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The Embodiment of Color in Ancient Mediterranean Art

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Abstract

The Embodiment of Color in Ancient Mediterranean Art
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The polychromy of ancient Mediterranean art is an issue with which scholars have grappled for centuries. The fugitive nature of many pigments coupled with a classicizing taste for the stripped antique fragment have contributed to a fictional narrative that contradicts the material and textual records, a narrative of art and culture executed in half-tones. In *The Embodiment of Color in Ancient Mediterranean Art*, I argue that color is a material phenomenon that forms bodies, structures vision and shapes a beholder's experience of the built and natural environment. In presenting this argument, I pursue four lines of inquiry: the role of replication in separating color and form, the material significance of color in the formation of sculpture; the relationship of inlaid eyes to ancient Greek theories of vision; the use of color on architectural relief. In each of these chapters I situate Greek artistic practice within the context of the wider Mediterranean world, for which ancient polychromy has always been less controversial. I focus on the abundance of color still present in the material record, as well as recent discoveries in conservation, to demonstrate that color was not, as is often argued, applied in the pursuit of lifelikeness, but served as a vehicle for philosophical and aesthetic investigations about bodily experience. I argue for the active role of material polychromy in structuring ancient Mediterranean conceptions of figural and living bodies.

In Chapter One, "Color, Form, and Replication," I examine how something so integral to visual experience as color has come to be so suppressed in the historiography of the ancient Mediterranean. Most historiographies explain the absence of color as primarily the result of natural decay. I show, however, that technologies for replicating images, such as plaques and glyptic arts, as well as Roman emulations of Greek sculpture produced using moulds, and later prints and black and white photographs all replicate an object's formal characteristics without replicating its polychromy. Replications select against color and begin the process of wresting color from form, a process that is active from the moment a polychrome image comes into being.

Color in the ancient Mediterranean world was thought to inhere in materials so that form remained inseparable from color. In Chapter Two, "Color, Materiality and Corporeality," I argue that sculptures formed from colored materials, such as the Zeus and Ganymede from Olympia, depend on colors for a portion of their affect and legibility. Textual sources, such as Homeric poetry and Sappho, deploy material terms as color words. Accepting the matieriality of color in the ancient Mediterranean exposes the abundance of polychromy in ancient texts and on ancient objects.

In Chapter Three, "Inlaid Eyes, Color, and Visuality," I explore the philosophical investigations into color and vision by the early atomists, Plato and Aristotle, who theorize colors and visual apprehension as produced through the recombination of atoms. Artists produced complex inlaid eyes, such as those on bronzes from the Riace Marina,

not for verisimilitude, but to work through how visual processes took place. In these eyes the interstices are as important as the pieces between which they lie, acting as pores through which colors (as atoms) of the visible world may enter the body. These sculptural bodies show their beholders how the act of beholding unfolds.

I then turn in Chapter Four, "Color, Architecture, and Space," to the beholding body in space. Using the particular examples of the Ishtar Gate complex at Babylon and the Siphnian Treasury at Delphi, I argue that the use of color on relief could be an explicit means of destabilizing distinctions between the natural environment and architecture standing in it. Through this destabilization, artists returned the built and natural environments to greater alignment, emphasizing the earth-born sources of the materials used for man-made structures.

I examine the juxtaposition of colored stones in mosaic, an artistic practice which makes manifest the fragmented mechanics of vision. It is perhaps the medium's explicitness that has led to its devaluation in later hierarchies of artistic media, for an image laid out in tesserae mirrors the beholder's own fragmented nature. In beholding mosaics, one comes to know, not just the particular image, but also an image of the assembled matter of the visible world. In matter, vision and space, colors—as atom, stroke, or colored stone—mark the pieced-togetherness of being.

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List of Figures:

Flagrant polychrome adorns the classicizing sculptures which figure in Jean-Luc Godard's film, *Le Mépris* (1963), the tale of a director making a movie of Homer's *Odyssey*.[1] [Figure 1] Of this polychromy, art historian Rosalind Krauss writes the following:

> ….blank cerulean eyes, garish red mouths, hair the color of mahogany. One is upset to be in the presence of a classicism made vulgar – and somehow implausible – by color. And one is irritated by this reminder that Greek sculpture was, after all, originally painted, that what one has come to love is a kind of fiction produced by the erasures of time and the expurgative criticism of later cultures. … Yet our irritation does not arise so much from Godard's flouting of our ignorance as from something else: we like those statues white. We have a taste for monochrome sculpture. Color seems to dislocate the surface, to interrupt the gradual modeling through which three-dimensional works stand revealed in their primary tactility. And so we find ourselves prudishly wanting to set limits on the sensibility of antiquity – to lop off all those irregularities of taste that don't seem to fit, to disallow to that art the colors of its own convictions.[2]

The polychromy of ancient Mediterranean art is an issue with which scholars have grappled for centuries. The fugitive nature of many pigments, coupled with a classicizing taste for the antique fragment, have contributed to a fictional narrative that contradicts the material and textual records, a narrative of art and culture executed in half-tones. *One has come to love this kind of fiction produced by the erasures of time and the expurgative criticism of later cultures.* Although the polychrome state of ancient Mediterranean art has never been a secret, for centuries it has come in and out of fashion as an irritation worthy of consideration.

The eighteenth and nineteenth centuries witnessed furious debate in Europe about the presence and absence of color on Graeco-Roman sculptures.[3] Discoveries at Pompeii and Herculaneum from the mid-eighteenth century inspired debate well beyond academic circles. The popularity of the polychromy debate is perhaps best encapsulated by the diverse public reactions to John Gibson's *The Tinted Venus*, which the artist exhibited in Rome in 1854 and again in London at the International Exhibition of 1862.[4] [Figure 2] Gibson's sculpture became a touchstone for the popular debate for and against sculptural and architectural polychromy.[5] In contrast, little was said about the presence of polychromy on the Mesopotamian and Egyptian antiquities also on display at the Crystal

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[1] The film is an adaptation of Alberto Moravia's novel *Il disprezzo* (1954). On "classicism" in *Le Mépris*

[2] Rosalind Krauss 1974, 30-. See especially Hamill 2010 and Hamill 2008. I thank Sarah Hamill for sharing her work on David Smith with me while in progress and for many fruitful discussions about color, sculpture and space in antiquity and modernity.

[3] Gage 1993; Panzanelli 2008; Bradley 2009b; Brinkmann, Primavesi, and Hollhein 2010.

[4] Blühm 1996. For the conservative attitude towards "John Gibson's still mildly embarrassing 'Tinted Venus,'" see Moisnard 1997, reviewing Boardman 1995, the final chapter of which addresses Gibson's sculpture in the context of presenting the impact of the Classical period on later art practice. Gibson himself wrote "polychromy was the link connecting the forms of matter with the airy fairies in which genius is rife," Gibson and Matthews 1911, 181.

[5] Darby 1981, 51 n. 82, who compiles the relevant articles.

Palace, for color has always been an accepted part of other cultures, a vibrant contrast against which to hold up western art's whiteness.[6] The subsequent formalist turn within the discipline of art history quieted some of the louder arguments over Graeco-Roman polychromy, but the presence of pigments on ancient sculpture remains an intractable problem in the history of western art.[7] Like color in the work of David Smith, we know it is or was there, but we are rarely forced to *see* it.

Recent scholarly work in art history, classical archaeology, anthropology, and the natural sciences along with a number of international exhibitions and conferences have returned debate about ancient (and subsequent) polychromy to the center of scholarly inquiry.[8] We are in what one might call a colorist turn. Much of the ink spilt on the subject of ancient polychromy has hitherto been devoted to proving the case for or against the presence of colors on ancient Graeco-Roman sculpture, or once proven to documenting technical discoveries of additional pigments. This has left little time for analysis of what color might mean or do in ancient art and with ancient viewers.[9]

In this dissertation, I explore the meanings and effects of color within the social world of the ancient Mediterranean and the subsequent history of art written from the position of color's absence. My approach joins cultural history and phenomenology to recover how color has been muted in the art historical record, what color meant, and how it shaped a body's experience of its surroundings in the ancient Mediterranean world. I frame my inquiry through the lens of the body and embodiment. Colors are perceived by, visible on, and constitutive of the beholding body; color is always already a bodily experience. I move from the role of color in creating and animating sculptural and pictorial bodies to the relationship of those bodies to the real and represented space that they inhabit. Central to my account of color and the body is the notion that colors operate as parts that cohere or seem to cohere into a whole. These part:whole relationships scale our experience of the represented body, from the particles that create a pigment or colored material, to the pieces that form a part of the whole body, and finally to that body

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[6] Blühm 1996, 11 and fig. 1, a photograph of the Egyptian Hall from the International Exhibition ca. 1860.

[7] On the lull, at least in European scholarship, between and after the world wars see Brinkmann and Wünsche 2007, 22.

[8] Recent exhibitions and conferences include: Stanford, CA 2011: "True Colors: Rediscovering Pigments on Greco-Roman Marble Sculpture"; Paris 2010: "D'or et de feu, L'art en Slovaquie à la fin du Moyen Âge" Musée du Moyen Âge, Cluny; London 2010: "Colour and Light in Art, Architecture and Material Culture" (7ICAANE); Stanford 2009: "The Color of Things. Debating the Role of Color in the Current State And Future of Material Culture Studies"; Athens 2009: "*Les arts de la couleur en Grèce ancienne ... et ailleurs."* (Jockey forthcoming); Los Angeles 2008: "The Color of Life" (Panzanelli 2008); Paris 2006: "*Couleurs et matieres dans l'anitquité*" (Rouveret, Dubel, Naas 2006); Oxford 2001: "Colour in the Ancient Mediterranean World" (Cleland and Stears 2004); Thessaloniki 2000: "Color in Ancient Greece : the role of color in ancient Greek art and architecture (700-31 B.C.)" (Tiverios and Tsiakakis 2002); Siena 2001: "*I colori nel mondo antico*"; Louvre, 1999: "*Cornaline et pierres précieuses: La Méditerranée, de l'Antiquité à l'Islam*," Caubet 1999. For updates on recent conferences and publications related to polychromy in antiquity see Ostergaard 2001, with extensive digital resources.

[9] Two welcome and notable exceptions to this microcosmic trend have been James 1996, a study of color and light in Byzantine art, and Bradley 2009a, an exploration of color in Roman culture and literature. Bradley applies James's text-centered approach to the Roman context while incorporating recent research on color and Roman art. Although his book is intended for classicists, texts remain one of the richest sources of information about how colors were used in ancient art. In addition, Bradley offers a related prolegomena to color and ancient art in a contemporaneous article, Bradley 2009b. For an earlier emphasis on polychrome finish, see Stewart 1990, 40-42.

as a part of the space it inhabits. Each of these notional wholes coheres through color, but can always return again to its constituent parts, at times even reduced again to particles.

Color as visible material always interacts with ambient light. This interaction shapes the beholder's experience of colors. It is, therefore, difficult to address color in objects, either empirically or conceptually, without addressing the illumination context where possible. For objects of ancient art the reconstruction of an earlier illumination context poses a particular challenge, especially for objects no longer in situ. Architecture offers the greatest possibility of reconstructing how light and color interact, although even here light conditions have changed over time. Changeableness is a property shared by color and light and is both one source of their importance in the history of art and also one reason for the challenges in accounting for either.

In Chapter One, "Color, Form and Replication," I begin with a historiography of color's absence in order to understand not only why color has disappeared from art historical accounts, but also how this disappearance came about. How did we get to the point that colors seem strange and unsettling rather than familiar? Often we encounter images through replications. Until very recently, technologies of replication selected against color. I have chosen three important technologies for replicating and circulating images beyond their original context, casting, printmaking, and photography, in order to analyze how and to what ends these replicatory technologies filtered color from images to the point where it seems the exception rather than the rule.

Casting a copy not only necessitates surface loss from the original, but it also promotes monochrome. Because only a small number of antiquities were cast and these casts were initially the province of kings, casting also created a relatively fixed, monochrome dataset.[10] Even as the popularity of casts increased, the number of possible subjects cast remained much the same and the eventual dominance of plaster casts had obvious consequences. Reproductive printmaking translates a three-dimensional object into a (almost) two-dimensional image that is often printed with one ink color. Additional color can be added at additional cost to the fully formed image. In this way, prints, which frequently illustrated books before the emergence of photography, popularize a reduced palette and prioritize tonal description. Photography emerged in the nineteenth century as a medium with the technical properties to capture what by that time was considered the important aspect of antiquities, namely monochrome form. Because antiquities did not move, they offered excellent subjects to the nascent photographer honing his skills, and because antiquities were generally expected to be monochrome the loss of color in the photograph did not register as such. It is largely through these technological replications that the variegation (*poikilia*) of the ancient world comes to appear strange, unnatural and other.

In Chapter Two, "Color, Materiality and Corporeality," I analyze the material presence of color on figural sculptures from the Greece world (a terracotta of Zeus and Ganymede, the limestone Bluebeard sculpture from the Archaic Acropolis, and the terracotta head of a deity), Mesopotamia (bull-headed protomes for lyres from Ur), and Persia (fragments of beards from Persepolis), as well as descriptions of colored materials and their effects in the work of Gorgias, Sappho, and Homer, as well as in the earlier Gilgamesh epic. Objects and texts demonstrate the integration of color into the represented image, so that without color the image cannot come fully into being. I argue

[10] Haskell and Penny 1981, 16-30.

that the materiality of color constitutes rather than characterizes the sculpted body. Focusing on the use of blue pigment and its relation to earlier use of the stone lapis lazuli, I trace the symbolic, social and economic value of lapis lazuli in Near Eastern and Mediterranean art and texts. I connect the use of "Egyptian blue" pigment with this history of lapis lazuli. The texts that I analyze do not take color as their subject, but describe a world animated through color. The importance of *poikilia*, or variegation, and *to lampron*, or luster, emerges, as does a rainbow conceived through colored materials rather than hues. Finally, I analyze how color constructs a myth of the image/body's wholeness. Colored materials and color terms do similar work of combining to create a whole image from parts, but always marking that whole as pieced together.

Chapter Three, "Inlaid eyes, Color and Visuality," concerns the use of polychrome materials to make eyes. Although we have come to accept the blank eyes of figural sculptures, ancient Mediterranean sculptures originally had inlaid or painted eyes. It is through the eyes that a beholder takes in colors and integrates colored pieces into a unified whole. These inlaid eyes, with their fitted-together colored pieces, are themselves wholes assembled from parts as well as a part of the bodily whole. Inlaid eyes show the very process through which they are apprehended. In focusing on the eye, I examine the long history of inlaid eyes in Egypt and Mesopotamia, as well as evidence from the Graeco-Roman world. Examples include votive figurines, Egyptian funerary sculpture, the bronze warriors from the Riace Marina, and a marble dedication to Asklepios. These examples reveal an array of possible ways to depict eyes in antiquity, from those eyes that show the *outcome* of or response to seeing to those which foreground the *process* through which we see. Alongside inlaid eyes, I consider contemporary ancient Greek texts of pre-Socratic philosophers, Plato and Aristotle on vision, color and perception. These seem to describe at least three possible accounts for how vision works: extramission, intromission and dual vision. Each of these accounts depends upon the exchange of matter on the level of the particle and describes the kind of intersubjective exchange that figural sculpture seems to demand of its beholders. Finally, I attend to poetic accounts of seeing, especially in Sappho 31, alongside the sculpture of a pair of eyes that are losing their capacity to see. Both the eyes and the verse picture the impossibility of visual exchange and the isolation of seeing.

In Chapter Four, "Color, Architecture and Space," I explore the use of color to construct virtual space in architectural relief and the way in which real and virtual colors converge. I focus, in particular, on two examples of relief sculpture which are set into the natural environment. One is the Siphnian treasury at Delphi (525 B.C.E.) and the other the Ishtar Gate from Babylon (575 B.C.E). Both structures are polychrome and that polychromy destabilizes the boundaries between the real space of the beholder's body and the representational or virtual space of the relief. Because colors emerge from the natural world, they always retain some trace of earthly presence. We also experience natural phenomena and aether as polychrome: blue sky, white cloud, silver moon, and the rich *poikilia* of a rising or setting sun. Colors move between the space of the representation and the surrounding environment. In these four chapters I proceed from an analysis of individual somatic construction and experience towards the relationship of colored bodies to each other and the social spaces that they take up and traverse.

Scholars often draw a distinction, either explicitly or tacitly, between the phenomenon of Color with a capital 'C' and the particularity of base colors.[11] This distinction can be useful ontologically, or to signal the focus of an author's inquiry (often loosely divided between philosophical explorations and technical findings). Phenomena, however, cannot be separated from their physicality, nor can Color be distinguished from colors. The decoupling of color and matter takes on greater meaning in the post-Newtonian preoccupation with perceptual color.[12] Ancient theories of color and vision did not separate color and matter; in fact, seeing itself was thought to involve an exchange of matter between beholder and beheld, a point which I shall address at greater length in Chapter Three: Inlaid Eyes, Color and Visuality. Although we refer to a color by the name of its hue (red, yellow, blue), two additional aspects, saturation and luminance, compose color. Saturation refers to the vividness or "purity" of a color, how blue a particular blue is. Luminance, which is sometimes called brightness or intensity, refers to the "whiteness" of a given color. Hue, saturation and luminance (or HSL) are three variables that are used to visualize color space, although there are other more complex models available.[13] Color has always been something beyond hue, but too often we reduce it to its most obvious aspect. In practice, art historical analyses most often relegate both Color and colors to the role of qualifier or inessential detail. While the recuperation of the decorative from its secondary treatment within the art historical tradition is much needed, we must also extricate color from the standard treatments of decoration in order to foreground its capacity to constitute an image's corporeality.[14]

The Roman historian Pliny's oft-quoted remark about the 4th century B.C.E. Greek sculptor Praxiteles and contemporary painter Nikias affirms that painting the surface was an essential part of the completed image:

it is this Nikias, of whom Praxiteles said when asked which among his sculptural works he most preferred, "the one to which Nicias has laid his hand"; so great was his esteem for [Nikias] (*NH* 35.133)[15]

Even the sculptures of a canonical artist such as Praxiteles were painted and this practice required no defense or justification—indeed, the sculptor himself would have considered his work incomplete or flawed without the addition of pigments and surface

[11]On a similar distinction between classical and Classical, see Stewart 2009, 1-6.
[12] Newton 2003; Gage 1993, 168-169; Bradley 2009a, 25
[13] Gage 1993, 138. See also Taylor 1719, 72-80, who refines Newton's position (1704) and more specifically articulates multiple dimensions of color.
[14] On the decorative, see Grabar 1992; Gombrich 1994; Anger 2004.
[15] Pollitt 1990, 170.The word *circumlitio -onis* (f) is unusual, with few known occurrences. It occurs twice in Pliny's *Natural History* (24.40 and here at 35.133). The *OLD* offers two definitions: 1. "anointing round about," for which it cites *NH* 24.40 and 2. "coating or covering (with paint or similar substance)," for which it cites *NH* 35.133 as well as Sen. *Ep.* 86.6. The *TLL* also cites the two passages from Pliny and the one from Seneca, but considers *circumlitio –onis* to be more of a technical term for painting. See also, Blümner 1912, 203.
In a commentary on Pliny's art historical texts Sellers [1896] 2009, 158, argues that *circumlitio –onis* refers specifically to highlighting the hair, lips and accessories, like a technical term for the type of restrained polychromy that John Gibson applied to his *Tinted Venus.* This definition owes more to the nineteenth-century debates about polychromy and a longstanding preference amongst scholars for a light touch with color than to some truth to etymology.

treatments. The implied relationship between Praxiteles and Nikias also highlights the confluence of sculptural and painterly practices, a confluence that traditional art historical boundaries separating the study of sculpture from the study of painting obscure.[16] For painting, we accept colors as an expected and necessary material tool, but rarely as the intellectual basis of the practice.[17] Sculpture, on the other hand, can be constructed "without" color through that tenacious linguistic reduction of the palette which categorizes the variegated as monochrome.

Materials that we describe as *white* contain an array of hues; they are, as David Batchelor puts it, plural, "and in being plural, they are therefore not 'pure'.[18] As with color(s) and Color, so do whites and White invoke different associations. Whites are a range of hues along the color spectrum, but White is beyond material presence.[19] White is no longer a hue, but a symbol for purity, restraint, and otherworldliness. Nothing captures this more concretely than the conventional notion of white and black as existing outside of the color spectrum, whereby black is understood as a cesspool combining all other hues and white as their absence.[20] What is the absence of color? If color is immanent in the material world, its absence must transcend materiality. White is the code for that transcendence, or the possibility of transcendence.

In the ancient Mediterranean world, however, white and black were not theoretical bookends of the spectrum, but material hues. For some ancient Greek philosophers, from Empedokles through Aristotle, black and white were the "primary" colors and could be combined in different proportions to create the rest of spectrum.[21] Black and white exit the spectrum only in the post-Newtonian world of perceptual color, which divorces hues from materials and marries color to light. Despite the place of black and white in the ancient Mediterranean rainbow, the dematerialization of White and its elevation to a plane beyond the material world is founded in ancient Mediterranean philosophy, especially in arguments put forth by Plato, who exhibits a wide range of attitudes towards and explanations for color in his work.[22] Plato's iconoclastic, dematerialized Ideal forms appear to transcend matter and thus color. In rescuing images from that Platonic bind, art historians tend to sacrifice color, or the image's inescapable

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[16] On the importance of painting for completing partially sculpted forms see, Bourgeois and Jockey 2002, 503 and Bourgeois and Jockey 2009. On paint used to create or emphasize the modeling or shadows of a sculpture, see Brinkmann and Wünsche 2007, 38-39. On the relationship of painting and sculpture in the modern period, see Lichtenstein 2003. See also recent work at the British Museum, Jenkins and Middleton 1997, and Chapter One.

[17] Certainly there are notable exceptions, among which see Kandinsky 2007 and Albers 2006. For a discussion of painting through colors see Brusatin 1986, 1-17 (trans. Louis Marin). Brusatin dedicates his book on colors to the return of painting.

[18] Batchelor 2000, 13.

[19] Byrne 2005.

[20] This layman's description of black and white remains pervasive in casual discussions of color, as evidenced by the prevalence of the question "is white the absence of color" on various online information services, such as http://www.ask.com or http://answers.yahoo.com. Wittgenstein considers white throughout *Remarks on Color*, asking "why don't we include black and white in the color circle?" Wittgenstein 1991, 27. On Wittgenstein and white, see Westphal 1986.

[21] See Aristotle *de Sens.* 439b, 23ff; James 1991, 59. One can see how this provided the germ of the later exclusion of black and white from the spectrum, although that was not the thrust of Aristotle's argument.

[22] Plato addresses color in the following texts: *Tim*. 67e-68d; *Meno* 76d, e, *Phaedo* 110b-e, *Symp.* 211e, *Rep.* 6.500c-501c, 507d-509a, 9.585b-586c, 10.601a-602e, *Crat.* 424b-425b, *Theaet.* 153d-154b, 156a-157a, 182a, b, *Phileb.* 51b, d. See Irwin 1974, p. 24 for commentary.

materiality, and to focus on form.[23] And if one must represent a Platonic (imagined, idealized) form, White is the hue by which to make present that absent ideal.[24]

One reason for this monochrome picture of the ancient world is the selection of datasets, to which I alluded above in my description of Chapter One, "Color and Replications." Investigating the development of the discipline of art history illuminates this issue of a monochrome past. Although in later periods and cultures painting emerges as the medium accorded the greatest respect and attention, art historians from the very emergence of the discipline have traditionally attended to the sculpture rather than panel and mural paintings of ancient Greece and Rome as objects of art historical engagement. Vase painting has received attention, but most typically as a repository of illustrations recorded as black and white drawings rather than material objects themselves.[25] Gems, mirrors, portable objects, and myriad other media are often swept into the broad category of material culture or treated as objects of secondary significance. Sculptures, and primarily Roman copies of Greek originals, still comprise the bulk of the foundation upon which Classicism rests. This dominance certainly owes something to Winckelmann, whose works continue to infuse standard treatments of art history, and of Graeco-Roman antiquity in particular, despite the constraints under which Winckelmann formulated his categories and analyses and the selectivity with which parts of his oeuvre have been translated.[26]

The attention paid to sculpture is partly a question of preservation. Most ancient Greek panel and mural paintings are now lost or only tangentially preserved in other media, such as vases and mosaics. While the former were often decorated with deliberately reduced palettes, mosaics likely remain the best proxy for the sorts of colors used in classical paintings. Stones and glass used in mosaic-making, which I address in Chapter Four, retain their original colors far better than pigments.[27] We do not know, however, by what system pigments translated into tesserae, although the replication of similar images in several locations suggests that some degree of color-coding or standardization was in use. Paintings preserved in tombs and on funerary stelai remain one under-analyzed resource, although several recent studies focus on colors in ancient Graeco-Roman painting.[28] Physically absent paintings—not to mention colors—are

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[23] Lichtenstein 1989, 6; Batchelor 2000, 29.

[24] "Though in many natural objects, whiteness refiningly enhances beauty, as if imparting some special virtue of its own, as in marbles, japonicas and pearls…; Melville 1851, 204, as cited in Batchelor 2008, 37.

[25] See Ferrari 2002 and Neer 2002 for notable exceptions to this trend, as well as Cohen 2006.

[26] Winckelmann, for example, rather famously never saw any Greek art in its original context, but worked entirely from what sculptures he saw in his travels through Italy. This lack of specificity about original form was integral to Winckelmann's interaction with ancient art. On Winckelmann's form of Classicism, see Potts 2000. It is worth emphasizing that while art historians remember Winckelmann's most enduring work *Geschichte der Kunst des Altertums* (1764) primarily for its celebration of Greek art, he also described the art of the Egyptians, Etruscans, Phoenicians, and Persians, Winckelmann 2002. His book on allegory, published in 1766, has never been translated into English, Winckelmann 1976. On Winckelmann's interest in ancient polychromy, see Primavesi 2010, although I reject this attempt to rescue Winckelmann from those prejudices evident in the very texts cited, e.g. 1.3 "Black is Beautiful, pp. 28-31.

[27] On color in vase painting, see Cohen 2006. I know of no work that focuses specifically on colors and ancient mosaic, although they are, of course, usually mentioned in surveys of mosaic. I thank Michael Koortbojian for emphasizing the importance of mosaic in any study of ancient color.

[28] For recent scholarly work on color and Greek painting, see especially Brecoulaki 2006a; Descamps-Lequime 2009. For earlier work, Rouveret 1989 and Scheibler 1994. The default text in English has long been Bruno 1977.

richly represented in the Greek and Latin textual traditions, which describe details of paintings executed by masters of the classical period. These *ekphrases* captured the imagination of later painters who produced their own versions of lost originals inspired by and in competition with the textual versions.[29] *Ekphrasis* remains a rich source of scholarly inquiry and the means by which the historical imaginary conjures lost classical Greek free paintings.[30] Words project an image of a lost painting, but this image is filtered by medium, chronological distance, and the particular circumstances of author and audience. These translations compose, along with casts, prints, and photographs, a prominent mode through which we encounter ancient Mediterranean visual arts.

Time has been a great enemy of color's particularizing power because exposed pigments disappear and valuable materials were removed and reused in new contexts. Color's comparative impermanence, that greatest of weaknesses in a Darwinian system, diminishes its significance in the visual arts. Scholars build their stories from what fragments of the ancient world do survive and these stories often efface what colors remain by omitting them. Later ancient viewers of and writers about Mediterranean art on whose texts we so readily rely already saw many objects deprived of their original colors. Authors such as Pausanias, Pliny, the Philostrati, and Lucian, each of whose descriptions of earlier art and architecture was directed towards his own distinct authorial end, are often mined as collective evidence by scholars despite the fact that what they saw might not correspond to what they described and was already distant from its original state. This is not to dismiss the significant evidence that such valuable texts can provide, merely to acknowledge from the outset that we cannot assume, for example, that Lucian's refusal to mention any pigment other than black in his description of Apelles' painting *The Calumny* tells us anything about the pigments of a painting.[31]

The polychrome world of Homer's *Odyssey* that Godard stages in *Contempt* invokes longstanding debates about the presence or absence of colors in Homer. The four-time British Prime Minister W. E. Gladstone rather famously suggested that Greeks did not see and use the full range of colors.

> But in examining the question from the works of Homer we must bear in mind, first, their very early date, and, secondly, the likelihood that heroic Greece may probably have been far behind some countries in the east in the use and the idea of colour, which has always had a privileged home there.[32]

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[29] One popular example in the Renaissance were paintings of Apelles' *The Calumny*, described by the rhetorician Lucian and painted or drawn by Botticelli, Mantegna, and Rubens, among others, Cast 1981.

[30] On classical paintings and the imaginary see Rouveret 1989. For another account of classical painting based on the extant physical (now somewhat out of date) and textual evidence see Scheibler 1994. Scheibler leads with later textual accounts in a gesture to the sequence by which ancient Greek paintings have been intellectually reconstructed, which is to say, everyone is working from the texts whether they lead with them or not. Among recent work on *ekphrasis* see Webb 2009; Newby and Leader-Newby 2007; Rutter and Sparks 2000; Elsner 2002; Elsner 1996; Goldhill and Osbourne 1994.

[31] Lukian I, trans. A. M. Harmon. Cambridge, 1913. Kakouli 2009, 1-2 addresses the need to contextualize ancient literary sources on color.

[32] Gladstone 1858, 491. On Gladstone's impact see also Bellmer 1999; for current work on vision in classical antiquity, see Villard 2002.

The east offers a safe repository for color. Gladstone offered as his primary evidence for the optical deficiency of the ancient Greeks the supposed absence of color terms in Homeric poetry, arguing that they did not name colors because they could not perceive them. Aside from the obvious error of inferring physical deformity from omission, it is particularly strange that Gladstone, a celebrated statesman and noted classicist, failed to mark the abundance of color-terms in the Homeric texts. Rosy-fingered dawn aside, Homeric description teems with color terms. Gladstone could overlook colors in Homer because, as I will argue in Chapter Two, these color terms often remain linguistically bound to their material support. Blue, for example, may be described as *kuanos* (lapis lazuli). Language signaled the material origins of color. In Gladstone's world of perceptual optics, materials did not count as a palette. Many rushed to echo Gladstone's charges of color-blindness, either dismissing the visual capacities of the ancient Greeks or blaming the blind poet himself.[33]

Unfortunately the legacy of this absurd charge persists to this day, if not among specialists in the fields of ancient color studies, then certainly amongst a broader scholarly and popular audience. For example, Guy Deutscher's recent and acclaimed book on language and color begins with Gladstone's article. Although Deutscher's approach is linguistic rather than evolutionary, the assumption of an impoverished color vocabulary in Homer (and thus an impoverished color-world in ancient Greece) remains undisputed in his work.[34] Because Gladstone mined Homer for words clearly denoting specific hues, such as he might expect in English, he failed to account for the embodied nature of Homer's color-terms, in which hue and material object are bound together.

In confronting the absence of the ancient Greek word for coinage (*nomisma*) at the time of the very invention of coinage in the Archaic period, Leslie Kurke offers a solution to this problem of apparently absent terminology and material presence. *Nomisma* scarcely appears in the literary record until over a hundred years after the invention of coinage. Coinage, like colors, came into material being and circulation without accompanying textual abundance, a circumstance that Kurke likens to the emergence of democracy itself. She writes:

in the gap between explicit discussions of coinage and the concept of civic authority encoded in many of the terms themselves, we confront the shape of an absence, but it is perhaps a shape whose lineaments we recognize. Among ancient historians, it is a well-known paradox that Athens never produced any genuine democratic theory composed by those sympathetic to democracy.[35]

Colors have a less precise chronology than coins. The apparent paucity of terms for specific *hues* in surviving Greek literature, and the loss of artistic treatises describing color practice, has allowed scholars to deny visible evidence of the vital presence of

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[33] Nineteenth-century speculation about the color-blindness of the Greeks posited some relation between the (supposed) absence of color-words in Homer and the poet's legendary blindness, Cookson 2010.

[34] Deutscher 2010. Among a host of laudatory reviews that refer to the Gladstone reference, see Cookson 2010, Bellos 2010, Schaeffer 2010a and 2010b.

The classic, though much debated, text on color and linguistics remains Berlin and Kay 1999 (originally 1969) and their more recent attempts to respond to criticisms of their initial study, Berlin et al. 2010.

[35] Kurke 1999, 332.

colors in ancient Greek artistic practice. Formalist classicism is founded upon this denial.[36] The absence of color in democratic Athens (the "classical moment") comes to stand for the absence of effeminate, imported, eastern materialism. Formalism becomes a philosophical vehicle for historical white-washing in a quite literal sense. But perhaps with color, as with coinage and "with democratic 'theory' itself, we perceive only absence because we've been looking in the wrong places. Perhaps we need to look at the 'embodied' discourses of imagery and anecdote, and at lived practices."[37] Similarly, the colors of ancient Mediterranean art are inescapably embodied in the lived experience of the visual world.

The evidence for color in ancient Mediterranean art is all around us, in the surviving literature, written into passages about materials and light effects, on the surviving monuments in the form of remaining marks, in images incompletely sculpted, in holes for metal attachments, sockets emptied of their inlaid eyes, recovered paint pots, and unworked stone, or variegated earth.[38] The materiality of color belongs neither exclusively to the elite world of high-value materials traded across long distances, or the non-elite world of industrial waste products (waste from the silver mines at Laurion, for example, was used to make popular pigments).[39] The materiality of color traverses geographic, social, and bodily boundaries.

Technical research on ancient polychromy is enjoying a renaissance. Recent scholarly inquiries, including projects spearheaded by the late Volkmar von Gräve, his student Vinzenz Brinkmann, and their team in Germany, the Ny Carlsberg Glyptothek in Copenhagen, the British Museum, the Getty, and the Vatican have conjecturally reconstructed fugitive pigments on Greek and Roman sculptures.[40] This work and an associated traveling exhibition "*Bunte Götter*" have been instrumental in generating debate and renewing attention, public and scholarly, to the presence of color on ancient Greek and Roman sculpture and the relationship of this polychromy to artistic practices throughout the Mediterranean, in Mesopotamia and Egypt.[41] Full-scale reconstructions in

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[36] On this denial as "negative hallucination" see Batchelor 2000, 12.

[37] Kurke, 1999, 333. The ancient voices that do analyze color and vision (the Atomists, Plato, Aristotle, Pliny) often appear to criticize color and to favor form. Just as one can see an object anew in different light, so can one read a passage from a different perspective; throughout what follows I will attempt to read color back into texts from which it has been edited out or marginalized.

[38] Archaeological method depends upon our ability to distinguish between different colors and striations in the earth and to reconstruct these different colors as layers, features and objects of the past.

[39] Opper, pers. comm. 2010.

[40] Brinkmann 2003; Brinkmann and Wünsche 2004; Brinkmann and Wünsche 2007a. As the exhibition "Bunte Götter" continues to tour the world, having already made stops in Amsterdam, Athens, Basel, Berlin, Cambridge, Copenhagen, Frankfurt, Istanbul, Los Angeles, Munich, Stockholm, the Vatican, each stop brings a slightly modified catalogue specific to each site. For example, the catalogue for "*Polychromoi Theoi*" at the National Archaeological Museum in Athens contains images of objects that appeared in the Athenian iteration of the show, but did not travel elsewhere, Brinkmann and Wünsche 2007b. Although the majority of the essays remain the same, each catalogue records some of what was specific to a given site. For current projects of the foundation behind the exhibitions and related reconstruction work, see http://www.stiftung-archeologie.de.

[41] For example, an unpublished portion of the Gods in Color exhibition reconstructed color on a relief from Persepolis. Ahura Mazda in the Winged Disk, Achaemenid Persian, Persepolis, Hall of 100 Columns, 486-460 BC; Limestone Original: Arthur M. Sackler Museum, Harvard University Art Museums, Bequest of Grenville L. Winthrop, 1943.1062; Color Reconstruction: plaster, acrylic paint Arthur M. Sackler Museum, Harvard University Art Museums1943.1062.X.

color present a double bind. On the one hand they are the only way given existing technology to offer contemporary beholders a direct confrontation with the effects of ancient polychromy; on the other hand, the data-gathering phase of polychromy research is ongoing and reconstructions are inherently debatable. All this leaves ample room for the dismissal of a given reconstruction and with it the importance or presence of polychromy itself.

As an alternative, several research groups, including curators at the British Museum and the French archaeological team working on Delos, have produced computer-generated reconstructions of sculptures on which they have collected sufficient data.[42] Although the results lack the visceral punch of physical reconstructions, this approach allows scholars to modify a reconstruction easily and to reconstruct the viewing conditions of the sculptures in their original contexts at different times of day, thus exploring the interaction of color and light, two inextricably linked components of visual experience.[43] In the case of the British Museum's film on the polychromy on the Parthenon, a monitor showing the film occupies a small space at the end of a subsidiary chamber off of the Parthenon hall. This small, tucked-away screen is cannot counter the central sprawl of washed white monochrome marbles, which are a centerpiece both of the Greek galleries and of the museum itself and occupy center-stage in ongoing international debates about repatriation.[44] An international team working at Persepolis under the auspices of "The Persepolis Polychromy Project" is currently gathering data in situ. The project has been underway since 2006 and they have begun to work on virtual reconstructions.[45] Since Gisela Richter's investigations in the 1940s curators and scientists at the Metropolitan Museum of Art in New York have worked to recover pigments on objects in their collection.[46] Francophone scholarship has, with the exception of the Delos project, focused less on reconstructing pigments on sculpture and more on color in painting and in textual sources, an approach which has perhaps garnered less public international attention, but offers more space to situate the study of ancient polychromy within the history of aesthetics and theory.

Despite all of this activity to date there has been little theorization of the place and effects of color within ancient Mediterranean art, nor a critical account of the story of art told from the perspective of its absence.[47] This dissertation seeks to fill these lacunae. The time-consuming nature of data-gathering and the furor surrounding existing reproductions has steered discussions of ancient polychromy towards empiricism. I in no

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[42] Jockey and his colleagues presented their research at the 2009 color conference hosted by the École française d'Athènes, Jockey forthcoming.

[43] In the discussion following Jockey's presentation, Paolo Liverani, who has worked with the Vatican team responsible for reconstructions of ancient sculptures, suggested that some combination of the physical and the computer-generated reconstructions was essential. The physical, he argued, risk monumentalization as art objects independent of their originals through their placement in the museum context, while the computer-generated reconstructions deprive the viewer of a real world interaction with the object. Liverani 2009, pers. comm.

[44] So many white casts comprise the Parthenon hall's counterpart in the New Akropolis Museum in Athens as to achieve the same monochrome effect, despite the abundance of extant color on sculptures on view in other galleries in the museum.

[45] See current results here: http://persepolis3d.com/ and Nagel 2010 and forthcoming.

[46] See Richter 1944; Abbe 2007; Roth 2002; Hendrix 2001.

[47] Bradley 2009b surveys the state of the study of ancient Graeco-Roman polychromy and suggests avenues for future exploration, although his focus is on marble sculpture.

way wish to downplay the importance of these efforts from which this project certainly benefits. I do not, however, share the implicit sentiment that we must restrict ourselves to data-gathering lest we overstep the bounds of our evidence. Much color remains on objects from antiquity, a truism that flies in the face of long-term efforts to deny its presence. Traces remain for us to see; in some cases they stare back at us. While certain arguments might turn on the reconstruction of a single hue, much can and should be said about the nature of ancient polychromy with the information we already have. Data-gathering will and should continue and technological developments will likely speed the process of recovery and provide exciting alternatives in conservation and reconstruction, such as, for example, the nascent technology of three-dimensional printing. It is, however, paramount that we begin to integrate what we know and think we know about ancient polychromy into broader narratives of art history and not merely within the sub-field of ancient Mediterranean art studies. To continue to avoid such integration risks marginalizing the study of ancient polychromy to the realm of hyper-specialists talking only to each other.

In this dissertation, I focus on the constitutive power of material color in antiquity to create images and bodies and on the cross-cultural histories of colored materials and pigments. The circulation and use of colors juxtaposes seemingly distinct cultures and histories, each of which manifests to some extent in every use of a color to construct an image. In tracing cross-cultural connections, I acknowledge, even follow, Marcel Detienne's condemnation of the assumption of sameness across distinct social groups.[48] When analyzing the relatedness of cultural groups and peoples, local, particular meaning trumps some notion of belonging or connectedness beyond the individual moment, experience, or event. There are, however, additional values, associations, and indeed myths, that individuals of one locality may share with those of other localities, thus creating a network linking these individual moments or events. The network exerts its own power on each of its participants, although in individually specific ways.[49] Local meanings experienced by individual beholders are distinct from but related to meanings experienced at the level of the network. In what follows I will attempt to trace both particular and shared experiences of ancient color, local practices of applying pigments and creating images and bodies out of materials, and the global networks within which these materials, images, and bodies circulate.

A word about geography and chronology. This project moves across two geo-temporal spaces. The first, what I visualize as the horizontal axis, concerns the geographic territory in antiquity broadly associated with the Mediterranean, either adjacent to that sea or in consistent political contact with it.[50] Central to my claims about color in ancient Mediterranean art is that its use mapped a network of trade and cultural relations that situate Graeco-Roman artistic practice within a set of practices common to the art produced elsewhere in the wider Mediterranean. Prior to the widespread use of synthetic pigments, which emerged in the nineteenth century, color was something born of the earth. Colors bear traces of the mud, insect or plant from which they derive, as well as traces of the places from which they emerge.[51]

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[48] Detienne 2000, 205-224.
[49] See David Singh Grewal's treatment of the role of networks in contemporary globalization, Grewal 2007.
[50] Horden and Purcell 2000.
[51] Finlay 2004 attempts to trace the natural histories of the seven hues that make up the traditional rainbow.

Pliny (*NH* 35.50) illustrates the kind of anxiety that was felt as early as the first century C.E. about the geographic diversity of the painter's palette:
It was with four colours only, that Apelles, Echion, Melanthius, and Nicomachus, those most illustrous painters, executed their immortal works; melinum for the white, Attic sil for the yellow, Pontic sinopis for the red, and atramentum for the black; and yet a single picture of theirs has sold before now for the treasures of whole cities. But at the present day, when purple is employed for colouring *walls* even, and when *India* sends to us the slime of her rivers, and the corrupt blood of her dragons and her elephants, there is no such thing as a picture of high quality produced. Everything, in fact, was superior at a time when the resources of art were so much fewer than they now are. Yes, so it is; and the reason is, as we have already stated, that it is the *material*, and not the efforts of genius, that is now the object of research (Pliny *NH* 35.32, emphasis mine).[52]

Unrestrained excess, physical traces of distant geographies, bodily fluids from fantastic creatures, the base world of matter instead of the ideal world of genius—the persistent idea that colors *contaminate* finds its instantiation in the hallowed whiteness of western Modernity, a whiteness conceived in direct opposition to the geopolitics of more colorful cultures.

The presence of color on the art of other cultures has fueled a commitment to erasing it from the Graeco-Roman tradition the better to highlight the differences of the art (and politics) on which the western artistic tradition was founded. Moreover, the historiography of color in antiquity is largely a story about Greece and then about Rome. Thus, the second axis along which this project proceeds, what I see as the vertical, diachronic axis, maps the much narrower space of canonical Graeco-Roman art and the history of western art told in relation to it.

Throughout this dissertation I will try to balance my accounts of these related axes: on the one hand I will sketch the broad geography that maps the polychromatic world of the ancient Mediterranean, of trade relations and material exchange; on the other I will account for the way in which the historiography of the subject refers to a much narrower geography, the traditional and much-hallowed map of the Classical World: fifth and fourth century B.C.E. Greece and republican Rome. The tools that I deploy are traditional staples of art historical research, close-looking at objects alongside contemporary texts, but I hope to show that a shift in the emphasis of what one sees produces important insights. Although I include information generated by recent work in conservation and reconstruction where relevant, I have limited myself to examples in which some color is physically present on the object and visible to the naked eye. I have structured each chapter around four conceptual categories in which color plays a central role: image replication or how color disappears, corporeality, or how color materially constitutes bodies; visuality, or how color animates the bodies of images and beholders; and virtuality, or how color creates represented space. Each argument incorporates visual and textual evidence from across the Near Eastern, Egyptian, and Mediterranean traditions.

[52] Bostock 1855, 35.32; It is worth noting that in Pollitt's much-used reference on Greek and Roman texts on art he reduces the passage to include only the information on four colors, leaving out the business about contamination, Pollitt 1990, 229. Gage begins his section on Apelles in *Colour and Culture* with this passage in its entirety although he does not directly address Pliny's authorial voice, Gage 1993, 29, n. 1

The repression of color in ancient Mediterranean art has had and continues to have a significant impact on what questions art historians ask of the visible world and what avenue artists pursue in their practice. Krauss deployed the description of *Contempt* with which we began in her 1974 article "Changing the Work of David Smith". Using color photograph's of Smith's work, Krauss demonstrates that the influential art historian Clement Greenberg, who was one of three executors of Smith's estate, purged pigments from certain sculptures after the artist's death.[53] Greenberg's expurgations took two forms: in the case of three vibrantly painted works, he allowed the pigments to deteriorate outside, leaving the rust-color of the steel of the base material exposed; in the case of five steel sculptures that Smith had coated with white paint, Greenberg stripped the sculpture down to the steel.[54] Smith used white pigment (often applied over yellow-green zinc primer) as both an end-color and as one temporal and conceptual stage in his process towards polychromy.[55] Greenberg re-staged Smith's process posthumously to make the artist's work accord with his own preferences for medium purity and monochrome.[56] Even white pigment offended Greenberg, for maintaining the purity of the medium trumped any attachment to whiteness. [57] Similarly, our attachment to the whiteness of classical statuary is not only an attachment to the purity of the hue, but also to the purity of the medium, specifically marble, or more rarely, bronze. Longstanding ideals of monochrome classical sculpture no doubt shaped Greenberg's modernism, and in turn Greenberg's modern narrative was also instrumental in maintaining those ideals, whatever the evidence.

The aftershocks of Krauss's article continued for decades in art historical and legal circles and eventually impelled Greenberg to apologize for the steps that he had taken to make Smith's work conform to his ideals.[58] The damage, however, had literally been done, both through the physical alteration of Smith's works and the intellectual obstruction of the artist's (and modernism's) concern with color, a concern at odds with Greenberg's aesthetic preferences and the dominant rhetoric of formalism, of which Greenberg was an influential proponent. As an intellectual and cultural authority Greenberg followed a long sequence of heavy-handed critics, conservators, and antiquarians, and scrubbed free the irritation presented by polychromy.[59] Many cannot blame him. As Krauss reminds us, we like those sculptures white.

