GIRLS GONE WILD: A SPECULATIVE 3D RENDERING OF THE LESSER ATTALID MONUMENT AMAZONOMACHY

by

Elizabeth Patricia Tennant

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Author's Declaration

I hereby declare that I am the sole author of this thesis. This is a true copy of the thesis, including any required final revisions, as accepted by my examiners.

I understand that my thesis may be made electronically available to the public.

Abstract

Using the surviving historical and archaeological remains, as well as contemporary stylistic reference, this thesis reconstructs one battle of the lost Lesser Attalid Monument in its entirety. This is done through digital 3D models created in free online software (Blender). The battle chosen is the Amazonomachy, consisting of 24 individual figural sculptures, with main stylistic reference taken from the Mausoleum at Halicarnassus, the temple of Apollo Bassitas, and the Parthenon Amazonomachy. The intent of the project is to recreate both a sense of the visual reality that existed, as well as the potential emotional impacts it would have had on its audience. The goal is that the final result will be of interest to a wide audience, including art historians, reconstruction specialists, and digital artists. By providing an accurate and interactive reconstruction, this project can act as a base for scholars in several different disciplines to work from.

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Thank you.

Elizabeth Tennant

Dedication

For my parents, and for Natasha.

sine qua non

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Introduction

Classical Studies, as a discipline, is essentially a reconstruction of the past.

Through interpretations of our sources we attempt to rebuild – mentally and physically – the evidence that reveals elements of the cultures and communities of ancient Mediterranean peoples. This project will pursue one type of reconstruction – a digital 3D model, created in free online software (Blender), with the intent to recreate both a sense of the visual reality that existed, as well as the potential emotional impacts it would have had on its audience.

The Lesser Attalid Monument stood on the Athenian Akropolis, dedicated by a Pergamene ruler, and featured four separate battles. Its full history and context will be addressed further below. Using the surviving historical and archaeological remains, as well as extensive contemporary stylistic reference, this project will reconstruct one battle of the lost monument in its entirety. This monument is the subject of this reconstruction for a number of reasons, both academic and personal. Andrew Stewart aptly summarizes the dedication's intellectual appeal: "[B]oth it and its copies stand at the intersection of several different subdisciplines, including art history, topography, cultural history, ideology, religion, politics, and intellectual history. They have many stories to tell." (2004, xviii). As such, my goal in pursuing this project was that the final result would be of interest to a wide audience, including art historians, reconstruction specialists, and digital artists. By providing an accurate and interactive reconstruction, this project can act as a base for scholars in several different disciplines to work from. Having established why the monument itself was chosen, now the reasoning for selecting the individual battle will be discussed.

The entirety of the monument, estimated at over 100 individual figures, would have been too large a challenge to undertake in this Master's thesis due to the time required to complete

each model, and I therefore decided to focus on only one of the four battles. For my purposes, the Amazonomachy – second of the four battle scenes – was the obvious choice. The paradoxical nature of Amazons as a culture and societal construct, a juxtaposition of masculine and feminine traits in a single body, is incredibly intriguing and presents a stimulating visual challenge – not only in recreating an ancient depiction, but by necessity in coming to understand it. In both ancient Greek and Roman art and literature, the Amazons were presented as paradoxical: a combination of feminine visual features and masculine moral qualities.¹ They were condemned for both these aspects, equally for inverting their natural female role and perverting the typically good male traits they possess.² Their vanquishing therefore represented the Greek world overcoming barbarism by civilizing it. As such, Amazonomachies became a popular artistic image, seen in sculptures on temples, statues, and in painted depictions on pottery, and on wall panel paintings. Amazonomachies are rich with iconographical meaning, providing abundant possibilities and challenges in replicating. As I could only choose one of the four battles to spend the better part of two years taking apart, it seemed a more prudent choice to select the area where my own personal interest could result in a more exciting and detailed reconstruction. Furthermore, there are numerous extant Amazonomachies from which to draw inspiration and reference, including – most beneficially – ones at Halicarnassus, the Parthenon, and the Temple of Apollo at Bassae. Each provides insight into the contextual and stylistic considerations that need to be addressed. Moreover, Amazonomachies in general tend to possess a formulaic quality in their figural positioning that presented itself as least challenging to replicate.

That said, the project itself, a 3D reconstruction, provided its own arsenal of challenges.

¹ This is typical, but not always true: there are early visual examples of Amazons depicted as so masculine that they are almost indistinguishable from the male Greeks they fight (see: Pella mosaic).

² See: Lysias, Funeral Oration 2.4-6

While the project allows me to combine my love of research with my interest in digital art, the difficulties of the task are significant but well understood. The limited extant materials and their scattered provenance; the areas of debate and lack of certainty surrounding the dedication as a whole; and the actual complex process of digital 3D modelling. However, these proved to be gratifying challenges that pushed my abilities as a researcher, forcing re-examination of ideas and assumptions in a new way. Ideally, the final result will have a similar effect on the viewer.

Reconstructions: An Outline

First, in order to ensure clarity throughout, a vocabulary should be established. The terminology surrounding reconstructive work, particularly digital, is still developing along with the discipline. It is therefore difficult to establish one generally accepted set of definitions as many researchers simply use the classifications that they are most familiar with. As a baseline, as outlined in 2001 by English Heritage, the general definitions surrounding restorative work are as follows:

RESTORATION: returning the existing fabric of a place to a known earlier state by removing accretions or by reassembling existing components without the introduction of new material.

RECONSTRUCTION: returning a place to a known earlier state and is distinguished from restoration by the introduction of new material into the fabric.

RE-CREATION: speculative creation of a presumed earlier state on the basis of surviving evidence from that place and other sites and on deductions drawn from that evidence, using new materials.

