
image.
Fig. 5: *Ideal View of Athens*, Leo von Klenze, 1846.

Fig. 6: Woman Painting a Herm of Priapus, House of Surgeon, Pompeii, 55-79 C.E., fresco.
Fig. 7: *Venus Lovatelli*, Pompeii, 1st century C.E., marble.

Fig. 8: *Augustus of Prima Porta* and colored cast. Original: 20 B.C.E., Parian marble.
Fig. 9: *Hall of Pediment*, Via di San Gregorio, mid-second century B.C.E., marble.

Fig. 10: *Head of Emperor Caligula*, colored plaster cast and original. Original: 39-41 C.E., marble.
Fig. 11: *Zeus* at Olympia, Phidias, 432 B.C.E., marble.

Fig. 12: *Tinted Venus*, John Gibson, 1851-56, marble and polychromy.
Fig. 13: *Venus Gentrix*, Praxiteles, 46 B.C.E., marble.

Fig. 14: *Hermes*, 4th century B.C.E., marble.
Fig. 15: *Woman in White*, Pablo Picasso, 1923, oil on canvas.

Fig. 16: *Bust of a Woman, Arms Raised*, Pablo Picasso, 1922, oil on canvas.
Fig. 17: *Porch of the Maidens at the Erechtheion*, Parthenon Acropolis, 421-395 B.C.E.

Fig. 18: *Gravestone of a Warrior* (detail), 535-525 B.C.E., limestone.
Fig. 19: South Slope Head, Roman replica, 14-68 C.E., marble.

Fig. 20: Mary and Michael Jaharis Gallery in the center, with surrounding Greek galleries, at the Metropolitan Museum of Art.
Fig. 21: Leon Levy and Shelby White Sculpture Court in the center, with surrounding Roman galleries, Metropolitan Museum of Art.

Fig. 22: Modern plaster additions are noted in grey on the object labels.
Fig. 23: *Amathus Sarcophagus*, Archaic Greek Cypriot, 2nd quarter of the fifth century B.C.E.

Fig. 24: *Amathus Sarcophagus*, Archaic Greek Cypriot, 2nd quarter of the fifth century B.C.E.
Fig. 25: *Amathus Sarcophagus*, Archaic Greek Cypriot, 2nd quarter of the fifth century B.C.E.

Fig. 26: *Amathus Sarcophagus*, Archaic Greek Cypriot, 2nd quarter of the fifth century B.C.E.
Fig. 27: *Marble Statue of a Kourus*, Greek, Attic, 590-80 B.C.E., marble.

Fig. 28: *Amathus Sarcophagus*, color recreation.
Fig. 29: *Amathus Sarcophagus*, color recreation.

Fig. 30: *Amathus Sarcophagus*, color recreation.
Fig. 31: Amathus Sarcophagus, color recreation.

Fig. 32: Amathus Sarcophagus, color key.

Reconstruction drawing of the original polychromy on the Amathus sarcophagus

The reconstruction is based on traces of pigment that have been identified. There may have been additional decoration, on the lid for example, but no remains have been found.

Key:  
- Egyptian blue
- Azurite blue
- Terre Verte green
- Cinnabar red
- Limestone
Fig. 33: George D. and Margo Behrakis wing, level 1, Museum of Fine Arts, Boston.

Fig. 34: George D. and Margo Behrakis wing, level 2, Museum of Fine Arts, Boston.
Fig. 35: *Sphinx from a grave monument*, Archaic Greece, 535-530 B.C.E., marble.

Fig. 36: First gallery, George D. and Margo Behrakis wing, level 1, Museum of Fine Arts, Boston.
Fig. 37: First Greek gallery, George D. and Margo Behrakis wing, level 2, Museum of Fine Arts, Boston.

Fig. 38: Greek and Roman sculpture hallway, George D. and Margo Behrakis wing, level 2, Museum of Fine Arts, Boston.
Fig. 39: Head of a Woman, 3rd-2nd centuries B.C.E., marble.

Fig. 40: Woman from a funerary naiskos, 330-325 B.C.E., marble.
Fig. 41: Grave stele of a mounted warrior, 490-480 B.C.E., marble.

Fig. 42: Three-sided relief, 470-440 B.C.E., marble.
Fig. 43: *Grave marker in the form of an oil bottle (lekythos)*, from 390-380 B.C.E., marble.

Fig. 44: *Peplos Kore*, 520 B.C.E., marble.
Fig. 45: *Peplos Kore*, colored casts.

Fig. 46: *Archer 'Paris,'* from the Aphaia Temple in Aegina, 480-90 B.C.E., marble.
Fig. 47: Archer ‘Paris,’ colored cast.

Fig. 48: Cuirass-Torso colored cast and original. Original: from the Athenian Acropolis, 470 B.C.E., marble.
Fig. 49: *Alexander Sarcophagus*, 320 B.C.E., marble.

Fig. 50: *Alexander Sarcophagus*, colored cast.

Fig. 51: *Head of a Boy with Victor's Fillet*, color copy. Original: 20 C.E., bronze.
Fig. 52: Head of a Greek God, 325 B.C.E., marble.

Fig. 53: Special Exhibition Gallery 199, Metropolitan Museum of Art, New York.
Fig. 54: Mock gallery layout.

Fig. 55: Mock introductory label.
Fig. 56: Terracotta column-krater, 360-350 B.C.E.

Fig. 57: Terracotta loutrophorous 4th cent. B.C.E.
Fig. 58: *Terracotta Krater*, 8th century B.C.E.

Fig. 59: *Terracotta Krater*, 8th century B.C.E.
Fig. 60: *South Italian Wall Painting*, mid-4th century B.C.E.

Fig. 61: *Marble statue of a woman*, second half of the 4th century B.C.E.
Fig. 62: Marble statue of a woman, late 4th century B.C.E.

Fig. 63: Marble and limestone statue of an attendant, late 4th or 3rd century B.C.E.
Fig. 64: Marble akroterion, 350-325 B.C.E.

Fig. 65: Marble Statue of a Youthful Hercules, 68-98 C.E.
Fig. 66: *Marble Statue of a Bearded Hercules*, 68-98 C.E.

Fig. 67: *Marble Statue of Dionysus leaning on an archaic female figure*, 27 B.C.E.-68 C.E.
Fig. 68: *Marble fragment of the Great Eleusinian Relief*, 27 B.C.E.-14 C.E.
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