The controversy over Greenberg's role in the reception of Smith's work demonstrates how resilient our attachment to the fiction of monochrome remains, how resistant we stand to evidence before our eyes. Smith, it turns out, researched ancient Greek polychromy thoroughly. In 1936 he traveled to Athens where he obtained samples

[53] Krauss 1974; Hamill 2008; On Greenberg and modernism see recently Khullar 2009.
[54] For a summary of the debate surrounding Greenberg's actions and Smith's intentions with the white pigment, which he considered an investigative stage, see Hamill 2010, 93.
[55] Hamill 2010, 93.
[56] Hamill 2010, 92.
[57] Hamill 2008, 6.
[58] Hamill 2008, 1.
[59] See Jenkins 2001, discussed further in Chapter Two.

of paint from works on display there, which he brought back to New York.[60] In January 1936 Smith wrote from Greece to his friends Edgar Levy and Lucille Corcos:

It is easy to understand the patine [*sic*] on the greek and roman statues. The romans got it all from the greeks. I've been reading Pliny and Vitruvius and Theophrastus and learning their methods. I intend to take color specimens from the colored statues in the museums for micro slides etc.[61]

Smith produced polychrome sculpture in dialogue with antiquity, an antiquity that he had discovered looked different from typical reproductions of it. I am not suggesting that Smith painted his sculptures *d'apres l'antique*, but that the pigments he culled from sculptures in Athens played a role in how he went about making sculpture in New York. By removing the pigment on Smith's sculptures, Greenberg removed a trace of the connection between Smith's practice and, for example, Praxiteles' practice. A material connection between ancient and modern art practices forged by colors on sculptures served neither the dominant narrative of classical antiquity, nor the emerging story of modern art. In expurgating color from David Smith's work, Greenberg staged a formalist narrative of modernity that depended on the continued costuming of antiquity.[62] In what follows, I hope to reveal the colors of and on ancient Mediterranean art and in so doing to offer a wider account of color and embodiment.

[60] Hamill 2008, p. 11.
[61] Hamill 2008 p. 11 n. 28.
[62] The idea of nudity as costume in ancient Greek art was first proposed by Bonfante 1989; Cf. Stewart 1997, 2009 who argues for nakedness *tout court*.

Chapter One: Color, Form and Replication

The story about the loss of color over time is primarily a story about replications and their relationship to each other. Replications raise issues of material likeness, originality, authenticity, creativity and value. In this chapter, I am concerned with replications of ancient Mediterranean polychrome visual art. In some cases, the initial iteration exists in a less accessible state than its replications (e.g. a cult statue); in others, no image prior to its replications survives (e.g. the Diskobolos, Aphrodite of Knidos, among others), which is to say that these replications produce an imagined original by virtue of their seriality.[63] In what follows I draw together two related aims: to trace the loss of color from ancient Mediterranean art through an account of its replications and to weave through this account the historiography of debates about polychromy and attempts to excise and recover ancient color. The first strand tells the story of how color has been changed and lost over time, not merely through fragility and decay, but through processes of replication that were active from the moment, or, in the case of drafts, prior to the moment, in which an image came into being. The second strand accounts for the many competing efforts to eradicate or to reinstate color once it had disappeared. Because many of the same technologies used to replicate images are deployed in reconstituting them, these twin pursuits of excision and augmentation cannot and should not be fully separated from each other, despite their seeming opposition.

Given the importance of color in the ancient world and how much color remains in the material record, one might now wonder how we even came to think of Graeco-Roman antiquity in terms of its whiteness. Despite intermittent debates about the polychromy of the classical past confirmed by mounting archaeological evidence, the monochrome whiteness of ancient Greece exerts a tyrannical force, both on our understanding of the classical past and on subsequent art produced in relation to it. While the transience of colored pigments plays a role in the absence of color from the art history books, other more active forces are at work.

In what follows I argue that two technologies of replication through which we experience ancient artworks, casting and photography, select for form and against color. I open with a work of contemporary art, Rachel Whiteread's *Ghost* (1990), which, I argue, offers an important commentary on the role of these two technologies of replication, casting and photography. By beginning with *Ghost*, I hope to show that the implications of how we experience art objects through replications reverberate through the history of art. Following my reading of *Ghost*, I examine the history of casting, from the production of original images in the ancient Mediterranean world and Roman use of moulds to produce emulations of Greek art, through the use of casting to produce collections of copies of classical antiquities from the sixteenth century to the present day. The history of casting is, in many ways, a history of forms and formal replications.

From casting I turn to the rise of photography; first I examine pre-photographic technologies of replication, such as glyptic arts and print-making; second, I look at the importance of plaster casts in the early history of photography. The rise of photographic replication, which remains predominantly black and white in published form, created a "museum without walls" in which color and material differences were of no visual

[63] Trimble and Elsner 2006, 201-212.

consequence.[64] The joint impact of casting and photography solidifies the greater value given to form in art historical accounts. Finally, I examine the impact of conservation efforts that have led to the further depletion of our knowledge of ancient polychromy and of recent reconstructions of polychromy, produced using casting, UV photography, and computer graphics. Scholars now put the very technologies that shaped our misunderstanding of the classical past as monochrome to work recreating ancient polychromy.

Ghost

Unpainted plaster blocks cast from the inside of the entry room of an East London home make up *Ghost* (1990), a sculpture by Rachel Whiteread [Figure 3].[65] The artist constructed each block by layering plaster and hemp rope for structural integrity directly on the walls of the room. She cut many of the blocks along a consistent, but not mathematically exact, module roughly equivalent in size to a painted canvas that could fit under one's arm (75 cm x 75 cm).[66] The upper and lower registers of the walls, the corners, doorway and fireplace do not insist on this module; Whiteread cropped as needed to fit the pieces together. After casting and cutting the blocks, Whiteread transported them to her studio and assembled them on a steel skeleton frame. Light filters through interstices visible at the joins between blocks, which are left exposed. The resulting assemblage has no floor or roof. Visible surface traces from the room that Whiteread cast are embedded in the plaster of the monument. Peach fragments of paint peeled off of the walls; soot streaks the projection of the fireplace. Along with these visible traces no doubt came innumerable less visible traces of prior habitants—prints on the light switch, accumulated dust in the corners, detritus of shed skin. The assembled casts project a monument of negative space on which a partial history of that space is indexically inscribed.[67]

Ghost stands on the mezzanine of the east building of the National Gallery of Art in Washington DC. The sculpture faces a large glass window that looks onto the pale stone of the Gallery's west building, which is built in the Neoclassical style that was used throughout many of the buildings and monuments of the National Mall. Although beholders approach the monument from the back, seeing the fireplace first, the closed door to the room aligns with the front entrance of the East Building of the museum; *Ghost* aligns with the building that houses it and connects IM Pei's red structure designed to house modern and contemporary art with the muted stone temple that houses the rest of the Gallery's collections across the street. *Ghost* transposes the distinctly British space of the east London row house into an art museum in Washington DC and simultaneously bridges the Neoclassical and Modernist halves of the museum. As with the assembled blocks, the interstices of this joining are as visible and traversable as the street that runs between them.

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[64] Malraux 1978 [1951]; see also Nichols 2005, 34.
[65] Townsend 2004.
[66] On could describe the practice by which Whiteread laid on the plaster as a kind of painting; she also describes the canvas-like module used for the blocks as deriving from proportions in the Italian painter Piero della Francesca (1415-1492). Piero also depicts various sarcophagi in his paintings, e.g. *Resurrection of Christ*. Ghost resembles a kind of sarcophagus.
[67] On the indexicality of photography, see Barthes 1981.

I would like to draw out three aspects of Rachel Whiteread's sculpture which are important to the work and also to its place in this analysis of color and antiquity: first, Whiteread's choice of material and technique, unpainted cast plaster; second, the traces of lived experience documented by the sculpture; third, its monumentalization of negative space. This first aspect relates *Ghost* to a complex history of plaster cast production, while the second and third aspects join casting and photographic processes. Casting and photography are two replicatory technologies which appear morphologically disjunct in their resulting appearance, but which share certain qualities of process. Both depend on an external object that is present in real space. Both record that prior presence in the resulting image. Both reverse positive and negative space in order to produce themselves. Both offer the possibility of serial replication. Both capture the form of the prior presence while excising the particulars of its polychromy, although black and white photography records tonal difference and casting might record fragments or traces of the intial object's surface. Both casts and photographs have enjoyed a prominent role in the dissemination of canonical art images and thus in the formation and reception of the discipline of the history of art, yet neither practice enjoys the esteem of the very discipline they helped to create precisely because both technologies depend on a physical, material source rather than a mental image.

Rachel Whiteread began working with casts in the 1980s, when she experimented with casting parts of her own body and as well as small spaces.[68] Whiteread's interest in casting corresponds to the renaissance of the classical plaster cast gallery in Europe and elsewhere.[69] Casts of Graeco-Roman sculpture have a long and storied history, to which I shall attend below, and in the mid-twentieth century their status as objects had bottomed out. Cast collections were offloaded, stored away, and otherwise neglected as these "mere copies" found no place in an art world preoccupied with authenticity, originality, and cults of individual genius.[70] In the 80s, when Rachel Whiteread was acquiring her self-described "language" for making art, the western art world had retracted its rejection of casts and was dusting off and fixing up the long-buried casts of the nineteenth century.[71] In 1982, the Victoria & Albert Museum fully renovated its cast gallery.[72] A few years later, in 1986, a writer for the New York Times declared that casts had "been away so long they began to look new."[73] This return to prominence had both aesthetic and archaeological motivations.[74] Plaster casts offer the possibility of collecting in a single venue various replications of the same object that has been elected to the canon of western art history. At the same time because plaster casts are divorced from the originals

[68] One such space, *Closet*, Whiteread cast a closet from her childhood home in which she had frequently hidden in pieces and then reassembled it in her studio and later in exhibition rooms, transposing to the public a private, personal space with marks of her own presence therein recorded on its surface (whether visible or not to the naked eye). Townsend 2004, 6.

[69] Nichols 2005 examines the cast revival from 1980-2005, as cast collections re-emerged following a long period of neglect and destruction that extended through the 1960s; see especially Nichols 2005:11.

[70] On this see Nichols 2005.

[71] Whiteread 2007, 73

[72] Rachel Whiteread contributed the piece Room 101 for installation amidst the nineteenth-century casts, Nichols 2005, 42 in 2001.

[73] Nichols 2005, 45; McGill 1987, 9.

[74] Nichols 2005, 46-52.

that they replicate, they do not enjoy the same protection offered to a work of art and thus allow for greater experimentation.[75]

Whiteread's casts, however, differ significantly from the unified wholes produced in previous centuries. To produce, for example, a cast of the Parthenon marbles, one first casts the surface of the initial iteration to generate a negative mould of the original surface. The image produced, however, is a mid-process step. The negative mirrors the original object. Every recession protrudes and every protrusion recesses. This image, usually produced in plaster, touches the original surface, potentially taking with it surface traces, such as pigments. From the negative a second, positive cast is taken and this becomes the copy. Thus, the mould, or negative print, enjoys an indexical relationship with the original that is not present in the copy. The mould requires the original in order to be made, whereas the copy requires only the mould. Whatever traces of the original monument might find their way into the plaster of the mould probably did not transfer a second time. Any traces that did enjoy a double transfer do so only in and through the mould.

In the nineteenth century these stages of the casting process were described as the birth (original), death (negative mould), and rebirth (positive copy), of the image.[76] Rachel Whiteread's *Ghost* stops *in medias res*, at the moment of the original's death. Her casts are negative moulds of the interior space of the room. She assembles these casts into a monument that represents the negative space of the room. Hidden within the walls is this space, but the surface of the monument remains a three dimensional mirror of the original room. The recession of the fireplace in the room becomes the protrusion of a soot-covered entity in the monument; the light switch becomes hollow; even the shadows cast by the architecture are reversed.

The negative space that Whiteread has captured and monumentalized holds within itself the latent potential of a mould. One could always take another cast of these and reconstruct some approximation of the original room. An approximation is all, however, that we could have. *Ghost* records information, the peach of the walls, the soot of the fireplace, even the particularities of the tiles and mouldings, about the original room and about our experience of its space that would be lost in a replication. In its latent potential for replication and its inversion of positives into negatives, *Ghost* stages an explicit relationship between casting and photography.

As Marden Nichols has argued, the rise of the photograph heralded the temporary death of the cast.[77] The photograph partly replaced the three-dimensional technology of mechanical reproduction that had been in use for millennia with a new, less expensive and more portable two-dimensional technology. This transposition had already been underway with glyptic arts and print-making, although photographs made greater claim to capturing the real object in a two-dimensional state.[78] Dimensional disjunction is a persistent feature of replication, both in the material sense of an object in the round finding itself replicated as a print or photograph (although both object and image are to some extent three-dimensional), but also in the conceptual sense of imagined replications,

[75] Nichols 2005, 52, 94.
[76] Nesbit 2001, 133.
[77] Nichols 2005, 34-5.
[78] On the truth claims of photography, see Sontag 1977, 6-7.

or mental images, which exist outside of three-dimensional space.[79] Sculpture, and especially casts, lent themselves readily as one of the early subjects of photography, having the dual virtues of stillness and monochrome.

Casts

The technical capacity to replicate objects through casting has a long history that is inseparable from the history of ancient Mediterranean art and also inseparable from the historiography of the loss and recovery of color. Although we have come to consider casts as copies of earlier images, casting is also the method by which bronze sculptures originally came into being. Take, for example, the indirect lost-wax technique, which was used widely throughout the ancient Mediterranean to produce objects in metal.[80] The artist begins with an object to be replicated in metal. This object is either an object already in existence to be copied as a step from the conceptual image of the object towards it metal instantiation. After marking divisions along the object, the maker creates piece-moulds from plaster or clay; the maker lines these piece moulds with a layer of wax in order to generate a positive replication of the first version and then fills in the remaining space with a clay core. After the reusable moulds are removed, the caster covers the wax and clay image with more clay and then melts out the wax lining. Into the space left by the wax the maker pours molten metal and so creates a positive copy of the initial iteration. This technique produces at least four replications through its very process: the concept or mental image*,* the initial object in wood or clay, the piece-moulds, which may be used again, the wax and clay version, which may never come into independent being, and the metal object, which is the endpoint of this particular exercise, but which might find itself the initial object in a later casting process.

For Plato, and to some extent Aristotle, as well as later philosophers, the mental *eidos* or form definitively exists as the ur-image of the material object, and it is always prior to and thus superior to all subsequent iterations, including the material "original".[81] This philosophy relies on accepting the primacy of the wholly inaccessible conceptual/mental initial image (*eidos*). This *eidos,* which has no material presence, only comes into being through material or verbal production. Whitney Davis has successfully challenged the primacy of the *eidos*, arguing convincingly that all objects exist in a chain of replications, whether morphologically substitutable or not, and that these chains are part of what brings an object into being.[82]

Although the image of a chain well captures the potential seriality of replication, I propose to substitute the term matrix of replications here in order to better capture the diachronic aspect of some of these connections. An object is not necessarily prior to all replications with which it is genealogically associated. Although it may be serially related to those objects with which it shares a morphology, the wider matrix of replications of

[79] At the heart of this focus on dimensionality is the question of whether optics actually allow for the third dimension; while we might see a three-dimensional space and understand its dimensionality, the visual image of that space is always somewhat two-dimensional. On simultaneity and dimensional apprehension see Davis 1996, 19, 232-253.
[80] Stewart 1990, I; Mattusch 2002, 112, Fig. 5.7 a-f.
[81] On the term *eidos* see especially Pl. *Rep.* 10 (595a-608b) and Arist. *Met.* Z.4-10. How the term *eidos* and Plato's theory of forms relates to later 'formalisms' within the history of art is a critical issue that is, unfortunately, beyond the scope of this project. On form and gender in the history of art see Summers 1993.
[82] Davis 1996, 1-2.

materials, sounds, smells, or visual inspirations with which the initial object shares an association is simultaneously prior to, contemporary with, and after it. Both morphologically-related and non-morphologically-related replications of an object produce its matrix of being. These replications make the object known; it is notionally impossible to prove that an *eidos* completely precedes that which is produced.[83]

The narrative of western art that depends on the *eidos*, individual genius, and a history of attributions or original works to famous names demands that one take the conceptual pre-existence of the *eidos* on faith. A closer look at the processes of production reveals that no idea pre-exists a matrix of associated replications. Integrating the role of replications in the production and dissemination of artworks is one step towards weakening the grip of this wholly inaccessible yet inevitably superior mental *eidos*, a concept that finds its physical instantiation best captured by pure form.

Replications are not only produced in moments long after the initial object's production, but could also appear roughly contemporary with the object replicated. In an important article on replications roughly contemporary with their referent, Milette Gaifman, demonstrates that images of the Athena Parthenos, the chryselephantine statue created by Pheidias that stood in the cella of the Periklean Akropolis, circulated widely on vase painting, terracotta plaques, coins minted by Athenian allies, gems, metalwork, jewelry, on dedicatory reliefs, and as freestanding statues and statuettes.[84] Replications of the Parthenos appear in domestic and public contexts, in planar and three-dimensional forms; they map political allegiances and personal practice. Gaifman describes the network of copies as "expanding" the original.[85]

None of these replications reproduce the materials, scale, or even exact form of Pheidias's gleaming gold-and-ivory treasury. Gaifman describes this reduction thusly: "the original is reduced to some basic iconographic trait."[86] Despite the reduction that accompanies replication, I argue that each replication calls to mind the overt materiality of the Parthenos from the Athenian Akropolis. In beholding an unpainted terracotta plaque from Olynthos, the gold and ivory leaf, the piercing blue eyes of *glaukopis* Athena, took shape in the imagined world of the beholder, whether or not s/he had ever seen the highly secluded, but renowned statue which the plaque depicts.[87] Certainly one saw the terracotta, or marble or silver of the replication as well; its association with the chryselephantine Parthenos did not efface its status as an object present in real space. The polychromy and materiality of the initial referent, however, attached to the replication.

Certain properties of Pheidias's Parthenos made the statue famous— as described by the peripatetic writer of the second century C.E., Pausanias, these were the grand polychrome materials of gold and ivory which form the staute, the ivory Medusa, the gold Nike, and as well as the narrative of Pandora worked into the statue-base.[88] Equally important was the statue's double status as the cult statue of the goddess and treasury of her city. These properties of material splendor are not present in the replications that

[83] On this relating to replication, see Davis 1996, 4.
[84] Gaifman 2006.
[85] Gaifman 2006, 259.
[86] Gaifman 2006, 264.
[87] On the use of ivory "leaf" to create the massive chryselephantine statues, see Lapatin 1997; for the Olynthos plaque, see Gaifman 2006, 269.
[88] Paus. 1.24.5-7.

circulated contemporaneously with the statue, yet the circulation of these replications assures the status of Pheidias's Parthenos, and these absent properties of his statue are partially present in the reception of its replications. One might consider this an extension of Wollheim's principle of seeing-in/seeing-as which posits "that the seeing appropriate to representations permits simultaneous attention to what is represented and to the representation, to the object and to the medium, and therefore instantiates seeing-in rather than seeing-as…"[89] A beholder simultaneously sees the representation and the materials of its making.

In applying Wollheim's concept to replications, I argue that a beholder both sees in the replication an object, and that object as a replication, but also sees in that replication the visible properties of the absent original. This seeing-in takes place whether or not the beholder of the replication has beheld the absent original, as long as s/he has some prior understanding of the referent, which is to say, as long as the beholder exists in a context in which visible and verbal descriptions (replications) of the absent original circulate. To the owner of the terracotta plaque from Olynthos, the splendor of the Parthenos is present in the plaque in much the same way that the goddess is also present.

Our ability to add back these differences, such as the gold leaf of the Athena Parthenos not present on the terracotta plaque of the same sculpture, or the obsidian and ivory eyes of the Kritian boy vacant in all plaster iterations, vary with physical and temporal proximity to the initial object or descriptions of it. Even, however, as these material properties remain present for the beholder, the process of replication is a first step in wresting form from (polychrome) materials. The early replications that are roughly contemporary with Pheidias's Parthenos play a role in destabilizing the co-dependence of form and color, a process that continued into the Roman period.

When Roman artists sought to replicate an object of Greek sculpture for Roman patrons, the maker took moulds of sculpture, from which they created a positive in plaster. A hollow plaster could be used to create a bronze iteration, whereas solid plaster casts allowed artists to create marble iterations using precise measurements. In most cases the Greek sculpture itself did not travel with the moulds to artists' workshops such as the one at Baiae.[90] The moulds and the plaster casts offered an image of the Greek object's form, but not its surface treatment or original materials. A mould, for example, renders an inlaid eye solid.[91] A mould may strip a layer of the surface treatment from the initial object, but subsequent iterations produced using the mould do not bear that surface treatment unless executed after the form of the object has been created. This substitution takes on its own force.

The power of subsequent replications increases with distance from the initial object, so that as a cast comes to be the only point of contact with an absent "original" it takes on greater value. One example of this phenomenon is the gallery in the Metropolitan Museum of Art dedicated to classical Greek statuary in which most of the sculptures are Roman in date; instead, Roman marble copies executed from plaster casts produced using moulds taken from Greek sculptures literally stand in for the sculptures that they replicate [Figure 4]. Because we continue to see Greece through Rome,

[89] Wollheim 1980, 213.
[90] Landwehr 1985.
[91] Note the strange eyelid flanges on the Aristogeiton cast, which replicate the clay protection for the bronze eyelashes. Richter 1970, Figs. 1-3.

sculptures produced in the Classical period of Greek art conform to our expectations by appearing as unadorned white marble sculptures. Casting technology selects for morphological (formal) substitutability as opposed to material or chromatic substitutability. As a result, casts have played a significant role in conditioning our expectations of ancient images so that even when confronted with polychrome traces on original marbles or bronzes, we fail to see them or to see their importance. The plaster cast abstracts the surface details and corporeal materials of the initial form. In addition, although the flash-lines of the pieces moulds used to produce a cast sometimes remain visible, the uniform color and material abstracts away the pieced-together-ness of the original form, presenting a unified whole. Ironically, the cast's self-presentation of wholeness is itself an illusion, because leavening in the form of wheat or an iron core are often added to the plaster in order to shore up this fragile material. Wholeness is illusory, but because we are always looking at merely a copy of the absent original we can continue to imagine the original whole, even if the initial object would actually contradict that idea. The pursuit of wholeness bears some relation to the theory of the mental *eidos,* for the imagined mental image always offers a greater possibility of being whole than the material object. The cast, which often abstracts joins, additions and other disruptions, conforms to our expectation that classical Greek art present an idealized whole, an ideal that polychromy disrupts.

The subject of Roman sculptural polychromy is currently under investigation and current research, which I shall address below, confirms that polychrome effects were an important part of many finished sculptures in the Roman period.[92] The question of whether or not Roman iterations (copies) of Greek images received surface treatments after they had been cast has not been the subject of sustained inquiry. Although the presence of coloristic effects on Roman sculpture more generally suggests that casts also received such treatment, one can make the case more clearly.

There are extant examples of polychromy on Roman sculptures that make a direct reference to an earlier Greek iteration. One particularly rich example that has been well-studied by a team from the University of Northhampton, is the head of an Amazon from Herculaneam (C.E. 79) that replicated a Greek bronze original. [Figure 5] The head was discovered near the Roman Basilica by members of the Herculanean Conservation Project team. Because the head was buried under volcanic ash after the eruption of Mt. Vesuvius, pigments on the hair and eyes are especially well preserved. Rich reddish-brown pigment covers the statue's hair. Her heavy eyebrows are built up with thick layers of pigment and both upper and lower lashes are rendered along the upper and lower lid. These lashes would have been formed from bronze in the earlier Greek iteration.[93] In the first century C.E. the artist has rendered the thick bronze lashes with pigment. A reddish pigment outlines her iris, but leaves a white ring around the brown pupil. The iris and pupil are painted as though the upper lid covers their upper curve, hooding the eye.

A separate and important body of evidence for polychromy on Roman copies is depictions of statues from the paintings of the houses of Pompeii and Herculaneum.[94] Take, for example, the painted versions of Praxiteles' Infant Dionysos group from the

[92] Ostergaard 2011; Abbe 2011 and 2010.
[93] I thank Andrew Stewart for this observation.
[94] Moormann 1988, especially 71-75.

Casa del Naviglio, *Casa di Sallustio*, and the *Casa di Giasone*.[95] Even the baby Dionysos is painted in greenish-brown to represent bronze.[96] The corpus of painted depictions of statues in Roman wall painting displays a range of choices in play, from fully painted statues that are identifiable as such within the wall painting by their bases, to statues that are left unpainted and appear white or green as a shorthand for their marble or bronze surfaces, respectively. Some scholars dismiss this evidence from Roman wall painting because these paintings are fantastical and illusionistic and because they understand sculpture and painting as completely independent media, a distinction that carried minimal weight in the ancient world.[97] The range of sculptural effects that the painting depict, however, have been included precisely because they contribute to the paintings' illusionism. Which is to say that illusionism need not be only the province of painting; the polychromy of ancient sculpture offers up just the sort of illusionistic games that Roman wall paintings embrace.

The Roman sculptural and painting traditions suggest that a range of surface treatments and materials could be used in creating images. This range may have been greater than that enjoyed in Greek art production. The processes by which images are replicated, whether stamping or rolling a seal, or creating new forms from moulds separate an object's material specificity from its formal characteristics. This separation allows for the range of possible polychromies on all subsequent iterations of an image, but also eventually allows formal characteristics to dominate artistic practice and discourse. As monochrome sculpture gained in popularity in later periods, the groundwork separating materials from form had been laid for centuries.

From the sixth to the early fourteenth century, there is little evidence for replications of freestanding ancient sculpture in-the-round. Certainly sculpture from the middle ages was made from polychrome materials and received surface treatments and much more of this polychromy remains extant.[98] In the 1300s in Italy attention turned to a revival of classical antiquity. Armed with Pliny and rich local sources of white marble, the production of sculpture *d'apres l'antique* began in earnest. The post-antique history of replicated casts is best documented in Haskell & Penny's lively account *Taste and the Antique*.[99] They demonstrate that from the sixteenth-nineteenth centuries in Europe a fairly limited corpus of sculptures from antiquity found replication as highly prized casts.[100] The sculptures that were moulded for the Belvedere in Rome, the Tribuna in Florence and the Musée Napoleon in Paris defined a canon of casts of known classical sculptures, including Antinous, the Apollo Belvedere, the Farnese Herakles and the Laoköon. This canon gradually expanded across the map of Europe and through different economic classes of beholders.[101]

In their initial phase of replication, kings and popes traded the moulds from which these casts were produced in expensive materials like bronze and marble. Vasari, however, recounts that the artist Leone Leoni created a private cast collection in plaster

[95]Moormann 1988, 181, #207/2, #198b/2, 288. 207/2 is depicted, but regrettably only in black and white.
[96] I am grateful to Chris Hallett who points out that infants are always given a pale flesh color when the image is meant to signal a living being.
[97] Ling 1989.
[98] Nash 2010; Ostergaard 2010; Roller 2010; v. Ulmann 2010; Andreuccetti and Cervelli 2009.
[99] Haskell and Penny 1982.
[100] Haskell and Penny 1982, xiv.
[101] Haskell and Penny 1982, xiv. Musée Napoleon also produced casts for sale.

sometime before 1550.[102] From the seventeenth century onwards, casts from this corpus were made available to artists training in the national academies in Rome and Paris and thus began the prominent role of antique sculpture in the training of European artists, both painters and sculptors. All major European universities maintained plaster cast collections, as did wealthy citizens. It is primarily these plaster cast collections with which modern beholders are most familiar. Because these casts are most often left in their base material, with minimal surface treatment, the rise and expansion of sculptural casts has been instrumental in sharing formal replications while dismissing material polychromy from analysis.[103]

The Post-Antique Color Debates

Contemporaneous with the expansion of cast collections in Europe is a renewed attention to and debate about the role of color in not only art practice, but philosophical life. This debate and its ramifications has been particularly well-documented by Jacqueline Lichtenstein in *The Eloquence of Color*, in which she traces the Neoplatonic origins of an anti-color bias in aesthetic practice, the rise of a debate about the relative merits of color and form in the French classical age.[104] Lichtenstein charts the geneaology of these debates from quattrocento debates about color and line (*disegno vs. colore*) in Italy. Of the role of color in the wider philosophical significance of this debate, enacted primarily in fifteenth-century Italy and mid-seventeenth-century France, Lichtenstein writes:

color has always displayed a tension that runs through all theories of representation. For color is the material in, or rather *of*, painting, the irreducible component of representation that escapes the hegemony of language, the pure expressivity of a silent visibility that constitutes the image as such.[105]

Thus, color comes to figure the tension between theoretical reason and material visibility. Lichtenstein demonstrates that in the French Classical period the interpretation of ancient authors, especially Plato, as against color was deployed to support debates in contemporary aesthetics. An artist or a rhetorician could choose to work in a classical, that is anti-color, manner or in an anti-classical, that is pro-color, manner. Thus, these later color debates propagated a very limited idea of how color was approached in classical antiquity.

Lichtenstein compares two binaries in the history of rhetoric and representation: color and drawing; the eloquent body and rhetoric.[106] Color and the body escape the confines of graphic and verbal representation; their vivid material excess dazzles without depicting. The trajectory of this debate from quattrocento Italy to seventeenth century France traces the philosophical orientation of the intellectual communities that received casts of classical antiquities and shaped their responses to them. Although Lichtenstein is

[102] Haskell and Penny 1982, 16; Vasari 545
[103] See Stewart 2004, 56, on the scholars' use of casts in the nineteenth and early twentieth centuries, with bibliography.
[104] Lichtenstein 1993.
[105] Lichtenstein 1993, 4.
[106] Lichtenstein 1993, 6.

particularly concerned with color's presence in painting, as I will argue in Chapter Two: The Materiality of Color, polychrome materials constitute form in any medium, including sculpture, the medium for which it has historically been deemed most excessive.

In a related work, *The Blind Spot*, Lichtenstein traces the metaphor of blindness in sculptural practice in the period of seventeenth-nineteenth centuries in the French academies, drawing particular attention to the opposition of painting and sculpture and of touch and sight.[107] Lichtenstein's account of the theory and practice of sculpture maps well to her work on color in the theory and practice of painting. One site of this debate, which I will address in Chapter Three: Color, Inlaid Eyes and Visuality, concerned whether to pierce the surface of a sculpture in order to drill the pupil of the eye, or to leave the surface blank and unpenetrated, presenting a "blind eye".[108] These two narratives, of color and the body and sculpture and the visible, are deeply intertwined in the history of aesthetic thought and art. One of the principle arguments of the present dissertation is that color destabilizes such binaries, absorbing the body, painting, rhetoric and sculpture into a matrix of associated replications that bear on each other. Without the form:color binary on which much of the history of art depends, sculpture and painting cease to present intrinsically distinct practices.[109]

Amidst these debates about the role of color in art practice, emerges Isaac Newton's research on color and light. In 1665 Newton discovered that he could bend light using a prism; thereby producing a spectrum of colors ranging from the least bent rays of light (red) to the most bent (violet). Newton published these most substantively in his treatise Opticks of 1704.[110] Prior to Newton, Aristotle's understanding of colors as the properties of material objects that were created through different juxtapositions of black and white remained unchallenged.[111] Newton isolated seven colors within the spectrum and arranged these colors into a circle. [Figure 6] Although his work is often described as demonstrating that color is a property of light, Newton considered colors a sensation produced in the beholder by light, not a property of it.[112] Newton's rainbow remains the dominant paradigm in the modern west. An important consequence of the success of Newton's theory, however, meant that the colors of classical antiquity colors would be judged by this standard. If technologies of replication began the separation of color and form, Newton's theory seemed to remove color from the material world entirely.

Not everyone embraced Newton's new understanding of color; his staunchest critic was the German writer Johann Wolfgang von Goethe, who rebutted Newton's approach and findings in his *Zur Farbenlehre* (Theory of Colors) of 1810.[113] Goethe argues that our experience of colors is fundamentally material, a position that has much more in common with the predominant views in classical antiquity than Newton's.[114] Physicists found little to support in Goethe's work, but it resonated with philosophers, including Schopenhauer and Wittgenstein, whose works have been important for the

[107] Lichtenstein 2008.
[108] Lichtenstein 2008, 86-92.
[109] For a discussion of how color disrupts the distinction between painting and sculpture see Wollheim 1972, 21 on Adrian Stokes.
[110] Newton [1704] 2003; On the impact of Newton, see Gage 1993, 153-176.
[111] Aristotle *de Sens* (439a-440b); Judd 1840, v; Irwin 1974, 25.
[112] Judd 1840, vii.
[113] Goethe 1840.
[114] Goethe does not, however, align himself with atomist theories, Sepper 1988, 93, 153.

history of aesthetics, and visual artists, including Philipp Otto Runge, J.W. Turner, and later Kandinsky and his circle.[115]

Photographic technologies

Although the technique of photography does not emerge until the mid-nineteenth century, two different technologies of replication that bear some relation to photographic practice precede its invention, the glyptic arts and print-making. The use of cylinder and stamps seals to authenticate transactions and mark presence and ownership is very ancient. Cylinder and stamps seals were particularly prominent in the Mesopotamian tradition. A sealing provides a trace of the owners physical presence, as the seal was usually worn on the body of the person whose authority it marked (although it was also possible to bestow that authority onto a proxy via the seal). Like the photographic negative and printer's block, the seal's imagery is carved in the negative in order to produce a positive image (and text) when the wearer presses or rolls it into the receiving material. Seals were often made from very high-value materials, quite frequently of lapis lazuli. [Figure 7] The value of the material accorded status to its bearer, even though no trace of the material or its color is visible in the sealing. Seals, thus, begin a process of referential replication that separates form from materiality.[116]

In later periods print-making offered the seriality of the seal, with the additional important aspect that prints were often themselves depictions of other images and the means by which these images circulated. In fact, the very images that casts had begun to canonize in the fifteenth and sixteenth centuries circulated even more widely as prints.[117] A recent exhibition at the Louvre, *Musées de papier: l'antiquité en livres 1600-1800* examined the force of the replication and circulation of printed images of Graeco-Roman art in visually building an art historical canon.[118] The earliest examples in the exhibition are engravings from the *Museo cartaceo* of Cassiano dal Pozzo (1588-1657) and the latest are from work by the Visconti Brothers (late sixteenth-mid-seventeenth century) [Figure 8], Caylus (1692-1765) and Winckelmann (1717- 1768). Although scholars trace the origins of modern art historical inquiry to Winckelmann's *Geshichte,* one of this exhibition's principal arguments is that print-driven canonization preceded textual discourse. Most commonly these books included black and white prints; as they circulated more and more widely, these prints, like the cast collections, conditioned our reception of ancient art.

By the time that photography emerged in the mid-nineteenth century, the public did not expect replicated images, whether in-the-round or on paper, to produce polychrome materiality. Photography expanded and modified the replicatory possibilities of print-making. Accompanying a photographic copy of a lithographic print in his treatise on photographic practice, *The Pencil of Nature* (1844)*,* Henry Fox Talbot, the British inventor of the calotype, wrote:

We have here the copy of a Parisian caricature, which is probably well known to many of my readers. All kinds of engravings may be copied by photographic means; and this

[115] Schopenhauer 2010; Runge 2010; Wittgenstein 2007.
[116] On Graeco-Roman seals, see Platt 2006.
[117] Haskell and Penny 1982, 17.
[118] Décultot 2010, 10.

application of the art is a very important one, not only as producing in general nearly fac-simile copies, but because it enables us at pleasure to alter the scale, and to make the copies as much larger or smaller than the originals as we may desire.[119]

History has borne out Fox Talbot's claim and photographic replications of images have become commonplace. Even with the shift to digital photography, color images remain more expensive to print and thus circulate with less frequency. Because of the coloristic limitations of black and white photography, monochrome plaster casts offered a perfect partnership. Color could be added back onto early black and white photographs, in a process described as "making the correction," but photographs of antiquities remained uncorrected, either because no color was visible on the original, or because that color was not considered a salient part of the image. Although the early history of photography has been well described elsewhere, it is important to emphasize here that the earlier Daguerrotype, invented by Daguerre in Paris, produced a positive image on glass and thus could not be replicated mechanically; Fox Talbot's calotype offers the first possibility of serially printing positive images from a negative onto paper.[120]

In *The Pencil of Nature*, the only object that Fox Talbot includes twice is his plaster bust of 'Patroclus', which he photographed repeatedly throughout his career.[121] The first image is a salt paper print from a calotype paper negative dated August 9, 1842. [Figure 9B] The photograph captures the plaster bust of a bearded man gazing to his right. The photograph plays with the deep recession of his eyes, his slightly parted lips, nostrils, and recesses between curls, darkening the recessions and brightening the contrasting surfaces. The bust's large, opaque, undifferentiated eyes contribute to the pathos of his gaze, as though blinded by circumstance. The *Literary Gazette* of 1844 reviews Fox Talbot's image of Patroclus as sublime and the author of the article goes on to suggest that:

photography is admirably adapted for sculpture; and a noble gallery of all that is great in that art might readily be produced in such splendid imitations as that now before us. Mr. Talbot's instructions as to the best means for taking these 'likenesses' are of high practical value.[122]

Photography took 'likenesses' of objects in the round and could be used to produce a paper museum of "all that is great in [sculptural] art." In contrast to the earlier paper museums of non-photographic prints, photographs claimed a closer relationship to the true image as it appears in real space. In Paris, where Daguerre invented a metallic photographic practice independently of Fox Talbot, photography was soon enlisted in the

[119] Tomas 1993, 42; Fox Talbot *Nature* Plate XI. On the relationship of Talbot and Benjamin, see Tomas 1993, 43.
[120] Fox Talbot named his process the calotype from the Greek *kalos* (beautiful). The slightly earlier Daguerrotype, invented by Daguerre in France, produced a positive image on glass, which could not be replicated. The calotype (later Talbotype) negative allowed for infinite replication of the image on paper. Caminos 1966, 66. For a summary of early photographic processes, see: Sontag 1977; Barthes 1982.
[121] Although Fox Talbot believed his bust represented Patroclus, it was apparently cast from a marble in the collection of Charles Townley that is thought to represent a companion of Odysseus. On photography and classical archaeology, see Stewart 2004, 44-60.
[122] Weaver 1992, 107; Jerdan 1844, 410.

standardization of the criminal justice system. The criminal archive championed by Alphonse Bertillon finds its layman's counterpart in the artistic archive that is envisioned in response to Fox Talbot's *Patroclus*.[123]

In Plate XVII, another salt paper print from a calotype paper negative taken exactly one year after Plate V, on August 9, 1843, Fox Talbot photographs the bust in profile, facing left. [Figure 9A] In this version, the highlights concentrate around the locks of hair and right torso, while the eyes are now almost entirely in shadow. From this angle the opacity of the eyes is less evident and disturbing. Fox Talbot made dozens of images of this bust from different angles and under different lighting conditions.[124] In *Nature*, Fox Talbot writes: "Statues, busts and other specimens of sculpture, are generally well represented by the Photographic Art; and also very rapidly, in consequence of their whiteness."[125] The plaster cast offered a perfect subject for early photography; in turn, photographic replication advanced the monochromatic insistence of casting by making possible the wider circulation of halftone images.

As photographs circulated they produced an independent canon of images; "they effectively displace the actual artifact in the collective art-historical imagination."[126] Adolf Furtwängler's *Meisterwerke der griechischen Plastik* (1893) was the first scholarly book to use exclusively photography rather than drawings.[127] Photography was then increasingly integrated into twentieth century art historical practice so that it now forms the basis for most of our initial encounters with art objects.[128] In the mid-nineteenth century casting and photographic print-making colluded in the presentation of a monochromatic ideal. This collusion, however, constituted only one side of an argument, which had been underway since at least the early modern period, concerning the status of color in the visual arts.

Further Polychromy Debates

Beginning in the eighteenth century many traveling European antiquarians remarked upon the pigments still visible on ancient Mediterranean monuments. Extensive debate about the degree and role of polychromy in Graeco-Roman art ensued and this crystallized in the nineteenth century with several publications that included reconstructions on paper of the polychromy of various ancient monuments. In the winter of 1814 Antoine-Chrysostum Quatremère de Quincy, an art historian and politician, published *Le Jupiter olympien: l'art de la sculpture antique considéré sous un nouveau point de vue.* Quatremère de Quincy first conceived of this work during a trip to Paestum in the company of his friend the painter Jacques-Louis David in 1779. The completed volume includes hand-colored plates of Quatremère's de Quincy's polychrome reconstruction of Pheidias's chryselephantine cult state of Zeus. [Figure 10] His reconstruction, Quatremère himself admits, is not something for which he has concrete

[123] On photography and the criminal justice system, and on Fox Talbot's understanding of this sort of technical potential (although he does not mention criminal justice), see Sekula 1986.
[124] Fox Talbot in Weaver 1992, 88-89.
[125] Fox Talbot in Weaver 1992, 89.
[126] Bergstein 1992, 476.
[127] Stewart 2004, 50.
[128] Photography is, for example, essential to Heinrich Wöfflin's comparative methodology, a system of presenting visual materials in pairs that reigned until Powerpoint displaced slides.

physical evidence, but a product of his well-read and well-traveled imagination.[129] Gottfried Semper later described Quatremère de Quincy's contribution as "the abstract theory of polychromy."[130] In 1822 Franz-Christian Gau, a mentor of Gottfried Semper and friend of Jacques-Ignaz Hittorf, exhibited and published images of painted tomb facades and interiors from Nubia.[131] Casual excavations at Aegina and several other Greek sites indicated that architectural polychromy was not, in fact, isolated to Egypt, but a fact of Greek practice as well. Unfortunately, whatever pigments that remained visible to the naked eye seem to have disappeared quickly after exposure to air and thus were visibly known only to those who pulled the architectural blocks from the ground.[132] Because "proof" existed only in the words of archaeologists and in a few rare exceptions in hand-colored plates, which were also subjective, there could be no visual corroboration of these claims of Greek architectural polychromy.[133] Nonetheless, when the Glyptothek in Munich opened in 1830, the director, Leo von Klenze included a plaster relief from the temple of Aphaia at Aegina painted by the artist Thorvaldsen.[134]

A flurry of pamphlets by various antiquarians invested in the issue of classical polychromy established three distinct positions, which remain largely in place today: minimal surface treatment confined to ornament to enhance the plasticity of sculpture and to mask defects; complete surface coverage with heavy, flat pigment; full coverage with varnish that ranged from translucent to deeper coloristic saturation. In his 1835 publication *Über die Polychromie der griechischen Architektur und Skulptur und ihre Grenzen (mit farbigen Lithographie*), Franz Kugler argued that Greek buildings in marble received far less surface paint than those in materials like limestone, which required stucco.[135] His reconstruction of the metopes from the Parthenon included thick painting on the underside of the lintel, the guttae and over the background, while the figures themselves are only partially polychrome. This argument for partial polychromy, especially the use of pigment to increase the relief of sculptures and to differentiate details of dress and person, continues to hold sway in ongoing contemporary debates about the degree to which the white (especially Parian) marble was left visible. Kugler's argument directly addressed the work of Hittorf, who from 1824 had been publishing pamphlets on Greek and Sicilian architectural polychromy and who argued that pigments covered the entire surface of the marble.[136] In his "On the Polychromy of Greek Architecture" Hittorf acknowledged that his full-color approach "so entirely subversive to the hitherto dominant idea of the monochromy of Greek art, met with many opponents, and but few supporters."[137] Hittorf went on to argue the following:

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[129] Van Zanten 1977, 9.
[130] Semper 1851, 228.
[131] Van Zanten 1977, 19.
[132] Van Zanten, 1977, 64; Cockerell 1819, 340-1. Fleeting pigments were also attested by Charles Newton in his excavation of the Mausoleum of Halicarnassos and although most of these traces disappeared immediately after exacavation some remained visible to curators at the British Museum, where the monument was shipped and now stands. Jenkins and Middleton 1997.
[133] Alexander Nagel describes a similar situation in the excavations at Persepolis. Herzfeld's personal excavation diaries detail discoveries of architectural polychromy, but little of this information made it into the official excavation reports. Nagel 2010.
[134] Van Zanten 1977, 22.
[135] Kugler 1835, 12-24; Hittorf 1851 32; Van Zanten 1977, 23.
[136] Semper 1851, 228.
[137] Hittorf 1851, 21.

the material proofs [of polychromy], even now abundantly sufficient, would have been much more numerous, as observes M. Quatremère de Quincy, if modern critics, whenever they perceive traces of decoration, either on the monuments themselves, or historically in the description of ancient authors, had not seemed to be resolved, sometimes to deny their consequence, as conflicting with their notions of the taste and genius of the ancients.[138]

In his "On the Study of Polychromy and its Revival," Gottfried Semper articulated the positions of the two opposing polychromy camps as follows: those who see polychromy as a mere supplement to improve sculptural effects and conceal defects, in contrast to those who "acknowledge no priority of importance in sculpture and architecture over painting; they deny the existence of limits between the different manifestations of Greek art, which, in their collectiveness, form but one indissoluble whole."[139] Semper's argument inverted standard resistance to material polychromy, reading color not as divisive, but unifying. Semper also emphasized the importance of the wider Mediterranean context in which Greek polychromy should be considered. He wrote, "but what have most assisted in the investigations of ancient polychromy are the discoveries in Assyria, and the better acquaintance with the monuments of Persepolis and of Egypt.[140]

With respect to the appearance of monuments, Semper believed that the primary color of temple architecture was "yellow red, very vapoury, resembling that of the finest terracottas" and corresponding with the setting and rising Mediterranean sun.[141] Semper argued for a position somewhat between that of Kugler and Hittorf that "white marble never remained naked, not even in the parts intended to appear white; but the layer of color by which they were covered was rendered more or less transparent, to enable the white color of the marble to appear through it."[142]

A number of artists also produced work that explicitly questioned the prevailing assault of white Neoclassicism.[143] John Gibson, a one-time student of Canova's, was commissioned by Joseph Neeld to produce a statue of Venus. *Tinted Venus*, which Gibson worked on from 1851 to 1856 was first exhibited in Rome. [Fig 2] A couple from Liverpool, the Prestons, commissioned a replica of the statue before Gibson had completed the first version. *Tinted Venus* is not a copy, but is certainly a work in the classical tradition. Gibson's surface treatment of the sculpture offered an argument for how Graeco-Roman sculptures might have been painted. Venus holds a gilded pomegranate in her left hand and a gilded tortoise sits at her feet. Like Kugler, Gibson uses polychromy to highlight details. Gleaming white marble flesh predominates, but Gibson made up his Venus with tint over her lips, rouge on her cheeks, colored pupils, and a golden gloss over her hair. These surface treatments correspond to a longstanding equation of color and cosmetics, a relationship that I will address at the end of Chapter

[138] Hittorf 1851, 21.
[139] Semper 1851, 234.
[140] Semper 1851, 233.
[141] Semper 1851, 245. Semper's use of "yellow-red" reveals the difficulty in classifying colors with words.
[142] Semper 1851, 243.
[143] For a survey of sculptural polychromy in nineteenth-century Europe, see the catalogue accompanying the 1996 exhibition "The Colour of Sculpture (1840-1910), Blühm 1996.