REPLICATION: the construction of a copy of a structure or building, usually on another site or nearby.

(English Heritage 2001, paragraph 5)

Working under the parameters of these definitions, the project that follows would undoubtedly be considered a "re-creation". However, as mentioned above, achieving a lexical

consensus proves difficult in this discipline, and these terms are often given different meanings dependent on the scholar and context. In this spirit, to quote the inimitable Humpty Dumpty: "When I use a word, it means just what I choose it to mean – neither more nor less." (Carroll, 1872). Therefore, the term used in this paper for what should technically be "recreation", will be "reconstruction".³

Reconstruction Theory

Reconstructions have been growing more prevalent in the area of cultural heritage within the last few decades as technology grows in both capability and accessibility.⁴ There are several methods used for varying purposes. 3D modeling is the process of automatically, or in this instance manually, developing a mathematical representation of an inanimate or living object surface using specialized software. The process is not dissimilar to the physical act of sculpting. There are two major categories of 3D models: solid (which define the volume of the object they represent, used primarily for engineering and medical purposes) and shell/boundary (which represent the surface, not volume, of an object, used in games and film). The variations between the two are primarily in how they are created, as well as their use throughout various fields. In terms of representing a model, there are three popular methods: polygonal modeling, curve modeling, and digital sculpting. The first, the method which is used for this project, uses points in 3D space (vertices) that are connected by lines to form a polygon mesh; this is the method the vast majority of 3D models are built with today, due to their flexibility and the fact that

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further.

³ There has been further debate in the past that these types of images – reconstructions, etc. – should not be referred to as "reconstructions" as the term implies elusive certainty but should rather be called "artist's impressions". This is not a solution, as that term only sounds 'fuzzy and undependable', as well as implies that reconstructions are the creation of a sole artist which is rarely – though evidently not always – the case. (Greaney 2013: 38).

⁴ see Demetrescu, E. et al. (2016), Lee, E. (2008), Lee, E. (2008), Artioli, G. (2010), Bianchi, C. (2006), Borghini, S., Carlani, R. (2008), Cameron, F. (2007), Dellepiane, M., Callieri, M., Corsini, M., Scopigno, R. (2011) for

computers can render them so quickly. Digital sculpting is the newest method of modeling that has gained popularity in the last few years, and currently features three types: displacement (the most popular, which uses a dense model); volumetric; and dynamic tessellation. Digital sculpting allows for more extensive artistic exploration, but requires more individualized artistic work, and as such is only used for details in this project (hair, wounds, blood, facial details). An example that includes many of the current relevant techniques: models of some Akropolis sculptures have been created recently using 3D laser scanning, structured light, photogrammetry, CAD, and photometric stereo.⁵ The result was a series of low-resolution 3D models able to be accessed interactively on a PC. Though the techniques described are significantly different than those used for this thesis, the ultimate results are similar: easily-viewed 3D models. Instead of using technology implemented for scanning sculptures that still exist, this project – wherein the sculptures being modeled are lost – implements 3D modeling and sculpting as the primary methods employed.

There is the question one must inevitably ask before approaching such a project: why create a visual reconstruction? Susan Greaney (2013) does an excellent job outlining the history and purpose of commissioning reconstruction drawings in the past. Essentially, although produced for a myriad of purposes and audiences, reconstructions typically hold the same objective: "to put flesh on the bare bones of the past by restoring [...] what time has taken away" (Greaney, 32). Research has demonstrated that audiences who engage with graphic panels typically look at the images first, then at the captions; only the heavily invested will read the body text.⁶ As a visual source, a reconstruction therefore transcends barriers of age,

⁵ El-Hakim et al. (2008): 5

⁶ Greaney (2013): 32

understanding, and language, much as Greaney argues.⁷ Furthermore, this type of reconstruction never damages or alters a site or artefact, a common argument against physical reconstructions.⁸

As mentioned, all aspects of Classical Studies as a discipline are arguably forms of reconstruction. "The study and description of history is fundamentally a process of reconstructing the past: piecing together fragments of documents, buildings and artefacts to create a believable story or illustration of people, events and places." (Spearman, 2013). Visual reconstructions routinely challenge our understanding of the evidence upon which the reconstruction itself is based. They allow for fundamental changes in how we research, manage, and present our heritage, by forcing us to more closely interrogate the existing evidence.⁹ The result aims to both inform and provoke. No reconstruction can do more than illustrate the state of knowledge present at the time of its creation, and it is important to understand that archaeological evidence will always be incomplete to a certain degree. However, it can greatly serve to elicit new perspectives and approaches to old ideas and topics by forcing the viewer to reconsider what they are looking at, both in its content and context.¹⁰ Having established the importance of visual reconstructions as a concept, the specific and unique benefits and challenges of such reconstructive attempts will be addressed further below. First, however, the ultimate objective of the final reconstruction should be discussed: to replicate not only a potential physical reality, but also to attempt to visually reconstruct, to a degree, the impact which it could have had on its audience.

⁷ Greaney (2013): 32

⁸ Young (2013): 75. Physical reconstruction can damage the evidence as well as the aesthetic value of buildings, settings, or artefacts; they may present a misleading impression to the public; and often they have higher maintenance costs than unaltered sites. Physical reconstructions/restorations also present several benefits – see Young for further.

⁹ Spearman (2013): 119, Greaney (2013): 31

¹⁰ Greaney (2013): 38

The importance of viewing regarding this particular monument has been approached as a topic of significance by scholars in the recent past, as discussed below, and was integrated into the reconstruction result through visual choices intended to recreate that experiential quality. "To have walked along the dense and dramatic group must have created an overwhelming sensation that one was actually witnessing the massive defeat and surveying the battlefield at the battle's closing stages, with wounded, bleeding, and dead warriors – and their conquerors – everywhere." (Zanker, 107). Traversing a battlefield where the fighting is almost over, surrounding by bleeding and dying warriors, passing a few pockets of futile resistance – the imaginary experience is visceral, and inspires the audience to witness the events which the monument commemorated. This would only be furthered by the stylistic use of the Hellenistic Baroque, heightening the drama of the scenes through exaggerated poses and musculature, emotional expressions, and a communicated *pathos* in each figure. Victory is emphasized through the dramatic nature of the fallen foes, specifically Athenian victory: this is the connection the Attalid dedicator intends to make, projecting their own dynasty as next to inherit Athens' legacy. ¹¹

These techniques therefore play well into the messaging the Attalids want to communicate – a heroic past, an inherited future – but that messaging means little without the provoked reaction from the audience. The work must first incite a feeling, an experience, that then can be projected onto their own message: a sense of awe, for history and myth and for those who have staked their claim alongside them. The monument held a strong, deliberate relationship with the Parthenon: they stood side by each on the Akropolis with numerous intentional similarities drawn, including figural and iconographic parallels. This deliberately planned emotional response was as much a part of the monument's design as its visual image, and is

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¹¹ Pollitt (1986) and Stewart (2004) for further on Pergamene propaganda and connections to Athens

¹² For a strong Amazon example, see the shield of the Athena Parthenos.

subsequently of equal importance to address in a reconstruction. The elements that comprise this elicited awe must therefore be broken down into their parts in order to establish the artistic techniques employed to achieve the desired effect, both in the original monument and the reconstruction. A large component of gaining such a strong reaction was the sheer number of statues involved. The dramatic effect of such a monumental number of figures brought together in one composition – especially one with such dramatic depictions of physical pain and the *pathos* of dying enemies – would undoubtedly have been striking, even to a demographic accustomed to theatrical realism.¹³ Walking along a battlefield riddled with suffering at every turn would undoubtedly have provoked an emotional response from the audience. The close-knit placement of so many sculptures, which so theatrically dramatize wounds and exaggerate dying enemies, would have contributed to the collective effect of the pieces as individual works.¹⁴

As discussed above, concerning such a monument, reconstructing that feeling is arguably of equal importance to that of a proposed visual image. This project endeavors to recreate that emotional sensation through the use of sculptural style and the ability to interact fully with the monument in 3D, to better attempt to recreate the feeling of walking along its entirety. However, in approaching the idea of recreating emotional feeling, there is similar debate in the field of cultural heritage surrounding the 'authenticity', presentation, and use of digital reconstructions. First, one must examine the state of the discourse and arguments; then, my own attempts will be discussed.

¹³ Pollitt (1986): 92; Zanker (2004): 107 goes on to note that the "eye-witnessing" of an imaginary or past scene through a visual medium is analogous to the later rhetorical concept of *enargeia*. Kagan (2000): 77 notes that these themes would have been familiar to ancient audiences, used throughout triumphal monuments, but would undoubtedly have been heightened to the extreme by the magnitude of the monument.

¹⁴ Kagan (2000): 78

Reconstruction: Questions and Debate

To paraphrase Dr. Ian Malcolm, oftentimes people are so preoccupied with whether or not they can do something, they do not stop to think if they should. ¹⁵ Following that mentality, an active debate in the cultural heritage community is how far digital reconstructions can – and should – go. The tensions between the two realms is aptly summarized here:

"Contemporary discussions on the impact of multimedia technologies on museums tend to assume a radical difference between the virtual and material world, a difference that is conceived in terms of a series of oppositions. The material word carries weight — aura, evidence, the passage of time, the signs of power through accumulation, authority, knowledge and privilege. Multimedia [...] is perceived as "the other" of all of these — immediate, surface, temporary, modern, popular, and democratic. The character of the opposition is rarely disputed. What is disputed is its significance." (Witcomb, 35).

Witcomb goes on to elaborate on the multitudinous perspectives on the inclusion of virtual elements in cultural heritage: it is seen either as a threat to established museum culture and practices, or alternatively as an opportunity and potential to reinvent the system and ensure its survival in the future. Much of this stems from the frequent dispute around the material/immaterial question, to be discussed further below. The general arguments for and against are as follows. Digital reconstructions are understood as a threat because they are accompanied by a loss of aura and institutional authority. There is also the loss of ability to distinguish between the real and the copy, resulting in the 'death of the object'; and a reduction of knowledge to information. Furthermore, discourse has revolved around the digital version as inferior to the non-digital original, with a dangerous potential to subvert the original's values and meanings, as well as the loss of their auraic, iconic, and ritualistic qualities. However, digital

¹⁵ Dr. Ian Malcolm is a fictional character portrayed by Jeff Goldblum in the 1993 film *Jurassic Park*, and therefore in reality does not hold a PhD from any accredited institution. However, the quote stands.

¹⁶ Witcomb (2007): 35, Cameron (2007): 50

¹⁷ Cameron (2007): 50

reconstructions do offer unique possibilities. The aforementioned losses enable new democratic associations to emerge around museums. The diminishment of institutional authority equates with the need for curators to become facilitators rather than figures of authority. It also introduces an openness to popular culture, a recognition of multiple interpretations and meanings, and an extension of the growing media sphere into the museum context. ¹⁸ Through the aforementioned attention given to the context and emotional implications of the monument, this reconstruction will capitalize on the advantages of the medium while working away from the detriments.