Two.[144] Surely it is no accident that of all possible deities Gibson executed his experiments with Aphrodite.

Gibson exhibited *Tinted Venus* a second time in London at the Universal Exhibition of 1862 at the height of the polychromy debates. *Venus* stood in a rotunda designed by the architect Owen Jones, a champion of universal polychromy. Jones included a Latin inscription on the rotunda which read "without color there is neither life, nor health, nor beauty, nor youth."[145] Despite Gibson's light hand with color, many critics and members of the public rejected Gibson's tarted up sculpture.[146] An anonymous critic for *Art Journal* wrote:

It has either been carried too far, or not far enough; it is neither flesh nore marble. We consider the adjunct of colour, thus applied, as a departure from the original high purpose of sculpture, which never aimed at more than an abstract type of subject represented in form and expression; its end being to idealise rather than to realize. This attempt at too palpable flesh not only destroys the very essence of the sculptor's art, but violates the delicacy that attaches to pure material.[147]

A French critic, Paul Mantz, described the effect of Gibson's polychromy as "le sentiment le plus bourgeois" and compared Gibson's work to the cheap painted porcelain figurines sold in boutiques along the boulevards; in addition to being low class, Gibson's polychromy had also, according to Mantz, rendered Venus unchaste.[148]

By the time he built the rotunda for Gibson's statue, Owen Jones had already championed polychromy for more than a decade. Jones had been the force behind the polychrome Greek court added to the Crystal Palace, which had originally been designed for the Great Exhibition of 1851, when it moved to Sydenham. The centerpiece of Jones's Greek Court was a room decorated with red, blue and yellow columns that housed plaster casts of the Parthenon marbles painted in full color, as they were later depicted in Lawrence Alma-Tadema's *Pheidias and the frieze of the Parthenon* (1868), which I will discuss below.[149] Prior to opening his Greek Court, Jones, along with Semper and Hittorf, had participated in public debates concerning architectural polychromy at the Royal Institute of British Architects of London.[150] Nonetheless, the overwhelmingly negative public reaction to Jones's Greek Court impelled him to issue a public apology, published in 1854 as *An apology for the colouring of the Greek Court.*[151]

At the Great Exhibition, Crystal Palace had comprised pavilions of the world's cultures, as well as exhibits of living people recruited to stand in pens. After the Great Exhibition closed, the Palace Company relocated the original Crystal Palace to Sydenham

[144] On polychromy and cosmetics, see also Lichtenstein 1989 and Héron 1996.
[145] Drost 1996, 65.
[146] Drost 1996, 65-66.
[147] Drost 1996, 66.
[148] Drost 1996, 66; On sculptural polychromy and distinctions between high and low art, see Yarrington 1996; Drost 1996, 66.
[149] Drost 1996, 65.
[150] Drost 1996, 65.
[151] Drost 1996, 65; Jones included Semper's "On the origin of polychromy in architecture" in the same publication as his apology.

Serpentine, where it stood from 1854 to 1936, when it burned down. This Crystal Palace was effectively a cast of the original, with all of the exhibitions recreated in painted plaster; even the living people who had been on display were recreated in wood.[152] The Crystal Palace was described as "the people's palace" by its parent company and rather in the manner of a fully-accessible universal survey museum, part of its purpose was to educate those who did not have the means to own or otherwise access their own private cast collection.[153] The class politics of Crystal Palace map well to the politics of color, which has often been associated with lower class tastes. Crystal Palace presented a past in color, but to a public that did not have the power and capital to shape dominant tastes. The purity of Neoclassical whiteness may not have reigned undisturbed, but reign it did (and does).

The French artist Jean-Léon Gérôme offered a stark commentary on color and the hierarchy of the arts in his sculpture *Tanagra* (1890), now in the Musee d'Orsay in Paris. [Fig 10] The gleaming white marble body of a woman sits with her left hand extended; in it stands a small, fully-polychrome sculpture of a Tanagra figurine. Terracotta figurines from Boeotia were first discovered in the late 1860s, many of them with exquisite polychromy intact. [Figure 11] Gérôme's woman bears only minimal polychromy on her face and hair in contrast to the rich polychromy of the Tanagra figurine she holds. The artist offers two possibilities for sculptural polychromy within on sculpture. Gérôme was especially taken with the Tanagras, including them in several of his sculptures and in his painting *Sculpture Vitam Insufflat Pittura* (or *Atelier de Tanagra*) (1893) in which he paints a woman painting a series of Tanagra figurines. [Figure 12] Large-scale sculpture has historically been more highly valued than figurines, and has received the greater share of scholarly interest. The polychromy of small-scale terracotta figurines, and from the Hellenistic period no less did little to undermine the primacy of white full-scale sculpture. Gérôme was one of very few sculptors of his day who worked in polychrome and he described unpainted sculpture as "cold."[154] His *Bust of Bellone* (1892) as well as his *Sarah Bernhardt* (1895-1897) are his two most radical statements on sculptural polychromy.

Lawrence Alma-Tadema's painting, *Pheidias and the Frieze of the Parthenon*, (1868), shows the famous artist presenting the polychrome frieze of the Parthenon to an audience observing from behind rope-barriers, as in a gallery.[155] [Figure 13] The frieze is set just above eye-level and the relief has been painted with vibrant blue, gold and reddish-brown pigments, with white for garments and horses. Alma-Tadema's version of classical polychromy takes the Tanagra model and applies it to the most venerated of classical Greek sculptures. The Parthenon marbles were removed from the Akropolis by Lord Elgin between 1801 and 1805 and were first installed in the British Museum in 1816, at which point they became the Museum's most famous installation, a status which they continue to enjoy to this day. Alma-Tadema's painting, which may have drawn upon Owen Jones's reconstruction of the Parthenon marbles polychromy for his Greek Court

[152] Hales 2006, 118.
[153] Hales 2006, 117-118.
[154] Blühm 1996, 128.
[155] See Gage 1993, 11, who suggests that Alma-Tadema may have drawn on the excavation reports of 1862 for the Mausoleum of Halicarnassos, which documented a strong blue background and red fleshtones on the monument.

as inspiration, is both an argument in favor of classical polychromy of the fullest variety and an elegant commentary on the controversy that arose around the cleaning of the Parthenon marbles in the nineteenth and early twentieth centuries.

Cleaning Away Color (The Parthenon Marbles)

The polychromy debate resonated through the museum world and, as today, dogged cleaning and conservation efforts with controversy. The case of the Parthenon marbles demonstrates how museum practices of the nineteenth century and early twentieth centuries conspired to remake this iconic image of Classical Greece into an object that conformed to prevailing elite tastes. The publicity surrounding the marbles and their treatment means that we have access to far more documentation and information than is publically available for many other monuments. Many examples of overcleaning remain whispered behind palms at conferences and talks with no explicit evidence made public. It is to the great credit of the British Museum that they have made public so many internal documents relating to the 1939 cleaning controversy. These documents are important for reconstructing how the Parthenon marbles were cleaned, as well as demonstrating that these cleaning practices and the picture of classical Greece that resulted were controversial, and perhaps unauthorized, at the time.[156]

In 1937-8, while the Parthenon marbles awaited the construction of a new gallery to house them, some of the blocks were vigorously scraped using wire brushes, hammer and chisel. The art dealer Lord Duveen had donated the gallery and held a very strong opinion about the degree of whiteness desired in the marbles.[157] Curator Ian Jenkins estimates that when the Parthenon marbles entered the collection of the British Museum in February 1817 less than 20% of their surface retained its coating and that the 1930s cleaning removed half of what remained.[158] By coating, Jenkins refers to ancient fragments of paint that had weathered away, but which were still partially visible as orange-brown "stains."[159] In 1811, while the Parthenon marbles were still in Elgin's possession, the sculptor John Henning prevented Elgin's men from scouring the sculptures with dilute sulphuric acid and water, a practice he later observed conservators at the British Museum using on the Lycian sculptures.[160] The sculptures were washed again in 1816 when Richard Westmacott produced moulds for casts of them and in 1836-1937 when a second set of moulds were taken. [161] Throughout the nineteenth century complaints of the effects of London's polluted air on the sculptures meant that several trustee-approved cleanings took place.[162] In 1932-1933 the marbles were cleaned, block by block, using a solution of medicinal soft-soap and ammonia.[163] From 1937-1938 the marbles underwent additional cleanings that came to light in 1938, when then-director John Forsdyke acknowledged to the trustees what had taken place. After evaluating the

[156] Jenkins 2001.
[157] Jenkins 2001, 8.
[158] Jenkins 2001, 5.
[159] Jenkins 2001, 5; Jenkins 1999.
[160] Jenkins 2001, 7; On the polychromy of the Mausoleum of Halicarnassos, see Jenkins & Middleton 1997.
[161] Jenkins 2001, 4.
[162] Jenkins 2001, 6.
[163] Jenkins 2001, 6.

evidence the board described the result of this unauthorized cleaning as "to remove the surface of the marble and to impart to it a smooth and white appearance."[164]

The cleaning controversy remained an issue of public interest and debate primarily because of the fame and international political controversy surrounding the Parthenon marbles. While Jenkins argues that the marbles did not bear any remaining surface coloration by the time that they entered England, his research in the "patina spots" suggests that some residual evidence for ancient surface treatments remained. The British Museum has recently reconstructed polychromy on the metopes, on which I will say more below, and we must assume that if the metopes were painted, so was the frieze. Cleaning practices by conservation teams present an argument or best guess for how an object might have looked in its original incarnation. Conservators try to present the visual history of the object, to give an impression of how the object has borne up over time. Conservators face these choices today; the difference is a greater commitment to transparency and to using reversible materials. In the nineteenth and early twentieth centuries many people expected the Parthenon marbles to gleam white; the vigorous cleaning of 1937-8 brought those blocks that were stripped in line with visual expectations of the day and continue to exert a potent force on how we view the marbles today.

Approaches to Reconstruction

The same technologies of replication that have instilled monochrome or half-tone images of the classical past in the public imaginary, plaster casts and photography, with the recent addition of computer graphics, are the primary tools being put to the recovery and reconstruction of ancient polychromy. In the past two decades attention to ancient polychromy has been particularly concentrated. These efforts tend to be associated with specific museums, such as the British Museum, the Metropolitan Museum of Art, the Ny Carlsburg, and the Glyptothek in Munich, or archaeological projects, such as the French team in Delos and the British team in Herculaneum. Thus, reconstructions unfold according to the specific needs and interests of individuals working at these institutions.

With the rise in interest and available data, scholars have begun to build international networks to share research and data, such as the Copenhagen Polychromy Network and another unnamed network based in Italy.[165] Three approaches to reconstruction have been put into practice: full-scale replications using painted casts, computer-generated 3D reconstructions, which are often displayed as films, and the projection of colored lights onto the original surface. I will discuss one example of each of these three techniques below.

The experimental potential of casts has been particularly important for scholars interested in the recovery of ancient Mediterranean polychromy. Although modern conservation practice forbids reconstituting pigments on the surface of original ancient marbles, a cast of the original, with its modest material and infinite replicability, offers the right surface for such experimentations. Most recently, the *Stiftung Archäologie* in Germany has been especially active in experimenting with painting on casts in order to

[164] Jenkins 2001, 8.

[165] Brinkman, Primavesi, and Hollhein 2010. On the Copenhagen Polychromy Network see Ostergaard 2011, which will eventually maintain an active, open-source website.

replicate ancient sculptural polychromy.[166] This group uses primarily modern plaster casts of ancient sculptures, although they have occasionally used a marble replication in order to generate a better picture of how ancient marble sculpture would have interacted with pigments.[167] Decades of research that began under Volkmar von Gräve and has been continued by his students Vinzenz Brinkmann and Ulrike Koch-Brinkmann culminated in not only a dense scholarly volume by Brinkmann on the polychromy of archaic and classical Greek sculpture, but also an exhibition of the painted casts that their team had produced, *Bunte Götter* (2004).

The methods used by the *Stiftung Archaeologie* team and their collaborators at the Vatican Museums, in Copenhagen at the Ny Carlsburg Glyptothek, and in London at the British Museum consist of a combination of close examination under raking light, and analysis using UV-VIS absorption spectroscopy, a method of measuring colorants, and X-ray fluorescence measurement.[168] The Metropolitan Museum in New York has been using similar techniques to reconstruct pigments on objects in their collections.[169] The general approach to the recovery of pigments combines scientific techniques, photographic technology, mining texts for information about materials and artistic practices, and carrying out stylistic comparisons.

As interest in ancient polychromy has risen, so have funding opportunities and the *Stiftung Archaeologie* (SA) has expanded the scope and approach of its reconstructions, enlisting the help of trained painters and chemists in the preparation of pigments and execution of reconstructions.[170] Over the past eight years *Bunte Götter* has continued its world tour and more recent venues and accompanying exhibition catalogues include multiple versions. Their method consists of a triangulation of tests run on the original to detect original color traces or details that were painted, stylistic comparison with other media, such as vases, and trial and error, to create a polychrome replication of the original statue.[171] The German school and their collaborators in the Vatican and Copenhagen are careful to describe these reconstructions as experiments, presumably to evoke the mantle of scientific authority. As these are not replicable results-driven experiments in the literal sense I suggest that the term investigations more accurately captures their process from a more neutral perspective. They prefer to run these investigations on full-scale plaster casts precisely because these casts stage an experience of polychrome sculpture, which other modes of replication cannot approximate. On the other hand, these painted plaster cast reproductions substitute for the initial iteration. Like all conservation efforts, their investigations are controversial and risk monumentalizing a hypothesis.

The success of the polychrome casts echoes the success of the plaster cast itself, even as it seeks to reverse its effects. Plaster casts in academic, private and public collections stand in for the so-called originals that they depict. The use of casts for experiments with antique polychromy has a long history. Take, for example, the painted cast of the Peplos Kore (Acr. 679) on display in the Museum of Classical Archaeology at

[166] See http://www.stiftung-archaeologie.de
[167] Brinkmann and Wuensche 2004, 149.
[168] Brinkmann and Koch-Brinkmann 2010, 115
[169] Abbe 2007.
[170] For current research see http://www.stiftung-archaeologie.de.
[171] For example see Panzanelli 2008.

Cambridge University. The ancient Greek version of this sculpture, which was excavated from pit near the Erechtheion in 1884, stands in the New Acropolis Museum and some traces of pigment remain on the marble. The Museum of Classical Archaeology acquired a second cast of the so-called Peplos Kore in 1975. The curator Robert Cook elected to paint the second cast as they hypothesized it once had looked. The Museum's text on the reconstruction reads:

as so little paint remains on the original, the restored version does not claim to be exactly right; indeed, recent scientific analysis suggests that the paintwork may have been even more elaborate, and may have gone through a number of different designs. But the repainted Peplos Kore gives a good impression of what the ancient sculpture looked like.[172]

Curators at the museum had the Kore repainted in 1996 as the paints from 1975 had begun to deteriorate. This sort of repainting and maintenance took place on ancient sculptures that remained in place for any length of time.[173] Precisely this fragility of applied pigments has contributed to the suppression of ancient color, although as I am arguing here not all removal of color occurred organically, but through processes of replication and later deliberate removal.

One of the casts that has appeared in several iterations of *Bunte Götter* is of the so-called Persian rider from the Athenian Akropolis (ca. 490 B.C.E). [Figure 14] The original, which is in the New Akropolis Museum in Athens, retains extensive pigmentation, including traces of malachite, azurite, red ocher with madder red and ochre-yellow.[174] Two holes drilled into the rider's left thigh might have been used to secure a gorytos, or Persian quiver.[175] Using UV-VIS absorption spectroscopy, the SA team examined the original sculpture in 2007 and identified nine extant pigments: azurite with admixture of cobalt (blue) malachite with atacamite (green), a mixture of red ochre and madder red (red), a mixture of gold ochre and orpiment (yellow), brown ochre, unmixed red ochre, a mixture of red iron oxide and haematite, green earth, and light brown umber.[176]

By combining what remains of the painted pattern with the weathering pattern on the marble, they were able to recreate the complex decorative patterns on the rider's vest and leggings.[177] Preliminary incisions to create the pattern grid remain visible on the original. For the trouser leg, rows of blue rhombi are interspersed with multicolored rows.[178] The scale pattern on the vest uses a sequence of red scale on green ground, blue scale on red ground and green scale on blue ground on the left side, while on the right the ground only alternates every two scales.[179] A meander pattern in green and yellow and

[172] See the website of the Museum of Classical Archaeology, University of Cambridge: http://www.classics.cam.ac.uk/museum/peplos_kore/
[173] See, for example, the Delian inscription honoring the sculptor Telesinos for refurbishing the Asklepieon, *IG* 11.4 no. 514. Stewart 1990, 23, 297.
[174] Brinkmann and Koch-Brinkmann 2010, 114, figs. 55-56.
[175] Brinkmann and Koch-Brinkmann 2010, 115.
[176] Brinkmann and Koch-Brinkmann 2010, 116.
[177] Brinkmann and Koch-Brinkmann 2010, 117.
[178] Brinkmann and Koch-Brinkmann 2010, 119.
[179] Brinkmann and Koch-Brinkmann 2010, 119.

outlined in red runs along the hem of the vest, above the rider's leggings. For the horse, the SA team found iron oxide red and green earth on the mane, light brown umber for the coat, and gold for the hooves. In constructing all of this on the plaster cast, the SA team left any broken parts of the sculpture white, to expose the break, and they did not reconstruct the light brown umber of the horse's coat, but left it white as well.[180]

In a small wing adjacent to the hall containing the Parthenon marbles, the British Museum now displays a film of their reconstructions of the polychromy on one of the south metopes. As I have shown, the status of the surface treatments of the Parthenon, that frought icon of classical Greek ideals, is one of the most contentious of all of the polychromy debates. Given the response to Owen Jones's polychrome Greek Court of 1851, it is not surprising that the curators at the British Museum wished to avoid reconstructing the monument's polychromy on plaster casts. The digital reconstruction that they offer is a more effective teaching tool than a reconstruction in-the-round, but it lacks the sheer physical impact of the painted casts. The digital reconstruction cannot hope to counteract to visual weight of the adjacent hall lined with pale, unadorned marbles. It does, however, allow the curators to dissect their process and to show their approach step-by-step. The SA team does this in their accompanying texts, but the painted casts already present a completed argument.

The British Museum team has reconstructed the triglyphs a strong blue, with a gold-on-red meander pattern framing the metope on the top and bottom. [Figure 15] Gold detailing articulates the guttae area that overhangs the central image of a centaur battling with a fallen Lapith. For the centaur they have reconstructed warm tan skin for his human torso and upper body and a deeper brown for his horse's coat, which turns deeper still along his tail and over his hooves. The tail matches the deeper brown of his beard and hair, integrating the mixed creature. He raises a golden vase over his head, ready to bash it down on the Lapith below. The Lapith holds a golden sword that would have been added to the original in metal; they have picked up that gold in his shield as well, which has a red interior with gold detailing. The naked Lapith's skin matches the tan color of the centaur's human upper half and his hair is a similar brown color, encircled with a gold headband. [Figure 16] The Lapith wears a pair of darker brown boots, which are difficult to parse against the hooves of the centaur. In the main reconstruction they have left the background of this scene white, although they offer several alternatives versions, with red or blue. [Figures 17-18]

The digital reconstruction is more didactic than the painted casts, but has far less visual impact. It offers more flexibility in presenting alternatives and in showing the process behind the reconstructions. Although the British Museum team does not do this for the Parthenon metope, one very effective tool in digital reconstruction that has been used to great effect by the French team at Delos is to reconstruct the sculpture in situ and to explore the effects of light on the sculpture as the sun rises and sets.[181]

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[180] I have the impression that in earlier iterations of the exhibition the SA team left white areas for which they were not certain of the colors, or for which no evidence appeared. On the other hand, in later iterations of the exhibition they seem to include white among the other colors are part of the palette, which corresponds with what we know of ancient Greek ideas about the rainbow.

[181] Philippe Jockey and Brigitte Bourgeois showed this digital reconstruction technique at the April 2009 color conference at the French school in Athens.

The third reconstruction style, using projecting lights, differs significantly from the first two. I will focus here on the example of *I colori dell'Ara Pacis*, an exhibition for which colored lights were projected onto the Ara Pacis in the evenings (9pm to midnight) from 26 December 2008 to 06 January 2009, and again for a similar duration in 2010 and 2011. This projection technique has also been used on the cathedrals at Amiens and Chartres. Thus far, this technique has been used only on the architectural relief of freestanding monuments. The projection is an event of limited duration, due to cost, and is completely non-invasive. The only permanent record of these interventions is any photographs or videos taken during the projection. In the three examples of which I know the reconstruction of the colors is hypothetical and the organizers do not explain the selection of the colors in use or exactly who is responsible for the reconstruction.[182]

Along the lower panels of the Ara Pacis, rich green plants (acanthus scrolls) curve upwards against a blue background. [Figure 19] White and gold flowers bloom within curlicues and white birds fly just above the greenery. A gold with red and green meander pattern separates this register from the figural relief in the upper panel. The goddesses on the upper panels of the eastern façade wear blue, gold and white garments. [Figure 20] In the upper panels of the western façade depicting Aeneas sacrificing to the penates (household gods) on the right and Romulus and Remus on the left, the organizers have projected light flesh tones, darker brown hair and beards (for the mature males), deep purple-red, gold and white for the garments of different figures and brown and green unto the trees present on both sides. [Figures 21-22] It is difficult to offer a more complete description of the color because the only images currently in circulation are quick photographs of the light projections taken during the event. The organizers did not, to my knowledge, produce a catalogue to accompany the exhibition, although a conference, "*I colori di Augusto: polichromia dei monumenti antichi*" took place in association with the initial opening of the exhibition on 11 March 2009, which included several unpublished presentations on the polychromy of the Ara Pacis.[183]

These three approaches, full-scale casts, digital reconstruction, and light projection, offer a range of choices in reconstructing color on ancient sculptures and monuments. In the research used to generate the reconstructions, the presentation in which they culminate, and the circulation of images of these interventions to the public, all three of these approaches deploy the same technologies, casting and photography, which had previously given us a history of the art of antiquity in half tones. The problems of monumentalization on the one hand and inability to compete with the uncolored originals on the other hand are important. This phase of reconstruction, however, remains active and ongoing; situating these reconstructions within the critical discourse of art history takes them seriously as objects and as arguments. In tracing the history of the loss of color over time alongside different attempts to recover this loss, I have shown that these interventions operate most profoundly in the public imaginary; if we recolor our *eidos* of the past, we will begin to see the colors before our eyes.

[182] One review of the Ara Pacis exhibition mentions the use of paintings and mosaics from Pompeii and Herculaneum as comparanda, as well as research on the polychromy of Greek antiquity, as well as horticultural research at the University of Rome. http://www.archaeogate.org/classica/article.php?id=935

[183] Very brief abstracts of these presentations are available online at http://www.sovraintendenzaroma.it

Chapter Two: Color, Materiality and Corporeality

In the previous chapter, I focused on the problem of color and its historiography, in particular on the role of technologies of replication in removing color from images. I traced the history of the mechanical selection for form and against color through replication. This excision of color constituted contributed to the technical and intellectual disembodiment of the western artistic and philosophical traditions, which came to elevate the mind as something separate and superior to the body. In this chapter, I turn to the material presence, or materiality, of color in the ancient Mediterranean world. In the ancient world color was consider material rather than a trick of perception. I explore how the materiality of ancient colors, their status *as matter*, converged with representational intent. As matter, color constituted an object rather than characterizing it. I argue that it was only in and through colored matter that figural bodies could be brought into being. Embedded within this argument is an exploration of the relationship of parts to whole. Particles of matter (color) combine to form a whole, but a whole that is always only an assemblage of parts. In emphasizing color as the essential component of both the figural and the beholder's bodies I want to reinstate color's significance for embodiment.

An Apulian vase from the collection of the Metropolitan Museum of Art depicts an encaustic painter applying color to a sculpture of the god Herakles [Figure 23]. The sculpture stands on a base in its shrine and the painter works on the body in situ. The animate bodies depicted on the vase—the painter, his assistant, the divine audience of Zeus and Nike, and Herakles beholding his own image in the making—are all rendered in the terracotta palette of the red-figure technique. Two signs mark the image of Herakles as a sculpture: the rectangular base on which it stands and the white color in which the sculpted body is depicted.

The white pigment likely corresponds to the white base layer often applied to sculpture in marble, terracotta, and limestone as a support for additional pigments. Historical precedent suggests that we take the white pigment as a shorthand for the whiteness of marble; however, marble is neither homogeneous nor monochrome, and current research suggests that marble of ancient Mediterranean art was often painted, even in areas intended to appear white.[184] We can, therefore, understand the white figure as that of a sculpture of Herakles coated with a base layer in preparation for additional pigments.

The painter is depicted applying pigments to the surface of the sculpture's white body. He has already filled in much of the statue's lionskin attribute, and is in the process of completing the body and club. An assistant readies hot rods over a brazier, which the painter will use to heat the wax with which to mix the mineral pigments and wax directly on the surface of the sculpture in the encaustic technique.[185] We must be careful to differentiate between the colors shown on the vase and those that a painter would have used to paint a sculpture. Vase painters in antiquity typically deployed a limited palette.

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[184] Opper, 2010 pers.comm.; Brinkmann 2003, 39.

[185] On the encaustic technique, see von Bothmer 1951, 158. Although no encaustic panel paintings from classical Greece survive, Romano-Egyptian mummy portraits were often executed in encaustic. On these see Walker 2000 and Borg 1996. On the use of encaustic to paint ships in the fifth and fourth centuries B.C.E., see Glastrup 1995. On encaustic in contemporary art, see the range of scholarship on the American painter Jasper Johns, in particular Orton 1994.

As with other media, the passage of time has diminished what colors remain on ceramic vases; especially since additional colors were often added after firing and thus were more vulnerable than the iconic reds and blacks fired into the form.[186] The image on this vase, therefore, does not offer evidence of what a painted sculpture of Herakles would have looked like, only evidence that such a sculpture would have been painted in its entirety. Scholars often use images depicted on vases to supply copies or iterations of lost masterpieces of Greek sculpture and painting (e.g. Polygnotos' Iliupersis from Delphi). In reconstructing the colors on ancient images vases have helped to parse patterns.[187] The more limited range of colors deployed by vase painters, however, coupled with the way in which these images have often been reproduced in black and white or circulated as line drawings have contributed to the removal of color from ancient art. When we substitute images from vases for "lost originals," these images replace the imagined original with a real image now stripped of its original polychromy.

The vase's composition shows Herakles watching the completion of his own image. A body is in the process of becoming an image of *his* body through the application of colors, which have historically been relegated to the realm of qualifiers, or non-essential details. Dismissing these qualifiers privileges the image's status as a body above its specific identity as a representation of the body of Herakles. In this case I am not referring to iconographic details so much as the details of facture, the materials that literally *make* the image.[188] This preference for generic bodies (forms) results in part from the constant work that the past demands of us in trying to recover the kind of specificity on which earlier interactions with these images turned. Colors and colored materials bring about a kind of animation that the un-particularized body lacks. As distant beholders we have grown accustomed to looking at generalities, which spare us the uncanny experience of witnessing an image in all of its terrible specificity.

Poikilos

The term *poikilos* captures an aspect of color that was highly valued in the ancient Mediterranean, both for its positive and negative valences. Richard Neer writes the following of the related phrase *poikilon ēthos*:

Its literal meaning is "a painted character"; but *poikilos* is a particularly resonant term. As Marcel Detienne and Jean-Pierre Vernant have demonstrated, it describes shimmering or dappled things—a bright weapon, the hide of a fawn, soft fabrics—but also thoughts and personalities. The trickster Odysseus is *poikilometis*, a man of shifting and changeable wiles; in later literature, Fortune, *Tykhe,* is *poikile*, because it always changes; as are foxes, because of their craft. For Plato, the *poikilos* is simply 'that which is never the same as itself,' *oudepote tauton.*[189]

[186] Although we often discuss pottery as monochrome and bichrome, many vases included a wider range of colors, as the recent exhibition and accompanying catalogue at the Getty Museum *The Colors of Clay* demonstrated to great effect, Cohen 2006. For one explanation for the palette chosen by Athenian vase painters, see Vickers 1985. Because of their paucity and high value, metal vessels are more likely than their ceramic counterparts to be reproduced in color photographs so that their colorful materiality is more readily incorporated into any interpretations.

[187] Brinkmann 2003.54, fig. 72, 64 fig. 97, 106 fig. 175, 113 figs. 190-1, 116 figs 195-6.

[188] An image was considered incomplete without its *kosmēsis*, a subject to which I will return below.

[189] Neer 2002, 16. Detienne and Vernant 1978 25-31, 49-51, 288.

Polychromy thematizes duration precisely because of its changeableness; some color simply does not survive and in its absence beholders prioritize other properties of the image and cease to see or account for what color remains. *Poikilos,* however, is an important and valuable term for understanding how color works, both in antiquity and today.[190] Sappho uses color terms deftly in her poems, often at moments of particular significance, and she offers an important account of *poikilos* in Fragment 1.

Deathless Aphrodite of the spangled (*poikilo*-) mind,[191]
child of Zeus, who twists lures, I beg you
do not break with hard pains.
O lady, my heart

but come here if ever before
you caught my voice far off
and listening left your father's
golden (*chrusion*) house and came,

yoking your car. And fine birds brought you,
quick sparrows over the black (*malainas*) earth
whipping their wings down the sky
through midair--

they arrived. But you, O blessed one,
smiled in your deathless face
and asked what (now again) I have suffered and why
(now again) I am calling out

and what I want to happen most of all
in my crazy heart. Whom should I persuade (now again)
to lead you back into her love? Who, O
Sappho, is wronging you?

For if she flees, soon she will pursue.
If she refuses gifts, rather will she give them.
If she does not love, soon she will love
even unwilling.

[190] Both Sanskrit (*pekala*) and Sumerian (*gunu*) speak of variegation and changeableness as well, although these words appear to have no etymological relationship to *poikilos*, meaning they developed independently in response to the linguistic needs of each language group to describe shimmering, variegated materials. From ePSD: *gunu* [SPECKLED] (477x: ED IIIa, ED IIIb, Old Akkadian, Ur III, Old Babylonian, unknown) wr. gun3; gu2-un-gu2; gu2-nu; gun5 "(to be) speckled, multicolored; (to be) hatched (in sign names); to anoint, smear on, apply makeup" Akk. barmu; eqû, N. Veldhuis and DM Goldstein, pers. comm.

[191] Many have wrestled with the *poikilo*-compound. Carson 2003, 2-5 uses Voigt 1971 for the Greek, but amends *poikilothron'* to *poikilophro:n*, which is not the standard interpretation of the text. On Sappho's authorial voice and power, see Winkler 1990.

Come to me now: loose me from hard
care and all my heart longs
to accomplish, accomplish. You
be my ally

Sappho opens her poem with the *poikilo*-compound, invoking *poikilothron*/*poikilophro:n* Aphrodite. With that first word Sappho names what follows, her demonstration of *poikilia*. Sappho begs Aphrodite of the shimmering, dappled, changeable, adorned, and variegated mind (or throne). In describing an aspect of the goddess Aphrodite as *poikilos*, Sappho invokes the goddess's bodily adornment as well, finery that acts as an instrumental part of her divinity. Sappho's poem plays out the *poikilia* with which she begins; she speaks the variegation for which she praises the goddess. For the first three stanzas Sappho as supplicant speaks and a color-word appears in each stanza (*poikilo-, chrusos, melas*). The movement between gold and black is a kind of *poikilia* and the juxtaposition of bright and dark colors recurs throughout ancient Mediterranean visual and textual arts. In lines 18-20 the poem breaks midline with *tina* and Sappho as poet offers up the voice of the goddess in place of her own: *whom should I persuade (now again)/to lead you back into her love? Who, O/Sappho, is wronging you?* From the moment that (Sappho as) *poikilo*- Aphrodite enters the poem the color-words disappear. Shimmer shifts from visual to authorial. As Aphrodite, Sappho lists the repercussions that she will mete out to the unnamed person who has wronged Sappho. Finally Sappho steps backs into her own supplicant position and speaks directly to the goddess with the final two lines *Come to me now: loose me from hard/ care and all my heart longs/ to accomplish, accomplish. You/be my ally.* This movement between Aphrodite and Sappho pictures the changeableness that *poikilos* describes between voices, bodies, and states of being.[192] Sappho constructs a *poikilos* Sappho, like to *poikilos* Aphrodite.[193]

I would like to look briefly at one of the other color terms/materials mentioned in the poem: gold. The values of gold, in antiquity and today, stand in some amount of opposition to those of *poikilos*. Gold constitutes and retains its value in and through changelessness, its material capacity to remain the same over time.[194] Gold can appear on the surface of the earth's body, readily available in rivers and already in a usable, pure (unalloyed) state. In Near Eastern contexts, gold is frequently paired with lapis lazuli, another high-value, durable material associated with divinity and kingship. As I will discuss at length below, Mesopotamian art also valued materials of shimmering variegation, such as lapis lazuli, and often paired them with the steadfast purity of gold. The material of gold is both an independent material and an aspect of color that stands in dialectical relation to *poikilos* in ancient Mediterranean visual arts. Pairing gold and a material that is *poikilos* creates an image that is simultaneously steadfast and shimmering.

[192] On Sappho's double-consciousness see Winkler 1990, 162-176, who reads Fragment 1 alongside *Iliad* 5.
[193] I have chosen to use the citation form *poikilos* as an adjective in English rather than decline the Greek to match gender and number in English, thus circumventing any confusion about dialects (eg Aeolic) and different contexts.
[194] Kurke 1999, 50.

Zeus & Ganymede

A fully painted, half-life sized terracotta sculpture of Zeus and Ganymede stood in the sanctuary of Zeus at Olympia from the early 5th century B.C.E.[195] [Figures 24-30] Zeus's hair and full beard are painted the rich blue-black (probably the pigment Egyptian blue) described in Greek texts as *kuanos*.[196] His eyebrows, lashes, and irises are also painted the same blue-black color, while his pupils are slightly darker still. His flesh is painted the deep reddish-brown characteristic of the well-trained male body and he wears a darker red robe embroidered with repeating images of Pegasos along its border. In his left hand Zeus carries a staff. Under his right arm he carries the boy Ganymede whose own bare flesh carries the slightly lighter tones of an *ephebe* (but not the pale pigment associated with female flesh).[197] Ganymede's hair and eyes are reddish-brown and he carries a red cock, presumably a gift from Zeus, in his left hand. Zeus's blue-black eyes cast a sweeping gaze, while Ganymede looks downward, perhaps at the mortal world from which he is flying in the arms of the king of Olympos.

Zeus's divinity shines forth from within his body through his hair and eyes.[198] Textual descriptions and visual images from Egypt, Greece, and the Near East characterized aspects of the divine and heroic body as *kuanos* at least as far back as the 3rd millennium B.C.E. I will address this comparative history below; for now I wish to emphasize the appropriateness of *kuanos* for Zeus. Color in this context does not merely qualify the hair, beard and eyes, but makes these features into the hair, beard and eyes *of Zeus*.

Kuanos electrifies Zeus's gaze and head so that he dazzles and seems to move even when still. The beholder witnesses the shining color on the surface of the figure, produced through the application of pigment and a buffing agent, yet the figure appears to generate this shimmer from within. Color unifies surface and interior by producing the effect of interiority, of power and animation produced in the body itself and made

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[195] For the narrative of Zeus and Ganymede see Hom. Hymn to Aphrodite 200-216. *Il.* 5.265-79, 20.231-235 and Pindar *Ol.*1, esp. 44-45. The story of Ganymede is a popular myth, first appearing in the *Iliad* (5.265) and common in visual representations dating from the first half of the fifth century, with a hiatus in the latter half of the fifth century, to a resurgence in the mid-fourth century B.C.E. that stretched into a curious embrace by Christiantity in the Middle Ages, and then steadfast popularity in the Renaissance and beyond. On which see Davidson 2007, 184. On the absence of all manner of abduction scenes in the visual arts of the second half of the fifth century B.C.E. see Stewart 1995, 84-85.

[196] I reject the argument put forth in Brinkmann 2007, 23 that poetry and the visual arts do not inform each other's color vocabularies. Brinkmann writes: "[Poetry and visual arts] are autonomous aesthetic and narrative vocabularies of two independent art forms. Access to the actual phenomena of the coloring of archaic sculpture is thus [by relying too heavily on texts] obstructed." I understand that he makes this argument in support of the technical analysis that characterizes his methodological approach and from which the current study certainly benefits, but it is intellectually impossible for verbal colors and visual colors to remain entirely distinct. Brinkmann is correct to point out the pitfalls of relying entirely on textual evidence to understand color in the ancient world, for verbal and visual references never map directly onto each other; however his statement that the two spheres (verbal and visual) operate independently of each other participates in the very isolationist thinking that his research attempts to overcome. Indeed, his exhibition catalogue includes a chapter dedicated to the textual sources.

[197] I stress this because some discussions of the *erastes/eromenos* relationship liken the younger man to a woman because he is penetrated. This pairing is based precisely on the fact that the eromenos is *not* a woman. The sexual pairing is not about the substitution of one orifice for another, but the active selection of a male partner in the bloom of youth.

[198] For a discussion of shining and image-animation, see Zorach 2005, 195.

manifest on and through its surface. Blue-black color is naturally more saturated than colors of lighter hue, such as yellow. This depth contrasts with the pigment's sheen and finish, a juxtaposition that instantiates *to poikilon*. Colored materials establish the arrest and movement, or to use Richard Neer's recent characterization of sculpture, the *absence* and *presence* of the image.[199] This polychrome Zeus both represents and the deity and makes present the divine.

Traditional readings of this piece, which is frequently reproduced in black and white, barely mention its polychromy, while placing excessive weight on its form.[200] The image does not function without its color. Zeus without *kuanos* is simply another man offering love gifts to a boy. *Kuanos* reveals Zeus's divinity to his audience, while simultaneously affirming the narrative that the image depicts. Ganymede is rising to Olympus in order to serve Zeus and the other deities the red (*eruthros*) nectar that keeps him and them *kuaneoi*.[201] James Davidson has argued that the popularity of Ganymede's story derives primarily from his role serving red nectar to the gods sets him apart, both physically and experientially, from other mortals.[202] Ganymede's contact with the literal stuff of divinity differentiates him from the various other mortals who are intimate with Zeus. The sculptural group appropriately emphasizes Ganymede's mortality in contrast to Zeus's immortality. Ganymede's hair is light reddish-brown, a common color used for Greek men. In some accounts and depictions he is described as *xanthos* or yellow-haired, perhaps to further emphasize the contrast of his locks with the blue-black of his captor.[203] The relative pallor of Ganymede's skin in contrast to Zeus's marks their different stages of manhood in much the same way that their different sizes do. Ganymede, the *eromenos,* is precisely *not* given the pale skin of the confined woman, despite much commentary likening the *eromenos* to a woman because both are penetrated.[204] Their appearance in this sculpture resembles that on a contemporary or slightly earlier Attic bell-krater attributed to the Berlin Painter and now in the collection of the Louvre. [Figures 31-32] Here, Ganymede's hair is also painted a lighter shade (*xanthos*) than Zeus's hair and full beard. Both of them wear a purple fillet. Overall the palette is less distinct than that of the sculpture discussed above, as one would expect from vase painting.

There are at least two levels on which the Zeus and Ganymede story operates. First there is the relationship between a man, an *erastes*, and a boy, his *eromenos*. Form is adequate to convey this dimension of the story, although painted skin fleshes out the differences between *erastes* and *eromenos* and adds a level of nuance absent in the unpainted images. Second, the job that Ganymede performs for the gods is essential to the pair's narrative, as James Davidson emphasizes in his analysis of Ganymede's

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[199] Neer 2010, 28.
[200] Andrew Stewart's attention to the *Zeus and Ganymede*'s pigments in *Greek Sculpture* is a notable exception to the tendency of scholars to overlook entirely the sculpture's polychromy. The photograph accompanying the description is, unfortunately, black and white, but this is no doubt due to the cost of color reproductions at the time this book went to press in 1990. Vinzenz Brinkmann has successfully side-stepped the limitations placed on color by traditional presses by publishing through his own press, Biering & Brinkmann.
[201] See Hom. *Hymn to Aphrodite* 207.
[202] Davidson 2007, 170-200.
[203] Hom. *Hymn to Aphrodite* 202.
[204] See Davis 1996, 262–76.

story.[205] This aspect of Zeus and Ganymede's story, the more particular and perhaps more important dimension, is not adequately conveyed through form. The specificity of color (*kuanos*), its affect and effects, mark Zeus as divine in deliberate contrast to the mortal Ganymede and the beholder. In receiving and reciprocating Zeus's piercing blue-black gaze, the beholder experiences a frisson of what Ganymede will experience in his new role as cupbearer to the gods. Ganymede, notably, keeps his gaze averted from Zeus's divine gaze; instead, he track the mortal world that he leaves behind. Polychromy animates these two figures in substantively different ways.

Bluebeard/blue beards

A trio of hybrid creatures sculpted from limestone and covered with one layer of stucco and another of various colorful pigments occupied a pediment of the Hekatompedon on the Archaic Acropolis (ca. 560 B.C.E.) in a scene that also included the figure of Herakles wrestling a sea-creature.[206] [Figure 33] The so-called 'Bluebeard' pediment has been restored and installed as a centerpiece of the New Acropolis Museum. One now approaches the pediment from a long entrance ramp before coming abreast of the sculpture, replicating the pediment's original monumental context.

Until the New Acropolis Museum opened in 2009, the limestone sculpture from the Archaic Acropolis formerly occupied a poorly-lit position in the old Acropolis Museum, where it was notoriously difficult to photograph, and then spent a number of years in storage awaiting re-installation and the new museum's opening. The ban on photography in the New Acropolis Museum ensures that new images of the "Bluebeard" will not enter scholarly circulation until the museum publishes them.[207] I have, as a consequence, followed precedent and offer here an image of the nineteenth-century watercolor illustration first published by Wiegand in 1904.[208] Medium and preservation at the time of viewing and individual subjectivity all filter Wiegand's watercolor, but it remains the best image in circulation.[209] Until viewing the original in its new context and attempting to describe it for this project, I had never questioned that the image was of a single, composite body with three heads, rather than the trio it now appears to me to be.

The three composite creatures each have a human head, torso and arms, fitted with a twisting snakey body and wings. This trio is typically considered one figure with three heads. And the figure *is* difficult to parse. Do we see three snake-men bound together by their likeness and coiled tails, or does each torso and head belong to a single body with three-pronged tail? A large wing patterned with red and blue juts from the back of the rightmost torso. No wing is obvious behind the middle or leftmost torsos,

[205] Davidson 2007, 169-200.
[206] Hurwit 1999, 106-111, figs. 76-83, plate III.
[207] Even a specialist, Erin Babnik, given special access to photograph the collection was denied the opportunity to photograph any images whose installation in the New Acropolis Museum differed from their installation in the old museum, a category into which the sculptures from the Archaic Acropolis surely fall (Babnik, pers. Comm. 2009).
[208] Wiegand, 1904.
[209] See Brinkmann 2003, 26, fig 23a-b. The most frequently reproduced nineteenth-century watercolors of antiquities were produced by the family Gilliéron, who was the subject of a recent exhibition at the Metropolitan Museum of Art in New York "Historic Images of the Greek Bronze Age: The Reproductions of E. Gilliéron & Son" May 17, 2011–June 17, 2012.

although they are angled so that a wing attached to either might jut behind them to the left. Wiegand's watercolor includes only the figure's left wing, unfolded across the snaking tails. A single wing implies a pair (or pairs), but its mate is not clearly sculpted. As was often the case, additional wings might have been added entirely in pigment. Unfortunately, this lost detail of the wings is significant for parsing the image; either the three torsos are united by their single pair of wings, or each figure is structurally independent of the others and they are grouped only by their twined tails rather than conjoined. Each body holds a different attribute in his left hand. In the absence of further conservation and testing to determine whether additional wings or a wing were added in pigment, one can assume from the presence of three heads, torsos, attributes, and tails, that the so-called "triple-bodied" figure is in fact a trio. Whether of the same body or similar bodies, these figures work together in the pediment and for our purposes I will refer to the sculpture as Bluebeard(s) to mark the uncertainty.

My intention here is not to offer yet another tendentious iconographic interpretation of Bluebeard(s), but a phenomenology of the image's polychromy. I have chosen Bluebeard(s) as a test case because a significant amount of the extensive original color remains visible. Although many details of the building complexes on the Archaic Acropolis remain disputed, we know with certainty that much of its freestanding and architectural sculpture was painted with various pigments, much of which remain visible today. The gallery label in the New Acropolis Museum describes the figures of this pediment as "alive with color," a turn of phrase that emphasizes the important role that polychromy plays in animation. In addition, the colors on Bluebeard(s), particularly the blue of their eponymous beards, draw on an extensive cross-cultural history of pigments and their related materials, a history that asserts itself in the experience of the image.[210]

The three naked torsos overlap one another to display their reddish-brown painted flesh. Their well-muscled, brown-colored arms are displayed in profile and their elegant, blue-coiffured heads in three-quarter view. Each figure's head gazes out at a slightly different angle, covering a wide swath amongst them. Each holds his muscled arms bent at the elbow, although only the central figure has both arms visible. Each holds an attribute, a bird, water, and possibly a sheaf of wheat, respectively.[211] A full, stylized, dark blue beard and mustache covers each figure's face. The hair and beard of each head, like that of Zeus in the previous example, are painted a rich blue pigment known as "Egyptian Blue" that was ubiquitous throughout the ancient Mediterranean in antiquity. This hair flows in rivulets to the shoulders and curls back from each forehead, revealing prominent, sculpted, brown-colored eyebrows above deeply incised, black-lined eyes. The punched pupils are painted black, as are the incised lash-lines. The deep carving outlining the eyes evokes some of the effects produced by inlaid eyes, here executed through the combination of paint and incision. The different angles of each head offer the impression of sequential narrative, as though each head and torso are simultaneously individuated and three visions of the same singleton. In returning the gaze of each figure, the beholder must mimic this rotation or animation. Vibrant serpent bodies join the human torsos at the base of each sternum. Three interlaced coils, covered with red and

[210] For a summary of the various suggested identifications of Bluebeard(s) (none satisfactory) see Hurwit 1999, 108.
[211] Hurwit 1999, 108. These distinct attributes are not present in paintings published by Wiegand, 1904.

blue scales, unfurl behind the torsos. A wing painted with the same red and blue colors, but in a contrasting pattern of scales, rises from behind the torsos, visible at right.

I have argued above that color constitutes rather than characterizes the body, or put another way, color is a vehicle for the image's corporeal truth. We see before us a body (or three) that is made up of color. Color constitutes even unpainted three-dimensional bodies, for even unpainted sculpture has a palette, albeit a more muted one.[212] Consider the different colors produced by marbles—even "white" marbles—from different quarries.[213]

The surface of the sculpted hair and beards painted with a three-dimensional layer of Egyptian blue pigment atop white stucco creates the effect of hair sculpted from blue material or lapis lazuli. The shallow volume of the pigment layer is effectively deepened through its intimate association with stucco and sculpted stone. [214] The pigment itself takes up real space. [215] Nevertheless, the beholder is meant to perceive the blue pigment as a quality of the sculpture's sculpted surface. Through its association with the stucco layer and limestone core, the pigment takes on the illusion of greater volume for the beholder, who perceives color as pigment (actual material) or as lapis lazuli (the material referent), or as the even less tangible *kuanos*. This oscillation, or *poikilia,* is one reason why color is integral to representation and why its presence has produced so much unease historically.[216]

Stucco is often considered merely a means of imitating marble, of cloaking the base, earthly limestone in a veneer of whiteness approximating marble. This assumption turns on the notion of applied color (in this case the white color of stucco) as trickery.[217] Stucco over limestone functions primarily as a base layer for pigment, as the support to which pigment adheres. Little, if any, stucco remained unpainted in ancient sculpture. Indeed even areas meant to be "white" in color were painted on limestone *and* on marble sculpture.[218] Nor does unpainted stucco actually resemble marble in any way save the linguistic category of its hue, white. Stucco interacts with light differently from unpainted marble.[219] Its role in this building is as pigment's support, or as the bridge between the limestone and external color/surface of the sculpture.

Pigment, stucco and limestone merge in the Bluebeard(s) to produce the effect of sculpted lapis lazuli and to transform the object (the sculpted limestone) into something other than itself, something virtual. Pigment plays between its "true" material state (inexpensive components of Egyptian blue), its simulacrum as sculpted lapis lazuli (the high-value and high-status stone), and its representation of a blue beard, replete with the

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[212] On the tendency to absorb pale colors under the rubric "white" and the particular example of *Le Corbusier* see Batchelor 2000, 41-49.
[213] Herz 2008 on the colors within white marble.
[214] On planar vs. virtual images and their operations in "real space" see Summers 2002, 1.9, esp. 83
[215] On the real space of the *tâche* see Tuma 2002.
[216] The illusion of wholeness, a point to which I shall return below, is one which many sculptors practiced. See Stewart 1990, 39-40.
[217] For a brilliant exploration of the insistence on color as deceit, see Lichtenstein 1989, 37-44. See also Duigan 2004.
[218] Brinkmann 2008, 21-28, Thorston Opper, pers. comm.
[219] On the light effects of marble see Stewart 1990, 38.

divine associations of *kuanos*.[220] The image oscillates between different states: *kuanos*, pigment, beard, body, to and fro, fort/da.[221]

The beholder also moves between the real space of her feet on the ground, the space of the pigment's material reality, and a virtual or representational space in which figures with beards of lapis lazuli confront her. Of course the beholder of any sculpture, painted or unpainted, experiences some movement between real and virtual space, but applied pigment occasions a more profound instability by multiplying the illusions that the beholder must integrate and parse. As with the example of Zeus and Ganymede, the particular illusion of beards and hair of *kuanos* brings a host of associations to bear on the image and its beholder.

Skin

The skin of Bluebeard(s)'s faces is painted the same reddish-brown as that of their naked torsos.[222] Skin color and musculature work together to convey the fact of this figure's overtly masculine bodies.[223] The brown color of the skin signals the time spent outdoors acquiring the muscles that are sculpted beneath it. The brown pigment both represents the body's flesh and is the sculpture's actual epidermal covering itself, cloaking its interior, its limestone core.[224] The myth of the sculpted body is that it contains something beneath its surface, some homunculus of the self it represents.[225] Painted pigmentation literalizes that myth. The pigment both represents and *is* the body's skin. It constructs the illusion of the body beneath even as it physically covers the sculpted limestone core (and its enveloping stucco). If depictions of drapery in sculpture construct the illusion that a body lies beneath it, that the drape covers something real, we must understand the procedures of painted flesh somewhat differently.[226] Painted flesh also constructs a body beneath, but that body exists structurally. The choice to paint flesh literalizes the components of the body.

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[220] Dr. Thorston Opper, curator of Greek and Roman art at the British Museum, indicated to me that many ancient pigments were produced from industrial waste materials, unlike the use of expensive materials in other materials or the later use of high-value pigments in the early modern period, on which see Baxandall 1988.

[221] Freud 1961, see also discussion in Neer 2002, 65. On seeing-in vs. seeing-as, see Wollheim 1980, 205-227, as discussed in Chapter One.

[222] On the likelihood that the flesh of all Greek sculptures was painted see Richter 1944, 325. See also Brinkmann 2007, 32; 2008, 26, although I find no citation of the catalogue from 1960 of sculptures with painted skin to which he refers. On the convention of rendering the flesh of men brown and that of women white in ancient Greek art see Pomeroy 1994, 303-309; Fountoulakis 2004, 110-116; for a significant exception in the Egyptian context see Eaverly 2004, 53-55. On the application of brown body-color by men, Hannah 2004, 100-105. On whitening or reddening the body, see Xenophon *Oeconomicus* 10, Plautus *Truc.* 294, Xenophon *Cyropaedia* 8.1.41, Herodotos 4.191, 194, 7.69, scholiast on Aristophanes' *Knights* (230a.6), Theophrastus *de Lapidibus* (8.48-60), as cited in Hannah 2007, 100 and no. 1; see also *Odyssey* 16.174-6 (darkening of Odysseus, also discussed below) and 18.195-196 (whitening of Penelope). On white dress prescribed for priestesses of many Greek cults, see Connelly 2007, 90-91. Lapatin 2001, 19. On Latin color words, skin, and medicine see Bradley 2009a, 131-2.

[223] On the significance of the naked masculine body in ancient Greek art see Stewart 1997, 24-42.

[224] On skin containing the body and soul see Neer 2010, 16 and 147-155; see also Empedokles fr. 126 DK. Tr. K. Freeman, cited in Neer 2010, 172.

[225] Gell 1998, 131; Neer 2010, 105.

[226] Neer, 2010, 149-165.

This is no mere art historian's fantasy. In papers describing reactions to the vigorous nineteenth-century cleaning of some of the Parthenon marbles in the British Museum, discussed in the previous chapter, one observer described the head of Selene's horse as having been "skinned." Elsewhere the cleaning is generally described as a "ferocious skinning." Another writer described the stripped patina as having once "knit [the marbles] in a single unity."[227] The layers of paint correspond in a real sense to the layers of skin that mark the outermost boundary of the body and are the body's largest organ. Pigment operates simultaneously as a distinct physical layer and as what unifies the disparate parts beneath its surface; it is both constituent part and constitutive of its whole. Pigment is the/a surface, but a surface that the body cannot fully shed.[228]

As is often remarked upon in discussions of ancient polychromy, the English word "color" has its roots in the Latin *celare* (hide) and *occulere* (cover). The Greek equivalent, *chrōma* is related to the term *chrōs* (skin).[229] This genealogy (etymology) marks color off as a term of *mere surface* distracting scholars from the embedded-ness of surface, its fundamental role in constructing (and containing) the body.[230] *Chrōs*, however, refers to the organ of skin itself, which possesses solid substance, and *chroma* retains this association.[231] *Chrōs* itself can refer to the outer layer of the human body, or to the entire body and its limbs, as well as generally "color."[232] Thus, it is only in the translation into Latin that the materiality of color drops out and surface-ness begins to dominate. The integrated relationship between surface and depth that we have seen in the examples discussed above were not exceptions. An ancient Greek conception of color encompasses the duality of surface and depth; the linguistic move towards surfaceness in Latin may imply a shift in what the term could encompass. Certainly we have progressed to ever-narrower definitions of color, such that in English it most typically refers to hue.[233]

Skin was considered inviolable in the ancient Greek world.[234] In exploring the taboo against medical dissection of human cadavers, Henrich von Staden assesses the significance of skin in ancient Greek culture. It was, he writes, "a magical symbol of wholeness and oneness, of the integrity of the individual or collective organisms that might become susceptible to disintegration or fragmentation."[235] Herakles tore off his own skin in trying to shed the burning, posioned robe. Skinless, his apotheosis follows. Von Staden argues that Herakles's loss of his skin makes his apotheosis inevitable for "to be without skin entails not only being without power but also being without identity."[236]

The importance of an individual's physical skin extended metaphorically to communities, which could be surrounded by a "skin" that unified the individual parts into

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[227] On this see Jenkins 2001, 12, 45.
[228] The body continuously sheds parts of itself (skin cells, nails, hair), a reality against which myths of the body's wholeness must constantly work.
[229] Chantraine 2009, 1233. Price 1883, 6.
[230] On surface/interior relations see Neer 2010, 143-181.
[231] I am grateful to Andrew Stewart for raising this point.
[232] Chantraine 2009, 1233.
[233] Which is not to say that other definitions are not understood or possible in either Latin or English. As discussed in my introduction with respect to the Athenian democracy, words do not tell the whole story.
[234] Von Staden 1991, 227.
[235] Von Staden 1991, 228.
[236] Von Staden 1991, 229.

a coherent, functioning group.[237] For this reason, skin also played a role in several foundation myths, such as the association of Kekrops with the skin of a sacred ox and the story of Dido using the skin of an ox to outline the circumference of Carthage.[238] The skin of sacrificial animals was removed whole and not burnt along with the rest of the corpse as visible evidence for the purity and wholeness of the sacrified animal.[239] Not only does skin mark the wholeness of the body that it contains, but it is also the surface on which information about those interior parts can be read.[240] Changes in skin color or luster can be external markers of internal happenings, whether blushing, blanching, turning green, bruising, or a variety of skin conditions.[241] If color is the skin of an art object, a combination of time and taste has surely violated this integrity. Stripped of its original colored surfaces, the ancient art object may fail to resolve into an identifiable whole.

The abstraction of parts into a unified whole is one of the hallmarks of sculpture in various media in which the pieces used to construct the image are effaced by the illusion of wholeness. On the one hand, pigment unifies the sculptural body by concealing joins and crafting a unified surface (skin, *chrōs*); on the other hand, pigments break the body into associated blocks of color, shattering the unified whole that they bring into being. In the discourse on panel painting, this problem of part vs. whole is figured by the *tâche* or brushstroke and the visual contest between its visibility as such and its participation in the creation of the whole picture. In sculpture this problem is further complicated by the disjunction between the pieces of support joined to create the sculpted body and the application of pigment, gilding, and other attachments to that body.[242] In this sense, the sculptural body fragments before the beholder in two separate and distinct ways: the assembled forms that make up the sculptural body always risk revealing themselves as "mere" pieces *and* the colors that finish the body's surface simultaneously unify that surface by effacing its piecemeal construction and fragment that surface into every color and *tâche* applied to it. The body is at once a whole being and an assemblage of materials.

This tension present in sculptural and painted bodies pictures the same tension present in the human body. Although formed of many parts and systems, we operate with the body as a whole, so that each piece is integrated into the overall entity that is integral to an intact self. The Greek term *demas* refers to a person's build assembled from pieces, with explicit etymological association with architectural construction through the verb *demō*.[243] The breakdown of the body, however, occasions identification of its pieces. Medicine treats and sometimes removes ailing parts in the service of the whole. Wholeness is linked to the idea of a self, who we are beyond the particularities of each individual body. The self is beyond the body, yet housed within it. The fragmenting effects of color jeopardize both the wholeness of the figural body and the wholeness of the beholding self. In order to escape fragmentation, which happens on the material level,

[237] Von Staden 1991, 228.
[238] Von Staden 1991, 228.
[239] Von Staden 1991, 227-228.
[240] Von Staden 1991, 229.
[241] Because of his self-skinning Herakles became associated with a variety of gruesome skin diseases, von Staden 1991, 229.
[242] Sturgeon 2008, 52-53. 55, 59; Barletta 2008, 81-82, 103-104, Higgs 2008, 193-200.
[243] Chaintraine s.v. *demō*; Vernant 1989, 22.

the self must be dematerialized. What the particularity of pigment on sculpture or in painting does is pick out the parts from the whole. The legend recounted by Pliny and Cicero that the classical painter Zeuxis selected the best parts of the five most beautiful maidens from in order to paint Helen's incomparable beauty literalizes this piecemeal nature of the artistic whole.[244]

This debate over epidermal polychromy is an essential site of historical resistance to the reality of paint on sculpture. As discussed in the previous chapter, John Gibson's decision to color (lightly tint) the flesh of his *Tinted Venus* was hotly debated by critics.[245] The attachment to unpainted skin is common. Although scholars have found it difficult to swallow the fact of painted marble sculpture, for limestone, a comparatively cheap and low-quality stone, the use of stucco and pigment, as with terracotta, is less problematic. Limestone and terracotta demand additional surface treatment because of their blemishes and lackluster texture.

Excursus on luster

Marble, as opposed to limestone or terracotta, is expensive and its crystalline structure produces desirable surface effects such as the refraction of light. Historically, scholars have argued that these light effects are an end in themselves. In fact, the translucence of marble does contribute to its widespread adoption in the late Archaic and Classical periods, but in part because marble as a ground for pigment may infuse surface pigments with additional luster.[246] Although the pigments on the limestone sculptures of the Archaic Acropolis and the terracottas from Olympia possess some amount of luster, much of it is generated by surface treatments. The use of a marble ground might have increased a painted sculpture's luster significantly.[247] Despite the acceptance of color

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[244]Pliny *NH* 35.64–66, Cicero *de Inventione II.i.i*; For recent commentary see Mansfield 2007; On the humanist discussion of this myth see Baxandall 1986, 35-44.

[245] On this see Devere 1998, 72. The Fitzwilliam Museum offers an interactive image of the sculpture in which the viewer can turn the tint on and off. See Chapter One.

[246] On the shift from limestone to marble, see Stewart 1990, 38-39. On painted flesh see Ostergaard 2011, 8; Skovmoller and Therkildsen 2001, 37-44. Current work at the British Museum on painted skin has found evidence for polychromy on every tested example, Opper 2010, pers. comm. For a counter argument, see Neer 2010, 74-75, who argues that the whiteness of the marble, like the whiteness of chryselephantine statuary, was a visible and deliberate selection and part of the desired visual effects of the sculpture. Neer distinguishes a preference for white marble in antiquity from any attempt to depict the real color of flesh. It is only through history that white marble has taken the racial charge of depicting and elevating white flesh. Greek art, like Egyptian art, used gendered hues for skin color when it sought to mark fleshly difference—women were white and men were brown. This coding has little to do with the actual appearance of human flesh, with its various shades and shifting colors, save perhaps a reference to the increased exposure of male flesh to the sun. I take seriously Neer's comparison of bronze sculpture and white marble sculpture as equally "unreal" hues and materials that formed brilliant images, for I agree that naturalism was not the preconceived goal towards which classical Greek artists worked. I allow that the current body of evidence cannot and may never be able to *prove* that all white marble flesh was painted. I do not, however, agree that because sculptors in the Greek world continued to use and import fine white marble rather than available marble with more colorful hues they left the white surface unpainted. Surely applying pigments to fine white marble produces a different effect (perhaps a more brilliant effect) from pigments applied to, for example, serpentine.

[247] The evidence for this remains elusive; that marble interacts differently with light and color than other support materials has become a commonplace statement when discussing ancient sculptural polychromy, however, evidence continues to mount suggesting that marble sculptures were also covered with a base layer or primer just as limestone and stucco (Opper, pers. comm.). Surely, however, the ground matters.

extant on limestone and terracotta sculptures, art historians have long structured the history of Greek art around marble sculpture, often in the form of Roman copies. While no one denies the presence of color on non-marble objects, these objects are systematically denied space within the canon and their coloration is thus excluded as well.

Accounts of Greek color emphasize the importance of luster, shimmer, and brilliance, of *to lampron*, in Greek art.[248] The prevalence of words for shimmer in ancient Greek texts and the seeming dearth of words for particular hues in these same texts is often marshaled as sufficient evidence for a Greek *preference* for brilliance over of hue.[249] In a circular turn, these texts manqué are then marshaled to bolster scholarly insistence on the importance of unadorned white marble and its lustrous effects. Hues were unnamed in Greek texts and absent from Greek sculptures; thus both text and image retain their noble simplicity. Of course, most marble is not actually white in hue, and no marble is actually completely monochromatic.[250] Luster is, in fact, part of color. By divorcing luster from color, scholars efface the import of pigment's relationship to the sculptural interior and project a false picture of Greek image practice. Luster has been erroneously pried from color in order to retain an idealized image of sparkling white marble antiquity in the face of overwhelming evidence for a preference for a *combination* of variegated hues and shimmer.

To lampron/he lamprotes is significant for Greek aesthetics, but scholars err in wresting it from the category of color. *To lampron* is a part of ancient Greek color vocabulary. In his *Timaeus*, Plato offers a theory of colors in which he describes the components of each hue.[251] For *kuanos,* Plato offers a formula of white + black + *to lampron*.[252] Luster is a component of the color *kuanos*, but the effects themselves are a part of what makes up the color, not a category apart from *chrōma*. If we turn for the moment to *kuanos* in other cultural contexts, we find here as well that luster, an aspect of *poikilia,* is a part of what makes lapis lazuli a desirable material and part of what imbues the color/material with value. In ancient Near Eastern and Egyptian contexts color is an accepted and acceptable part of the visual tradition and no such splitting of hue and radiance takes place.

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[248] Among the ancient sources on luminosity and brilliance as a component of color, see Plato *Tim* 68c*,* Plutarch *Per.* 10.1 and on the addition of wax to increase it, Pliny *N.H.* 35.36.97. Scholars who have recently analyzed *to lampron* include Neer 2010; Duigan 2003, 80; Stewart 1990, 36-42; Irwin 1974.

[249] A recent example of this is Walter-Karydi's "La naissance de la polychromie dans l'art grec au VIIème-s. avant J.-C.," a talk given at the color colloquium at the French school in Athens, publication forthcoming in Jockey 2011. In an otherwise deft discussion of the relationship between the use of many colors on sculptural surfaces and the emergence in the sixth century B.C.E. of a correspondence between surface decoration and the surface decorated, Walter-Karydi framed the debate in terms of darkness and lightness and characterized Homer as uninterested in hue.

[250] Some museums have begun qualifying the hue "white" by describing the hues that appear in the marble's veining as well. See, for example, the collection at the University Art Museum at Princeton. On the possibilities within the hue category "white" see especially Wittgenstein 1977, I.3-5. On the tyranny of whiteness see Batchelor 2000, 9-19. See also my introduction, x.

[251] A particularly vexing aspect of Plato's work is that he is both one of the major sources about ancient Greek color and a source of the repression of color in favor of form.

[252] *Timaeus* 68c. See Ierodiakonou 2005, 219-233. For contemporary "experiments" in color making and the four-color palette, see Brecoulaki 2006, 29-42.

Bluebeards in Context

The blue pigments on the figure of Zeus and on Bluebeard draw on an extensive tradition in the ancient Near East, Egypt, and the Mediterranean of images worked from blue-colored materials. These pigments and the images they form derive their legibility and produce their effects within a tradition of facture no longer familiar to the modern beholder. Lapis lazuli and blue-black pigments operated within a panoply of associations that were so familiar as to be obvious, perhaps even inherent, for the ancient beholder. The mimetic relationship between pigment and preceding material is not of straightforward dependence, but pigment and colored material coexist as terms within the finished representation of Bluebeard(s) and the Olympian Zeus; their relationship is not merely a mimetic one, but one of mutual interdependence.

In addition to numerous textual references to beards and coiffures of lapis lazuli in Sumerian, Akkadian, and Greek texts, material culture yields a number of objects with beards sculpted from high-value stone. Among the earliest are the so-called "lyres" buried in the Royal Cemetery at Ur (2650-2500 B.C.E). [Figure 34] The "lyres" were buried along with many portable objects, ceramics, and metals and the site yielded countless objects formed from lapis lazuli. The body of each lyre is crafted of wood that has been inlaid with various precious materials, such as ivory, gold, carnelian, and lapis lazuli. A bull's head of gold, silver and lapis lazuli tops the wooden body. The head of the lyre now in the collection of the University Museum of Archaeology and Anthropology in Philadelphia consists of gold sheet with openings for attached hair, beard, ears, horns and eyes.[253] A sheet of gold hammered over a wooden core formed the base of each horn, with attached lapis lazuli tips. The eyes were assembled from lapis lazuli for the lid and iris, and shell for the white into which the iris is set. Each eye was then fitted into the opening in the gold head and attached with copper wire. Over seventy tesserae of lapis lazuli carved into curls were attached to the head core using bitumen. An additional fifty-eight tesserae of lapis lazuli were carved into beard locks and arranged into a pattern of longer and shorter pieces. The beard pieces were attached to the head using copper alloy wire and backed with silver.[254] These attachments mask the materials that attach them to the figure, concealing this disruption to the outward presentation of a completed (whole) form.

A pair of almost identical blue goats, each with its hind legs resting against a flowering plant of hammered gold, were also found at Ur in contexts contemporary with the lyres. The goats, each nicknamed by Woolley "the ram in the thicket" in reference to Genesis 22:13, were crafted in a similar manner to the bull-headed lyres. Each goat has horns, eyebrows, pupils, eyelids, a beard, and forehead locks set into a head of hammered gold. Some of their fleece is also of lapis lazuli. The whites of the eyes and the bulk of its fleece are of shell. Their genitals are of gold.

The individual pieces of hair and beard on the bulls and goats cohere to present the appearance of a carved whole, even as the attachments replicate strands that make up a real beard and hair. Although the specificity of language severs blue from beard, they are unified in the material of lapis lazuli. Blueness is not a quality of surface. The beard is blue and without this blueness, there would be no beard, only wires and silver backing.

[253] The University of Pennsylvania, along with the British Museum, co-sponsored the original excavation in the 1920s and early 1930s.
[254] Greene 2003.

Form (beard) depends on material (lapis lazuli) and color (blue) takes up real space; its materiality confronts the beholder directly.

Lapis lazuli is found primarily in the Badakshan region of modern Afghanistan.[255] From as early as the sixth millennium B.C.E., it was exported throughout the Indus valley, Mesopotamia, and Egypt.[256] The dark blue stone is composed of multiple minerals and often flecked with shimmering metallic pyrites.[257] It held significant monetary, social, and affective value.[258] Its closest equivalent in our own society would be the social and monetary value accorded to diamonds.[259] Objects, sculpture, tablets and inlay, portable seals, beads, and charms made with lapis lazuli have been found throughout excavations in the ancient Near East, especially in tomb contexts and in raw form as foundation deposits.[260] A cache of cylinder seals from Thebes (Boeotia) included many formed from lapis lazuli, where the color and value of the stone were among the reasons for their pride of place within the hoard.[261] Stashes of the unworked stone were buried with elite persons, used as offerings to deities, and buried along boundary lines. The most high-quality stones were often hoarded in treasuries, changing hands only through elite gift exchange, as war booty, or tribute.[262] Although the stone circulated widely, before the 6th-7th centuries C.E. it was highly unusual that lapis lazuli was ground into ultramarine, a pigment prized for its deep, vibrant color and the difficulty and expense of its production.[263] Artists, instead, used Egyptian Blue, one of the earliest artificial pigments, to produce a deep lapis lazuli-like blue.[264] Egyptian blue is a calcium-sodium bisilicate of copper and is technically a ceramic or glass.[265] The substitution of pigment for material also substituted technical skill for economic value.

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[255] On the extensive lapis lazuli trade see Moorey 1999, 175-184; Feldman 2006, 16.

[256] Feldman 2006, 16; Aston, Harrell and Shaw, 1999, 39-40; Lucas 1999, 398-400; Winter 1999, 43-58; Casanova 2008, 191-93. Recent excavations undertaken by a team from the University of Pennsylvania in conjunction with the Iranian antiquity authority in Iran revealed a lapidary way-station at which stones from the surrounding areas were collected and distributed for broader trade. Representatives from different Mesopotamian city-states would purchase large quantities of stones here and perhaps travel with artisans who would work them in situ before transporting the factured or semi-factured materials back to their city-state (Holly Pittman, pers. comm.).

[257] Plesters 1966, 63.

[258] Winter 1999.

[259] Moorey 1999, 178.

[260] Moorey 1999, 177.

[261] Feldman, forthcoming.

[262] Moorey, 1999, 181.

[263] The only context known to me in which lapis lazuli is ground into a pigment in antiquity is on a group of astragali which bear traces of ground lapis lazuli. These were mentioned in a recent presentation by Hericlia Bercoulaki at the EFA "Couleurs" conference in April 2009 to appear in Jockey forthcoming. On the value of the pigment lapis lazuli, see the classic Baxandall 1988.

[264] Panzanelli 2008,136 # 20. On the long, laborious process of extracting ultramarine from lapis lazuli, see Plesters 1966, 64. Artificial ultramarine was first introduced in 1828, Pleisters 1966, 74. On the technical production of Egyptian blue see Kakouli 2009, 61-66. On Egyptian blue in Greek painting see Calamiotou et al. 1983. On Egyptian blue on Egyptian bronzes, see la Niece et al. 2002. For lapis lazuli used as eye makeup in Persia, see Farmanfarmaian 2000. " On ultramarine and its substitutes in the middle ages, see Raft 1968.

[265] Vitruvius offers an extended description of the manufacture of Egyptian blue (7.11.1). On this see Davidovits 2004.

After the third millennium sources for lapis lazuli seem to have grown scarcer and fewer objects crafted from the stone appear in second- and first-millennium contexts.[266] The pigment "Egyptian blue" gains popularity as a means of giving objects the blue-black hue associated with lapis lazuli "from the mountain". A discussion of lapis lazuli "from the kiln" emerges in the textual record in the middle of the second millennium B.C.E. as do references to lapis lazuli adjusted by boiling and lapis lazuli mixed with glass.[267] This suggests a certain amount of preoccupation with the possibility of substituting something man-made and artificial for a natural resource born of the earth. Indeed, turquoise, which enjoyed esteem almost on par with that accorded lapis lazuli in the fourth millennium B.C.E., fell increasingly out of favor in part because of the ease with which it could be counterfeited and its potential for losing its color when oiled.[268]

Under the Persian Empire, "Egyptian blue" pigment was often used to paint beards and hair. On the tomb of Artaxerxes III above the terrace at Persepolis, excavators found abundant traces of Egyptian blue pigment on the hair and beard from a sculpture of a Persian soldier.[269] The same artificial pigment was used to paint the beards of sculptures adorning the buildings at Persepolis. Many fragments of such beards were found during excavations.[270] [Figure 35] I eagerly anticipate the preliminary published results of the Persepolis Polychromy Project (established in 2006), which should shed further light on the pigments used at Persepolis and on polychromy in Persian art.[271] Initial reports suggest that several different blue pigments, and not only Egyptian Blue, were used on beards depicted at Persepolis.[272] The recent US version of the *Bunte Götter* exhibition, *Gods in Color*, at the Sackler Museum in Cambridge, MA included the reconstruction of a fragment from Persepolis depicting Ahuramazda in the winged disk with blue beard and hair.[273]

Although physical (as opposed to textual) examples of blue beards are much less frequent outside of Persian and earlier Mesopotamian art, a south Italian or Sicilian terracotta head from the second half of the fourth century B.C.E. and now in the collection of the Getty Museum provides another interesting example. [Figures 36-37] The head is sculpted of terracotta and has thick, curly hair (some locks of which were sculpted separately and affixed) and an equally full and curly beard with less substantial mustache. The figure's mane was painted a reddish-brown (hematite), while the beard and mustache were covered with Egyptian blue. The shape of the eyes, like those of

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[266] Feldman 2006, 117.
[267] Moorey 1999, 182; Feldman 2006, 117.
[268] Moorey 1999, 179.
[269] Tillia 1978, 39.
[270] Tillia 1978, 39 see also Herzfeld 1941, 267, fig. 372; Herzfeld 1931, nos 189-193. Lumps of green, red, and blue are now in the Persepolis Museum.
[271] Some of the early findings are included in Alexander Nagel's 2010 dissertation, "Colors, Gilding and Painted Motifs in Persepolis: Approaching the Polychromy of Achaemenid Persian Architectural Sculpture, c. 520-330 B.C.E."
[272] Nagel, forthcoming.
[273] Unfortunately this reconstruction was not published with the rest of the catalogue, Brinkmann 2007, but should be published separately. Ahura Mazda in the Winged Disk, Achaemenid Persian, Persepolis, Hall of 100 Columns, 486-460 BC**.** Limestone Original: Arthur M. Sackler Museum, Harvard University Art Museums, Bequest of Grenville L. Winthrop, 1943.1062**;** Color Reconstruction: plaster, acrylic paint**.** Arthur M. Sackler Museum, Harvard University Art Museums 1943.1062.X. As with all reconstructions this represents a "best guess" on the part of the curators.

Bluebeard(s), are deeply incised and the pupils lightly incised. The flesh and lips were also painted. The discrepancy between hair and beard color is unique to this head. Like the blue beards found on the Acropolis and at Persepolis, this later South Italian or Sicilian head depends for its legibility on the legacy of lapis lazuli, for which the pigment "Egyptian blue" stands in. Although they do not offer the reasons behind their designation, the gallery label reads "head of a god, probably Zeus," who is one of the primary deities for whom *kuanos* is an aspect.[274]

The Language of Materials

Literary evidence complements the extensive evidence of material culture. Akkadian, Sumerian, and Greek texts all deploy the word for lapis lazuli to mean at times the material itself (e.g., this object or palace was made of the stone lapis lazuli) and at other times to mean "possessing the deep blueness of lapis," or "shining or shimmering in the manner of the stone lapis" (but not necessarily blue in color). Lapis lazuli accrued high-value not only from its blue color, but also from its bright shimmer, thus, "let them cut the pure lapis lazuli from the lumps, the brightness of pure lapis lazuli".[275] These twin terms, blue and shimmer, could operate together or independently, so that the term for lapis lazuli describes an object's color or an object's refraction of light, or the two simultaneously. As I argued above, a material's capacity to reflect light should not be extracted from its color, but is an essential component of what makes up color.

The word for lapis lazuli also can connote sexual desirability and potency. An Akkadian love incantation reads "love charm, love charm/ his horns are of gold/ his tail of lapis/It is placed in Ishtar's heart."[276] The Akkadian hymn recounting Ishtar's Descent into the Underworld does not specify the materials of the goddess's adornments (crown, necklace, earrings, brooches, girdle of birthstones, bangles), which she strips off one by one as she descends farther and farther into the Underworld, but her lover Tammuz plays a lapis flute in a sympotic setting amidst courtesans.[277] The longer Sumerian version of the hymn, however, does specify the materials adorning Innana (=Akkadian Ishtar) as made of lapis lazuli. "The measuring rod (and) line of lapis lazuli she gripped in her hand, small lapis lazuli stones she tied about her neck."[278] The underworld is described as "the palace, the lapis lazuli mountain," which links the material of lapis lazuli with the earth that produces it.[279] The poem also metaphorizes the goddess herself as finely-worked lapis lazuli. Ninšubur entreats Inanna's father "let not your daughter be put to death in the

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[274] Very recent and unpublished research conducted at the Getty may result in a shift in the sculpture's identification from Zeus to Hades. Andrew Stewart, pers. comm. For more details consult the Getty Research Institute.

[275] Enmerkar and the Lord of Aratta 6.1

[276] Charms and jewelry made of lapis lazuli may have had an additional apotropaic component, on this see Winter 1999, 50-51. Compare with the description of the defeated Bull of Heaven, "Gilgamesh called craftsmen, all the armourers/ and the craftsmen admired the thickness of its horns/thirty minas of lapis lazuli was (needed for) each of their pouring ends/two minas of gold (was needed for) each of their sheathings" Dalley 1991, 82.

[277] Dalley 1991, 155-162.

[278] Kramer 1951, 8. Compare with the "inlaid" armband of Praxiteles' Aphrodite of Knidos. In Gilgamesh, "as soon as the Mistress of the Gods arrived [she said] 'Behold, O gods, I shall never forget (the significance of) my lapis lazuli necklace, I shall remember these times, and I shall never forget" Dalley 1991, 114.

[279] Kramer 1951, 4, ln. 72. Natural lapis lazuli is described as "lapis from the mountain."

nether world/ let not your good metal be covered with the dust of the nether world/ let not your good lapis lazuli be broken up into the stone of the stone worker."[280] A related lament to Nanna concerning the fate of Inanna in the underworld reads: "When will she release her, the lapis she has accumulated? When will she release her?…The lapis lazuli I had, my lapis has been used up."[281] Lapis lazuli stands in for the alluring body of the Queen of Heaven. Shattering the stone signals her demise. Lapis lazuli describes the stone itself, the color blue, darkness, shimmer, the sky, and the divine body.

This semantic confluence of material, color, and quality surfaces identically in Greek, in which the term for lapis lazuli, *kuanos,* refers to the stone, and also to something dark and/or blue, or shimmering.[282] As mentioned above, according to Plato, *kuanos* comprised *to lampron* (shimmer), white (*leukos*), and black (*melas*).[283] Homer offers rich testimony for the varied uses of the term for lapis lazuli (*kuanos*.) I turn now to these *ekphraseis* of what Sandrine Dubel has called "painting in metal."[284]

In the ekphrastic narration of the shield of Achilles in the *Iliad*, for example, *kuanos* describes the colored enamel laid by Hephaestus into the metal shield. Fagles' translation captures the particulars:

And he forged a thriving vineyard loaded with clusters,
bunches of lustrous (*kalēn*)[285] grapes in gold (*chruseiēn*), ripening deep purple (*melanes*)[286]
and climbing vines shot up on silver (*argureēsin*) vine-poles.
And round it he cut a ditch in dark blue (*kuaneēn*) enamel
and round the ditch he staked a fence in tin (*kassiterou*)[287]

The color terms capture the virtuosity of the world created on the shield—the gold ripening into darkness, the dark vines climbing silver poles, and saturation of the lapis lazuli ditch cut in striking contrast to the bright tin fence that surrounds it.[288] This movement between colors dazzles. Individual colors shimmer but their juxtaposition moves.[289] The careful juxtaposition of colors animates the image and this generative action is the source of colors' terrible pleasure and power.

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[280] Kramer 1951, 9, ln. 210-213.
[281] George 1985, 111-112.
[282] Irwin 1974, 28-9, 79-110. On different translations of the term, see Descamps-Lequime 2006, 91-92.
[283] Plato *Tim*. 68c 5-6
[284] Dubel 2006.
[285] In the Greek *kalēn* and *chruseiēn* are two adjectives describing the vineyard, but Fagles deftly incorporates the property of lustrousness (what elsewhere may be called *to lampron*) into the definition of beauty. That which is beautiful is lustrous, hence "lustrous grapes in gold" rather than "he set up a vineyard heavy with grapes, beautiful and gold" *Il.*18.561-2.
[286] "Deep-purple" is an unusual translation of *melas,* which is typically translated as black, but the translation captures the progressive darkening of the ripening grape. Because hue-names are culturally constructed they do not always map easily to the set of terms available in another language.
[287] Fagles 1988, 654-658.
[288] This infusion of color contrasts sharply with descriptions of the Homeric world as one that favored value (light/dark) and disregarded hue, on this most recently Walter-Karydi, forthcoming and above n. 58. While darkness and lightness are often opposed, hue remains a part of these constructions, which generally account for the combination of hue, saturation and brilliance that constitute color.
[289] On juxtaposition as a form of color mixing in Aristotle *de Sensu* 439b15.

The breastplate that Agamemnon dons for battle in book 11 also bears extensive work in lapis lazuli, in concert with other bright and valuable materials:[290]
Again from Fagles:

Agamemnon cried out too, calling men to arms
and harnessed up in gleaming (*nōrops*) bronze (*kalkon*) himself.
First he wrapped his legs with well-made (*kala*) greaves,
fastened behind the heels with silver (*argureoisin*) ankle-claps,
and next he strapped the breastplate round his chest
that Cinyras gave him once, a guest-gift long ago.
The rousing rumor of war had carried as far as Cyprus—
how the Achaean ships were launching war on Troy—
so he gave the king that gear to please his spirit.
Magnificent! Ten bands of blue enamel (*melanos kuanoio*)[291] spanned it,
spaced by twelve of gold (*chrusoio*) and twenty of beaten tin (*kassiteroio*)
and dark blue (*kuaneou*) serpents writhe toward the throat,
three each side, shimmering bright as rainbows (*irissin*) arched
on the clouds by Cronus' son, a sign to mortal men. (11.17-30)

Bronze, silver, gold, lapis lazuli, and tin construct bands of color like rainbows.[292] The cumulative effect of their juxtaposition is as overwhelming, auspicious, fleeting, *poikilos* and as beautiful as the rainbows that Zeus arches through the clouds. The passage goes on to describe Agamemnon's swords, studded with gold, his sheath covered with silver and gold, and his shield covered with ten circles of bronze and twenty bosses of tin, with on central boss of lapis lazuli into which is set the Gorgon. The serpents of lapis lazuli worked into Agamemnon's shield function in much the same way as the Gorgon's, or Bluebeard(s)' head, entrancing and repelling beholders. The serpents "writhe toward the throat." Their serpentine forms combine with the shimmering material from which they are formed to animate the snakes. Color writhes to delight and awe the beholder. The bands of lapis lazuli, gold, and tin overwhelm in much the same way, but substitute rhythm for the particularity of mimesis. The properties of these materials with contrasting hues (bronze, gold, deep blue, tin) and varied capacities to refract light, create a physical barrier between the world and the man and visually shield him from harm.[293]

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[290] Agamemnon received his breastplate as, we are told, a guest-gift from the mythical king Cinyras a son of Apollo. His armor thus bears some direct connection to divinity, although unlike the armor commissioned for Achilles, was not forged by a divine hand. It is worth noting that Hephaestus willingly forges the arms for Achilles in reciprocation for Thetis having saved him when he was thrown out of Olympos. In this respect the shield he fashions for Achilles adheres to the reciprocal demands of aristocratic gift-exchange albeit in slightly altered terms. On aristocratic gift-exchange see Kurke 1999, pp. 103-111; 71-73, 121-129, 143-147.

[291] The bands are dark with lapis lazuli. The phrase blue enamel elides the *melanos*.

[292] For the lengthiest discussion of the rainbow in ancient Greek, see Aristotle *Met*. 3.2-5. Aristotle describes the bands of individual colors of the rainbow as made up of tiny fragments of cloud that reflect that particular color. These cloud fragments cohere to form the band of that color. See also Empedocles B50.

[293] Lapis lazuli is often joined with other materials in this way, e.g. the cornice above the bronze walls of Alkinoos' palace is formed from lapis lazuli (Od. 7. 87), or the frequent juxtaposition of lapis lazuli and gold in Mesopotamian and Egyptian art, on which, Moorey 1999, 177; Winter 1999, 49.

These colored materials are described as "like rainbows" both because they are arranged in bands of color so that they physically resemble a rainbow and because they inspire wonder (*thauma*) in their beholder like a rainbow does. In the fourth century B.C.E. dialogue, *Theaitetos*, Plato makes the connection between *thauma* and the rainbow explicit. Socrates responds to Theaitetos's confusion with the following statement:

I see, my dear Theaitetos, that Theodoros had a true insight into your nature when he said that you were a philosopher, for wonder is a feeling of a philosopher, and philosophy begins in wonder. He was not a bad genealogist who said that Iris is the child of Thaumas. (155d).[294]

Wonder is an important effect of ancient Mediterranean art and of polychromy. Wonder is also a feeling of a philosopher. Plato's next step makes explicit the link between color and *thauma*. Iris is the child of Thaumas. Wonder engendered the rainbow, which remains one of the wonders of the natural world.[295]

The Homeric texts offer other possible meanings for the term *kuanos*, all of them linked to magic and divinity. In Book 24 of the *Iliad*, Thetis covers herself in a dark mourning veil, darker than any other, and *kuanos* describes that darkness of hue and saturation (24.94).[296] *Kuanos* also describes the magical cloud (*kuaneē nephelē*) in which Apollo hides Aeneas (5.345), the cloud that envelopes Polydorus after Achilles has killed him (20.418), the permanent dark cloud surrounding the mountain housing Scylla's cave (Od.12.75), as well as the dark sandy earth at the bottom of Charybdis (*Od.* 12.243).

Kuanos also characterizes divine hair, for example Poseidon's dark locks, *kuanochaites* (13.563; 14.390; 20.144; Hes. *Th.* 278), Hector's hair as Achilles drags his corpse behind his chariot after killing him (22.401-402)[297] and the brilliance of Zeus's eyebrows as he renders judgment (1.528).[298] When Athena boosts Odysseus' appearance before he reveals himself to Telemachos, she makes his skin and hair *kuanos* once more (16.176). *Kuanos* can refer to hue, to brilliance, or to the combination of these qualities. Presumably this passage does not mean that Athena made Odysseus' face a blue-black color, but gave his skin the deep shimmer associated with *kuanos* and youth. She makes him something *more* than mortal Odysseus. Telemakhos, upon seeing his father thus, wonders if he is a god and remarks:

Friend, you're a new man—not what I saw before! Your clothes, they've changed, even your skin (*chrōs*) has changed—surely you are some god who rules the vaulting skies![299]

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[294] Fowler 1921

[295] On the rainbow see James 1996 and Fischer 1998, 35-36 and 113.

[296] Elsewhere: *kuanostolos* Bion 4-5 *kuaneov de kalumma* in Homeric *Hymn to Demeter* 43.

[297] While neither Hector nor Odysseus are divine, Odysseus receives his *kuanos* from the goddess Aphrodite and Hector his only after death and it has the effect of both likening him to the gods and distinguishing him from those who still live.

[298] LSJ suggests that Poseidon's epithet dark-haired may refer to his relationship to the sea, but there is little to support this, for other gods and men are described has having hair of *kuanos*, a term which is used to describe ether, but not water in Homer.

[299] *Odyssey* 16.205-208, Fagles 1996, 344. On this passage in relation to the mutability of the body and *chrōs* in particular, see Vernant 1989, 30-2

The shift in his *chrōs*, his color/skin, marks the improved Odysseus.

As I noted above, the relationship between skin and color is fraught. On the one hand skin, or surface, is the vehicle of the beholder's reception of color and the substance against which light and shadow play, but on the other hand it is precisely color's surface-ness that leaves *chrōma* open to indictment by ancient and modern commentators alike. The colored surface is *poikilos,* a quality that is both desirable and unstable (and therefore distrusted), or desirable precisely because of its instability. This passage in the *Odyssey* highlights both the wondrousness and the changeableness of the colored exterior. Greek texts suggest that surface appearance was intended to mark that which it contained. What our earlier exploration of painted sculptural groups revealed is that this *chrōma* penetrates beneath the surface of a monument, either by constituting the physical whole, as in the case of objects sculpted from colored materials, or by relating to the other materials used in an object's construction in order to present a whole. Because we confront *chrōma* as surface, we risk reducing it to the superficial. At the same time by treating a surface as something distinct from (or less valuable than) the interior to which it relates one denies the necessity of surface to the constitution of bounded body.

The relationship between color and illusion is one source of the anxiety expressed about color in certain Greek texts.[300] The mistake, however, of later critics has been to take this anxiety as a universal (Greek) condemnation of color and its effects, to internalize this worldview and to remake the images of classical antiquity in this (false) image. It is a fitting irony that this mistake is possible precisely because of color's changeableness. What Greek texts demonstrate is that color was integral to the material world inhabited by gods and men and that the pleasures taken in color's effects were similar to those taken by beholders of color in other cultural contexts, such as Mesopotamia. What differentiates the Greek situation from these other cultures is not any lesser ubiquity of color, applied and integrated, but our possession of texts that interrogate the experience of color.

Kosmēsis

Hesiod's account of the creation of Pandora describes the capacity of color to cloak humble materials with a stunning exterior and to render something of inherent evil or danger deceptively beautiful. Her *kosmēsis* at the hands of the gods is fitting punishment for man's theft of fire. Her surface will beguile them and they will fail to notice the disjunction between exterior and interior, between the earth-wrought vessel and its appearance as a blindingly beautiful (first) woman. This deceptive image provides the form after which all subsequent women are modeled. Hesiod explicitly links the deceptive *kosmēsis* that brings Pandora into being with the character (*ēthos*) of mortal women. Just as the made-up Pandora deceives and conceals, so do mortal women whose form she creates.

And wonder took hold of the deathless gods and mortal men when they saw that which was sheer guile, not to be withstood by men. [590] For from her is the race of women and female kind: of her is the deadly race and tribe of women who live amongst mortal men to their great trouble, no helpmeets in hateful poverty, but only in wealth. And as in

[300] On color and deception see Duigan 2001, 78-81; Lichtenstein 1989.

thatched hives bees [595] feed the drones whose nature is to do mischief—by day and throughout the day until the sun goes down the bees are busy and lay the white combs, while the drones stay at home in the covered hives and reap the toil of others into their own bellies— [600] even so Zeus who thunders on high made women to be an evil to mortal men, with a nature to do evil.[301]

The relationship between cosmetic color and women is one from which the western tradition has never fully escaped.[302] The rejection of color in the history of western art is one part of the suppression of the feminine from its story. Color in the form of cosmetics was a part of the *kosmēsis* of a woman, a part of what completes her, but the necessity of which signaled a basic lack.[303] Color was also one means of linking Easterners with women and so its expulsion has scrubbed both women and non-Western cultures from the dominant records. I do not mean that the feminine and the Eastern are not put to use in the service of a form-driven history of art, but that both are denied constitutive status.[304]

Kosmēsis derives from the verb *kosmeo*, which has an interesting array of related meanings. The prototypical meaning is "to order or arrange" and is often used to describe ordering an army.[305] It can also be used more generally to mean arranging or preparing. In other contexts it can mean "to rule" or "to hold office" (*ta kosmoumena* means "orderly institutions [of government]"). Directly relevant to the story of Pandora, *kosmein* can also mean 'to adorn, equip, or dress' and is most often, but not exclusively, used like this to describe women.[306] Each definition inflects the other in what is known in linguistic circles as "spreading activation," in which one linguistic form maps onto multiple senses. Cosmetics can be described as "war paint" or armor and adornment as a form of protection, either amuletic or to increase the number of surface layers between one's interior (or even one's unadorned surface, which might reveal too much about one's interior) and those outside. Embellishment acts as protection. Although *kosmein* gives rise to the modern English term cosmetics, *kosmein* was never the exclusive purview of pigments. The gods outfit Pandora (or her clay core) with golden necklaces, fine clothes, and spring flowers as well as a lying nature, and speech. Her *kosmēsis* encompasses both her external adornment and her interior "self."[307] *Kosmēsis* does include adornment through the application of pigments, forging a link between adornment and death.