Prevailing debates are bounded by established discourses, material culture paradigms, and the object-centeredness of museum culture; these ideas should be challenged in order to genuinely develop the conversation.¹⁹ This implied opposition in itself is perhaps unhelpful; we should rather begin at a point that does not assume such a polarized opposition between the material and virtual. 'Authenticity' should not be the focal point, but rather the depth and quality of the presentation of cultural objects; the intrinsic symbolic significance of an object is lost when they are removed from their rightful context, regardless of whether it is 'real' or a replication.²⁰ As Kwee (2008) argues, "real' cultural objects in glass compartments affixed in museums do not communicate much more, especially of symbolic meanings, than, for example, their respective images on the internet do."²¹

As such, it would irresponsible not to treat this reconstruction as a work in its own right. I do not say this as an attempt to bolster my own self-importance, but rather to stress that this reconstruction, by merit of simply existing, contains its own biases and prejudices unseen in

¹⁸ Witcomb (2007): 35

¹⁹ Cameron (2007): 49, Witcomb (2007): 50

²⁰ Kwee et al. (2008): 474

²¹ Kwee et al. (2008): 474

antiquity. Beyond the question of artistic style and capability, which I have not perfectly matched, I have possibly reinforced stereotypes or reinterpreted the past by creating it in my own image; I inevitably made choices concerning where to place emphasis, to give more or less attention or detail, which cannot possibly – by sheer laws of probability if nothing else – align with the choices made by the ancient artists.²² "Like every medium used in the past to preserve the memory of cultural heritage, new digital media are not neutral: they impact the represented content and the ways the audience interprets it." (Nitoslawka and Loader, 527). Immersive realism and the transparency of the medium as obviously modern creates an illusion of objectivity, often effacing authorship. Digital images can add a sense of certainty about the past that can be both untrue and unhelpful. The creation of a reconstruction should still be "firmly regarded and approached as art", for although based on fact it is still a work of imagination, and the more precise and detailed it is, the more guesswork it contains.²³

With this degree of disclaimer applied, it does not necessarily mean that reconstructions cannot attempt to recreate that lost sense of context, aura, and spirit. The 'aura' of an object is typically considered its physical presence, but as well – and more importantly – its ascribed social meanings and life history. ²⁴ It has been argued that by separating the aura from the object, its authority is threatened, and often lack substantial intrinsic cultural and symbolic values. ²⁵ However, the curatorial process of digitization is not dissimilar to that for physical objects: choosing what is significant, what should be remembered or emphasized – meanings like classification, cultural values, or aesthetic attributes. ²⁶ The 'spirit' of a place or object is not only

²² Greaney (2013): 38 elaborates on this idea – however, as noted, this problem is inherent in all archaeological interpretation, it is just more obvious in graphic form.

²³ Greaney (2013): 35

²⁴ Cameron (2007): 57

²⁵ Kwee et al. (2008): 473

²⁶ Cameron (2007): 57

about realism, achieved through detail, colour, surface, and so on, but about the presence of the viewer within or around the space. This includes memories and knowledge of the past, but also cannot ignore modern knowledge and perceptions.²⁷ Multimedia installations play on this dualism, turning the act of interpretation into a conscious action, facilitating a response both to the history and the object individually.²⁸ Therefore in reconstructing a physical reality, we face the "even more challenging task of reconstructing political and social intent and consequence. This is, and always has been, difficult history. It is the study of the past, present and future conflict." (Spearman, 121).

The Monument: Historical Sources

The so-called Lesser Attalid Monument was a dedication erected on the Akropolis in Athens. It consisted of four battles: a Gigantomachy, Amazonomachy, Persianomachy, and Galatomachy. There is debate surrounding nearly every aspect of its existence: location, date, style, number, subject matter, etc. Pausanias, our primary source on the subject in every sense of the term, describes the monument as follows:

πρὸς δὲ τῷ τείχει τῷ Νοτίῳ γιγάντων, οῖ περὶ Θράκην ποτὲ καὶ τὸν ἰσθμὸν τῆς Παλλήνης ὅκησαν, τούτων τὸν λεγόμενον πόλεμον καὶ μάχην πρὸς ἄμαζόνας ἄθηναίων καὶ τὸ Μαραθῶνι πρὸς Μήδους ἔργον καὶ Γαλατῶν τὴν ἐν Μυσίᾳ φθορὰν ἀνέθηκεν ἄτταλος, ὅσον τε δύο πηχῶν ἕκαστον.

By the south wall are represented the legendary war with the giants, who once dwelt about Thrace and on the isthmus of Pallene, the battle between the Athenians and the Amazons, the engagement with the Persians at Marathon and the destruction of the Gauls in Mysia. I Each is about two cubits, and all were dedicated by Attalus.

(1.25.2, Leipzig, Teubner 1903)

²⁷ Nitoslawska and Loader (2008): 520. They emphasize the importance of approaches that utilize experiential aspects of memory construction, treating memory as a source of ethnographic data.

²⁸ Witcomb (2007): 46

Our general understanding of the monument stems from this description: its location, near (alternatively, on) the South Wall of the Akropolis.²⁹ Its scale, about half to to-thirds life size (earning it the title "lesser"). The number of figures included is impossible to determine; estimates range from 50 to well over a hundred.³⁰ This number varies further according to whether or not the scholar believes victors to have been included on the monument. Plutarch's *Life of Antony* (60.2) is often used as confirmation for their presence, describing a statue of Dionysos "from the Gigantomachy" which toppled into the theatre during a storm. If the Gods were in the Gigantomachy, it is thought, then so too the Greeks must have been in the Amazonomachy, Persianomachy, and Galatomachy. However, this cannot be treated as certainty, and is still a split issue in scholarship.³¹

Its dedicator, named by Pausanias only as Attalos, is a spot of contention among scholars. Attalos I visited Athens in 200 BCE, hailed as an eponymous hero.³² Historical circumstances favour him as dedicator: Attalos II did not fight against the Gauls as king. His only involvement in a Gallic victory was alongside his brother Eumenes II in 166. Therefore, any triumphal monument would be expected as a joint dedication between the two, as familial ties was a well-publicized Attalid virtue.³³ Despite the historical leaning, Pausanias' lack of specificity has resulted in endless debate on stylistic basis: the baroque style of the monument is thought to be too 'advanced' as to predate the Great Altar, and therefore is argued to have been dedicated later by Attalos II.³⁴ Stylistic analysis, although useful, cannot affirmatively date the monument. The main argument stems around similarities to the Altar of Zeus (including similar pathetic

²⁹ see Marszal (1998) for further debate on specific placement.