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[301] Evelyn-White 1914, 589-604.
[302] Brown 1997, 39.
[303] I thank Andrew Stewart for this observation.
[304] This is true even in Summers 2002 extensive rerouting of the story of art to rest less on the shoulders of classical Greek art and more on traditions developed in Egypt and Mesopotamia and developed in 13th century Islam. The end towards which these earlier eastern traditions are working remains the linear perspective of the Italian Renaissance, the coup de grace in the story of form and line dominating color.
[305] Chantraine 2009, 549, s.v. *kosmeo*; Liddell & Scott, 984-985, s.v. *kosmeo.*
[306] *Kosmein* can also mean to perform funeral rites, specifically to sprinkle the tomb with dust and pour libations-to adorn the space of the dead, to complete the orderly (fitting) funeral practices—or even more concretely to bury someone. *Kosmein* describes men arranged for battle, institutions and persons arranged to govern effectively, women arrayed for view, tombs adorned for the dead and the gods, as well as the dead buried in their tombs.

[307] On the abstract gifts with which the gods outfit Pandora, like *charis* and *pothos*, see Faroane 2001, 91.

Women have used toxic substances to color their skin.[308] A woman's *kosmēsis* could eventually destroy not just the surface of her self, but the interior of her body as well.[309]

Kosmēsis relates to a host of other words with the root kosm/-, including *kosmos,* or universe, and *kosmopoieo,* to make the world or to frame a system of the world.[310]

In an article about the *kosmos* of archaic temple architecture, Clemente Marconi has argued "that the figures of the building are its *kosmos*, its adornment" and they adorn both the building and the divinity to whom the building is dedicated.[311] He writes, *Kosmos* at the very beginning conveyed, to the Greeks, an unmistakable idea of order, both in the material and moral sense. It was from this very idea of material and moral order that the meaning of *kosmos* expanded to signify form, government, decoration, and honor, and it was this idea of order and good regulation that led philosophers, perhaps even as early as Pythagoras, to use the word *kosmos* to designate the order of the world and the universe.[312]

Despite the importance of each individual part of the architectural adornment for the building's *Gestalt*, the pieces of the building have traditionally been studied as part of typologies and in isolation from the rest of the building.[313] Marconi writes:

They generally begin by dismembering the figural decoration of the temple into its components—acroteria, pediments, and friezes, Doric or Ionic. They then discuss how the images of these dismembered parts correspond to the different compositional laws proper to each component and to its original position on the building. The original figural decoration of the temple—the adornment of the divinity—is shattered, dismembered, and torn into pieces.[314]

While the original composition (*kosmos*) of the building is shattered, these individual pieces are studied, not as the fragments they are, but as wholes to be compared with other wholes. Reintegrating the architectural decoration and its polychromy with the building presents, as I shall argue in Chapter Four, a whole that is assembled of parts. Color marks out these pieces, even as it unifies them.

Just as *kosmēsis* makes Pandora, and thus women, so can ornamentation (*kosmopoiesis*) make a world. Art practice is a kind of world-making. Pigments and materials construct bodies and images, create or invoke interiors, and act on other bodies in the space that they take up; they order or make the world. Color as matter makes up the visible world. In the next chapter I turn to the question of color and visuality, or how a beholder in the ancient Mediterranean world experienced this world of colored matter.

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[308] On deadly forms of *kosmēsis* see Marcello Carastro, "L'illusion produite par la couleur : pharmakon, d'Homère à Platon" presented at EFA Couleur…2009, publication forthcoming.

[309] The practice of making up the dead for view to temporarily delay the visibility (on the surface of the body) of death despite the arrest of the body's internal systems brings together *to kosmein* "to adorn" and *to kosmein* "to bury."

[310] Chaintraine 570-1, *kosmos*; Chantraine 2009, 549. See also Marconi 2004, 211, with bibliography.

[311] Marconi 2004, 212.

[312] Marconi 2004, 211.

[313] Marconi 2004, 212.

[314] Marconi 2004, 212.

Chapter Three: Inlaid Eyes, Color, and Visuality

I argued in the previous chapter that color and colored materials both structure and give the lie to myths about bodily integrity and wholeness. I traced the materiality of color in the ancient world and showed that colored materials mark a body's pieces and mask its joins.[315] In this chapter, I will explore the relationship of color to vision. I will consider the centrality of vision and visuality in ancient Mediterranean image-practices. I will trace, in particular, the role of inlaid eyes in structuring the beholder's experience of an image-body. Sight is both a sense and a system. Individual parts—cornea, iris, pupil, canthus, caruncle, lid, lashes—comprise a whole eye which is one of many parts that comprise a whole body. Without its parts the eye does not function. Without eyes a body is blind.[316]

Unlike form, which one can know through touch, other senses cannot perceive colors.[317] As Gorgias noted, *a color cannot be thought, nor can a sound, but it is only possible to see a color and hear a sound*. He writes:

Just as vision does not recognize sounds, so hearing does not hear colors, but sounds. And a speaker says, but what he says is not a color or a thing. Thus if someone does not have a notion of something, how could he acquire a notion of it from someone else by a word or by some sign different from a thing, *except by seeing it if it is a color, or by hearing it if it is a sound?* For to begin with someone who speaks does not say a sound or a color, but a word, so that *a color cannot be thought*, nor can a sound, but it is only possible to *see* a color and hear a sound.[318]

It is through the eyes that the mind and body apprehend color.[319] The eye is an important subset of the part:whole relationship, both as the organ that apprehends the parts of other objects and bodies and as a functioning part within the whole system of the body to which it belongs. Inlaid and painted eyes are formed from colored materials—copper, gold, silver, quartz, limestone, rock crystal, obsidian, lapis lazuli, resin, paint, colored glass, and alabaster. Since the eye is also the organ through which colors are processed, it is an essential site for the investigation of color. The eye is an important locus on, in and through which we enact the myth of bodily wholeness, of the undifferentiated ideal and of the world entière.

The relationships of iris:eye and of eye:body are but terms in the set of part:whole relationships that constitute a body. A *real* body is made up of disparate parts that contribute to a functioning whole but a whole that is always a functioning assemblage. The image-body is also assembled from pieces and rendered whole by the *techne* of the

[315] On joining see Neer 2010, 40-46.
[316] On blindness as a longstanding philosophical trope see Lichtenstein 2008.
[317] *Le livre noir des couleurs* plays with the nature of color vision by describing the basic colors of the rainbow through textured images of association and offers the accompanying text in braille. Cottin and Faria, 2010. See also Gérôme's painting of 1849 *Michaelangelo being shown the Belvedere Torso*, in which the artist is depicted blind and running his hands over the torso, Tronzo 2009, 5, fig. 3.
[318] Gagarin and Woodruff 1995, 208, my italics.
[319] Although it is essentially true to say that colors can only be apprehended through vision, the marginal field of dermo-optics indicates that certain rare individuals can perceive color through touch, Birren 1984, 29.

artist. The illusion of the represented image-body's wholeness maintains the illusion of the living body's wholeness. We perceive ourselves as individuals rather than collections of blood, muscle, bone and cerebral matter.

Inlaid eyes both mark the terms of this illusionism and foster the illusion itself. The sculpture that is missing its eyes actually offers an image of greater wholeness because it has done away with the necessity of parts and the imagistic body is now abstracted into the realm of idealized wholes, or forms. A beholder must project reciprocity onto the absent eyes and thereby defers any acknowledgment of the eyes' absence.

Through the very process of seeing colors the eye unifies parts into wholes. The eyes of ancient Mediterranean figural sculpture originally had either painted or inlaid eyes. These eyes were painted or assembled from colored pigments or materials such that these inlaid eyes represent the process or action by which vision works. In what follows I will explore the long history of inlaying or painting the eyes of figural sculptures and the relationship of beholders to these figures. I will draw upon contemporary optical theories, with which the techniques of inlaying the eyes of sculptures shared common ground. Through the investigation of inlaid eyes in this context, we move from vision to visuality, or to a world in which images are not subsequent to the real world, but actively structure our experience of the visible world.

Color's temporality, its change and disappearance over time, marks it as a site of death and decay, and also of idealizing generality. Color's temporality applies especially to the inlaid or painted eyes of ancient figural sculpture, most of which now look out from blank or vacant sockets. Time effaces the possibility of the image returning our gaze; the many eyes that once looked back are now blind.

Visual exchange is one means by which the beholding subject constitutes him or her self. The absence of a mirroring gaze would seem to strike a blow to the beholder's personhood. These absent eyes, however, preserve the myth that such an exchange between image and beholders could take place. Absence forces the beholder to supply that which is absent and thus allows the beholder to maintain the fiction that circumstances necessitate the supplement. The Kritian boy does not return my gaze because time stole his eyes. I rescue him with my own gaze, by performing our exchange on my own. Reality is less generous. That boy from Delphi, he sees me, but he fails to know me. When we must supply absent reciprocity we deflect our energies from the inherent unilateralism of visuality, from the unbearable emptiness or unknowableness of a returning gaze. We construct an exchange in order to escape (temporarily, imaginarily) the fundamental narcissism of our *experience of seeing, imaging and picturing*, to escape the isolation of being in the world and of being a world, alone.

Let me offer a brief note on terminology. Vision, the natural process by which a body sees, differs in constitution from visuality, "the symbolic form of visual experience" or "our experience of seeing, imaging, and picturing."[320] Whitney Davis distinguishes between vision and visuality as follows: "when we speak of 'visuality' rather than 'vision', we address the difference introduced into seeing by cultural meaning consolidated in and as images. In visuality one does not see the world rather one sees an

[320] Davis 2004, 1 and Davis 2010. Davis traces the historiography of the idea of visuality under different names from Wöfflin's "Sehformen", Gombrich's "mental sets", and Baxandall's "period eye". What this historiography also traces, however, is the primacy accorded to form in art theory.

image of the world."[321] When we speak of visuality we acknowledge that what and how we see is always already conditioned by the images surrounding us, that the image is, if not prior to then concurrent with, the visible world.[322]

How, then, do we see and interact with images that seem to offer the possibility of reciprocating or mirroring our gaze? Do the inlaid or painted eyes of ancient images seek a visual exchange with their beholders, a process that we might describe as mimicking real life social relations? Or do these image-eyes come up against the limits of recursive visuality, thereby demanding that beholders glimpse our own isolation in the world?[323] I will address these questions through the close examination of different figural sculptures with inlaid eyes from across the wider Mediterranean tradition.

Making eyes, exchanging glances

Large, round eyes cut from lapis lazuli look out from the face of an Egyptian figurine (From Upper Egypt, Early Predynastic period, Naqada I, 4000-3600 B.C.E.) carved otherwise entirely from white bone.[324] [Figure 38] As a votive in a predynastic tomb this figurine witnessed the deceased's journey to and in the afterlife. Her large, round blue eyes stare out in vivid contrast to her body. No mark of a pupil or iris disrupts the flat, blue expanse of each eye. Body, head and hair are all carved from a single unifying piece of bone. Lapis lazuli, a material different in color, texture, density, value and luminescence to bone, forms her enlarged eyes. Punching delineates her nipples, navel and pubis and light carving indicates her folded arms, but the eyes alone are rendered separately; they are a part of the whole figure, yes, but a part *apart*. Her bone body is a vessel for her lapis lazuli eyes, which are themselves vessels that take in the visual world.

The artist crafted these eyes from two unmarked disks of lapis lazuli rather than differentiating the individuated parts that make up the whole eye. By effacing the ocular components visible on its surface (lids, eyeball, cornea, pupil, iris, caruncle, lashes), the artist crafts a unified whole responding to the object of sight. These lapis lazuli eyes picture both the process and the outcome of seeing. Taken in through the eyes and reflected back by them, wonder fills her. Scale, hue, surface and material foreground vision at the top of a bodily hierarchy of systems and senses. [325]

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[321] Davis 2004, 9.

[322] The phrase "always already" is now so frequently deployed in art historical texts as to have escaped its geneology. I use the term in its traditional Kantian sense to mean that once an individual has experienced X, she can no longer experience the world as though s/he had not experienced X. It is as though she has always already experienced X when she draws upon memories prior to the experience. Following Kant the phrase was popular with Marx, Heidegger and later Derrida, who argues that we are always already in a moment of deconstruction.

[323] On "we" as always individually-constituted, see Kobow, forthcoming.

[324]BM EA 32141 (Early Predynastic period, Naqada I, 4000-3600 B.C.E. Hart, 1991; Lucas 1999, 99. This and other figurines of similar type were found in graves. Although it was once assumed that such figurines were intended as concubines for the deceased, this theory was reconsidered after similar figurines were found in graves belonging to children. Current explanations include the idea that such figurines provided magical support for the deceased's rebirth and regeneration.

[325] In Egyptian cosmography, the sun-god colors the earth through his light rays, which can be captured by the symbol of a sun-disc with multicolored plumage, itself an eye without which the world would not see, Donnat 2009, 199.

The votive gazes upon the divine image and the corpse it attends in the afterlife. Should divine eyes look back, the divinity sees itself reflected in the blue expanse of the figurine's worshipping eyes. Following standard treatments of the gaze, the image performs the possibility of this exchange; her eyes offer in and through their expansive surfaces this potential. Whether or not a beholder is physically present before the image's gaze, potentiality is energy and animates the image.[326] The image holds within itself the potential to affirm the beholder's being in the world.

Not all ancient Mediterranean artists, however, showcased the undifferentiated surface of the eye, a surface which performs the *outcome* of the process of seeing. Others attended to the *process*. So abundant are the possible forms that ancient Egyptian inlaid eyes took as to earn themselves a separate chapter in A. Lucas's *Ancient Egyptian Materials and Industries*. In ancient Egypt, inlaid eyes were used on mummy masks, coffins, mummies, statues, statuettes, and relief.[327] Lucas sorts hundreds of ancient Egyptian inlaid eyes into six classes on the basis of their anatomical complexity, construction technique, and use.[328] The pre-dynastic Egyptian votive figurine with which we began falls outside of Lucas's classification system because her eyes are not rendered with the differentiated components that he esteems. Lucas does mention undifferentiated inlaid eyes, which were especially popular in the predynastic period, and our female figurine from the British Museum in particular, before proceeding with his classification system.[329]

I am indifferent to the viability of Lucas's classification system, which presumes anatomical realism as the desired goals of artists and audiences, but I include the details of his system here because Lucas so thoroughly documents the popularity and the vast material and formal possibilities in how artists rendered eyes in ancient Egypt. From predynastic Egypt through at least late antique Rome, artists selected from a range of structural possibilities when crafting the eyes of statues, mummies, masks, and mosaics. I draw a functional distinction between those inlaid eyes which deliberately elide the eye's parts in order to emphasize the *response* of the whole eye and body and those which foreground the *process* of seeing by attending through color and form to the mechanics of sight.

Into his first class (Class I) Lucas places eyes that emphasize anatomical correctness and reproduce the surface features of the eye (eyelids, eyeball, cornea, iris, pupil, carnuncle).[330] The more complex and differentiated eye-structures do not recreate the entire internal eye-system, but do reconstruct interiority by including a structural pupil. The pupil sits behind the iris representing the void that a real pupil is. Structuring the eye in this way implies its integration with the rest of the body and brain; the pupil is

[326] I will address Alfred Gell's concept of image animation further below, but certainly I take this case study as support for his idea that objects possess animation in and of themselves, Gell 1998.
[327] Lucas 1999, 98. Prosthetic eyes are unknown beyond those given to mummies, although Lucas suggests that there may be one possible example which he does not describe fully enough for independent evaluation.
[328] Lucas 1999, 98-127.
[329] Lucas 1999, 99.
[330] Lucas 1999, 99.

essentially an opening into the head and the conceptual pathway whereby the visible world enters the body and mind.[331]

Lucas's second class (Class II) is the most populous and contains eyes with "differentiated eyelids, eyeball, pupil, and caruncle, and occasionally eyelashes."[332] In this category, Lucas includes the inlaid eyes used on the famous coffins and mask of Tutankhamun as well as many statuettes found in the tomb and his chariot (all eighteenth dynasty). Lapis lazuli forms the eyebrows and eyelids of Tutankhamun's death mask, quartz forms the whites, obsidian the pupils, and a pink material defines a caruncle on both the inner and outer eye. [Figure 39] As a subset of Class II, Lucas describes the practice of placing inlaid eyes beneath the eyelids of mummified corpses.[333]

Lucas creates a small third class (Class III) of eyes from Roman mummy masks from the Fayum Province, which are similar in their degree of detail to Class II eyes, but always delineate the iris.[334] Into a fourth class (Class IV) Lucas places eyes that have a layer of rock crystal across their entire outer surface, the better to reflect back the beholder. The fifth class (Class V) contains eyes in which eyelids, eyeballs, and pupil are formed in one piece, which Lucas finds to be "a very poor imitation of the natural eye".[335] And finally into the sixth class (Class VI) Lucas places eyes made from partial inlay, for which the sockets are cast with the statue and then partially inlaid with gold and silver to delineate visible parts of the surface of an eye.[336]

Mirroring Admiration

As Irene Winter argues in her exploration of visuality in ancient Mesopotamian images and texts, the large, opaque eyes given to dedicatory statues embody the wide-eyed admiration that appropriately infuses a beholder when gazing upon the divine.[337] Winter commences her argument with twelve votive sculptures found together within the precinct of the Square Temple (Early Dynastic Periods II and III, ca. 2750-2400 B.C.E.) from Tell Asmar, Khafeje that Henri Frankfort and his team from the Oriental Institute excavated in the 1930s. These votives were positioned before the temple's resident deity.[338] A photograph of the twelve sculptures together stages the impact of this collective gaze.[339] [Figure 40] The figurines are carved from alabaster (gypsum) and their enlarged eyes are formed from shell for the whites and lapis lazuli or bitumen for the

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[331] Later sculptors often opted to note the void of the pupil using a drill hole, a technique which bears close resemblance to ancient Mediterranean sculptures with eyes that are now missing the inlaid pupil (e.g. Warrior A from the Riace Marina, on which see below).
[332] Lucas 1999, 107
[333] Lucas 1999, 117. A practice not known until the twentieth dynasty, Lucas also states that all of the Graeco-Roman mummy masks and coffins in the Cairo Museum at the time of his analysis had inlaid eyes, most of which belong to Class II.
[334] Lucas 1999, 121. He feels bound to differentiate this category from the Class II eyes because the presence of an iris makes these anatomically more correct.
[335] Lucas 1999, 123.
[336] Lucas, 1999, 124.
[337] Winter 2000, 22.
[338] Winter 2002, 22.
[339] The variety of sizes displayed in this collection of votive figurines recalls the array of sizes found in Greek *kouroi* as seen in A. Stewart's drawing of scale difference across many well-known *koroi*, Stewart 1990, Fig. 43.

pupil.[340] Like the Egyptian votive with which we began, their eyes are wide with wonder. Unlike that figure, selected components of the eye are delineated, thereby integrating these parts into the process of seeing and alluding to the system behind the experience on show.

In the context of the Square Temple sanctuary the dedicatory sculpture behaves as its dedicator should; the image stands in for him or her in much the same way that the ancient Egyptian votive would have stood in its tomb or that a *kouros* or *kore* stood in Archaic Greek sanctuaries as both an offering and a representative.[341] The enlarged eyes of the Mesopotamian votives embody both the attentiveness of the votive/dedicator and their appropriate response to seeing the divinity or divine image.[342] The mechanics of the eye show outwardly what takes place within the whole body as divine presence radiates through it. The eye is both the portal by which the votive takes in divinity and a sign of that otherwise invisible taking in, a synecdoche for bodily response.

Winter links the enlarged eyes of these sculptures with the extensive Sumerian and Akkadian literary traditions describing visual experiences.[343] Among the examples she invokes is that of Gilgamesh and his axe in which the hero exclaims to his mother "I saw it and felt such joy; I loved it as one would a woman."[344] The beholder (Gilgamesh) attends to the axe, sees it, and the axe affects him; the axe causes him to feel joy and subsequently, love. The axe binds Gilgamesh to it through vision.

Winter correctly emphasizes the reciprocity of visual attention implicit in the sacred staging of votive and divine images. She draws attention to the material splendor of these inlaid eyes, which not only take in the divine image, but also shine to reflect back the awesome sight of the divinity to his/her own gaze.[345] Votives regard the divine image with admiration; the divinity sees this admiration reflected in these attentive eyes and is pleased. The votive both attends to the divinity as a worshipper ought and holds up a mirror in which the divinity sees itself as admired and admirable. Visual reciprocity between divine image and votive audience makes present the divinity by creating the space in which the divinity and its image become one. Like a votive image, a cult image

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[340] Winter 2000, 22.

[341] On the Mesopotamian votive, see Winter 2000; I have selected the term representative to emphasize the breadth of the role occupied by a *kouros* or *kore*—object, dedication, stand-in, reflection. Although *kouroi* and *korai* were types, individuation was a significant aspect of their value. As the representative of the dedicator, *kouroi* and *korai* display their individuality in terms of hairstyles (both coiffure and pubic hair), scale, color and attributes. Although one certainly adhered to type in dedicating such a representative in the sanctuary, one certainly wished for individualizing details to demarcate one's dedication (and oneself). In his work on the agency of images, Alfred Gell emphasizes that "ideas of representing (like picture) and representing (like an ambassador) are distinct, but none the less linked," Gell 1998, 98. Further on *kouroi* and *korai* as representatives, see Vernant 1990, 75; Steiner 2003, 5-11; Osborne 1994; Stewart 1986.

[342] Winter 2000, 22-3, 36-37.

[343] The Mesopotamian tradition of describing visual experience is similar to Graeco-Roman textual descriptions of visual experience. Zeitlin 1994 (also cited by Winter 2000) remains the best discussion of literary depictions of ancient Greek visuality. On Roman visuality see also Elsner 2007, dedicated to and in dialogue with Zeitlin, which I analyze below.
Winter places particular weight on the translation of Sumerian and Akkadian words for seeing and offers ad+miration in place of the more frequently used "wonder", which is also the common translation of the ancient Greek term *agalma*. Winter argues that ad+miration best retains the presence of the eye-sign in cuneiform, Winter 2000, 30-35.

[344] Foster 1987; Winter 2000, 24.

[345] Winter 2000, 35.

always contains potential presence, but this potentiality requires beholders in order to be active in the world.

In her argument about Mesopotamian visuality, Winter mobilizes the Hindu concept of *darśan* (lit."seeing"). *Darśan* is a process of reciprocal seeing and being seen in which both viewing directions are equally essential.[346] The worshipper comes to the temple in order to see the deity and to put him or herself in the path of the divine gaze. While being seen by the deity is conceptually more significant than seeing the deity, in the context of the sanctuary, the two processes cannot be separated.[347] The deity is equally dependent on the confirming gaze of the beholder.[348] Worship is recursive.

The hierarchy of beholder and beheld is simultaneously confirmed and undermined through the exchange between them. Power relations are confirmed by the reaction (admiration) elicited from the beholder (or votive object), for it is through visually touching the divine that the charge accrues in the beholder's breast. It is, however, the *exchange* of gazes, the looking and being looked at that creates ritual space, or put another way, makes a world that is somehow distinct from the space that each body/image inhabited before their gazes meet. In this way reciprocal vision is an inherently democratic or equalizing force.[349] Without seeing itself reflected in the gaze of the beholder, without *being seen,* divinity cannot enter the object.[350]

In his exploration of visuality in Roman art, *Roman Eyes,* Jas Elsner calls this manner of seeing "ritual-centered viewing", a mode of seeing in which the subjectivity of the viewer is "elided into the world of art".[351]

In this liminal site, the viewer enters the god's world and likewise the deity intrudes directly into the viewer's world in a highly ritualized context. The reciprocal gaze of this visuality is a kind of epiphanic fulfillment both of the viewer-pilgrim, who discovers his or her deepest identity in the presence of the god, and of the god himself, who receives the offerings and worship appropriate to his divinity in this process of pilgrimage rites.[352]

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[346] On *darśan* see Eck 1998, Gell 1998, 116-120.

[347] In the example of the Tell Asnar votives, their eyes are enlarged both to embody the appropriate response to seeing the divine *and* to offer the divine gaze a sizeable target upon which to rest, however temporarily, Winter 2000, 35, no 72. Innumerable ancient Mesopotamian cylinder seals from various periods picture this exchange of gazes, staged either between the deity and the ruler, or between the ruler and subject with nearly identical iconography. For comparanda in Buddhist art see Faure 1998, 117.

[348] Winter 2000, 35.

[349] Earlier work on the gaze, especially Laura Mulvey's seminal text "Visual Pleasure and Narrative Cinema" describe its subjugating force, Mulvey [1975] 2006; more recent analyses expand the possibilities of gazes; see for example, Bal 2001, 239-258, who summarizes some history of the study of the gaze from Mulvey to the present.

[350] Although she attends to the importance of both participants, Winter emphasizes the power imbalances in visual exchange (Winter 2000, 38), and I am arguing here that while these imbalances are structurally present, in practice an equal share of power accrues to the beholders whose gaze brings the deity into being.

[351] Elsner 2007, 289. Recent years have seen a bumper crop of studies of the gaze in Roman Art, including Bartsch 2006, while Zeitlin 1994 remains the standard piece for the study of visuality in ancient Greece, where focus has been largely on the literary approaches to visuality, or discussions of the gaze have been folded into broader formal analyses in larger handbooks.

[352] Elsner 2007, 24

With this Elsner contrasts what he terms "mimesis-related viewing", in which the viewer's subjectivity is protected.[353] Of mimesis-related viewing, he writes:
It is the form of ancient Greco-Roman visuality most familiar to us, since it is precisely the kind of viewing which post-Renaissance art and art history have identified with and practiced. This is our version of 'reading-in', signaled at crucial junctures of the modern art historical enterprise by the great ekphraseis (themselves deeply influenced by antiquity) which punctuate the work of the founders of the discipline, especially Vasari and Winckelmann. But it is my claim that this visuality—of identification, objectification, ultimately erotic desire—is only one part of antiquity's armory of the visual.[354]

Representations of Narcissus, the young man who famously fell in love with his own reflection on the surface of a pool, offer a paradigmatic example of Elsner's mimesis-related viewing.[355] [Figure 41] Indeed, Narcissus's story of impossible self-love remains popular amongst students of visuality. The story sets up a kind of ur-exchange between two hypothetical beholders who are famously the same person. Or rather the person and his reflected image. Narcissus can only know his own face on the reflective surface of the pool That we can never see ourselves as we appear to others is an important tenet of visual theory and psychology. At best we see ourselves fractured by the limits of our own vision (arm, leg, buttock) or the framed limits of reflected space. These ideas, however, have been well-covered in the literature on Narcissus and on vision and the body more generally.[356] I would like, instead, to focus on the one-to-one exchange between Narcissus and himself.

Unlike the votive:deity:beholder exchanges in which reflection played a role in the exchange but did not constitute it, Narcissus depends entirely upon reflection in order to admire and be admired. Without the reflective surface of the pool, Narcissus would neither see nor be seen by his beloved (self). Given his fate, one could argue that Narcissus is surely better off without the reflective object. What Narcissus and his reflected image construct, however, is the kind of direct exchange that is not possible when seeing and being seen involves other actors. In failing to understand that he gazes upon himself Narcissus experiences a momentary, unadulterated reciprocal visual exchange; he enters a state that would be impossible with two or more parties because their own agency always asserts itself and disrupts the field. If the myth of Narcissus offers any moral to the student of visuality it is surely that reciprocal vision can never be so completely realized as self-love.

Mimesis offers distance; ritual-centered visuality requires contact. These two distinct categories prove useful to Elsner in articulating possible modes of viewing in the Roman world. The world of the picture gallery, ekphraseis, and Roman nostalgia for the idealized artistic world of Classical Greece stands apart from the world of the temple,

[353] Elsner 2007, 289. I find the naming of these categories confusing since it has always been my understanding that the point of mimesis is in part to undermine the stability of the beholder's world, to draw him or her in to an other, depicted place, to drag the beholder down the rabbit hole.
[354] Elsner 2007, 10.
[355] Elsner 2007, 132. Mieke Bal, in arguing for multiple points-of-view also focuses on the story of Narcissus, as depicted by Carravagio, Bal 2001, 239-258.
[356] Elsner 2007; Bal 2001; Lacan 1966, 1999; Mulvey [1975] 2006; 1992; Bryson 1986.

sanctuary and pilgrimage site in which artistic images serve and serve as the gods, placing the ritually-prepared beholder in direct contact with divinity.[357]

Despite the historical dominance of mimesis-related viewing, Elsner argues that ritual-centered viewing trumped its alternative in the ancient Roman context.[358] Emphasizing the primacy of ritual-centered viewing in ancient Roman culture is an important corrective to the problem of museums and academies remaking religious images into art images. And yet, boundaries between ritual-centered and mimesis-related viewing prove impossible to maintain (as, indeed, Elsner concedes rather deliberately in his coda).[359] Images affect beholders and beholders constitute images. Viewing is contact, whatever the context.

For preceding periods of Mediterranean art, I argue that distinctions between ritual and mimetic visuality are anachronistic; instead, the goals of ritual-centered viewing and of mimesis converge. This is not to say that all forms of viewing and all forms of image-making are identical. We must, however, remain conscious of so constant an interpenetration of types that ways of seeing escape conscription. Mimesis and magic are part and parcel of the viewing experience, of visuality.[360] The symbiosis of ritual-centered and mimetic viewing is particularly important for what scholars of Greek art term the Archaic and Classical periods and what scholars of Near Eastern and Mesopotamian art call the Persian period. To this historical moment scholars traditionally ascribe a shift from non-mimetic styles assumed appropriate for ritualized viewing towards mimetic (read *naturalistic*) styles appropriate for non-religious or non-magical vision. It is my claim that rendering eyes and constructing vision in ancient Mediterranean art synthesizes ritual-centered and mimetic visuality, which is always magical and world-making.

It is "only from a very parochial [blinkered] Western post-Enlightenment point of view that the separation between the beautiful and the holy, between religious experience and aesthetic experience, arises," writes Alfred Gell in an article that laid out some of the ideas on which he later elaborated in *Art and Agency: an anthropological theory*.[361] In their analyses of viewing in ancient Mesopotamia and Rome, respectively, both Winter and Elsner mobilize Gell's theories of image animation.[362] As Gell's logic also shapes a part of my own approach to ancient images, I will summarize briefly Gell's section on *darśan* and animation, which is found within his chapter on "the distributed person." The premise of *Art and Agency* "is that works of art have to be treated in the context of an

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[357] On visuality and the Greek sanctuary see Tanner 2006, 48-55.
[358] Elsner 2007, 24-26.
[359] Elsner acknowledges the unavoidable convergence of the thought-categories described and deployed throughout the book in the final chapter saying "Antiquity did not fully separate the magical effects of divine intervention from its portrayal of the psychopathologies of visual abstraction," Elsner 2007, 290. I wish that he had begun from this standpoint and read his examples accordingly, as I notice the excessive constraint of these categories throughout the text and it is only in the final moments that the author reveals himself complicit rather than naïve about their limitations. Elsner still insists, however, on a "shift" between two types of viewing rather than accepting the impossibility of maintaining such distinctions.
[360] Following Gell, who defines magic as "what you have when you do without a physical theory on the grounds of its redundancy, relying on the idea that any given event is caused intentionally (by someone somewhere)," Gell 1998, 101.
[361] Gell 1988, 97; Gell 1998, edited and published posthumously.
[362] Gell 1998. For the reception and integration of his scholarship in the discipline of the history of art, see Tanner & Osborne 2007.

anthropological theory, as person-like; that is, sources for, and targets of social agency."[363] Although careful to emphasize his anthropological approach, Gell also argues that his theory is not anti-aesthetic. Religious and aesthetic exaltation are of a piece; when one strips off the cultural trappings exaltation is exaltation.[364]

In their assessment of Gell's impact on and place within the discipline of the history of art, Robin Osborne and Jeremy Tanner argue that although Gell rejects the "pure aesthetics" of Kant's Third Critique (and the insidious tenacity of Kantean aesthetics in our approach to objects), his work aligns with the "transcendental aesthetics" of Kant's First Critique, which concerns human sensory experience.[365]Aesthetic/religious experiences are bodied forth by the senses, most primarily by vision. The examples at which we have already looked emerge from ancient Mediterranean cultures that have been drawn into the narrative of the modern, post-Enlightenment West, despite not sharing its values. It may seem an obvious and perhaps belabored point: we continue to assume that the ends towards which the ancient Mediterranean world, and especially Graeco-Roman antiquity, have been belatedly directed and the genealogies for which these histories have been co-opted had any meaning in their original contexts. Thus, Renaissance and modern sculptures formed in relation to some dream of antiquity rarely included inlaid or painted eyes because the "originals" had lost their eyes.[366]

Gell emphasizes an important distinction between the pursuit of naturalism and the function of cult images.[367] One of the essential components of a cult image, namely its capacity to act as a proxy for the divinity, *or as the divinity itself*, takes place outside of the circumscribed ritual space of the sanctuary with potentially equal force. In a ritual context the icon is both a separate body and an extension of the divine, a body in and through which the divine makes itself manifest. The cult-image and indeed all replications of the cult image in circulation are extensions of a divinity, a part of the whole that is also the whole in its entirety, metonymy made manifest.[368] In this way the relationship of image:divinity replicates the relationship of part:body. Both pairs share a metonymic quality such that an image can *be* a god and an eye can *be* a body.[369]

While the fetishization of the fragment preceded Winckelmann, his rapturous loss of self before the Belvedere torso captures the appeal of a past in pieces.[370] Winckelmann completes the sculpture with his own ekphrasis:

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[363] Gell 1998, 96.
[364] Gell 1998, 97.
[365] Osborne and Tanner 2007, 6-7.
[366] Faroult 2010. Lichtenstein 2009.
[367] Gell 1998, 97.
[368] Gaifmann 2006 on copying and circulation as discussed in Chapter One.
[369] Following strict definitions of the grammatical terms these pairs are actually separate strains of metaphor. The divinity:image (or worshipper:votive) are metonymical pairs, while the eye:body is a synecdochal pairing. Synecdoche (a part:whole substitution) is frequently considered a subset of metonymy (a:b substitution), while a meronym refers to any part:whole relationship. One could say that the relationship of cult object to god is one of presupposition.
[370] On, for example, the emergence of the cult of fragments in association with the discovery and restorations of the Laokoön, see Bourgeois 2009. Michelangelo famously admired the Belvedere torso, as Winckelmann notes in the opening of his essay (2001, xiii). The torso, housed in the Vatican, left Rome for the first time in 1998 to be the centerpiece of the exhibit *Der Torso: Ruhm und Rätsel* at the Glyptothek in Munich. The exhibition contextualizes the torso and traces the history of representations based on it from Michelangelo to Picasso.

A first glance will perhaps allow you to see nothing but an *unformed* stone; but if you are able to penetrate the secrets of art, then you will see a miracle in it—if you consider this work with a calm eye. The Herakles will appear to you as if he were in the middle of all of his labours, and the hero and the god will simultaneously become visible in this work.[371]

He goes on to narrate his own loss of self in the face of this imagined whole:
"one muscle flows into the other, and a third, which raises itself between them and seems to strengthen their motion, loses itself in the latter, and our glance is, as it were, likewise swallowed."[372] The imagined body swallows its creator and audience. The generative act of beholding results in a loss of self, subsumed in the imagined ideal. Beholding becomes union with the divine. In the next moment, however, a resurrected beholder appears, now divorced from the confines of the earthly body and capable of flight.
At this moment my mind travels through the most remote regions of the world through which Heracles passed...by the sight of thighs of inexhaustible force (and of a length appropriate for one of the gods) which have carried the hero through hundreds of lands and peoples into immortality.[373]

Rainer Maria Rilke's homage to Winckelmann and the fragmented past describes a modern experience of the absent parts of antiquity:

Archaic Torso of Apollo

We cannot know his legendary head
with eyes like ripening fruit. And yet his torso
is still suffused with brilliance from inside,
like a lamp, in which his gaze, now turned to low,
gleams in all its power. Otherwise
the curved breast could not dazzle you so, nor could
a smile run through the placid hips and thighs
to that dark center where procreation flared.
Otherwise this stone would seem defaced
beneath the translucent cascade of the shoulders
and would not glisten like a wild beast's fur:
would not, from all the borders of itself,
burst like a star: for here there is no place
that does not see you. You must change your life.[374]

Despite its missing head and eyes "like ripening fruit", Rilke contends that the headless torso does see: *for here there is no place that does not see you.* If the torso did not gaze out *in all its power* in its fragmentary state, we would not see and know its dazzling, glistening interior *bursting like a star.* If we see the torso's interiority inscribed on its

[371] Winckelmann 2001, xvi.
[372] Winckelmann 2001, xv.
[373] Winckelmann 2001, xvi.
[374] Mitchell 1995.

surface, it must see us in turn: *otherwise this stone would seem defaced*. Rilke rescues the fragment from defacement by recuperating its missing parts, not as Winckelmann does by sculpting them himself in his ekphrasis, but by ascribing the powers of the missing systems to that which remains. Rilke's fragment effaces the whole: if a smile runs from hip to thigh or a gaze dazzles out from shining flesh, who needs a mouth or eyes? Rilke's modern account clarifies how the tradition of inlaid or painted eyes has come to be seen as so irrelevant to an exchange with and understanding of ancient images, despite the persistence of ancient eyes gazing out from some figures.

Greek Eyes

A first confrontation with the figure fills the space between you with the bright force of his gaze touching yours. [Figures 42-43] Light shimmers across an expanse of gleaming flesh, off of bright teeth, nails and nipples; his eyes seek and hold yours. While this gaze might once have been sharper and the materials of its making brighter and more complete, time has not fully dimmed its strength. The eyes' specificity—bronze lashes surrounding an ivory white cut to hold a (now-missing) iris and pupil—contrasts vividly with the vacant expressions of innumerable antique faces. The jolt of these inlaid eyes, even in their damaged state, traverses the space between your bodies, both the real space of you and this figure and the temporal space between ancients and moderns. These material effects, the sharp gaze, the sheen along bronze skin, the glint of silver teeth, the contrast of copper nipples set into the bronze torso, the ripple of cast bronze curls, present to you an animate being.[375] They do not, however, create a "reality effect", for this is strikingly not a real body. Colored materials and the relationship of light to those materials forge a supranatural body.[376] The figure's materiality is never in question, for the artist's *techne* lies not in concealing its materiality with a veil of what is conventionally understood as naturalism, but in igniting a beholder's senses in and through overt materiality.[377] This body stages life, not by overcoming its materiality, but

[375] On surface effects see Neer 2010, who directs us to Rilke on Rodin; Stewart 1990.

[376] Writing in an entirely different context of Leonardo's *techne,* Martin Kemp describes just this sort of "supranaturalism" as follows: "Inevitably, to achieve the maximum level of *relievo* possible within the limited compass of pigments on a flat surface, a kind of enhancement is necessary--playing up tonal and colouristic contrasts between objects occupying different planes, making emphatic use of aerial perspective, and insistently modeling forms in light and shade. His remaking or synthesis of effects from causes is dedicated to this end. The result is a peculiar form of naturalism--a kind of 'hypernaturalism' in which things look incredibly 'real' on their own terms without looking quite as they do in nature. There is some similarity to what happens with the most advanced computer graphics, in which the extraordinary naturalism carries with it some indefinable sense of synthetic strangeness," Kemp 2005, 193. I am grateful to Chris Hallett for bringing this passage to my attention.

[377] The association of these bronzes with high Classical "naturalism" led some scholars to suggest that the bronzes were literally cast from life, and thus both a trace and a replica of a "real" body. Richard Neer has recently demonstrated the absurdity of such a claim in light of torturous poses a real body would have had to assume in order to serve as such a one-to-one model, Neer 2010, 150. Nor does Greek literature give us much reason to assume such correspondence between model and image, with stories such as the image of Helen painted from the assembled body parts of the maidens of Croton. Cic *de Inv.* II.i.1 and Pliny *NH* 35.64. For later use of the myth as described by Cicero, see Baxandall 1986, 35-39 and for the Victorian period Smith 1997, 200. On Zeuxis and Mimesis see Mansfield 2007. Later renditions of the scene include Francois Andre-Vincent's *Zeuxis Choosing his Models for the Image of Helen from Among the Maidens of Croton*, c. 1791 Cantor Art Center, Stanford University 2007.28, Edwin Long's *The Search for Beauty* and *The Chosen Five* (1885) and G. A. Storey *The Choice of the Beautiful Five* (1885).

by animating the materials of its making, in the manner of, for example, Hephaistos's tripods, bellows, or handmaiden automata, as well as the bronze guardian Talos.[378] The difference between this bronze warrior's body and an automaton is precisely that this sculpture is not intended to "live", but to appear as though it does. An automaton moves and its magic lies in its obvious appearance as a non-living being that can do work typically reserved for the living. The bronze warrior offers up precisely the opposite appeal as a non-moving sculptural object that nonetheless appears animate. The emptiness of the automaton is never in question, while the bronze warrior deliberately plays on the beholder's response to its potential interiority.

Nor is seeing and being seen by this bronze warrior the same sort of experience as looking at another person, although the artist has certainly attended to the personhood of the figure in its anatomical details. Seeing the figure is not like seeing a person because the figure *is and always remains* an image, even as animation takes place. In fact, were the bronze another person the animation would be unremarkable, expected, and identical to the lifeforce of you, the beholder. For the bronze warrior, however, these animating effects of polychromatic materials, of nipples, nails, teeth and, especially, inlaid eyes, charge the space that it occupies as well as the space between him and you. Taking *darśan* of this bronze warrior draws you into the animated space he occupies and charges you in turn.

A difference between this figure and a cult-image in which the deity can reside is that exactly what "force" enters the bronze remains ambiguous.[379] With a cult image the beholder is keyed to respond as if the image bodies forth the deity in exactly the ritually-prescribed ways that Winter and Elsner describe in their respective accounts of ritual-centered viewing in Mesopotamia and Rome.[380] Non-cultic images also breathe forth some animus and the beholder responds without acknowledging in that force a particular divinity. A response that is less ritually-prescribed may be just as strong.[381] The bronze's supra-human charge emanates in part from the visible, superficial fact that the bronze figure is neither human nor divine.

I have been describing one of two-larger-than life bronze warriors from the Riace Marina, which were pulled from the sea off of the coast of Calabria in southern Italy by the skin-diver, Stefano Mariottini, in the summer of 1972.[382] [Figure 44] From 1975 through 1980 the bronzes underwent conservation, primarily in a laboratory in Florence. When they were shown to the public in the exhibition "The Riace Bronzes: an archaeological restauration" the furor surrounding them has been described as on par with that which greeted the discovery of the *Laokoon* in the sixteenth century.[383] In the

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[378] For Hephaistos's automata see *Il.* 18.372-377 (tripods), 410-420 (handmaidens), 468-473 (bellows), Apollodorus 1. 140 (Talos). Other ancient Greek automata include Phaiakians' self-directing ships *Od.* 8.555-563. See also Pindar *Olympian* 7.

[379] Moreno 1999, for example, juxtaposes the line "a man burning and completely blinded by his enterprise," from Statius *Thebaid* II.696.

[380] Winter 2000 & 2009; Elsner 2007.

[381] As Gell emphasizes, in modern viewing contexts, such as the art museum, a gallery, a private home, a beholder's response may be no less prescribed. Gell 1998. On the politics of museum display more generally, see Levine and Karp, 1991.

[382] Moreno 1999, 7, Moreno is correct to commend Mariottini's honesty in reporting the bronzes, for which he could have made a fortune on the black market. Figures A and B measure 198 cm and 197 cm, respectively.

[383] Moreno 1999, 7.

summer of 1981, more than a year and a half after their debut in Florence, the bronzes were moved to their permanent home in Reggio Calabria, where they remain and where conservation work and analysis on their persons continues. The statues depict two men at slightly different stages of life and may have been part of a larger group of bronzes.[384] One wears a helmet and the other a fillet. Both bronzes carried attributes or weapons, which are now lost.[385] Although their exact date remains debated, consensus rests with the middle of the 5th century on stylistic grounds—their High Classical style, contrapposto stance and the anatomical details such as the sculpted veins appearing to run beneath their flesh.[386] The sensation surrounding the discovery of these bronze warriors from the Riace Marina has scarcely diminished in the ensuing years. Bronze was the most popular medium for full-scale sculpture in the fifth and fourth centuries B.C.E., but few bronzes have survived the combination of natural disaster and military destruction, accidents during long-haul transit, iconoclasm, and reuse to supply metal in the Middle Ages: "by 1500 no Greek bronze statue remained above ground anywhere in the Mediterranean."[387] Of the thirty or so that have subsequently resurfaced, none matches

[384] Possible iconographic identifications include two of the nine Achaean warriors watching Nestor cast lots to decide who will battle Hector in *Iliad* VII, Stewart 1990, 147. Moreno suggests two of the seven against Thebes, although his explanation is dubious in its specificity (he goes so far as to name the sculptors of each bronze), Moreno 1999.

[385] Stewart 1993, 29.

[386] Stewart 1993, 148. There is some evidence to suggest that the bronze skin of the Riace bronzes was once black (sulphur patina), Mattusch 2006, 238, n 18. Despite their striking polychromy, the bronze warriors from the Riace Marina have long been held up as exempla par excellence (especially Statue A) of classical Greek naturalism. On the polychromy see especially Descamps-Lequime 2006, 79-92; On the construction technique, see Stewart 1993, 148, who notes that the middle toe of each foot was attached separately in order to leave a thick clay wall to absorb the stress of casting the bronze. Stewart also mentions the likelihood of later repairs to the arm of Warrior B, which is made up of an alloy containing far more lead than the alloys from which the rest of the body was cast, as was typical of Hellenistic and Roman bronzes. Richard Neer attends to the torturous incongruities that such an appellation demands and receives; we turn a blind eye to the many deviations between this figure's materials, pose, and anatomy and the natural or real body for which we wish it to stand in. Neer 2010, 148-149. Although the causal relationship between democracy and the naturalism associated with the High Classical style is at times explicitly argued it is more often tacitly accepted and written in to the assumptions of a text. The obvious appeal of such a facile equation between "political freedoms" and "freedom of the depicted body" finds endless repetition in scholarship of the classical period and throughout the larger body of the art historical canon. The oft-cited exhibition The Greek Miracle is certainly the most forceful, but the sentiment is latent in many discussions of Classical Greece, Buitron-Oliver 1993. The underlying contention of this proposed relationship between naturalism and democracy insists that a naturalistic body is bodied forth by political freedoms. For a critique of this naïve pairing and an argument for art practice as a complex site of political wrangling and change, see Neer 2002, 1-8. When merely representing the "ideal" body fell out of fashion, scholars substituted the political ideals of modern western capitalist democracy, a political practice that has always sought and found genealogical roots in the brief direct democracy of Athens in the fifth and fourth century B.C.E., so that a temporal fragment of the Classical past has come to substitute for the whole of Graeco-Roman antiquity. On the problematic terms Classical and Classicism, see Stewart 2009, 1-6.

[387] Stewart 1990, 24: "Bronze become the preferred medium for freestanding sculpture by 480, though interest in marble revived in the fourth century…Sadly, of the thousands of bronzes attested in texts and inscriptions, only a handful remain. Most come from shipwrecks, random casualities from the mass plunder of Greek art by the Romans from the late third century B.C. to the time of Nero (A.D. 54-68) and beyond. Others are stray survivors of such catastrophes as the sacks of Delos in 88, Athens in 86, and Ephesos in A.D. 263; these disasters, and others such as the great fire of Rome in A.D. 64, wreaked havoc among their respective art collections…Only with the iconoclasm and severe metal shortages of the early Middle Ages did this vast heritage really begin to disappear in earnest," Stewart 1990, 24. See also, Mattusch 1996.

these warriors for sheer appeal. Their discovery in contemporary times also contributes to the warriors' appeal as their images have not grown dusty in the history books, but entered the public imaginary with sudden force.[388]

At home in Reggio Calabria the bronzes enjoy the status of local heroes. At the time of my visit in April 2010 the pair were undergoing conservation work in a glass-walled operating theater in the Palazzo Campanella. [Figure 46] Many pictures recording the history of their conservation bear a strong resemblance to images of doctors performing operations in hospital and this evocation is certainly deliberate. That the region regained and retains control of the bronzes is a coup for this impoverished area and ancient images continue to play an active role in contemporary regional politics and the local economy.[389] The display of the scientific (quasi-medical) treatment that the figures are undergoing is one part of this regional campaign and also further evidence for the treatment of these figures as something beyond metal objects. The sculptures remain artifacts or art objects, but they also act as quasi-living beings, regional heroes being treated in an operating theater for the wounds they have sustained over time. They remain at the center of local and international attention. The quality of the available photographs of them surpasses that of most ancient sculpture and the images have been shot to accentuate the enticing details of their bodies—the well-rounded curve of buttocks, the sheen off of the iliac crest, the gleam of a copper nipple. These photographic images fragment the body for the beholder's benefit, offering up parts of their bodies without subjecting the beholder to their full impact.[390] Framing and fragmenting the body with the camera is one means of heightening the sexual appeal of the bronzes; these fragments offer the beholder a safe approach to the sculptures, shifting the type of visuality in play from exchange to voyeurism.[391] What has been translated into a kind of sexualization of

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[388] Indeed, a *fumetto*, or serial comic, written by Renzo Barbieri in the 1980s starred an eponymous vampire heroine, Sukia, and featured both Riace bronzes in episode 41. In the story Sukia and her homosexual sidekick, Gary, kidnap the two bronzes, whose damaged eyes have been miraculously restored, and stow away with them on an ocean liner. In the night the bronzes each seek out Sukia and Gary in their respective cabins and each human-sculpture pair has sex. That Statue A visits the heroine, while Statue B visits her male sidekick finds curious explication by Oliver Taplin in his pop-academic book *Greek Fire*, in which he suggests that Statue A is more appealing to heterosexual women (as evidence by the pulp vampire), while Statue B holds greater appeal with the gay male population, Taplin 1990, 88. In Sukia the statues have not precisely "come to life" in that they remain bronze bodies, but they are animate bronzes capable of having sex with both the vampire vixen and her partner in crime. Thus Barbieri's fantasy conforms to a long history of sex or love with statues and stands somewhere between the paradigmatic myth of Pygmalion and Lucian's description of the man who stained the Knidia, Hersey 2006; Steiner 2001. Taplin also refers to Pygmalion, Taplin 1990, 89.

[389] Everyone in the city knows of the bronzes, where to find them, and some anecdote relating to their discovery, recovery, and eventual installation in the city of Reggio Calabria. In much the same way that antiquities play an increasingly prominent role in international politics, the Riace bronzes play a significant role in the regional politics of Italy. That the bronzes have made their way "home" to Reggio Calabria, rather than remaining in Rome or Florence (where they were on display and undergoing conservation for the better part of a decade) is of particular import to Reggio and its surrounding region. Although the archaeological museum as a whole contains many very interesting finds (including some extraordinary architectural fragments with preserved pigments), the Riace bronzes continue to be what draws tourists and scholars and thus provides some amount of economic stimulus to the city.

[390] A recent publication by the Louvre emphasizing (and photographing) details within larger paintings similarly draws out what is deliberately incorporated into the whole to different effect, Laneyrie-Dagen, 2010

[391] Mulvey [1975] 2006.

the bronzes on the grounds of their "naturalism" is, however, a mistranslation of the energy produced by their materiality and by details that are deliberately unnatural or even supra-human. Their impact exceeds the natural, an excess which modern beholders may interpret as sexual attraction and response.

The restored bronzes come closer than many extant bronze sculptures to capturing the bright sheen of their original state. One has the impression of bathing in the light that is reflected off of their bodies. And while the average beholder did not reciprocate their aura, it might have actually been possible to catch sight of some fragment of oneself reflected off their flesh, not that one would wish to hold up a mirror to oneself in the presence of such a specimen. If anything the reflected glimpse offers the beholder confirmation of his or her comparative lack of substance, picturing a fleeting, insignificant fragment that never comes fully into being along the surface of the sculpture's body.

Writing on the polychromy of Graeco-Roman bronzes, Sophie Descamps-Lequime cites the Riace bronzes as exemplary of the "contrasting style" deployed on metallic surfaces.[392] Silver teeth gleam from behind copper-red mouths.[393] Warrior A's mustache was executed from bronze with a higher than typical tin content in the alloy, giving it a golden tint. [394] Their copper nipples offer a deliberate contrast with the rest of their golden-bronze skin. These coloristic effects—bronze, copper, silver, ivory, obsidian, glass—work light in order to project outwards a force generated entirely on the figure's surface, but that implies an animate interior.

Warrior A's eyes were framed by bronze lashes. The ivory whites remain as well as a separate caruncle inserted at the inner corner. The irises and pupils are no longer attached to their whites. [Figure 43] Warrior B suffers half of the fate of most large-scale sculptures that once had inlaid eyes; his left eye has been lost. [Figure 45] His right eye, however, remains intact except for the pupil. Into the white was set a pink tear duct at the inner corner and in the center a ring of dark material surrounding his light-brown iris, with the remains of a shallow void for the pupil, which is now missing.

These inlaid eyes were characteristic of bronze sculpture from at least the seventh century B.C.E. through the Roman period (see, for example, the Augustus from Meroë).[395] Although I know of no attempt to categorize the possible ancient types as Lucas does for the Egyptian material, most ancient Greek figural sculptures had inlaid or painted eyes.[396] The Moschophoros now looks back with empty sockets where the iris and pupil where once inserted and attached with a small joining pin. The drill holes for the pins conveniently invoke "pupils" for the Moschophoros.[397] The Kritian Boy (c. 475

[392] Descamps-Lequime 2006, 80.
[393] Descamps-Lequime 2006, 80 suggests that artist achieved the lip color by deliberately leaving that area unpolished to preserve the color which results from the alloy's high copper content.
[394] Descamps-Lequime 2006, 80; Formigli 1984, 130, 132, fig. 30. The Delphi charioteer deploys a similar mix of colors. See also Rolley 1990, 285-297. Descamps-Lequime follows Formigli in taking these deliberate manipulations of the statue's color as evidence for a sophisticated combination of positive and negative lost-wax casting, in which the parts intended to be of different colors were cast before others and using different alloys.
[395] Descamps-Lequime 2006, 81, Lahusen and Formigli 2001, 58-60, n. 18.
[396] Most of the contributors to Palagia 2008 address inlaid eyes, especially Sturgeon 2008, 73, n. 76.
[397] The calf he bears across his shoulders has painted, rather than inlaid eyes; an ironic distinction that might have been intended, in this particular case, to animate the dedicator more intensely than his no-longer animate offering, ironic since both the man and his calf are actually offerings.

B.C.E.), another favorite of the handbooks and cast galleries, had a long eyeball inserted into a deep socket.[398] The Antenor Kore retains parts of the crystal inlays that once formed her eyes.[399] An acrolithic head from Krimisa also had inlaid eyes, as well as a body formed from different materials, such as wood, straw and plaster.[400] In addition to eyes in which all of the selected surface details were rendered in stone or glass, some eyes made from glass crystal may have had the iris and pupil incised or painted onto the surface in order to heighten the fusion of color and light.[401] Use of inlaid eyes never falls entirely out of fashion in the western sculptural tradition, although in Roman sculpture eyes are increasingly engraved (bronzes) or drilled (marbles).[402] From the early modern period and onwards the question of how to render the eyes of figural sculpture was subject to heated debate and experimentation.[403] With the exception of Gérôme, few opted to color the eyes. Instead the debate centered on whether to drill a hole for the pupil, thus penetrating the surface, or to leave the surface of the eye blank and white, thus abstracting the gaze.[404] This debate arose because artists crafted bodies and eyes in direct relation to the ruins of the Graeco-Roman tradition, one in which the eyes appear empty. Artists trained primarily from fragmentary copies, cast collections, drawings, or even photographs and confronted a disabled past that could no longer look back.[405] It is with no small surprise and discomfort that we look on examples from Graeco-Roman antiquity with intact or restored eyes.

Typically, the inlaid eyes of Greek bronze sculptures were formed from a white ball of ivory, limestone, marble, or white glass paste encased in hammered bronze, the ends of which were cut into lashes.[406] The area of the pupil was cut to receive a contrasting material to represent the iris and pupil. A pair of over-lifesize eyes now free of their original body are currently on view in the Metropolitan Museum of Art in New York and they demonstrate the standard technique used for Greek bronzes.[407] [Figure 47-

[398] Sturgeon 2008, 57, Adam 1966, 47.
[399] Sturgeon 2008, 57.
[400] Sturgeon 2008.
[401] Sturgeon 2008.
[402] For example, a quick survey of the Roman portrait busts on display in the Louvre reveals that the majority have drilled eyes.
[403] Lichtenstein, 2008, 2009.
[404] See especially Gérôme's *Buste de Bellone* (1892) cat. 182 and *Corinthe* (1904), Cat 192 and 193, although Gérôme also combined polychromy and drilling, for example *Sarah Bernhardt* (1894-1901), cat. 187. Lichtenstein, 2009, 86-92.
[405] For example, in the Greek galleries of the Metropolitan Museum of Art white marble Roman copies stand in for their Greek originals. The curators are explicit about this choice, but the visual impact of the gleaming white galleries normalizes the substitution and affirms existing assumptions about Greek aesthetics. See Hemingway and Hemingway 2003: "Since all but a few ancient bronze statues have been lost or were melted down to reuse the valuable metal, marble copies made during the Roman period provide our primary visual evidence of masterpieces by famous Greek sculptors. Almost all the marble statues in the Mary and Michael Jaharis Gallery at The Metropolitan Museum of Art are Roman copies of bronze statues created by Greek artists some five hundred years earlier, during the fifth and fourth centuries B.C."
[406] Mattusch 2009, x. Xenophon's *Memorabilia* 1.5-6 describes the senses as part of "intelligent design" and goes into some detail about the particulars of the eye: the gift of the eyelids, the protective screen of the eyelashes, and the eyebrow to protect the eyes from sweat. Each of these details was picked out in figural representations of the human body.
[407] These body-less inlaid eyes are in display in a side room of the Greek galleries at the Met, adjacent to the many gleaming white marble bodies, but it is difficult to picture them belonging to one of these.

48] The whites are set with an iris and pupil of obsidian.[408] That obsidian, a glassy, volcanic stone, often used as a tool to carve wood or ivory, signifies in its role as a pupil, not only because of the material's appropriate black hue, but also because vision was theorized as a form of long-distance touching, or forming. As an obsidian tool might form a figure from matter, so might an obsidian pupil apprehend a figure. Although the mechanics of these eyes do not quite reach the technical sophistication used in Class I Egyptian inlaid eyes, they offer more anatomical specificity than the enlarged votive eyes with which we began. If their bodies imply an interior through surface effects, their eyes deepen the suggestion of interiority.The inlaid eye animates the figure through the relationship between its parts, their stitched-together-ness to form a whole. The eye's distinction from, but integration into its host body is a fundamental premise on which the animation of the whole image-body rests.

Writing of the mythical Greek artist, Daidalos, Diodorus Siculus offers the following insight:

In the production of statues he so excelled all other men that later generations preserved a story to the effect that the statues which he created were *exactly like living beings*; for they say that they could *see* and *walk*, and preserved so completely the disposition of the entire body that the statue which was produced by art seemed to be a *living being* [4.76.2][409]

One could marshal this text to support the traditional argument that Greek art sought to imitate or even surpass (in an idealizing fashion) *life*. Color has either been absent from these discussions of mimesis, or in recent years, evidence of color in ancient Mediterranean art, especially on sculpture, has been taken as further evidence of this pursuit of *lifelikeness*.[410] The assumption that verisimilitude is the goal towards which ancient Greek artists were working is so built into discussions of Greek art as to demand no defense or evidence. The ancient Greek artist seeks either to imitate or to compete with living bodies. Diodorus' description of Daedalus' skill, however, emphasizes what Daedalus' statues *do*, not how they look. They *see* and thus live. The bronzes warriors from the Riace Marina see and respond to their beholders' gazes in much the same way that Diodorus describes these *daedala.*[411]

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[408] Burnett Grossman 2003, 72.
[409] Pollitt 1990, 5.
[410] Panzanelli 2008.
[411] Two other important images of Greek visuality, the Athena Parthenos and the Medousa, deserve more extensive treatment than the scope of the current project allows. Both images have an extensive secondary literature. For now I will mention that the inlaid eyes of the Parthenos originally had eyes with ivory whites and irises and pupils of colored stone, Palagia 2006, 123. On inlaid eyes in chryselephantine cult statues, see Stewart 1990, 40. Athena's frequent epithet, *glaukopis*, referred to her unusual, piercing gaze. Although typically rendered "grey-eyed," *glaukos* could refer to a multitude of hues (blue, green, gray,) objects (the sea, an olive, a vine, the moon, sky, dawn,) or symbolic associations (untrustworthiness, variability, the power of the evil eye,) Deacy and Villin 2001, 85-86. In addition to the power of her own divine gaze, Athena wielded the power of the gorgon Medousa, whose disembodied head she sewed to her aegis. Medousa had the power to turn those who looked upon her to stone. Perseus successfully beheaded her with the help of Athena and after using the disembodied head against Polydektes, he gave the head to Athena. On narratives of Medousa see Hesiod Theogony 270-282; ps.-Hesiod *Shield of* Herakles 229-237; Iliad 2.36-37, 5.741-42, 8.348-349; *Odyssey* 2. 633-635; Euripides's *Ion* 987-997; Pindar *Pythian* 10 and

Seeing, touching, mixing

Ancient Greek philosophers and medical thinkers posited several related, if slightly contradictory, optical processes, with the evidence for each scattered across different texts and often passed down through students of the original thinkers. This is to say that the evidence of ancient Greek theories of visuality maps well to the fragmented evidence for ancient eyes. For our purposes, it is sufficient to articulate three different theories of vision: *extromissive*, *intromissive*, and *dual,* all of which concern emissions from the eye, the object, or both. Following Newton, modern scholars understand perception as a process that takes places in the rods and cones of the eye with little action from the materials or objects perceived.[412] While the science behind perception may be technically correct, this highly internalized understanding of sight offers too great an autonomy to the beholder, permitting us to divorce seeing from the material properties of the objects beheld. Western philosophy, beginning with Plato's theory of forms and persisting through Kant's Third Critique and beyond, elevates the imagined world of the mind far above direct bodily experience, as if the mind were not a part of and integrated into the body.[413]

In the ancient Mediterranean world seeing was a matter of materials acting on each other. The theory of *extromissive* vision posits that an eye emits rays (of light) that traverse the space between a beholder and an object. These rays then "trace" the form of the object apprehending its particulars through a kind of visual touch. Rays emitted by the eyes perceive colors and contours.[414] Extromissive optical theory emerged from Empedokles's (ca. 490-430 B.C.E.) theory of the four cosmogenic "roots"—fire, air, water, earth—that form the indestructible material basis of all things.[415] According to Empedokles no new matter was ever generated; instead, new entities comprise different proportions of these four roots (later called elements). Extromissive eyes act on the objects that they apprehend and seeing takes the form of mapping.

The theory of *intromissive* vision, which was popular with the Epicureans, depends on the object emitting its own "particle ray" that touches the eyes of the beholder and inscribes itself on and into the eye. The object takes an active role in the beholder's

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12; as well as Stewart 1997, 183. Several aspects of Medousa's story and depiction stand in some tension. The power of her gaze persisted even after Perseus severed her head from her body; she is mortal, but her gaze is not (on this see Vernant [1985] 2007, 1475-1519; Stewart 1997, 186-187.) Reflections and representations of her gaze, however, do not retain her petrifying power. Looking at the Gorgon at the center of the pediment of Temple C at Selinous will not turn you to stone. Because no one could survive an encounter with Medousa's gaze, their and her power and appearance are always imagined. Depictions of Medousa are always depictions of the imagined and impossible experience of seeing her. In Greek depictions of Medousa, her monstrosity is depicted on the surface of her body, while in the Roman period her monstrosity is concealed beneath a lovely appearance.

[412] For a succinct summary of visual processes, see Byrne 2006, 78.

[413] Kant, although interested in the philosophical aspect of aesthetics, was no connoisseur and Winckelmann's experience of ancient art was likely a significant source against which Kant carried out his inquiries. Kant owned only one piece of visual art, an engraving of Rousseau. Scruton 2001, 6-7.

[414] On extromissive theories in Indian visual theory, see Gell 1998, 117. Extromissive optics find their contemporary realization in technology for rendering computer graphics called "ray tracing", which uses algorithms to sort light rays that emanate from (imagined) "eyes" to the object of sight (that which is represented). Ray tracing can replace rasterisation, a pixelating technique with much in common with mosaic and other pointillist constructions. Ray tracing stages the light emanating from "eyes" Ward 2007.

[415] See especially Kingsley 1997.

apprehension; it insists on making its matter known. Intromissive eyes *take in* emissions from the object. These particle emissions are thought to be so microscopic as to be insignificant to the mass of their object, nevertheless being seen results in the object losing some part of itself in the transfer of matter from the beheld to the beholder.

The *dual* theory of vision, which Plato appears to describe alongside his theory of colors (*Tim*. 45c-d, 67d-68e), combines the extromissive action of the eyes with the intromissive action of the object. The eye emits its "particle stream" and the object emits its own counter "particle stream"; these two streams meet and engage each other, recombining as needed before returning to both eye and object. The dual theory of vision captures the reciprocal action of seeing and being seen, whereby object and subject act upon each other and cannot be known without the other. The particle exchange "midstream" takes place in the separate space of visuality, between object and subject, but essential to each. If, like the divinity, we exist only because we are seen by others, then the object must make its pilgrimage to the virtual space in which it meets the beholder's emission in order to make itself seen. In this way, being requires voluntarily giving up one's effluence in order to maintain oneself in the world, to be seen and to be.

Theories of vision and theories of color inform each other precisely because color can only be apprehended through the eyes. Pre-socratic philosophers agreed that color was the epistemological index of the perceptible world, although they debated both the reliability of sensory perception and the epistemological value of the perceptible world in relation to the world of the mind, a debate that persists unresolved in philosophical discourse.[416] Ancient Greek literature reveals other dynamics of visuality that are less well accounted for in the familiar discourses of exchange and intersubjectivity. Sappho's poetry captures some of what is missing from more technical accounts of ancient Greek optics. Witness Fragment 31:

He seems to me equal to gods that man
whoever he is who opposite you
sits and listens close
        to your sweet speaking
and lovely laughing—oh it
puts the heart in my chest on wings
for when I look at you, even a moment, no speaking
        is left in me
no: tongue breaks and thin
fire is racing under skin
and in eyes no sight and drumming
        fills ears
and cold sweat holds me and shaking
grips me all, greener than grass[417]
I am and dead—or almost

[416] Bradley 2010, 57, who also offers a clear and useful summary of ancient theories of perception from the pre-Socratics to Lucretius, 56-86.

[417] For another example of green expressing fear see *Od.* 11.633-35 and Stewart 1997, 183. "Green fear" (*chloros deos*) that Persephone may send the Gorgon's head after him overtakes Odysseus. On turning green in Latin literature see Bradley 2009a.

I seem to me.
But all is to be dared, because even a person of poverty—[418]

As the philosophers were working out how vision worked and postulating a kind of material exchange, Sappho pictures the alienating force of visuality. Sappho sees her beloved speaking with a man who seems perfectly unaffected by their exchange. Sappho, by contrast, is almost completely eclipsed by her bodily response to the sight of her beloved. Her faculties desert her—*in eyes no sight*. Seeing provokes bodily responses in Sappho that ultimately deprive her, not only of her other senses, but also of the sight that wrought her response in the first place. She experiences these responses alone, yet her responses are publicly visible on the surface of her body. Reading Sappho alongside the work of Emily Dickinson, V. Joshua Adams writes:
The pathos of this poem (as it has come down to us) rests on the fact that the speaker's desire *cannot* be hidden or mitigated. Bodily responses index the experience of nearness to the beloved. This nearness is painful and disorienting. She suffers in silence, but not in private: turning green is as much a public gesture as blushing. Eventually, she comes to have words for what is happening inside of her, though Sappho's speaker manages to vocalize this only after the fact. In the moment of the poem, her tongue is broken, but the rest of her body is working. The speaker's behavior speaks for itself, and her poem eventually echoes this speaking, but neither receives a reply.[419]

With respect to vision, a reply takes the form of an exchanged glance, or in the theories of Empedokles, the mixing of matter. At times, perhaps, these exchanges take place. Eyes do their proscribed work. Beholders feel a moment of connection, of seeing and being in the world *together*. At other moments, however, the body breaks out of our control and acts without instruction or reciprocity. *Greener than grass*, she turns. Sappho's pointed use of color shows us what is visible on the surface of her own skin. Seeing her beloved exposes what she alone experiences. The changeableness of the color of one's skin is one locus of the power of and uncertainty about color.[420] Shifts in color on the surface of the skin, a green tint, a blush or pallor indicate changes within the body and were one means by which doctors did and do diagnose illness.[421] *Pharmaka* denote substances that can alter a body, thus drugs, poisons, and remedies, but also pigments.[422]

Blindness

Up to now I have focused on the successful exchange between the beholder and an image. I have also argued that theories of vision in the ancient Greek world directly engaged the part:whole relationship by which a body came into being. Like matter, vision was inherently fragmented. Corporeal metonymy more broadly was an important part of Greek image practice, especially in the arena of Greek medicine and the cult of Asklepios.

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[418] Carson 2002, 63.
[419] Cited with the author's permission from "Emily Dickinson's and the Problem of Privacy," Adams, forthcoming.
[420] On skin and color see Chapter Two.
[421] On blushing in Roman art and literature, see Bradley 2009, 150-159. On color and ancient Greek and Roman medicine, see Villard 2002; Plato *Tim* 83c.
[422] Skarsouli 2009, 168. As in Plato *Rep* 420c, *Cratylus* 434b, Herodotos I. 98, 6, Aristophanes *Ekklēsiáksousai* 735.

Dedications in the temple of Asklepios, the Greek god of medicine, typically took the form of a sculpted piece of the body part in need of repair. Thus, a broken arm produces the dedication of a terracotta plaque of the arm, mastitis yields a plaque displaying the ailing breast, and ocular disease leads to the dedication of an image of the eyes themselves. All of these dedications stand in not only for the ailing body parts, but also for the whole body of the dedicator and the referent, in much the same way that a *kouros* or *kore* stands in for the person who dedicated it. Certainly the *kouros* or *kore* is offered with less explicit (although no less certain) hope for a return on the investment, but the man who dedicates an elbow in the temple of Asklepios offers up his devotion through the image of his body part while simultaneously seeking divine intervention.

A particularly compelling votive offering from the sanctuary of Asklepios at the base of the Athenian Akropolis consists of part of a marble head inlaid with a pair of eyes.[423] [Figure 49] The piece was set into a niche pillar of porous stone with variously shaped niches cut into it for dedications. [Figure 50] A special curved slot was cut for this dedication. Beneath the eyes an inscription was carved into the porous stone of the stele:

UPER TES GUNAIKOS/
EUXA-MENOS
PRAXIAS ASKLEPIOI[424]

Making a vow on behalf of his wife Praxias (dedicated it) to Asklepios.
Praxias probably erected this monument in the latter half of the fourth century B.C.E on behalf of his wife who was losing her sight.[425] This Praxias was probably the known sculptor of that name, active at Delphi and elsehwhere c. 330 B.C.E. The image appears to have been cut down from a larger sculpture.[426] [Figure 51] Her brow, eyebrows, lids, and sockets and bridge of the nose (now broken) were sculpted from marble. The eyes were crafted separately and laid into the sockets of the marble. These eyes, the subject of the dedication, include the pink tear duct, white, iris, and pupil, each crafted from different materials and assembled together. A material that is much brighter and whiter in hue than the pallid marble of her skin forms the whites of her eyeballs. Dark, brown-black irises are set into the whites. On her left eyeball one can see a slight gap between the iris and the white on the inner arc of the join. Sparkling crystalline stones set into an adhesive resin form her pupils, which look out from the votive offering. Although no other offerings remain in the pillar, empty niches mark where they would have been placed. One can picture the pillar studded with detached body parts, a monument to the breakdown of somatic systems.

This pair of eyes now greet visitors at the entrance to the Akropolis exhibition spaces of the New Akropolis Museum, which are staged to evoke entering the sanctuaries at its base and then mounting the Akropolis itself. In order to secure the Asklepios's help, the woman's husband dedicated an image of his wife's injured eyes. These eyes looked

[423] Salta 2003, 171-182, with bibliography.
[424] CIA II 1453; IG II^2 4372.
[425] Salta 2003, 171-182. Although this piece appeared in the exhibition "The City Beneath the City", it is not included in the published exhibition catalogue, Parlama and Stampolidis 2001. I am grateful to Bob Bridges and Olga Palagia for their assistance in my research of this piece.
[426] Salta 2003, 172, figs 2-7.

out as a *sema*, in reality either sightless or rapidly losing their capacity to see. They gazed upon Asklepios in his sanctuary and sought his returning (healing) gaze. We know nothing of the outcome of this offering, whether the woman whose eyes we see regained her sight, whether Asklepios saw her husband's dedication and restored her vision, or whether he erected it in thanks for the divinity's intervention. What we do know is that this *sema* of her eyes and brow stands in for much more than the exact part of her body that requires the healing attention of the deity. The votive represents her entire body/being as a supplicant in the sanctuary of Asklepios and the body of her husband who supplicates the god on her behalf.

This votive's eyes should not return our gaze, for it is just that capacity that the woman whom they represent is losing. With her damaged eyes depart her vision and thus the visible world. If she could see, no *sema* of her eyes would look back at us and for our purposes, she would not exist, lost to the vicissitudes of history. Her eyes, whether they regained their sight or not, seem to see us now. Except, somehow they do not. Divorced from their body, set into the pillar and accompanying the offerings of other body parts of other ailing bodies, these eyes do not quite return our gaze for they lack the paraphernalia of the accompanying body that makes seeing and knowing possible. The votive's deferral of an exchange is not identical to an object avoiding a beholding gaze. These eyes show us, not the self shaped by an encounter with the other, but a fragment of the other unable to affirm our being. It is the beholder who avoids her gaze.

If, as Beatrice Sasha Kobow has argued, "we", that concept of our collective sociability, exist only in the minds of individuals, I am constituted, not in relation to your gaze, but only in my own mind and body.[427] I may see you seeing me and believe that this constitutes my being in the world, but there is no actual confirmation that you are seeing me as I see myself, whom I can see only in fragments or with the aid of reflection. Just as I cannot know that others perceive the same colors as I perceive, so too I cannot know that I am seen as I know myself.

Up to now I have been concerned with establishing the prevalence of inlaid eyes in ancient Egyptian, Mesopotamian, Greek and Roman sculpture, examining how that tradition has heretofore been analyzed, and emphasizing the similarities across the broader Mediterranean in terms of the way in which figural images saw and were seen. Kant, Hegel, and theories of intersubjectivity and the gaze predominate, both in the accounts preceding mine and up to now in this text. This has to do with certain explicit arguments about ancient visuality, namely those of Gell, Winter, and Elsner, as well as the predominance of that tradition within the history of western art. The notion that we see others (people, sculptures) and are also seen by them, that two (or more) pairs of eyes engage or avoid each other, is foundational for our understanding of social interaction, of being in the world. What if, however, this notion of sharing vision, or seeing as others see were not really true? Vision would be not a social (and socializing) force, but the locus of the image's and beholder's isolation in the world. The votive's eyes show us the disjunction between visuality as a shared practice dependent on exchange and an internal visual system that operates independently of others, in much the same way that Sappho's fragments describe an individual's experience of isolation and alienation within social space. *Dead, almost/ I seem to me.*

[427] Kobow, forthcoming.

Chapter Four: Color, Architecture and Space

This chapter explores the role of color in architecture and space. Color both integrates the built and natural environments and destabilizes their boundaries. Each of the previous chapters explored the relationship of parts to wholes whereby color marks the stitched-together pieces that bring any whole into being. In this chapter, I will expand the field to consider the colored body in space and in relation to the built and natural environments. While the previous chapters have emphasized the relationship between color and the body, in this chapter I consider how color shapes a beholder's experience of architecture and space.

I begin with the vividly polychrome example of the Ishtar Gate from the city of Babylon, now partially reconstructed in the Vorderasiatisches Museum in Berlin. I will then turn to the polychromy of the east façade of the Siphnian treasury at Delphi, a building that stood in a place of significance along the sacred way at Delphi by which a beholder approached the temple of Apollo. For both of these places I will offer a textual reconstruction of the polychromy of the site, as a beholder moving around and through the space might experience it, to consider how adding color back in changes the spatial experience of the building and shapes a beholder's perception of space.

Despite standing in different places and emerging from different cultures, both the Ishtar Gate complex at Babylon and the Siphnian Treasury at Delphi rely on their polychromy to negotiate between built and natural spaces. Although this may seem a surprising pairing given the temporal, geographic, cultural and political distance between these two sites, my intention is to explore how colors, the material of the visible world, might traverse these differences.

Since the earlier decades of the twentieth century there has been a push from historians of the ancient Near East to characterize the arts of the Greek world as derivative of the Near Eastern. No doubt some of this emerged in response to the longstanding dominance of the classical tradition in western education and art production. Historians of the ancient Greek world have, in turn, celebrated the uniqueness of ancient Greek art production, claiming a particular "miraculous" status for art produced under the intellectual conditions of the short-lived Athenian democracy. To be sure politics played an important role in how ancient Near Art and ancient Greek art were produced and in how they have been received. The aesthetics of color, however, may bridge some of this cultural distance.

Throughout this dissertation images from Mesopotamia and the wider Mediterranean have stood alongside those from Greece and the Greek world. Through these juxtapositions, I hope to show that the material conditions of polychromy can be shared across cultural and political differences. While color is to some extent culturally determined, it also realizes sameness in difference. The search for cross-cultural connections should not efface cultural differences, but demonstrate the connections within differences. In considering the polychromy of Babylon and Delphi in these terms, I hope to move beyond the directionality that has plagued discourse on east-west relations. After Babylon and Delphi, I will examine the polychromy of mosaic, a medium which best instantiates some of the principles governing the intersection of color, architecture and space in the ancient Mediterranean world. Mosaic, I will argue, is both a class of objects and the general condition under which we perceive color and the visible world.

Babylon

The Ishtar Gate (c. 575 B.C.E.) from Babylon in Mesopotamia forms the north entrance to the city, adjacent to Nebuchadnezzar's palace complex and leading to the Temple of Marduk. [Figure 52] Babylon is situated in southern Mesopotamia between the Tigris and Euphrates rivers, in an area that is roughly equivalent to the territory of modern Iraq. Babylon city sits along the eastern bank of the Euphrates, about fifty miles from Baghdad. This city was the stronghold of the eponymous Babylonian empire, which was particularly powerful under the reign of Nebuchadnezzar II from c. 605 B.C.E.-563 B.C.E.

Although Babylon has been the subject of extensive discussion since its discovery and excavation in the late nineteenth century, that analysis has taken one of two forms. Some scholars have been dedicated to reconstructing the site, identifying its buildings and their functions, a practice that deliberately confines analysis to the specific space of the city architecture. Others, alternatively, have taken up the history of Babylon as a place that extends far beyond its footprint, the mythical Babylon that proved a rich subject for western art and reified stereotypes about the east. A recent (2008-2009) exhibition, *Babylon: Myth and Reality,* organized by the Staatliche Museen zu Berlin, the Louvre and the British Museum, attempted to bridge those two Babylons. The exhibition combined site plans with later paintings in order to combine archaeological accuracy with the historiography of the site, which had been, of course, part of the original impetus to excavate it. Although the exhibition beautifully reproduces the polychromy of the Ishtar Gate complex, like all previous scholarship, it does not analyze that polychromy. While color on ancient Greek architecture generated furious debates on both sides of the issue, color in Mesopotamia was both accepted and dismissed as unimportant.

The city buildings at Babylon were heavily renovated and expanded under Nebuchadnezzar's rule. Eight gates opened into the city, two on each side of the city walls. Of these the most spectacular was the vibrant polychrome Ishtar Gate complex that stood on the north side of the city. The gate is named *Ishtar-sakipat-tebisa*, or "Ishtar repels her attackers."[428] A massive walled processional way leads up to the double gate. [Figures 53-55] The gate opens on the section of the city where the temple of Marduk, who was the king of the gods in the Mesopotamian pantheon and the patron deity of Babylon, stood. The Ishtar Gate was especially active during the annual New Year's festival, at which participants bearing images of important deities processed around the city of Babylon, stepping onto the processional way at the North end of the city walls and into an otherworldly polychromatic space.[429]

Although color was used throughout Nebuchadnezzar's building complex, it is especially concentrated along the processional way and the Ishtar Gate. The walled processional way that leads up to the double gate; the walls and gate are unified by the vivid polychromy of the glazed, moulded mudbricks which shape them. These mudbricks were formed on wooden moulds from the local alluvial clay tempered with straw.[430] Clay glazes in blue, yellow, green were painted onto the individual bricks and then heated in

[428] George 2008, 57.
[429] On religious processions at Babylon see George 2008, 54-57.
[430] Marzahn 2008, 48.

the sun.[431] Vast registers of blue glazed bricks interspersed with narrower registers of yellow or white bricks or rows of rosettes rise above the polychrome walkway, which was originally paved with glazed bricks.[432]

Yellow lions process across a narrow register of yellow bricks against a blue background. The lions also stage a transition for the beholder from the secular space outside of the city walls to the sacred space of the sanctuary of Marduk, the patron deity of Babylon.[433] The lion is an attribute of the goddess Ishtar, as is the stone lapis lazuli, which the blue glazed bricks explicitly evoke.[434] The deep blue of the relief background contributes to the effect of the lions, which appear both to be walking along the defined relief space of the façade and also through the aether.

The powerful combination of these two attributes, the lion and lapis lazuli, formed the very walls leading up to the goddess's gate. Ishtar surrounded the beholder as he approached, both metonymically and materially through her attributes. The beholder is never deceived as to the integrity of the surface of the wall, but the coloration deliberately evokes the earthly yellows of the Babylonian soil and the bright blues of its skies.[435] The foundation bricks of the walls are moulded, but remain unglazed, in keeping with their placement at and below ground level.[436] [Figure 57] A stretch of the wall between the lowest register with the lions against a blue ground and the upper registers may also have been unglazed, along the processional way.[437]

The crenellation at the top of the walls of the processional way offers movement between the pictorial space of the relief and the surrounding environment. The deep blue of the glazed bricks alternates with glimpses of the sky above and between the crenellations. The blue bricks of the walls and gates rise into and merge with the blueness of the sky, creating in the confluence of real brick and real sky, a virtual continuity that unifies matter and the universe. Both the sky and the built environment are described as made from lapis lazuli in Mesopotamian literature. "Oh abode (earth) built with silver and lapis lazuli, whose foundations are deeply planted on the Aps*û*"[438] As the sun shifts throughout the day both the colors of the bricks and the colors of the sky would have shifted with the change in light conditions. There were no windows or openings in the walls; once a pilgrim stepped onto the processional way, he stepped into a space enclosed by vibrant colors on all sides from the pavement to the blue and yellow walls, but for the opening to the sky.

The blue bricks of the double gate match those of the walls along the processional way, integrating path and portal. Dragons and bulls cover the façade of the outer and inner gates processing towards the arched doorway in even registers. [Figure 56] Unlike the lions along the processional way, only the bottommost register of these animals stands on an explicitly delineated ground line. They walk, instead, in even

[431] Marzahn 2008, 48.
[432] Marzahn 2008, 50.
[433] Marzahn 2008, 50.
[434] On the history of lapis lazuli and its material and symbolic associations see Chapter Two. On Ishtar's association with the lion, see Stager 2005.
[435] The ziggurat at Babylon was also lined with blue bricks on its uppermost storey, George 2008, 55.
[436] Marzahn 2008, 49.
[437] The current reconstruction in the Vorderasiatisches Museum in Berlin treats the middle section of the wall as an unpainted and unmoulded expanse.
[438] See *Enlil in Nippur,* Castillo 2001, 91-92.

registers through the blue background towards the arched entrance. Patterns of yellow, white and brown bricks and rosettes frame each major panel and curve over the arch. A narrow register of yellow, white and brown bricks runs along the top of the gate's wall, just before the crenellations. According to the accompanying inscription, the gate complex was roofed with cedar and its doors were of cedar and bronze. Movement from the processional way, which was open to the sky, in and through the Ishtar Gate completed the transition from the outside world of the land of Bablyon surrounding the city into the sacred space of the deities who protect it and through whom Nebuchadnezzar claimed power.

As the Babylonian king, Nebuchadnezzar built this transitional space, and was himself the point of contact between his people and the deities whom he claimed sanctioned his reign. The careful deployment of earth-based polychromy connected his building project with the availability of abundant resources from the earth. Nebuchadnezzar shaped the local, humble clay into a spectacle for the gods and his people. The fact that all of the imagery of the gate complex is pixelated, by virtue of its mudbrick construction, intensifies the oscillation between the image as another world, and the image as material entity. Distance effaces that pixelation for the beholder, presenting a unified image-world, while proximity breaks down the image-world into individual pixels. The relationship between the Ishtar Gate and the surrounding sky further effaces the bricks (pixels) that compose it. Merging with the sky, bricks lose their individuality; each unit disappears into and is enveloped by the illusionistic unification of pixel and aether. Conversely, the viewer's awareness of the pixelated construction shatters the sky, or breaks down heavenly unity, like a drawing in which just enough of the pattern has been articulated to convey that it covers the entire surface beyond what has actually been rendered. "Let not your good lapis lazuli be broken up into the stone of the stone worker," admonishes the narrator of *The Descent of Ishtar*.[439] The movement between pixel and illusion, or part and whole, extended outwards from the gate complex to encompass the surrounding Babylonian landscape.

The interaction between the structure and its environment, between the colors of earth and sky and the colors of walls and gate, stages Nebuchadnezzar's divinely sanctioned royal power to bring forth the earth's abundance for his people. An elaborate 60-line version of Nebuchanezzar's signature Akkadian inscription, which appeared elsewhere in the city, was a part of the gate complex. [Figure 58] The cuneiform is cut into the moulded bricks. The inscription, which was reconstructed from fragments, measures approximately 15 meters high by 10 meters in width. The full inscription is rarely reproduced alongside its image and for this reason I include the entire text in translation.[440] It reads:

Nebuchadnezzar, King of Babylon, the pious prince appointed by the will of Marduk, the highest priestly prince, beloved of Nabu, of prudent deliberation, who has learnt to embrace wisdom, who fathomed their [Marduk and Nabu] godly being and pays reverence to Their Majesty, the untiring governor, who always has at heart the care of the cult of Esagila and Ezida and is constantly concerned with the well-being of Babylon and Borsippa, the wise, the humble, the caretaker of Esagila and Ezida, the firstborn son of

[439] Kramer 1951, 3; *Descent* 45.

[440] For the cuneiform transliteration, see Marzahn 1994. On glazed bricks in Assyrian royal construction see the palace of Assurnasirpal II and that of Tiglath Pilaser I, Winter 1993, 35, n. 61.

Nabopolassar, the King of Babylon, am I (24). Both gate entrances of the [city walls] Imgur-Ellil and Nemetti-Ellil—following the filling of the street from Babylon—had become increasingly lower. [Therefore,] I pulled down these gates and *laid their foundations at the water-table with asphalt and bricks and had them made of bricks with blue stone [uqnu (NA4.ZA.GIN)] on which wonderful bulls and dragons were depicted. I covered their roofs by laying majestic cedars length-wise over them. I fixed doors of cedar wood adorned with bronze at all the gate openings. I placed wild bulls and ferocious dragons in the gateways and thus adorned them with luxurious splendor so that Mankind might gaze on them in wonder.*(54) I let the temple of Esiskuriskur, the highest festival house of Marduk, the Lord of the Gods—a place of joy and jubilation for the major and minor deities--be built firm like a mountain in the precinct of Babylon of asphalt and fired bricks [emphasis supplied].[441]

In the midst of a formulaic inscription, the likes of which appear in shorter, single brick, seven-line versions throughout the building complex, Nebuchadnezzar inserted descriptions of his aesthetic choices and intentions.[442] His "bricks with blue stone" were actually glazed clay, not cut bricks of lapis lazuli. The word *uqnu* may actually be expansive enough to mean in certain cases "blue glaze," but it most frequently means the worked or unworked (raw) stone "lapis lazuli."[443] At the very least Nebuchadnezzar played with this ambiguity. The expense of constructing even a part of the walls or gate from the stone lapis lazuli would certainly have been prohibitive, but the blue-glazed bricks evoke the vivid blue of the expensive stone. The construction technique used to build the Ishtar Gate complex, with its movement between the individual pixels of brick and the expansive colors and creatures that they create, constituted the true achievement of the king. Nebuchadnezzar laid out this "*luxurious splendor so that Mankind might gaze on* [it] *in wonder*."[444]

The importance of "wonder" in ancient Mesopotamian aesthetics has been well covered by Irene Winter.[445] In Chapter Three, I addressed Winter's analysis of wonder, which she renders "ad+miration" to capture the kinetic sense of beholding, with respect to inlaid eyes and votive sculpture.[446] Writing on the construct of the palace complex in the ancient Near East, Winter argues that the "seat of kingship" functioned as an extension or vehicle of the king's imperial power or ideology, but also as the literal place in which this power resided.[447] Assyrian and Babylonian inscriptions frequently described a royal project as "a wonder to behold."[448] Of the Ishtar Gate, Winter writes, "if we were to include procession as part of ceremonial display, then the fact that the

[441] Marzahn 1994, 29-30.
[442] For the short version of this inscription, which covers a single brick, see Finkel 2008, 85.
[443] See CAD 2010, *uqnu*, 195-202, especially 2.b, p. 202, "I glazed baked bricks with lapis lazuli (colored glaze.)
[444] Compare with Sennacherib's descriptions of his palace at Nineveh with its reliefs and colossi, "I made [the reliefs] objects of astonishment," "I made [the colossi] a wonder to behold," "To the astonishment of all peoples I raised aloft [the palace's] head," Winter 1993, 37; Luckenbill 1926-7, 367, 389, 394. On Sennacherib's palace, see especially Russell 1991. The Assyrian palace reliefs were also originally painted. For a reconstruction by the British Museum see Verri et al. 2009.
[445] Winter 1993, 1999, 2000.
[446] Winter 2000 and discussion in Chapter Three.
[447] Winter 1993, especially 36-38.
[448] Winter 1993.

processional route from the Ishtar Gate to the temple of Marduk passes along the east wall of Nebuchadnezzar's palace…could imply an active role for the palace and/or the king in the procession."[449] The affect of the building program was equal in importance to its administrative and residential functions.[450] Nebuchadnezzar's polychrome complex was intended to inspire wonder in its beholders and this wonder accrued simultaneously to the building and to the ruler whose building it was and who had caused this wonder to be brought into being.[451]

A parallel discourse concerning wonder (*thauma*) and the phrase "a wonder to behold" (*thauma idesthai*) runs through ancient Greek aesthetics as well. This has recently been well laid out by Richard Neer with respect to sculpture.[452] Both Neer and Winter emphasize the deeply visual nature of wonder in the ancient world; one experiences something as wonderful or one is perceived as wonderful in and through vision.[453] Neer also argues that a basic quality of wonderful things is their doubleness or twofoldness; a beholder's response to this doubleness is, in fact, to wonder at it.[454] The source of the wonder of the Ishtar Gate complex is both the careful juxtaposition of the building's and the site's polychromy and also the movement between the materials of nature (alluvial clay and colored glazes) from which the building has been constructed, and the imperial might that enabled Babylon to rise from the earth.

The wonder inspired by Nebuchadnezzar's building program also played a significant role in the discovery and full-scale excavation of the gate complex. The German architect Robert Koldewey visited Babylon in 1887 and 1889 and began the first of eighteen years of excavation under the auspices of the Deutsche Orient-Gesellschaft in 1899. Koldewey noted that the glazed brick fragments that he brought back from his preliminary trips captured the interest of his superiors in Berlin with their "peculiar beauty."[455] This helped to tip the scales in favor of backing a major excavation at Babylon.