³⁰ Pausanias gives no indication of the number. See Pollitt (1986) and Palma (1981) for lower numbers; see Holscher (1985) and Stewart (2004) for higher estimates.

³¹ Stewart (2004):73 provides an up-to-date scholarship analysis on whether victors were included.

³² Polybios, 16.25-6

³³ Smith (1991): 103

³⁴ For further on stylistic debate and analysis, see: Smith (1991), Pollitt (1986), and Bieber (1955).

expressions and a tendency towards melodrama lacking subtle sympathies), which dates to the time of Eumenes II. However, there is no reason why these figures could not have influenced the Altar instead of the other way around. As Pollitt (1986) argues, "quite possibly the same sculptors worked on both monuments". This also leads into the debate surrounding the fact that what remains we have are marble copies, not the bronze originals, as will be further discussed.

Regardless of dedicator, the purpose of the monument is more easily agreed on. The dedication acted as propaganda for Pergamon. The combination of selected battles conjoined Attalos' success with the triumphs of Athens' mythological-historical past, each a victory of Hellenism over barbarism.³⁵ It enhanced the Attalid deeds by marking their victories alongside those of history and legend. The Persianomachy in particular, an emblem of Athenian triumph, was symbolic and parallel to Attalid victories.³⁶ As a whole, it conveyed Attalid ambition to turn Pergamon into the new Athens, presenting themselves as natural inheritors and successors of their position as defender of Hellenic culture.³⁷ Athens was central to expressing their message but their reach sought to exceed their grasp: working off of the heroic past present on the Akropolis they linked their own monument and deeds to it, assimilating themselves into history, and further intending that their message should resonate beyond the city, integrating Pergamon into mainstream Greek culture.³⁸ Furthermore, it was a beneficial monument for both parties, with Athens gaining arguably as much as the Attalids: its placement on the Akropolis, immediately next to the Parthenon (which itself featured so many Athenian triumphs) would have flattered Athens immensely.³⁹

³⁵ Gruen (2000): 18, Zanker (2004): 107

³⁶ Bieber (1955): 109

³⁷ Pollitt (1986): 93, Smith (1991): 103

³⁸ Gruen (2000): 18, Pollitt (1986): 93

³⁹ Marszal (2000): 211, Gruen (2000): 18

The Monument: Archaeology

This leads into the inevitable question: what, exactly, did it look like? In order to answer this, the issue of the copies must first be addressed. Again, scholars do not agree. The number and provenance of surviving copies are problems debated extensively. The originals were almost certainly bronze, while the surviving copies are marble - the pedestals discovered on the Akropolis, attributed to the monument, feature cuttings exclusive to bronze. The number of extant sculptures that accurately match the description outlined by Pausanias varies according to the scholar. Pollitt (1986) attributes over 20, while Stewart (2004) insists on only 10. There is no scholarly agreement as to which figures ought to be included – around 30 works in various collections technically fit the required size and subject. No figure is copied twice, and there is no single cycle of copies that survive. Those that do are made of Asiatic marble, igniting another line of debate. Stewart (2000) fervently asserts that the use of Asian marble does not necessarily equate production in Asia Minor, citing that copyists often preferred stone familiar to them and, if based in Italy, would use imported casts rather than travel to consult the original works.

The style of the monument and subsequent reconstruction, as far as can be judged from the copies, was that of the Hellenistic Baroque. The term 'baroque' has been used loosely since

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⁴⁰ Pollitt (1986): 90

⁴¹ Smith (1991): 102

⁴² Smith (1991): 102. By "single cycle", it is meant that small groups of individual figures were excerpted from the monument for different and unknown Roman contexts, and those are the pieces which survive.

⁴³ Stewart goes on to defend why the originals were indeed placed in Athens rather than the occasionally suggested Pergamon (see Hoepfner for further).

In 2000 Steingraber made the claim that some of the copies (namely the Gauls) were not in fact of Pergamene or Asiatic marble, as always asserted, but rather in alabaster. He proposes drastic potential shifts in dating, provenance, function, and "ideological" significance. This has not been further extensively addressed in scholarship as of yet and will not be here.

the early 20th century to categorize the style of certain prominent works in the Hellenistic era. 44 It is only really applied in connection with sculpture. The term is directly linked with that used for European sculpture in the 17th century, as the two are thought to share certain similarities. The term is used, in many ways, for convenience, as opposed to prejudicial and limiting phrases such as 'high Pergamene' or 'middle Hellenistic'. 45 The style reached its height between the period of ca.225 – 150 BCE, though its chronological range extends both ways beyond those dates. 46 Such a style is characterized by a variety of stylistic and formal qualities which make it distinct, including a theatrical representation, emphasizing emotional intensity and drama, as well as the technical methodology by which this is achieved: undulating surfaces, extreme facial expressions, high contrasts of texture, particularly those created by deep sculptural carving resulting in areas of extreme shadow and highlight (*chiaroscuro*), and the use of 'open' forms.⁴⁷ These distinctive stylistic mannerisms are perpetuated throughout Attalid dedications, almost to a degree of standardization: they featured the use of "exaggerated swelling and deepening of facial and anatomical features to create anguished, stress-filled figures either caught in a crisis of victims of a calamity". 48 The realistic details – including wounds with blood, appropriate dress and armour – are also taken from earlier Pergamene dedications.⁴⁹ Once the stylistic elements of the monument had been established, the compositional design process preceding the digital modelling could begin.