Despite its historical fame and although many other travelers had previously visited the site and described aspects of the enormous tell, few connected the site with the historical city of Babylon.[456] With the rise of archaeology in the mid-nineteenth century, European nations and museums competed to excavate and retrieve objects from the ancient world. England and France has already made strong inroads in Mesopotamia at Nineveh and Nimrud and Germany was eager to catch up.[457] The doctor and politician Rudolf Virchow wrote:

[The French] in the Near East have collected extraordinary treasures. The English have explored Assyria. We have gotten little. We have long contented ourselves with large plaster casts which have been ceremoniously displayed in museums. It is no small

[449] Winter 1993, 37.
[450] Affect, used here as a noun, refers to the emotion state brought on by beholding the building. On affect in ancient Mesopotamian art, see Winter 1993, 38.
[451] Winter 1993, 38 describes the royal palace as the "mirror" of the ruler.
[452] Neer 2010.
[453] Winter 2000, Neer 2010, 58.
[454] Neer 2010, 66-7.
[455] Koldewey (fn 87) in Reade 2008, 42.
[456] Reade 2008, 36, Bohrer 2003, 279.
[457] Bohrer 2003, 279.

advantage, and certainly cannot be denied, that the originals are more interesting than the plaster casts.[458]

Once the site had been identified and German excavations approved, Koldewey returned to Babylon in the company of the archaeologist and architectural draftsman Walter Andrae, who produced a vast number of drawings and watercolors of the site and excavations, including many in color. The excavators also photographed the tell in black and white. By 1902 most of the glazed bricks from the Ishtar Gate complex and processional way had been shipped to Berlin.[459] Andrae's drawings were the primary source for his much later reconstruction of the processional way and Ishtar Gate in the Vorderasiatisches Museum in Berlin, of which Andrae served as the first director.[460] Although the reconstructed complex did not go on display to the public until the 1920s, Babylon and the images emerging from the excavations there became a prominent part of contemporary political discourse which sought to capitalize on German philological strength in Sumerian and Akkadian, and the expansion of the German museum collections.[461] In public lectures on Babylon the scholar and public figure Friedrich Delitzsch described Koldewey's discoveries at Babylon:
How the pulse quickens when…the great double-gate of Babylon, flanked northward by three mighty towers, emerges from the bowels of the earth in splendid preservation. Whichever way we look…every part swarms with reliefs, [wild oxen] coloured on their surface with enamels standing out against the background of deep blue.[462]

Andrae's drawings and watercolors were accorded such authoritative status in Germany that the government-sanctioned opera *Sardanapal*, which claimed that its sets were "archaeologically true" simply copied to scale one of Andrae's watercolors from the site of Assur in Assyria in order to stage the scene.[463]

Many of the mudbricks from Nebuchadnezzar's palace complex were reused in modern times in the architecture of nearby towns, even as far away as Baghdad.[464] Although the bricks from the Ishtar Gate complex had been removed to Berlin, reconstructing both the palace and the Gate complex was a propagandistic priority under the reign of Saddam Hussein. In On February 14, 1978 the "Archaeological Restoration of Babylon Project" began. With it, Saddam sought to harness the same wonder that had legitimized the reign of Nebuchanezzar for his own regime. Saddam had a reduced replica of the Ishtar Gate built at the entrance to the site's museum. In 1982 Saddam's government issued a group of legal-tender coins with images from the site of Babylon, including objects from the site which are now in European museums; four of these coins depicted images from the Ishtar Gate.[465] Saddam also had Nebuchadnezzar's palace complex rebuilt directly atop the remaining ruins from the ancient palace. In the tradition of the Babylonian king, Saddam stamped his bricks with several inscriptions in Arabic,

[458] Bohrer 2003, 279
[459] Bohrer 2003, 282.
[460] Seymour 2008, 43-4.
[461] Bohrer 2003, 292.
[462] Bohrer 2003, 292; Delitzsch 1903, 162-3.
[463] Bohrer 2003, 300.
[464] Curtis 2008, 213.
[465] Curtis 2008, 213.

including "In the era of Saddam Hussein, protector of Iraq, who rebuilt the royal palace."[466]

The majority of Saddam's reconstruction had been completed by September 1987 when he hosted the month-long Babylon International Festival in which he presented himself as the modern Nebuchadnezzar with the theme "From Nebuchadnezzar to Saddam Hussein, Babylon undergoes a Renaissance."[467] The wonder for mankind that Nebuchadnezzar had produced now played a major role in the politics of not only modern Germany, but also modern Iraq.[468] Through the reconstruction of the Ishtar Gate in Berlin and in the smaller replica built on the site of Babylon, as well as the numerous visual representations of the gate, both in the Middle East and Europe, the building program of Nebuchadnezzar was geographically expanded and the space that the glazed bricks occupied likewise expanded far beyond the original building's specific footprint. The building's polychromy defined its role in Nebuchadnezzar's Babylon and in the many iterations of Babylon that have succeeded his, *so that Mankind might gaze on them in wonder*.

Delphi

The Siphnian treasury at Delphi differs markedly from the Ishtar Gate in its scale, materials, politics, and imagery; nonetheless, the polychromy of the treasury shares with the Ishtar Gate a similar engagement with the polychromy of its natural setting. Delphi sits in a glen on the southern slope of Mount Parnassos. A pair of cliffs, the Phaidriades, or the "shining ones", enclose one side of the site of Delphi and cut a mountainous swath through the blue skyline. Their name refers to the way in which the sun brilliantly reflects off of the cliff faces, dazzling those in the sanctuary. The valley of Pleistos stretches out as a verdant vista below. Pausanias (10.5.5) describes the ascent to Delphi: "from here the high road to Delphi becomes both steeper and more difficult for the walker."[469] Mists moving in from the mountains frequently shroud the site. "You have the feeling that you have entered a place separated from the rest of the world."[470] The lush beauty, altitude and difficult access all contribute to Delphi's powerful affect.

This tucked-away pilgrimage center was at one time the center of regional and pan-Mediterranean politics and religious life. Pilgrims traveled to Delphi to hear the oracle of Pythian Apollo's pronouncements, which played an important role in civic decisions.[471] Whereas Babylon was the seat of Nebuchadnezzar's power and of the Babylonian empire, Delphi was the seat of cultic and political power that operated outside of bounded polities, but could enhance or diminish the power of those polities within its purview.

The description of Delphi as the *omphalos* of the world found instantiation in several known dedications of navels found on the site. While the term "navel" becomes a common description to denote the importance or centrality of a place, with Delphi the

[466] Curtis 2008, 213.
[467] Curtis 2008, 215
[468] In the second Gulf war the palace complex was completely occupied by the military forces of the US and their allies. On the destruction of the site of Babylon during the second gulf war see Curtis 216-220.
[469] Jones 1918.
[470] Seferis and Clay 2005, 4.
[471] Bowden 2005 on the importance of the oracle in democratic decision-making.

description relates directly to a version of its foundation myth and even its etymology.[472] In the *Theogony* (495-500) Hesiod describes how Rhea offered Kronos a swaddled stone in lieu of their infant Zeus, for Kronos was swallowing each of their children at birth so that they could not grow up to overthrow him. Kronos eventually vomited up the stone, which Zeus set into the ground at Delphi as the original *omphalos*, to be a sign (*sema*) and wonder (*thauma*) to mortals. Zeus sets the stone, which was originally born of the earth, back into the earth, but now it has been imbued with the story of Zeus's survival. The stone did not depict Zeus, but represented him and comes to mark the center of the Greek world over which Zeus presides.

Although the site originally belonged to Gaia, Apollo is said to have killed her child, the dragon Pytho, who guarded the stone that marked the *omphalos.*

But near by was a sweet flowing spring, and there with his strong bow the lord, son of Zeus, killed the bloated, great she-dragon, a fierce monster wont to do great mischief to men upon earth, to men themselves and their thin-shanked sheep; for she was a very bloody plague. (*Hom. Hymn Pythian Apollo* 300-305)[473]

Whosoever met the dragoness, the day of doom would sweep him away, until the lord Apollo, who deals death from afar, shot a strong arrow at her. Then she, rent with bitter pangs, lay drawing great gasps for breath and rolling about that place. An awful noise swelled up unspeakable as she writhed continually this way and that amid the wood: and so she left her life, breathing it forth in blood. (*Hom. Hymn Pythian Apollo* 366-369)[474]

Although alternative versions of the site's foundation and development were also in circulation, ("many and different are the stories told about Delphi, and even more so about the oracle of Apollo" Pausanias 10.5.5.) the myth involving Gaia, the serpent and Apollo most matches the description of the site as an *omphalos*. The serpent stands in visually for cutting the umbilical cord to Mother Gaia. Apollo killed the serpent, cut the cord, and took over responsibility for the cult center. An *omphalos* both marks the physical connection whereby a mother nourished her child in the womb and the violent separation ("breathing forth in blood") of the child from the mother at birth. The site of Delphi was both steeped in its connection to Gaia, and also oriented towards the social and political world of men and the built environment. The transfer of power from Gaia to Apollo was a transfer from the primordial realm to the realm overseen by the gods of men.

Pindar and later Pausanias describe the early temples to Apollo as having been constructed from various materials of earthly abundance, such as laurels or beeswax and feathers.[475] Indeed, the materials from which the more permanent buildings and dedications were eventually constructed also come from the earth. Moving up the Sacred Way, the pilgrim turned his back on the rich panorama of the land below and walked through the material abundance lining his route, a series of treasuries surrounded by dedications in rich materials. [Figure 59]

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[472]On the frequent application of the term "navel" to centers, see Summers 2003, 130-137.
[473] Evelyn-White, 1914.
[474] Evelyn-White, 1914.
[475] Pindar 8th *Paean* 11.58-99 (ed. Snell 1964), Paus (10.5.9); Aristotle *De Philosophia* fr. 3 R and Strabo 9.421 also mention the temple of feathers. On the early temples to Apollo at Delphi see Sourvinou-Inwood 1979.

The Siphnian Treasury was one of the earliest built (c. 520 B.C.E.) at Delphi and occupied a prominent and visible place at a turning point along the Sacred Way towards the sanctuary of Apollo.[476] At the time of the treasury's construction, visitors entered the sanctuary from the southwest entrance, confronting west façade of the treasury immediately. Only later in antiquity did the southeast entrance supersede the southwest. The Siphnian Treasury's well-selected position meant that at least one face of the building was prominently visible from either entrance.[477] Visitors to the oracle had to pass by the Siphnian treasury en route. As Richard Neer has argued, the rise of civic treasuries, literally treasure-houses (*thesauroi*), corresponded with a transition in many Greek cities from aristocratic power centered around individuals and their *oikoi* and towards the civic power of the polis, under which, for citizens, collected resources were claimed and redistributed by the city rather than the household.[478] At Delphi, the treasury came to stand for the civic body and by storing individual and group dedications within the treasury, the city asserted its custody of that material wealth.

Many of the treasuries were built in part from materials imported from the land of the city that sponsored the treasury, often at great expense and effort.[479] The Siphnian treasury was constructed from four different types of stone, drawn from four different places.[480] Its foundation was laid from local blue-gray limestone. [Figure 60]; its walls were built of imported Siphnian marble; its floral bands were of Naxian marble; and its frieze and pediment were carved from Parian marble.[481] The Siphnians insisted on using materials from Siphnos for some portion of the treasury and the gold and silver mined on Siphnos (on which see Herodotos 3.57.1-3.58.4) funded the entire building. By assembling the building from a combination of materials, however, the Siphnians asserted not only their civic authority in this space, but their connection to the place of Delphi through the use of local limestone for the foundations, with high-quality imported Naxian and Parian marble for important parts of the building program.

The iconography of the Siphnian treasury has been the subject of extended analysis since its excavation. The details are as follows: the pediment depicts Herakles' (foiled) attempt to steal the Delphic tripod from Apollo; the west frieze may depict the Judgement of Paris; the south frieze depicts an abduction scene; the north frieze depicts a Gigantomachy; and the east frieze depicts a fight between the Greeks and Trojans over the body of Antilochos and an assembly of the gods.[482] The polychromy of the building, has factored only minimally into discussions of the monument. Given the importance of the raw materials used in constructing the treasury and the visible remains of pigments on the reliefs now on display in the museum at Delphi, the lack of attention paid to the building's polychromy is striking. [Figure 61] The surface treatments must have been as thought out as the choice of base materials appears to have been.

In the volume of *Fouilles de Delphes* dedicated to the Siphnian Treasury, Georges Daux includes three-quarters of a page on the monument's polychromy and a color

[476] On the date see Neer 2001, 289
[477] Bommelaer 94, 97, 124, nos. 103, 232.
[478] Neer 2001, 284, who describes the treasury as "a synecdoche for the polis itself."
[479] Neer 2001, 278-9.
[480] Daux 1987, 26-31; 233.
[481] Daux, 1987, x; Neer 2001, 290. The treasury was not, as Brinkmann states, carved entirely from Parian marble, Brinkmann 2008, 55.
[482] For a complete description of the iconography and style, see Stewart 1990, 128-9.

reconstruction on paper of the polychromy of the mouldings running above and below the frieze.[483] [Figure 62] Daux writes, "this treasury of white marble was painted with vibrant colors."[484] He goes on to discuss the tentative acknowledgement of that polychromy by the original excavators in the late nineteenth century, who saw traces of "abundant" pigments on the emerging stones, including blue, red, and green.[485] Although Daux does not offer any complete reconstructions, he describes the blue background of the relief space, with its red plinth and groundline, as well as additional details in blue, red and green.[486] Daux also confirms that some of the paint traces remained visible to his team in the 80s; indeed some remain visible today. Details of the site's polychromy survive in watercolor reconstructions painted in the nineteenth century. To my knowledge no analysis accompanied these watercolors, which remain the best suggestion for what color was preserved at the time of the first excavations at Delphi.[487]

Those approaching the sanctuary of Apollo and the oracle through the southeast entrance climbed the Sacred Way and approached the east pediment of the Siphnian Treasury first. The German team working with Vinzenz Brinkmann has reconstructed the possible polychromy of the east frieze that runs beneath the pediment. [Figures 63-64] This frieze is divided and depicts the assembly of the gods on the left and the battle between the Greeks and Trojans over the body of Antilochos on the right. Both unfold against a rich blue relief background and a red groundline that covers the sculpted ledge of the frieze as well as a few centimeters of background relief. The team carrying out the reconstruction elected to fill in colors only where physical evidence remained, so many of the figures remain white. The interiors of the shields are all painted red (still visible to the naked eye), with green for the shield-strap. A brownish red is used on some of the figures' hair, both divine and human, while the manes of the horses are staggered blue, red and green. Thetis wears a red garment decorated with glittering stars. Especially important are the white inscriptions labeling individual figures, both in the assembly of the gods and in the battle over Antilochos. These are carved into the marble and reinforced by white paint.

Elena Walter-Karydi has argued that a shift from predominantly red to blue background color in architectural relief takes place in the late Archaic or early Classical period, citing the blue backgrounds of the friezes of the Parthenon, the Hephaisteion, the Siphnian treasury, and the Mausoleum of Halikarnassos.[488] For Walter-Karydi this blue background bears no relationship to the sky, as others have suggested, and she argues that the color of relief background has no narrative value.[489] While resistance to a simple assumption that a solid blue background represents the sky is understandable, one cannot avoid the phenomenological effect of the blue background in relief sculpture that is set outdoors in a natural setting. In addition, the brown of the fascia below extended a few centimeters up the background of the frieze. The brown reads clearly as a groundline and

[483] Daux 1987, 222, 233. The reconstruction of these decorative fragments is based on notes taken by the original excavators, which describe multiple colors, but not always with replicable specificity. See especially Daux 1987, n. 3-7.
[484] Daux 1987, 233.
[485] Homolle 1894, 194.
[486] See also Bommelaer 1991, 125, for a description of the polychromy of the mouldings and bronze attachments.
[487] Hellmann and Fraisse 1982.
[488] Walter-Karydi 2008, 175.
[489] Walter-Karydi 2008, 175 and 177.

the blue background above it as sky. As with the Ishtar Gate, the blue background of the Siphnian treasury does not represent the sky within the exclusive narrative frame of the frieze. Approaching the Siphnian Treasury from the Sacred Way, however, a beholder took in the lavish decoration of the monument and its setting partway up the hill towards the oracle. The changing blues of the daytime sky or the inky, twinkling darkness of the night sky are also visible at the outer edges of the relief. To the left the blue background of the assembly of the gods gives way to the sky and air surrounding the treasury. To be sure this blue is neither so opaque nor so vivid, but the choice of color offers some movement between the setting of the gods and the setting of the treasury. Just so the narrative of the battle over the body of Antilochos gives way to the colors of the surrounding aether. The real space of the beholder is already charged with the mysticism of the approach to the oracle and the sacredness of the entire site. The image-space of epic blends with the setting to suggest a merging of priorities between real and depicted space. The red and green foot and crown (ovolo) mouldings frame the brown groundline and blue background offering the narrative of the frieze through a window of polychrome ornament. The illusionism of the building's polychromy works with the natural pictorialism of the setting. The colors of the building each find some extension in the surrounding natural setting, and as time went on in the increasing number of adjacent treasuries and dedications in the sanctuary. As the light changes, the colors of both the natural setting and the built environment change as well.

In analyzing the reciprocal relationship of architectural polychromy and the natural environment, I argue that the changeableness of color emerged as the source of its power. In previous chapters I discussed the importance of *poikilia*, or variegation, for ancient Mediterranean aesthetics and for understanding color. The importance of *poikilia* extends, not just to the surface of the object, or the exchange between beholder and object, but also to the active relationship between the built and natural environments. The earth is constantly moving; with that movement light conditions shift and under those shifting conditions the appearance of colors alters. All of these we accept as part of the natural world, the reds of a setting or rising sun, the bright blue of a cloudless sky that shifts to midnight as bright stars emerge, the brown, sunburnt grass of summer, the polychrome abundance of spring, and the pallid grays of winter. Daily, seasonally, the earth changes its colors. Colors of the built environment, a brightly delineated relief, the gleam of a bronze door, a painted pediment, a mosaic floor, all change in relation to the daily rotation of the earth, but they also insert themselves into their environment, shifting the way a beholder perceives the sky, plants and earth around the building. While this account of the colors of nature may seem obvious in the retelling, few accounts of the interaction of the colors of the natural world and the built environment in the ancient Mediterranean exist in the scholarly literature.[490] One need only think of the stunning impact of a night sky out in the country in contrast to the barely visible stars of an overbuilt urban space.

Paul Hills, in his study of color and the unique environment of Venice, argues that the Venetian environment with its reflective water and ambient light of its canals, the rich imports that moved through this entrepôt, and the vibrant colors used on its architecture and in Venetian painting all act upon and enhance each other, creating a city for which

[490] A notable exception to this absence is the digital reconstruction of polychrome sculpture at Delos that accounts for the changing light conditions on the colors sculpture, on which see Chapter One.

vibrant color became a powerful attribute.[491] Certainly the case of Venice is particularly unusual, but Hills's insistence that we take seriously the interaction of artistic and natural colors applies widely. Of Venetian color, Hills writes:

Venice, through its setting and its politics, creates a unique relation between the subject—as citizen-inhabitant and viewer—and the object viewed—the city, the work of art. Colour plays a role in this special subjectivity, operating at a subliminal level of shared experience of the climate and atmosphere of the lagoon (which in pictorial terms harmonizes colour by interweaving reflections, by softening and blending) and at the conscious level of ensign in clothes, in flags and even in the carpets hung from balconies.[492]

Although the cultural and geographic conditions of Babylon, Delphi and Venice differ markedly, the phenomenological slant of Hills's reading is equally important in these spaces. Phenomenology, the study of conscious, subjective experience, is a risky business, for it necessarily acknowledges the absence of proof.[493] In these cases it may, however, be the only business, for objects, colors, and spaces do not exist outside of subjective experience. For Venice, Hills argues for a reciprocal relationship between a beholder's experience of the place and the art that he might choose to produce or consume. Just so, the rich Delphic landscape in which mountain, spring and valley are all visually juxtaposed to splendid effect invited the rich polychromy applied to the Siphnian treasury so that the two acted upon and in dialogue with each other.

Writing on the relationship between the senses and colors, Aristotle outlined three possible modes of creating a palette in *de Sensu* (3.440b12-23): juxtaposition (whereby colored matter is laid next to matter of another color, as in pointillism) superimposition (whereby matter of one color is laid atop matter of another color) and blending (whereby the particles of each color are mixed to the extent that they are no longer separable.) Central to these three modes is the understanding of color as matter, as existing in separate particles that move through aether, which I covered in Chapters Two and Three. Aristotle goes one to describe the rainbow as emerging from particles of white juxtaposed with particles of black juxtaposed in different ratios.

At Delphi, the juxtaposition of colors within the polychrome architectural relief and between the surrounding environment and the built environment produced the site's visual effects and affect. In the Brinkmanns' reconstruction of the east frieze of the Siphnian treasury, they discovered pigment traces on each of the manes of the horses pulling Automedon's quadriga.[494] [Figure 65] The four horses overlap each other, in a conventional style. The horse closest to the beholder, on Automedon's right, has a deep blue mane, the horse next to him a red mane, the following horse a green mane, and the innermost horse, on Automedon's left has a red mane. All of these are set against the blue background of the relief. Although the horses are formally superimposed, the staggered manes illustrate the principle of juxtaposition, so that each mane is distinct from the others but each color acts on those around it. A similar principle applies to the

[491] Hills 1999.
[492] Hills 1999, 18.
[493] Smith 2011.
[494] Brinkmann 2008, 59, figs 82-5.

relationship of the entire building and the natural environment into which it is set. The building and its range of colors are juxtaposed against those of the Delphic countryside. The colors within the building affect each other, but they also act on the colors surrounding them. In a reciprocal exchange nature and the built environment color each other.

Underlying this set of coloristic relationships is an argument about the juxtaposition of the earthborn and manmade. The Siphnian treasury, like the other buildings and dedications in the sanctuary, is a product of the earth worked by men. While the the juxtaposition of applied and natural colors can be found at any site, this juxtaposition takes on particular resonance at Delphi in light of the link between colors and the earth, site's status as the *omphalos*, and as place with a particularly strong connection to the earth.

Color, as a kind of matter, was conceived in the body of the earth. The evidence here is rather diffuse, but fragments of Aristotle including those preserved in the work of his student Theophrastos seem to describe a process whereby colors came to be present on the earth's surface as a generative one. Colored powders contained within the body of the earth as matter are heated and the earth then exhaled them to her surface as colors (earths for Theophrastos.)[495] Pigments and colored stones are generated in the depths of the earth and released on the surface. Color thus traces not only the earth's surface, of civilization, but also of the deep space of choric generation. The polychromy of Delphic architecture was a major component that bound that site and its monuments to its original mistress, Gaia.

Mosaic

I have argued in previous chapters that in the ancient world color and the perception of color were driven by contact. Colored matter moved through the world as atoms or particles that are assembled into forms, which are effectively larger pieces of color. These larger forms were assembled into wholes, which were themselves pieces of the visible world. I have traced the way in which these pieces were assembled into figural bodies (Chapter Two) and exchanged between bodies (Chapter Three). In this chapter I have focused on the way in which fragments of color bound the built environment and the natural world together. Color was a phenomenon understood as emerging from the earth and thus retaining some relationship to the earth even as it was reassembled into new forms. In my discussion of Babylon and Delphi I have shown that an important part of architectural polychromy included the relationship between the surrounding colors of nature and those applied to the building. I have related this practice to Aristotle's principle of color juxtaposition. I do not suggest that builders and artists had Aristotle specifically in mind when establishing a color-scheme, but that Aristotle articulated a principle of color mixing that had long been in use and that relates most visibly to the principles of particle-exchange thought to govern perception more broadly.

The medium of mosaic most instantiates the principle of color juxtaposition; the mosaicist created an image by placing differently colored materials next to each other.[496]

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[495] Aristotle *de Sensu* 359^{b}10-12; Theophrastos *de Lap.* 1.1, who focuses on substances formed under the ground (*en tē gēn*) following Aristotle *Mete.* 341^{b}9; see Eicholtz 1965, 86.

[496] Mosaic is the antecedent of the nineteenth-century pointillist movement advanced by the French painters Seurat and Signac. The pointillists were quite influenced by color theories of their day, especially the work

Mosaic is juxtaposition made visible. Mosaic is also the medium that best preserves ancient polychromy, for stones do not lose their color over time as pigments do. Mosaic polychromy is also entirely uncontested, for color, whether black and white or a wider palette, is an essential component of the mosaic. Nonetheless, because mosaics fall into the category of craft rather than the more celebrated triumvirate of the arts (sculpture, painting and architecture), their polychromy has held little sway in the later reception of classical antiquity. Recent work in mosaic studies have tried to re-contextualize floor mosaics within their original architectural setting in order to address kinaesthetic effects of beholding mosaics.[497] This approach emphasizes the beholder's movements through space and the mosaics integration into its architectural context. For the ancient beholder, the functional aspect of mosaic floors always remains present in the experience of mosaic imagery. Contemporary museums often display floor mosaics on the walls, like paintings.[498] This removes for the contemporary beholder the sense of touch and physical contact inherent in the experience of traversing a mosaic floor and alters the visual effects of the tesserae.

Mosaic practice relates to a host of other media, including textile, stucco, painting, sculpture and architectural ornament.[499] Mosaicists often cited fragments of images produced in other media, but adapted them to the unique constraints of floor mosaic practice.[500] Mosaicists have the particular capacity to work with an incredible variety and scale of color juxtapositions and to modify the images through the patterns (worklines) with which tesserae are laid down.[501] Rather than give a lengthy history of mosaic practice in this subsection, I will sketch the development of the technique in order to focus on what mosaic practice reveals about color, vision, and the body in space. If the particle or atom makes all colors manifest, the tessera is the visible manifestation of those atoms. An image created through the assemblage of tesserae makes visible the process of perception. In this way, mosaic is process of vision made manifest. All images are in essence mosaics.

Although it is not included in histories of mosaic, the Ishtar Gate complex follows similar principles and the juxtaposition of the glazed mudbricks may be considered a form of mosaic.[502] Although we traditionally associate mosaic with later Greek and especially Roman art, mosaic was an important part of early Mesopotamian art production. Cone mosaics covered the walls of the Temple of E-anna at Uruk (ca. 3000 B.C.E.) and this style of mosaic has been found throughout Mesopotamia and as far away as the site of Habuba Kabira in Syria.[503] [Figure 66] The Uruk mosaics were formed from small clay cones. The flat end of the cone formed the surface of the mosaic and the pointed end of the cone was pressed, like a tack, into the wall covered with wet plaster.

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of Chevreul, especially the principles of color juxtaposition that Aristotle had explored much earlier. On color, Seurat, and Signac see Gage 1999.

[497] See especially Bergmann 1994 and Moltholt 2011. Dunbabin 1999 also addresses the importance of architectural setting to the medium of mosaic.

[498] On the debate over how best to exhibit floor mosaics see Podany 2006, 115-127.

[499] Dunbabin 1999, 300, 327.

[500] The Alexander Mosaic is a particularly good example of a mosaic floor that cites part of a Hellenistic painting. On this see Cohen 1997, with bibliography.

[501] Dunbabin 1999, 329.

[502] Roger Ling, for example, begin ascribes the origins of floor mosaics to Greece; Ling 1998, 19.

[503] "Cone mosaic" 2006; On the Uruk style and its geographic range see Algaze et al. 1989.

The flat surface of the cone was painted red, white or black, and the juxtaposition of different cones created the geometric patterns of the full mosaic.[504] Grouping cones of like colors produced the forms of the pattern; the concentration (saturation) of a particular color within the composition could be reduced by interspersing cones of different colors. The result was a rhythmic movement of colors over the surface of the temple walls. The application of hardened clay cones may also have enhanced the structural longevity of the walls, reinforcing their strength. These early wall mosaics served both a decorative and protective function.[505]

Although mosaic floors from Mesopotamia are not widely preserved, archaeologists have discovered examples at several Assyrian palaces of the ninth century B.C.E., as well as at the Aramaean sites of Asrlan-Tash (ancient Hadatu) and Tell Ahmar (ancient Til Barsip) in northern Syria, which were conquered by the Assyrians in the ninth century B.C.E.[506] These floors were pebble mosaics, a type of floor also found in Greece from the late fifth through the early third centuries B.C.E.

The stones used for pebble mosaics were not shaped or formed, but used in the state in which they were found. Collected from the earth's surface, these pebbles were arranged into patterns and pressed into clay or mortar. The palette of pebble mosaics was directly determined by what could be found in nature, and primarily included various shades of brown, black, orange, and white. Terracotta and lead lines could be added to outline important figures or features and glass enhanced the brilliance of the composition. In some instances, precious stones were used for the eyes. In some mosaics the artists sorted the pebbles for scale in order to use smaller pebbles on the faces; a practice used in later tessellated mosaics as well. The artist's role was to juxtapose the colored tesserae according to some order, not to place them "confusedly" (see Aristotle *Poetics* i45oa-b.)[507]

The best examples of Greek pebble mosaics come from the sites of Pella, Eretria, and Olynthos. This pebble mosaic from Pella (ca. 300 B.C.E.), for example, depicts Theseus abducting Helen, with the aid of the charioteer Phorbas. Helen's companion, Deianeira, reaches for Helen even as Theseus whisks her towards the chariot. [Figures 67-68] The scene is framed by a pattern of black and white lozenges and an inner frame in a meander pattern, which is also in black and white. The action takes place against a dark background and along groundline defined by lighter stones. The figures are labeled in text above their heads. Four white horses with golden-orange manes and tails are shown in profile, facing left. Phorbas holds the reins and turns and looks over his shoulder towards Theseus, who is dragging Helen towards the chariot, although this portion has sustained heavy damage. The eyes of each figure are void, indicating that the eyes were once inlaid with semi-precious stones that were subsequently removed.[508] Lead outlines were used to outline the eyes and the fingernails.[509] The rich modeling on coats of the horses and the drapery of the figures' garments are rendered using a combination

[504] "Cone Mosaic" 2006.
[505] Another early form of mosaic is that of the Warrior and Prisoner mosaic of bitumen and shell inlay from the pre-Sargonic palace at Mari. On Mari, see Malamat 1971, 17, fig.7.
[506] Müller 1939, 247-248.
[507] See Chapter Two for an analysis of the passage in the *Poetics*; See also Gage 1993, 15, who emphasized whiteness over color rather than order over disorder.
[508] Dunbabin 1999, 13.
[509] Dunbabin 1999, 13.

of terracotta outlines and the curving patterns in which the pebbles are laid into the plaster.

Tesselated mosaics, in which the individual marks of color are formed from stone or glass cut into a cubic shape, emerged in the third century B.C.E.[510] Some transitional mosaics, such as the Erotes Stag Hunt from Shatbi (Alexandria) in Egypt, were made using a combination of pebbles and tesserae, as well as lead lines.[511] The use of ever-smaller tesserae allowed mosaicists to produce highly modeled images in a technique known as *opus vermiculatum*, which was often used for the central panels (*emblemata*) of larger floor compositions.[512] Use of these smaller tesserae did not obscure the pointillist aspect of mosaic technology, whereby an image is always brought into being through the juxtaposition of colored parts. With the transition from pebbles to tesserae, mosaicists greatly expanded their palettes. In addition to cut stones the use of an incredible range of colored glass further increased the number of available colors and the use of uncolored glass increased brilliance without increasing the saturation of a particular color.

I turn to the particular example of a mosaic from a dining room floor of the Atrium House at the elite summer resort of Antioch-on-the-Orontes (modern Antakya) in southwestern Turkey that depicts the Judgment of Paris (115-150 C.E.).[513] [Figure 69] Of the innumerable examples of high-quality tessellated mosaics, I have selected this one as a case study for several reasons: it has been thoroughly and recently conserved, it demonstrates the quality of mosaics produced outside of Italy, and its subject matter is connected through Helen of Troy to the image of beauty as an assemblage. Apelles, as discussed in Chapter Three, famously selected five different maidens from Croton from whom to create the image of the most beautiful mortal woman.[514] By selecting Aphrodite as the most beautiful Paris secures Helen for himself setting in motion a series of events that lead centuries later to Apelles' creation of the perfect assemblage of beautiful parts.

This floor mosaic was one of hundreds of mosaics found at Antioch and its summer retreat, Daphne. The city was a cosmopolitan convergence of people and materials from throughout the broader Mediterranean.

It seems to me that one of the most pleasing things in cities, and one of the most useful, is meetings and mixings with other people…indeed if a man had the idea of traveling all over earth with a concern not to see how the cities looked but to learn their individual ways, Antioch would fulfill his purpose and save him journeying. If he sits in our market-place, he will sample every city' there will be so many people from each place with whom he can talk.[515]

The mixing of people that so pleases Libanios about Antioch finds material instantiation in the mixing of materials used for the luxurious mosaic program at the site.

The mosaic is the larger of two central floor panels designed to be viewed by those dining on couches around the room. The scene is framed by a rich border of grape and ivy leaves, birds and insects that is itself edged in a geometric pattern of orange and

[510] A stele from Ostia depicts mosaicists cutting stones for tesserae, Dunbabin 1999, 281, fig. 287.
[511] Ling 1998, 24
[512] Ling 1998, 25.
[513] Kondoleon 2000.
[514] See Chapter Three, 184, fn 376.
[515] Libanios *Or.* II.166, 213.

white triangles. Blues, greens, and earth tones abound. A double border of white and then red tesserae mark the transition from the thick vegetal motifs to the primary scene of the judgment of Paris.

The setting is slope of Mount Ida, where the shepherd Paris was tending his flocks. The landscape brings the natural world into the built space of the house and dining room. The craggy scene felt underfoot played between its depiction of the natural world the retooling of the materials of nature in the service of that depiction. As the story goes (briefly alluded to in *Il.* 24.25-30) after (uninvited) Strife tossed an apple labelled "for the most beautiful" amidst the wedding feast of Peleus and Thetis, Zeus selected Paris, the mortal son of Priam, to choose from among the three goddesses Hera, Athena, and Aphrodite.

Paris sits on a rock, holding a sheep in his arms. He wears the leggings and long-sleeved tunic and cap of a Phrygian. He looks, not at the trio of goddesses who stand to the right on a slightly elevated crop of rock, but away from the beauties he must judge towards Hermes, who stands to Paris's left and explains what he must do. Psyche and Eros flank the scene from elevated perches at the far upper left and right, respectively. To the right on a rocky outcrop slightly above the level on which Paris sits are the three goddesses awaiting his selection. Hera sits in the middle, with Athena standing to her right and Aphrodite to her left. Hera's white garment has purple at the borders. Athena's garment is white and light blue and she wears her helmet and aegis. Aphrodite stands out resplendent in a rich, sparkling garment of varied blues with golden borders. It is to Aphrodite whom Paris will award the apple and it is Aphrodite who is depicted in the boldest blues, drawing the beholder's gaze.

The materials used to create this panel were primarily cut stones and opaque and translucent glass. The glass tesserae from the mosaic underwent extensive examination using x-ray microanalysis with EDS and WDS detectors in the laboratory of the Metropolitan Museum of Art.[516] Within the interior of the mosaic (excluding the frame of ivy) conservators isolated twenty-one different colors, amethyst, six different blues, six different greens, two yellows, orange, clear or translucent, three whites, and a black, which was the expensive and unusual obsidian.[517] An additional fourteen colors, each with a compositional makeup different from those used on the interior panels, made up the border mosaic: three blues, five greens, three yellows, two oranges, and black. The extensive analysis of the chemical compounds present in each color allowed conservators to demonstrate similarities between the tesserae used at Antioch and those from a fountain mosaic from the first century C.E. at Pompeii as well as with several later mosaics from Egypt.[518] This suggests that the materials were shared across a vast geography.

Conservators sampled far fewer of the stone tesserae, but were able to demonstrate that the stones used for the Judgment of Paris, indeed for each of the major interior panels, originated from different quarries than those that produced the stones used in other mosaics at Antioch.[519] The range of compounds found and the variety of

[516] Wypyski and Becker 2000, 115-116.
[517] For the compositional analysis of the glass tesserae used on the Judgment of Paris mosaic, see Wypyski and Becker 2000, 142-143.
[518] Wypyski and Becker 2000, 134.
[519] Newman 2000, 67; On *emblemata* produced in studios and later laid *in situ* see Dunbabin 1999, 269.

colors used in the Antioch mosaics indicate that artists drew on many sources for their glass and stone tesserae. Antioch's mosaics used materials from disparate sources within the Roman economy. These mosaics mapped Antioch's, and by extension the Empire's reach through the collection and assembly of materials from disparate sources. When juxtaposed within the mosaic, these diverse material sources map a kind of extended cultural contact.[520] Mosaic recombines and unifies small pieces of color into a whole image. Color always operates in this manner, but mosaic makes visible this unification through fragmentation and recombination.

The story of the judgment of Paris was very popular. Amidst a lengthy description of a chest dedicated by the tyrant Cypselus at Delphi in the seventh century B.C.E. Pausanias (second century C.E.) describes the scene of the judgment that was apparently inlaid in the chest in gold and ivory. [5.19.5] A painting from Pompeii depicts the scene, as do two other known mosaics from Algeria and Romania.[521] As with the circulation of materials, these related images created a set of material connections that stretched across the vast trade and artistic networks of the Roman Empire.

Not only, however, do these mosaics map a set of thematic and geographical connections, but each tesserae emerged from the body of the earth (the site of color genesis) and could act on the beholding body itself. Although since the early modern period authors have turned to Pliny's *Natural History* for his descriptions of ancient artists, his book contains far lengthier descriptions of the medicinal uses of various botanical and animal substances and materials. Through the Middle Ages these sections on medicine received far more attention than his art historical commentary.[522] In the books on mineralogy and metallurgy (33-37), in which the sections on ancient artists are couched, Pliny describes the medicinal as well as artistic uses of minerals and metals.[523] These books follow an extended discussion of the medicinal uses of botanical substances (20-28) and animal products (28-32).[524] Examples include the medicinal uses of gold, copper, bitumen, gemstones and colored minerals. A particularly rich example is amber, which apparently could prevent delirium, cure urinary problems, fevers, loss of vision, earaches, as well as stomach problems (*NH* 37.12).

Each tessera deployed in mosaic, or each color related to a particular stone corresponds to different aspects of bodily breakdown and repair, of death and regeneration, of rhythmic replication. Seeing the world as mosaic, that is, as made up of colored particles that may serve purposes beyond the visual, the beholder's comes to know the fragmented state of his or her own body. The corporeality of the viewer is fractured and reconstituted through the circulation and recombination of colored material.

[520] On mosaic, materials, and geography see Wootton 2012.
[521] Astier 2012.
[522] Isager 1991, 9.
[523] Isager 1991, 48; 50-51; 76.
[524] Isager 1991, 48.

Coda (Leviathan)

You walk through a revolving door that separates the outside light from the dark, pressurized interior. [Figure 70] Within the whale everyone breathes the same heavy, damp, red air. The daylight that you have left behind filters through the taut skin of this tensile monster, casting shadows of the building's iron spandrels across its skin and darkening its seams. Its skin glows a bright, shimmering red towards the ceiling, while towards the ground, where its skin attaches to the floor the red is so dark as to be a kind of black. Our skin shines red as well, altered by this inside air and the outside light filtering through the red skin.

After a few minutes, you step out of the creature and back through the revolving door into the light clean air surrounding Leviathan. [Figures 71-72] Its form comes more visibly into being. Out here, its skin is darker and so smooth that it hides those still inside from sight; it reflects your image back at you, mirrored in the curved surface of Leviathan's exterior. Inside the whale you were pocketed in one part of a system whose pathways you could see, but not follow. You cannot take in the complete form at once, but you are better able to trace the outline of its smooth, strong forms, filling the atrium of the Grand Palais. Leviathan presses up towards its cage of glass and steel through which blue sky, white cloud and sunlight pour. Somehow the building houses Leviathan without containing it.

I am describing Anish Kapoor's 2011 installation, *Leviathan*, at the Grand Palais in Paris. Kapoor, an Indian-born, British-based contemporary artist, uses color as a fundamental "principle" of his work.[525] *Leviathan* consists of four connected colossal baloons inflated to fill much of the space of the atrium of the Grand Palais. The scale of the installation makes it impossible to absorb from any single viewpoint. The object encourages the beholder to circumambulate it and even to enter inside it, an experience akin to being absorbed by it. *Leviathan* speaks to the beholder's body in several ways. Its carmine flesh evokes the circulation of blood through the body running in vessels just below the surface of the body. At the same time, this red material is the skin of the object itself. Entering *Leviathan* inverts the traditional direction of beholding in which two surfaces greet each other. Looking out from within the object, one must acknowledge the messy interiority of this colossus. *Leviathan* is not a solid structure, but a vessel, like the body itself.

Kapoor's piece stands within the Grand Palais des Champs-Elysées in central Paris. The Beaux-Arts building, an exhibition hall and museum, was built for the Universal Exposition of 1900. The Grand Palais is made of iron and steel framing, glass, and reinforced concrete. Glass roofs the central nave in the style used at the Crystal Palace in London. In addition to various monochrome allegorical statues, a mosaic frieze runs along the outside wall of the building that faces Avenue Winston Churchill. [Figure 73] The frieze, designed by Louis Édouard Fournier, is the only polychrome feature of the building's exterior. It is eighty meters long and runs behind the building's colonnade.

The mosaic depicts an epochal timeline of art history. It begins with the wider geography of the ancient world, Asia, Assyria and Egypt, followed by ancient Greece and Rome, the Arab world, and then narrows to the familiar geography of western modernism, the European Middle Ages, the Renaissance, the seventeenth and eighteenth centuries combined into one panel. [Figures 74-76] Unlike the preceding panels, the final panel

[525] de Loisy 2011, p. 76.

depicting the nineteenth century does not show art-in-the-making, but a list of familiar French artists etched in stone; these include David, Prudhon, Gericault, Delacroix, Ingres, and Garnier.

While the scene set in ancient Egypt depicts an artist in the midst of painting a mummy case, the scenes set in ancient Greece and Rome show marble sculptures. The sculpture in the Greek panel shines a glimmering golden-white monochrome. From left to right, the panel depicts builders at work on a stone building, Pheidias seated next to his statue of Zeus, dancers and a double-flute player, a painter decorating a vase, and two figures at right, one holding a small winged statuette. The Parthenon rises in the background. Pheidias holds a papyrus scroll and a hammer. The Roman busts are entirely unadorned and depicted in a flatter white than the statue of Zeus. Polychromy is an essential element of the mosaic frieze, but is conspicuously absent from the depictions of classical sculpture within the scene. Life appears in full color; sculpture appears monochrome, as do the sculptures adorning the rest of the building.

The Grand Palais itself and the art that it houses stands as the effective culmination of the timeline depicted in the mosaic frieze. The tension surrounding color that had been heatedly debated in the decades leading up to the completion of the Grand Palais and the opening of the 1900 Universal Exposition is visible in the mosaic itself, in which colored tesserae depict a polychrome world on the exterior of a predominantly monochrome building. On the one hand, the polychrome frieze disrupts the monochrome façade and puts color undeniably on the surface of the building. On the other hand, relegating the polychromy to the frieze confines color to the world of painterly illusion (insofar as low relief, mosaic, and painting occupy similar terrain) and does not disrupt the impact of the building's monochrome footprint. The commission for the Grand Palais was the result of keen and unresolved competition, with three architects winning the commission for parts of the building.[526] Fournier's mosaic was originally cut from the designs, but later added back in. If the building exhibits the best of contemporary art, with the timeframe of contemporary shifting over time, the exhibitions are the effective end point of the mosaic's story of art. Kapoor's 2011 installation of Leviathan within the Grand Palais returns the color debate to this space.

I am not arguing that Kapoor's engagement with color is identical to ancient Mediterranean engagements with color, but that as beholders we witness a recursive relationship between ancient and modern color. Our understanding of ancient polychromy shapes how contemporary artists use color and, as Kapoor shows, contemporary art can pose questions about color that resonate with ancient experience. Kapoor's interest in color, light, skin and the body touches on many of the same themes visible in ancient Mediterranean art. As I have argued throughout this dissertation, color is always already a bodily experience.

[526] On the history of the Grand Palais, see Marrey 2006

Figures

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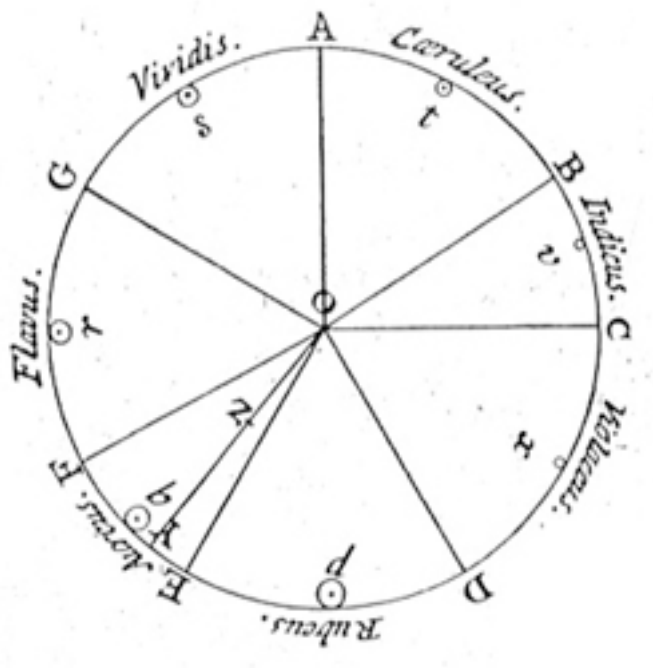
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Cæruleus.
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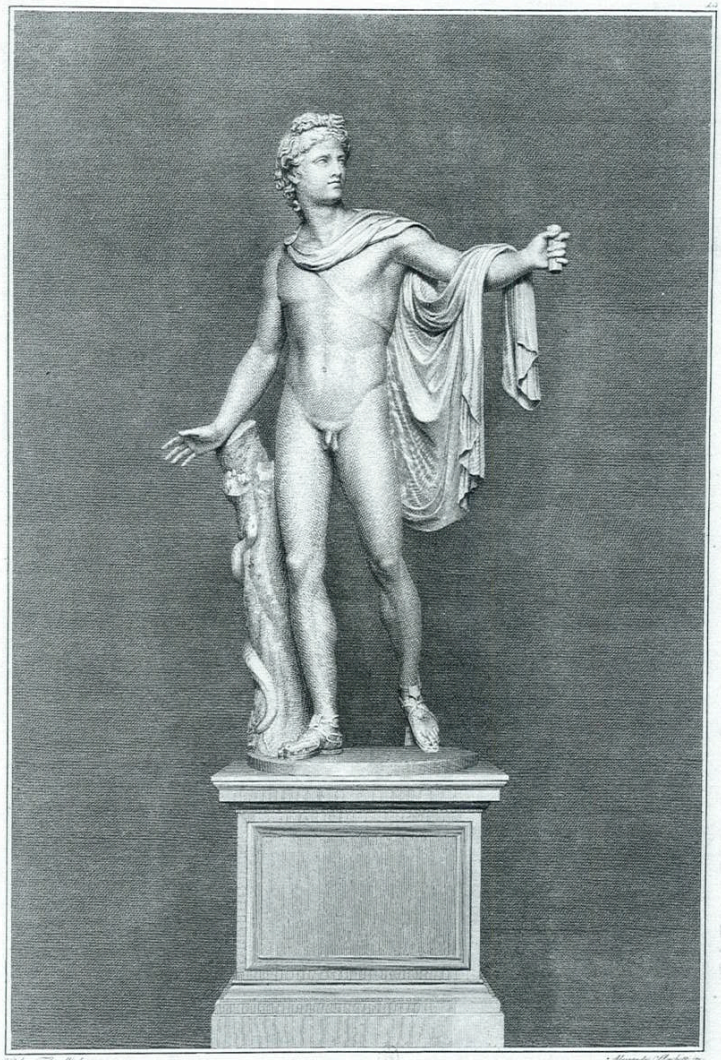

APOLLO

Detto di Belvedere trovato ad Anzio da GIULIO II.