Reconstruction Process

A number of extant Amazonomachies, as well as the corpus of Amazon sculpture in

⁴⁴ Pollitt (1986): 111

⁴⁵ Pollitt (1986): 111

⁴⁶ Pollitt (1986): 111

⁴⁷ Pollitt (1986): 111

⁴⁸ Pollitt (1986): 91

⁴⁹ Pollitt (1986): 92

general, were studied in order to assimilate a visually accurate representation of the subject for the reconstruction. The most valuable references used were the relief sculptures of the Mausoleum at Halicarnassus, the Temple of Apollo Bassitas, and the Parthenon Amazonomachy. Each provided recurring poses, duels, and configurations that could be mined for use. Sculptural examples proved of most use, as they already took into account the constraints and strengths of the medium, and as there are numerous differences in content and style between their representation and the more prevalent vase-painting images.⁵⁰

A brief history of the Amazonian image is here warranted. The earliest representations date back to archaic epic and attic vase paintings in the 6th century BCE.⁵¹ At this point, they were considered a band of great female warriors, and did not differ greatly visually from Greek heroes: they wore Greek armour, carried Greek weapons, and participated in typical warriormale pursuits.⁵² The exposing of one breast became a well-established Greek motif in the 5th century.⁵³ This related to aetiological tradition and developing ethnography that Amazons needed a breast out in order to fight, even going so far as to cut the right one off for archery.⁵⁴ However this concept does not translate into the visual sources, where both breasts are always intact.⁵⁵ Amazons quickly lost their status as admirable warriors, their use being reimagined by developing Athenian art and ideology in order to suit the changing culture and politics. For example, following the Persian wars, Amazons became analogous with visual depictions of the

⁵⁰ see Sobol (1972) for one opinion and analysis of the differences.

⁵¹ Fantham et al. (1994): 128

⁵² Fantham et al. (1994): 129. Herakles' battle with the Amazons became a particularly popular subject in Attic black-figure vase painting, occasionally even as single combat.

⁵³ Bieber (1977): 63. This motif was used to represent both Amazons and Aphrodite.

 $^{^{54}}$ Chrystal (2017): 21, Fantham et al. (1994): 129. This hypothesis is furthered etymologically, with some believing the word "Amazon" to stem from α- and μαζος meaning 'without breast'. Hippocrates and Justinus, 800 years apart, both insist on this strange tradition.

⁵⁵ Chrystal (2017): 21

Persians, dressed in eastern garb and carrying bows and arrows, suggesting a feminine nature of the barbarian opponents.⁵⁶ This relates back to the civilizing nature of the Amazon myths and their prevalence throughout Greek and Roman art and myth.⁵⁷ That is: Hellenic civilization bringing order to barbarians, whatever form they may take.

While the cultural and societal implications of the Amazonomachy myths are of undeniable importance, the focal point of this project surrounds the visual aspects. Therefore, the formal stylistic elements of prevalent Amazonomachy depictions, as listed above, are most beneficial as reference here and will be discussed in detail further below concerning their specific use. Following such analysis of the surviving Amazonomachy images, as well as examination of the pedestals discovered on the Akropolis attributed to the Lesser Attalid Monument, a 2D drawn mock-up was created (fig. 1). It was done so strongly based on the foundations laid by Manolis Korres (2004).

Korres, in his article outlining the discovery and analysis of the pedestals, does extensive work in attempting to distinguish which could have gone together, how, and where (fig. 23-26). I have based my work on the pedestals he attributes to the second grouping, which – following the chronology of battles – would be the Amazonomachy. Those pedestals are outlined on the mockup in red; the rest are imagined inclusions, with no physical remains. Korres asserts that the composition does not follow each pedestal, but rather that the cuttings were done after they were assembled – therefore, the composition was likely designed independently of its pedestals.⁵⁸ The order of the blocks proves impossible to determine, as they were doweled at both ends; however,

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⁵⁸ Korres (2004)

⁵⁶ Fantham et al. (1994): 131

⁵⁷ The most famous Amazonomachy myths include: Heracles' ninth labour (retrieving the girdle of Queen Hippolyta), Theseus' abduction of Hippolyta, and Achilles' battle with Penthesilea in the Trojan War.

we are able to establish that none of the discovered blocks were placed next to each other.⁵⁹ Taking this challenge into account, the pedestals attributed to the Amazonomachy could be tentatively ordered, with imagined blocks between.