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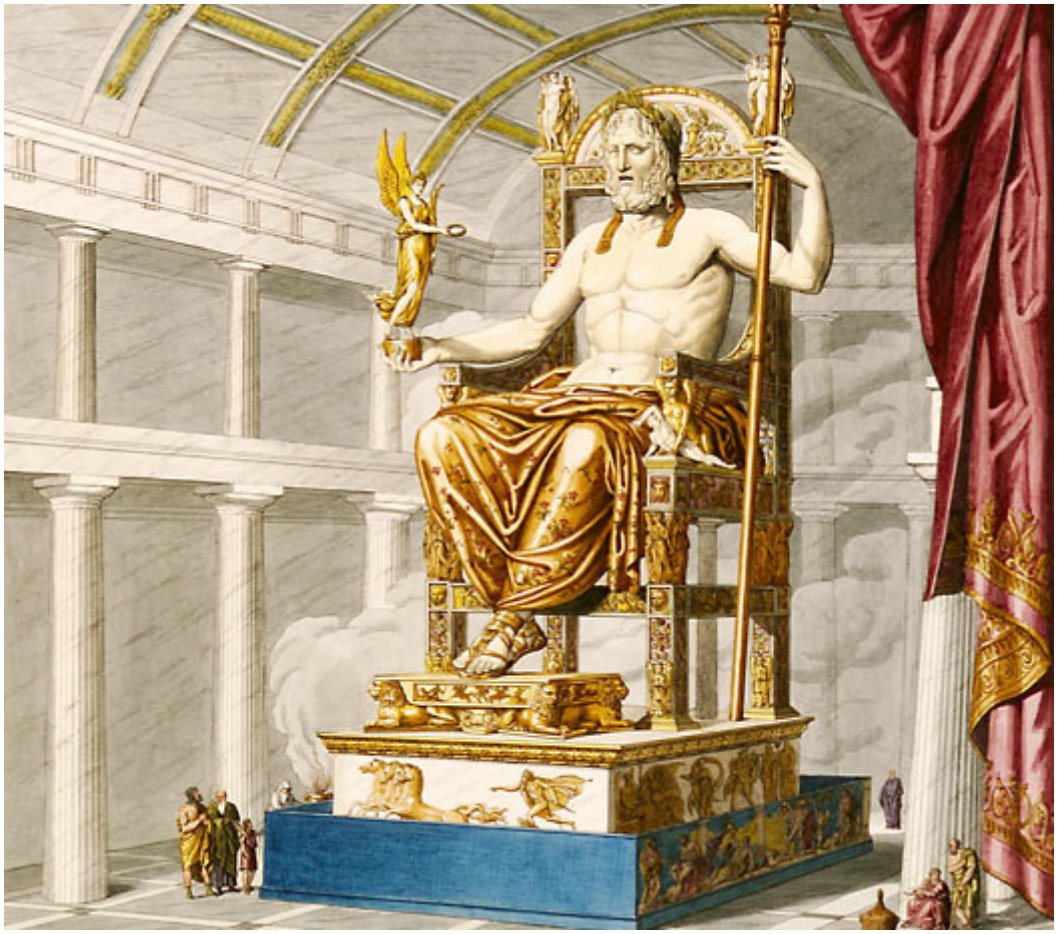
9 (A & B)



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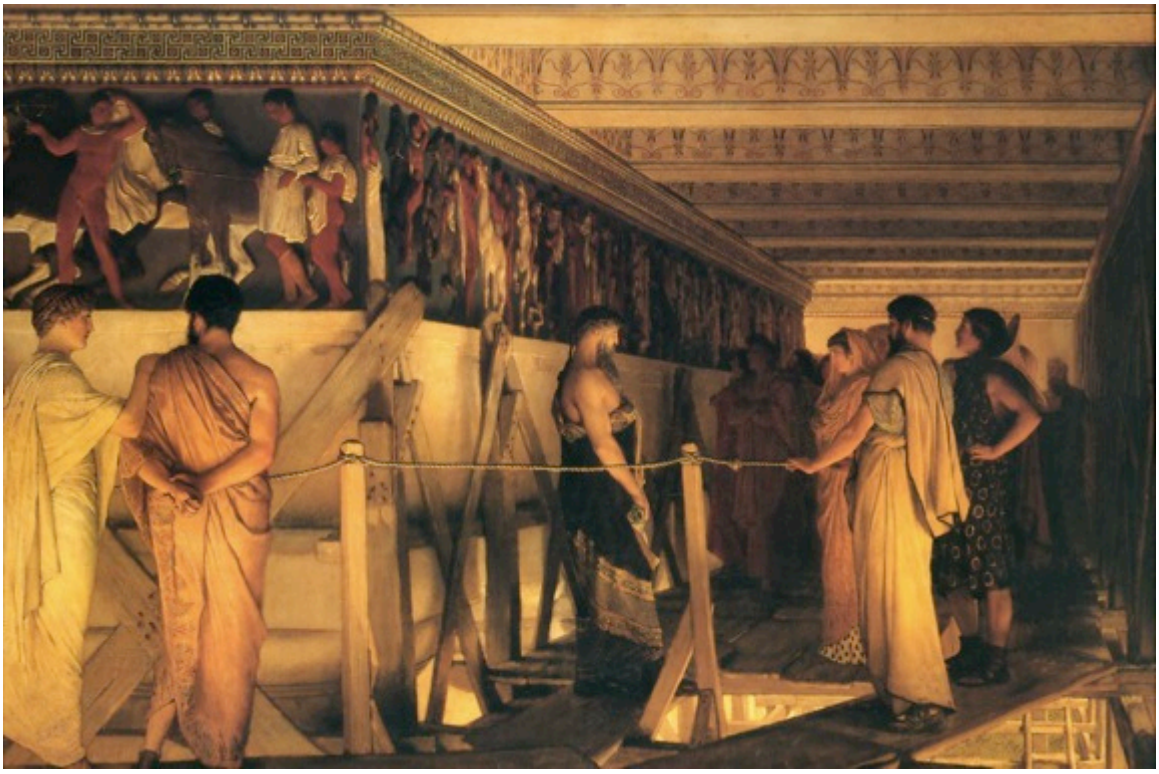

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THE
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THE
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A hole and a shallow groove indicate a metal head band.

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THE BRITISH MUSEUM
Other sculptures and paintings help us to imagine
what the metope might have looked like.

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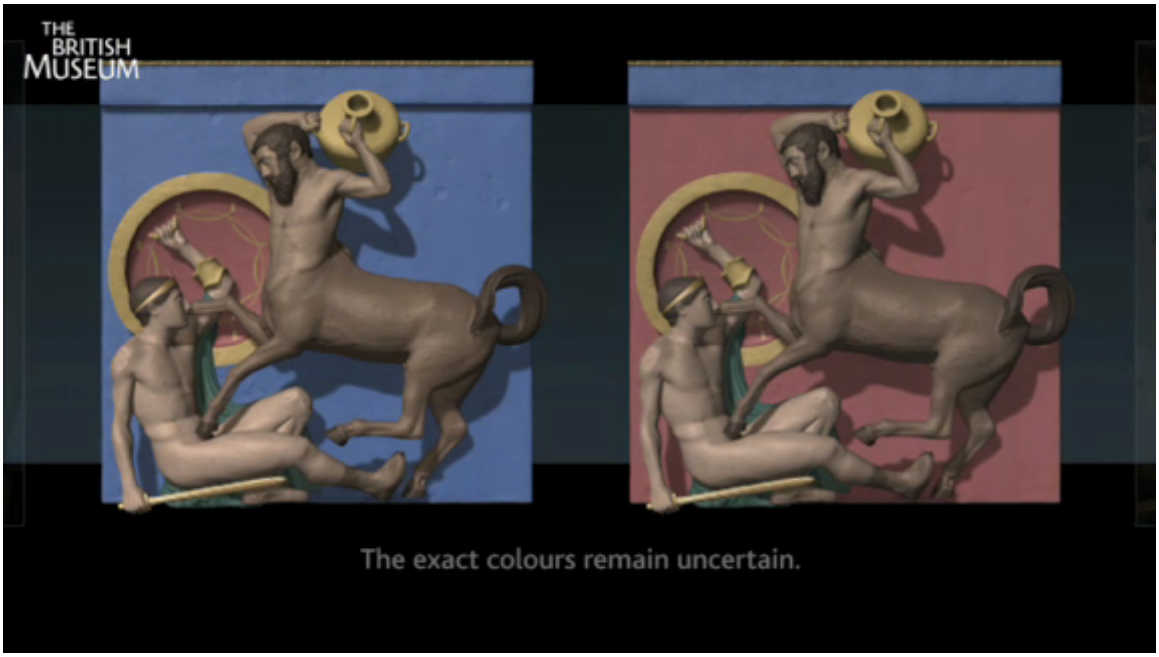
THE BRITISH MUSEUM
The exact colours remain uncertain.

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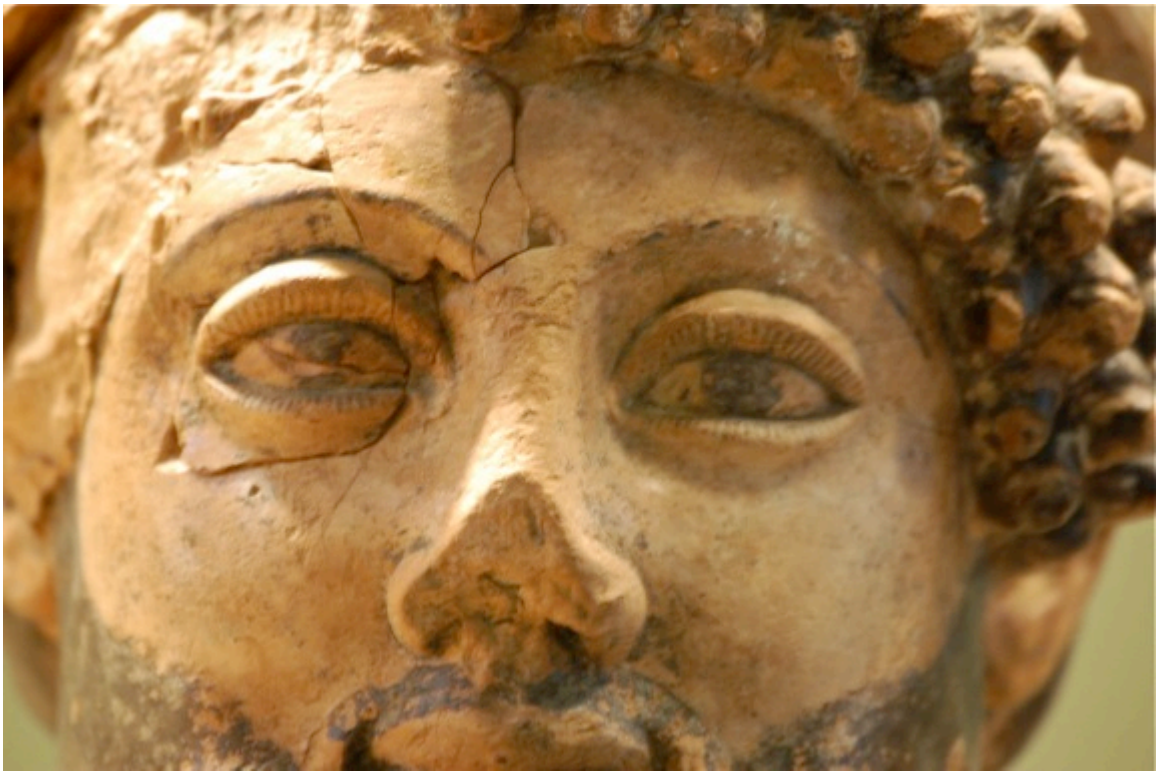

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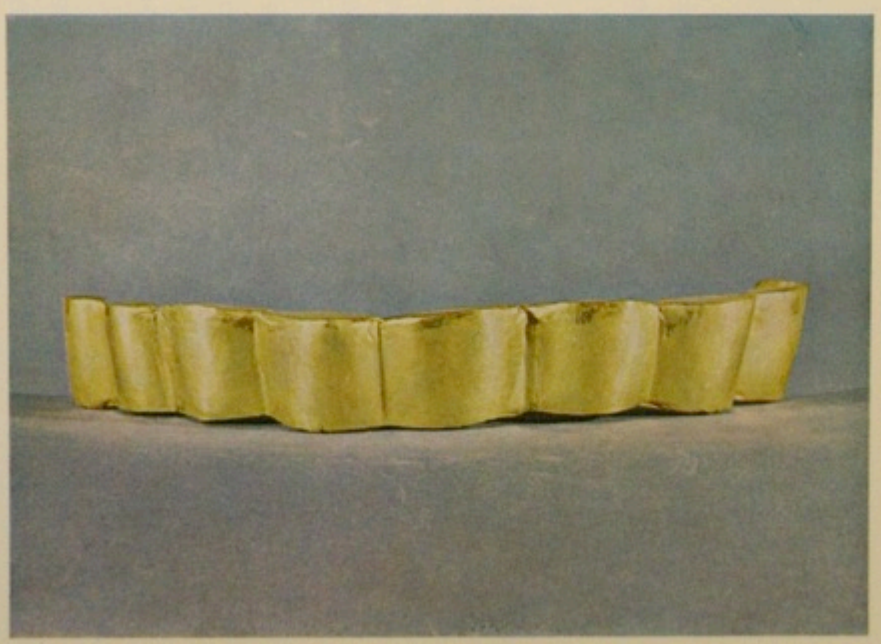
2) Piece of inlaid beard made of blue composition, found on the Terrace of Persepolis.



3) Head ornament of gold in Iran Bastan Museum, Tehran, found on the Terrace of Persepolis. (By courtesy of Iran Bastan Museum.)

Pl. C

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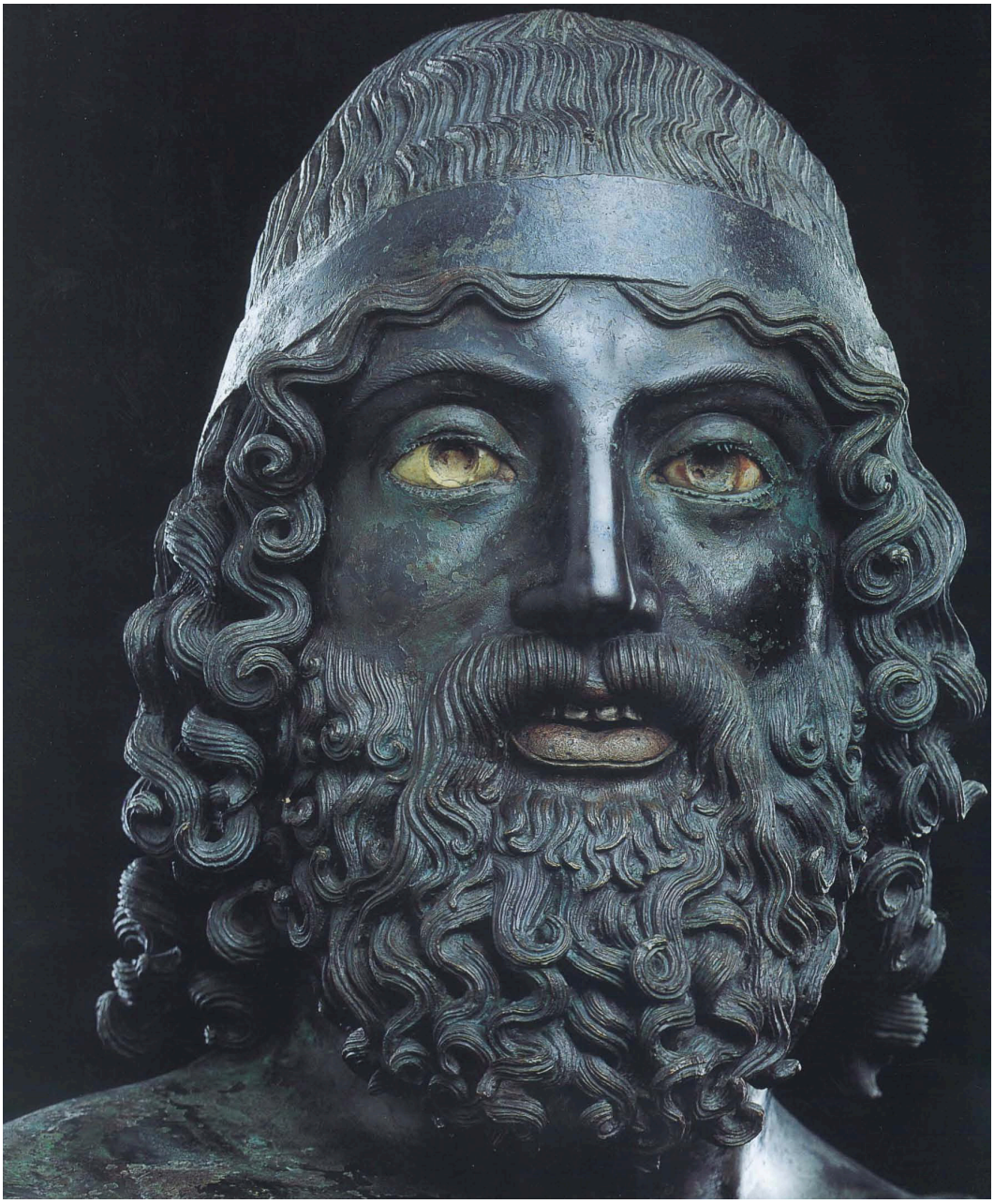

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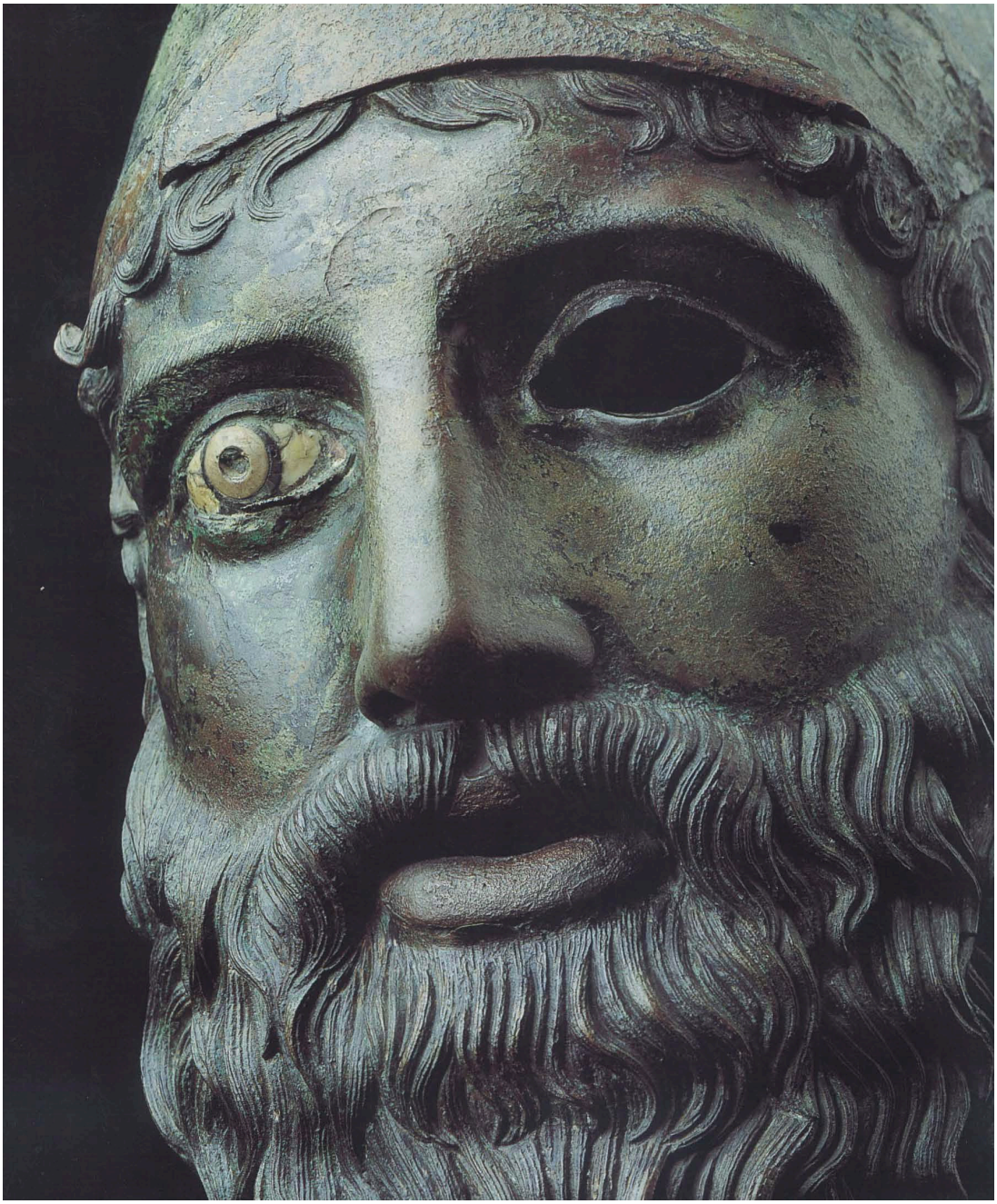

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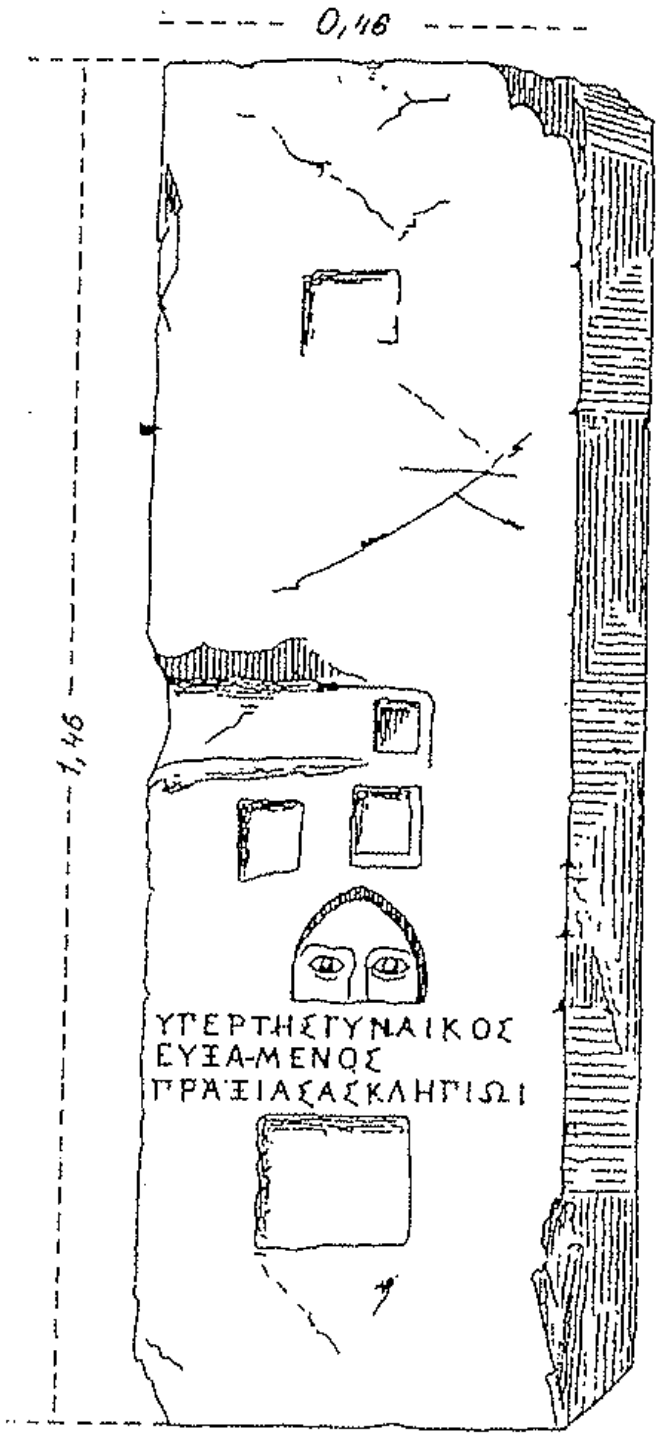

Stein mit einem Votivgeschenke.

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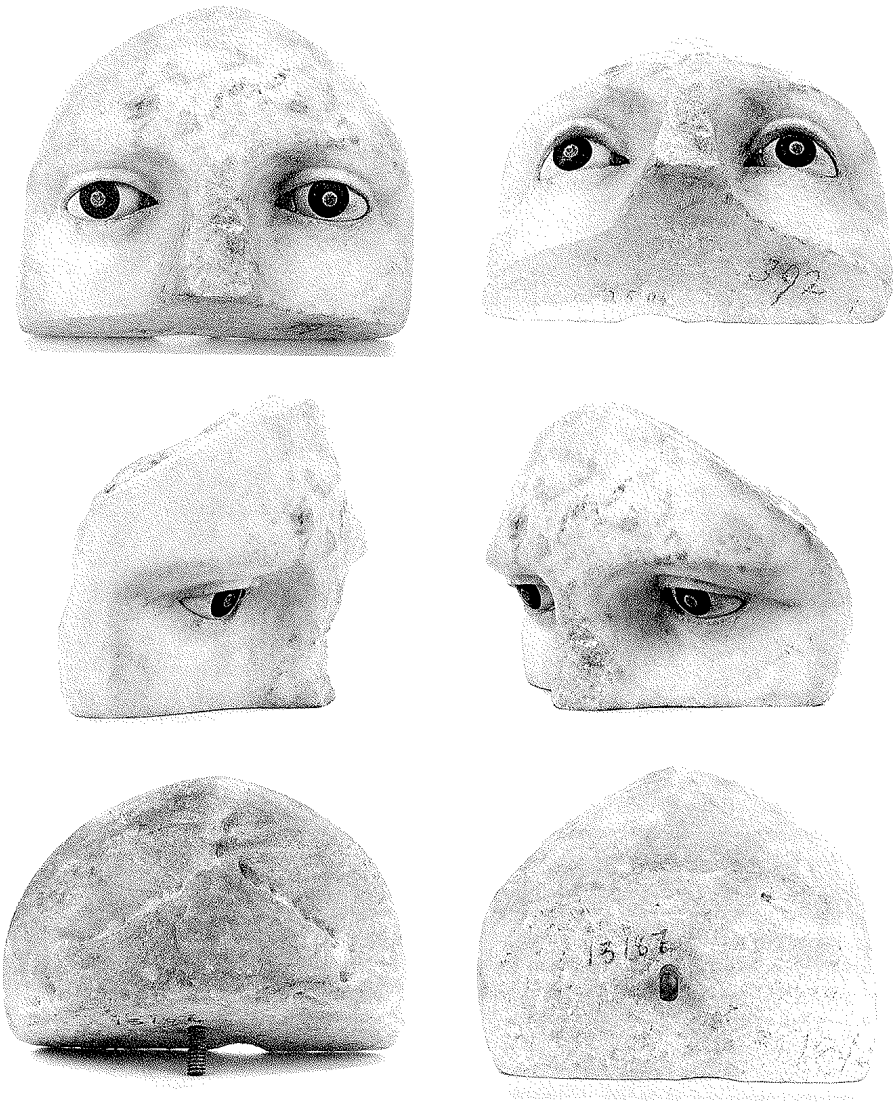

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FIG. 21
Modern archaeological map of Babylon

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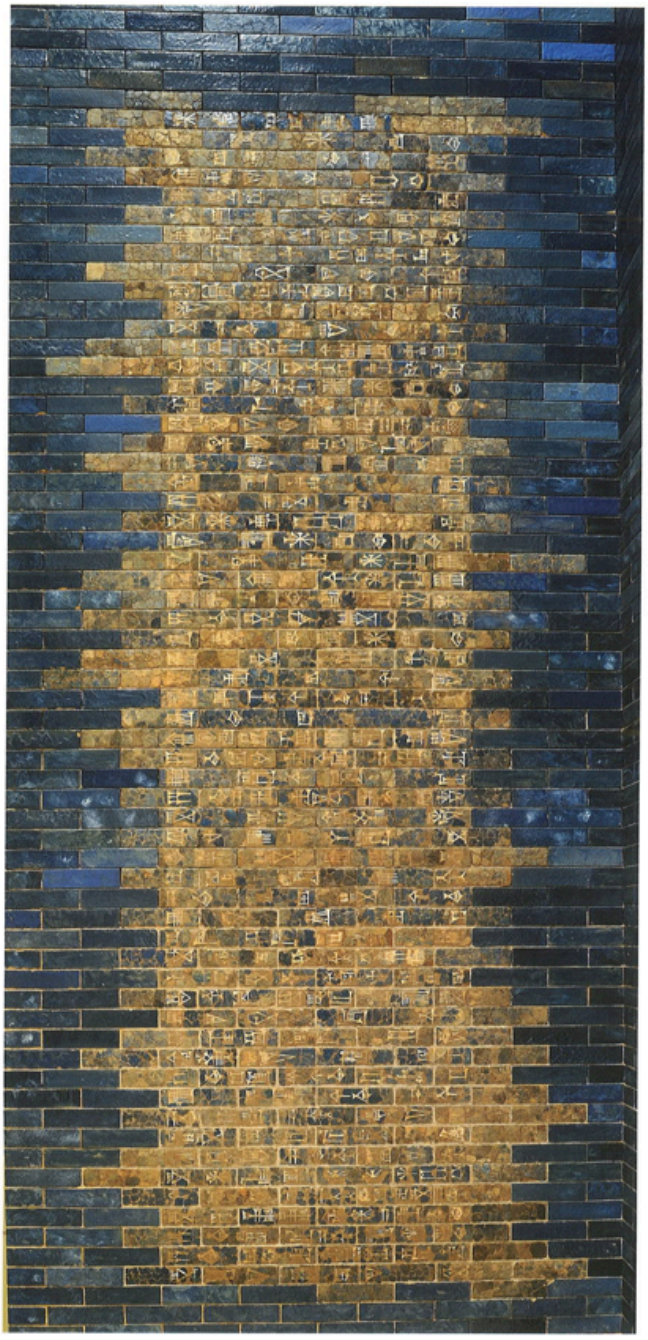

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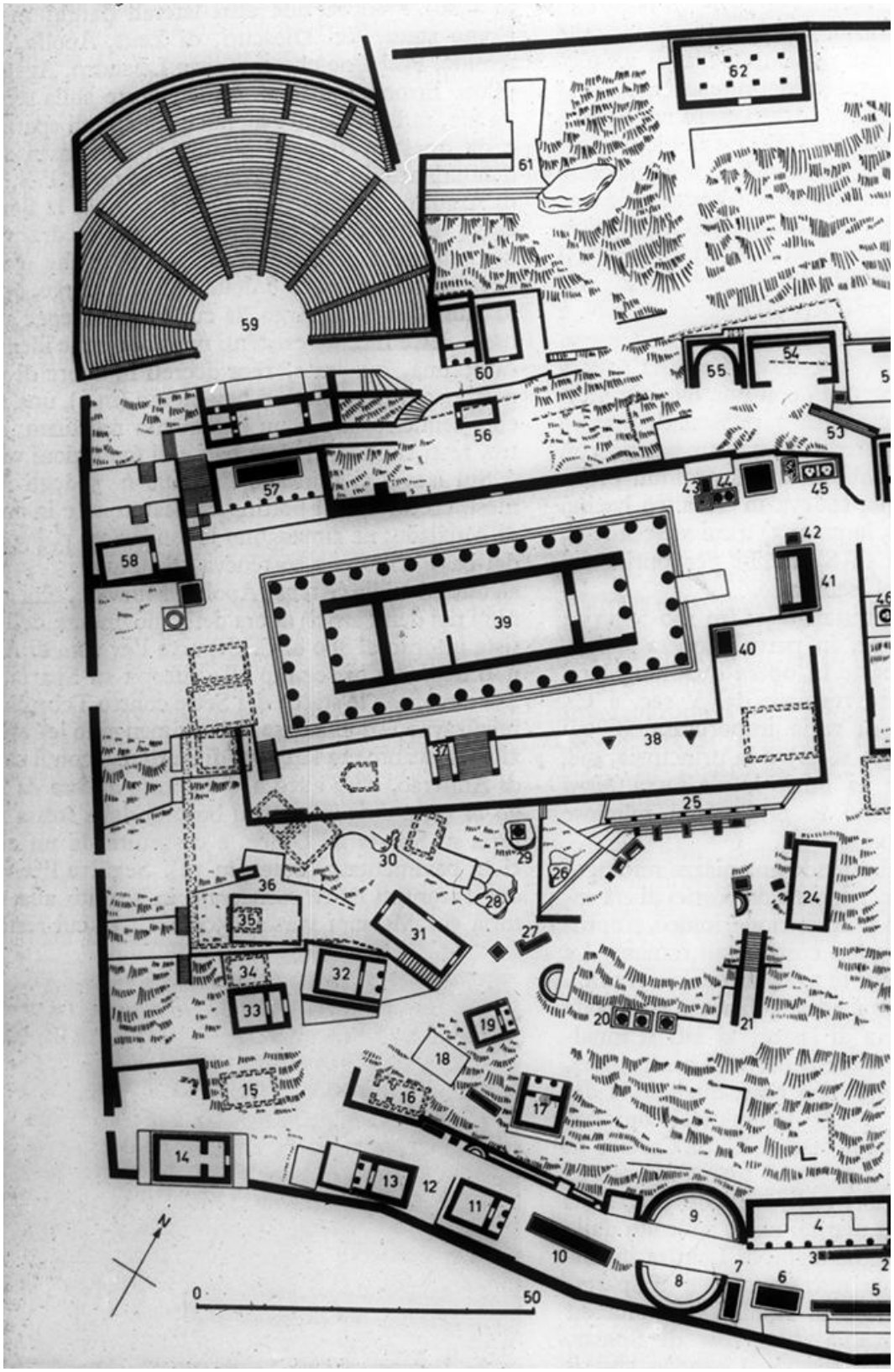
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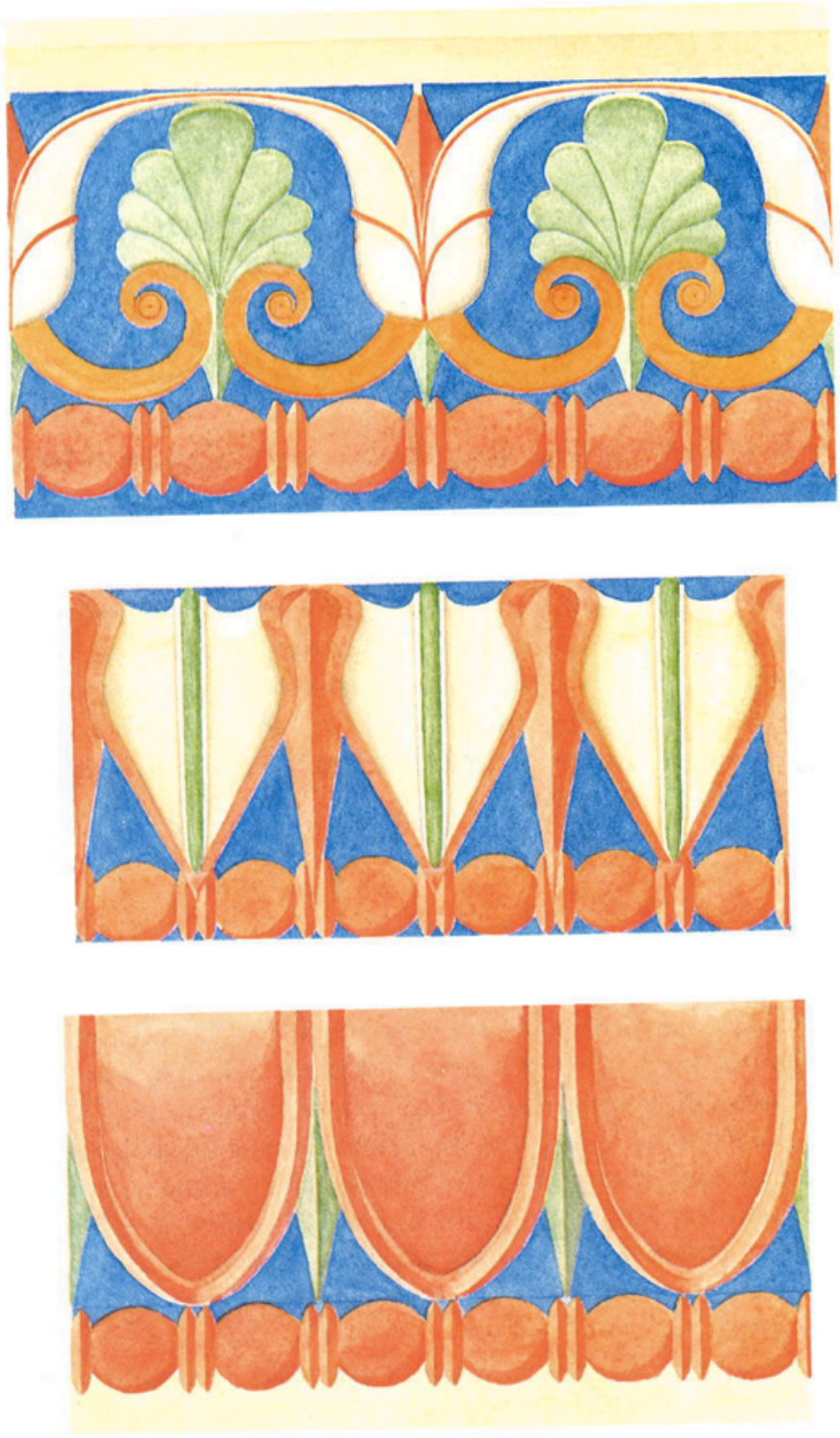

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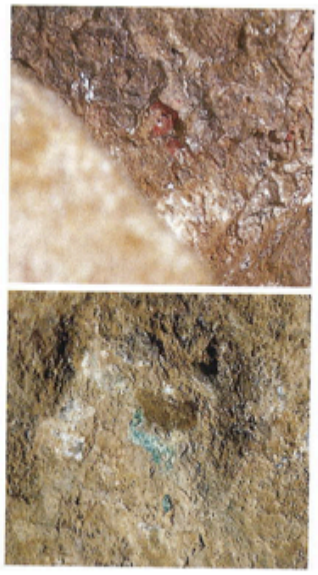
82–5 East frieze of the Siphnian treasury, pigment traces in the manes of Automedon's quadriga.



86 East frieze of the Siphnian treasury, traces of blue pigment on the relief's background.

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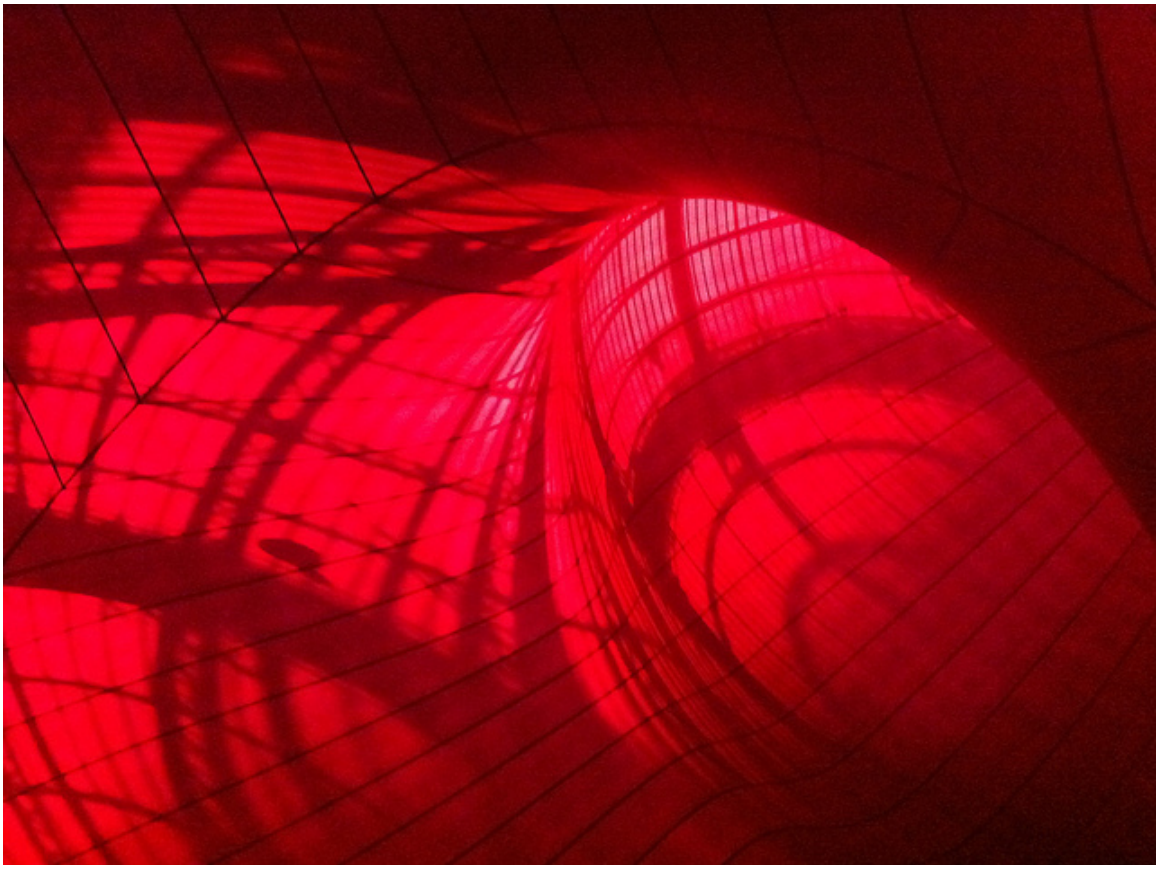

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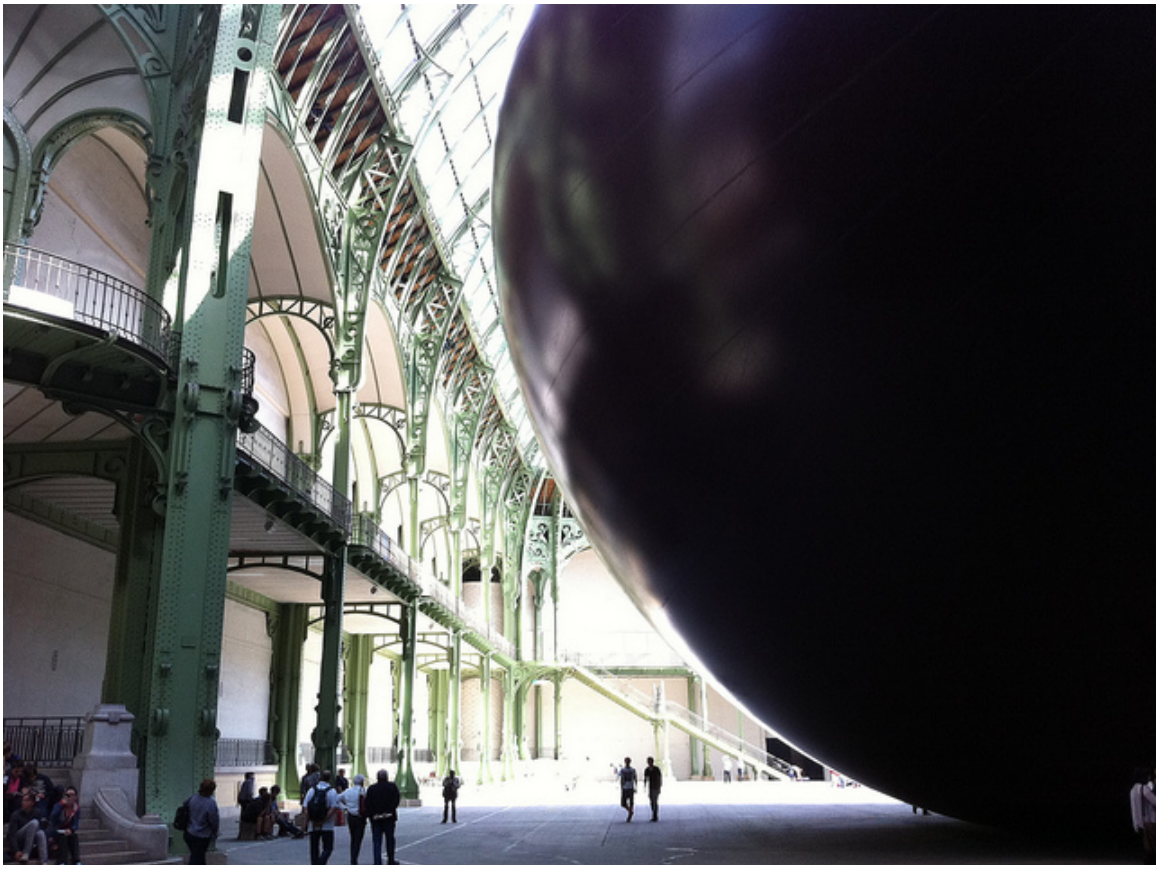

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