Hypothetical Composition

Compositional choices were made with both individual and collective considerations. Andrew Stewart's *Attalos, Athens, and the Akropolis* (2004) was an invaluable resource and tool in establishing potential both general and specific visual traits of the monument. The overall composition was, in fact, based on Stewarts assertions: that it would have featured a more open composition (closer to the temple of Nike frieze, as opposed to the dense Alexander Sarcophagus). He also argues that it would have included riders galloping out towards the end of the pedestals, creating a centrifugal effect, carrying the action onto the next battle, and that the overall structure of the composition was chiastic.⁶⁰ The cornice blocks themselves are exact digital 3D versions of the measurements described by Korres.⁶¹ He has separated the blocks into sections, labelled as Γ #, and lists Γ 2, 4, 7, 10, and 12 as belonging to Pedestal I, which Stewart then further ascribes to the Amazonomachy.⁶²

Using the information provided from the pedestals, as well as general stylistic research from other aforementioned Amazonomachies, basic figural designs were created for the mock-up, with only perfunctory attention paid to clothing, hair, and weaponry; the figures themselves are in fact faceless. These aspects were all to be fleshed-out, so to speak, during the actual digital

⁵⁹ Stewart (2004): 270

⁶⁰ Stewart (2004): 189-190

⁶¹ Korres (2004): 242

 $^{^{62}}$ Stewart (2004): 189, done so through analysis of remains and overall structure, based on the inclusion of riders. They cannot be assigned to each battle with absolute certainty, but Stewart provides a compelling argument and is therefore used in this project. Limited information was provided concerning Γ 12, and its inclusion is therefore limited.

modeling process. Explanation and precedent will be given for each of the depicted sections:⁶³ Γ2: An end block with one triangular socket with rounded corners and one sausage-shaped one preserved. A third socket is indicated in the corner. Korres proposes two sockets fit a warrior lunging in from the pedestal's outer end with his right foot and the ball of his left flat on the ground with his left heel raised; he was attacking an opponent on horseback, whose right hoof was on the ground and whose left hoof was raised (2004, 249).

The Greek fights with short-sword and shield against the Amazon's attacking spear, both similar to the potential figures outlined in Korres' proposed reconstruction drawing.

Ex1: One Greek, shield held up in defense, pulls by the arm the injured body of a companion. Similar motifs are seen at Pella and on the Parthenon, with more direct reference taken from Bassae (fig. 13).

Ex2: A lunging Amazon wielding a short-sword is preparing to strike a cowering Greek (on his knees, one hand on the ground), who holds a shield before himself in defense. Similar poses are found on the Parthenon, Bassae, Halicarnassus, as well as similar 3-person versions at Halicanassus, Pella, and on the Amazon Sarcophagus in the Museo Capitolino.

Further along, a Greek, leaning his weight backwards, with shield in one hand grabs the hair of an Amazon with the other, who herself grabs at his arm while on her knees. Hair-pulling is a common trope seen in Amazonomachies, with key compositional examples seen on the Parthenon and at Bassae (fig. 8, 9 and 11) and Halicarnassus (fig. 10).

⁶³ Any "references" indicated in this section were for my own personal use – I do not intend to indicate the original artists used these sources as reference.

Ex3: A spear-wielding Amazon strikes from atop a rearing horse at a Greek, who holds a shield up in defense. A dead Amazon (the Naples Amazon) lies on the ground, viewed from her left, facing the audience.⁶⁴ The Amazon on horseback is a common visual, seen often in vase-painting, here with most direct reference taken from Halicarnassus (fig. 12); similar posing and composition (albeit not Amazon warriors) are seen on examples such as the Alexander Sarcophagus (fig. 15).

Γ4: An interior block with ten sockets: two sausage-shaped, six round or oval, part of another continued onto the next block, and a very shallow, square cutting near the middle. ⁶⁵ The composition, Korres notes, is complicated and interlocked and therefore very challenging to restore (2004, 253). He proposes at least three figures (due to two footprints, both left feet, with one considerably smaller than the other). One might have lunged from the back of the block and another from the next block in sequence, fighting over one (or more) fallen figures.

This proposition was used a basis and adapted for the final version: two Greeks, the described lunging figures, fight together to destroy a collapsed Amazon. Her pose is near a mirror-image version of the Naples Dying Gaul.

Ex5: Amazonomachies often feature a centre of two figures clashing, legs crossed to create what is called a "chiastic centre". In this instance, the chiastic centre of the battle is a duel between Amazon and Greek (Theseus?). The strong χ overlap of legs is seen throughout relief-sculpture war scenes; in this instance, the example at Bassae was referenced most usefully (fig. 2). They eye the other as enemies, her with spear raised, he with sword arm thrown back – each ready to

⁶⁵ The cutting that crosses two blocks indicates that they were all cut after the pedestal was assembled, and the composition was thus created independently of its display. Korres also notes that one of the sockets is suspiciously shallow and small, with no indication of looting, and could therefore be a mistake (2004, 253).

⁶⁴ Based on visual features, The Met's online museum information states that the Amazon was designed to be viewed from the left side.

strike a death blow. The Greek pose is ubiquitous throughout the visual record: the striking arm over the head is a reference to the Tyrannicides, and quickly became shorthand in depictions of Greeks striking down enemies of ideals.

F7: An interior block, only 10% of which is preserved. It holds one rectangular socket, damaged by looters. Korres asserts that it likely held the belly support for a horse. The horse and rider interpreted from that claim was a wounded Amazon on rearing beast. The main reference was the sculpture of an Amazon falling off her horse from the Farnese collection (fig. 3), dating to the Roman imperial period. The drama of its scene and posing matched the atmosphere and style of the monument, lending itself well to incorporation.

Ex6: The three-character composition, two standing, one on the ground, is commonly found in battle art. There is often allowances for variation in angling and types of action, but the main structure remains consistent. In this instance, two Greeks attack a fallen Amazon. Both carry short-swords, and one holds a shield. The Amazon has lost her weapon and holds one hand out before herself in a sad semblance of final defense. The Tyrannicide pose is again seen in the right Greek figure. References include Halicarnassus (fig. 4), the Amazon mosaic at Pella, and Bassae (fig. 5).

Γ10: An interior block, with statue platform mostly invisible. One partial, very deep sausage-shaped socket. Korres does not provide a reconstruction hypothesis. My proposed recreation features one Amazon supporting the dying body of another. The figure behind faces away from the body, looking perhaps towards salvation, or death. The body language is softer than that seen in the similar iconography of a Greek supporting another Greek; whether this is a statement on male vs female, victor vs vanquished, or simply a matter of source selection is ultimately unknown. Foremost reference was Bassae (fig. 6).

Ex7: The final end block of the battle features a standing Greek pulling at the hair of a mounted Amazon, who reaches back attempting to stop him. It is similar in posing and drama both to the other example of a Greek yanking the hair of an Amazon, as well as the Amazon falling from the horse. Direct reference was Bassae (fig. 7), with influence from Halicarnassus (fig. 4). The composition, along with the other end block, follows Stewart's centrifugal idea of horses extending the sense of battle from either side towards the next scene.⁶⁶

Modelling Process

Once a basic composition was established, the modeling process began. 3D models were created in Blender (ver. 2.79). The program was chosen both for its price – free – and its surfeit of online resources, including video tutorials and forum discussions for troubleshooting problems. Initially, high-poly versions of one Amazon and one Greek were created in a standard T-pose. They were later decimated (that is, the number of polygons was reduced) in order to generate more easily manipulated low-poly models. This process was necessary in order to accommodate the required number of figures in the final product – an already inevitably large file. As such, the quality of the piece was marginally sacrificed – details such as wounds and blood are more suggestions rather than highly rendered features; the heightened baroque musculature is reduced. However, it allowed for the full work to come together in a more easily operated, cohesive product.

The individual designs of the Amazon and Greek models were built using various references. The Amazon model's primary reference was the Naples Amazon (fig. 14), included among the generally accepted surviving copies and considered the only extant of its type from the dedication. The Naples Amazon conforms to many typical Amazonian sculptural traditions,

⁶⁶ Stewart (2004): 189

featuring a short chiton cinched at the waist, with smoother, classically formed facial features. Her head is thrown back in defeat, and she is laying on broken spears (more typically seen in vase-painting, but not unusual).⁶⁷ Her body is composed of soft forms and 'feminine' curves, as the attribution of masculine traits to female Amazons did not appear to extend into the visual realm. These traits are typical and follow visual expectations. In contrast, her hairstyle (fig. 22) is odd – it is a type that does not generally appear on Amazons until Roman times; no other Hellenistic Amazons show the topknot depicted.⁶⁸ While other Amazon depictions were given due consideration in the creation of the model, this unusual addition was included in the result as the Naples Amazon took reasonable priority as a source.

There is famous debate surrounding an aspect of the Naples Amazon, and that is the question of the baby. An early drawing (by the Basel Anonymous, ca. 1540) shows the discovered Amazon with a child lying over her breast. It is assumed that the baby was a separate addition placed temporarily on the sculpture, since in a later drawing (by Cassiano dal Pozzo, 1651), the figure appears as it is now. However: two descriptions from the 16th century confirm the presence of a child with the woman without suggesting that these are additions or restorations.⁶⁹ Since the relevant texts were published in 1876, discussion has raged on whether this was a Renaissance addition or original component. There are compelling arguments both for and against its inclusion; it has not been included in this reconstruction for sole reason that there is no certainty either way.⁷⁰

⁶⁷ see: Smith (1991): 103, Fantham et al. (1994): 129, 134, Bieber (1977): 11, Hope (1962), Johnson (1964). In contrast, Ridgway (1989) argues that the costume is not "very typical" of an Amazon, but without substantial visual evidence.

⁶⁸ Marszal (2000): 203. Two strands of hair are drawn up and tied into a top knot. This style appears by the mid-late fourth century on divine figures, especially Artemis and Apollo, the Muses, Dionysos, and Aphrodite.

⁶⁹ Inscriptions by C. Bellievre (1514-1515) and U. Aldroandi (1550); see Ridgway (1989): 294-295 for further.

⁷⁰ It is therefore not my intent to, through its absence, be making a point arguing it was not included. I would also like to acknowledge in particular Stewart's (2004) detailed argument in favour of its presence, as it is highly compelling.

The Greek model was more difficult to source; as no victors' copies survive from the monument – and indeed their inclusion is such a spot of contention – a more assimilating version had to be created. The facial features drew initially from typical Hellenistic heroic depictions: almandine eyes, smooth planes, cupid's bow lips, and a strong nose. A bust of Demetrios Poliorketes was used as primary reference (fig. 16). It also follows the tradition of the heroic nude, with exaggerated Baroque musculature.⁷¹ The hairstyle (fig. 21) was an adaptation of common styles seen throughout the referenced Amazonomachies, with hooked curls falling over the forehead, while attempting to avoid overt allusions to Alexander.⁷²

The depiction of weapons, both those of the victors and the vanquished, were drawn from a number of literary and visual sources. The Naples Amazon lies on broken spear(s); therefore, spears were given to the fighters, both Greeks (typical) and Amazons (less typical, but still seen, particularly in mounted battle scenes). The thin shaft of the spear was topped with a pointed head slightly rounded to match the appearance of that which she lays on – similar in design to the Greek hoplite spear. The Greeks also fought with short-swords: the hilt design was based on the surviving piece included with the Venice Kneeling Gaul (fig. 17). The blade itself, with the slight curving swell partway through, was based on the Greek portrayals in the aforementioned Amazonomachies, as well as the general historic knowledge of ancient weaponry. The shields are based on hoplite weaponry: round with slotted cut-out sides, necessitated by the inclusion of spear-fighting.

Based on the attributed pedestal, four of the Amazon fighters are thought to have been on

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⁷¹ In theory. The technical restraints of the program did not allow for the full heightened effect of Hellenistic Baroque musculature.

⁷² The Alexander reference would not likely have been of particular benefit to the dedication in this instance, and here certainly would not have been part of the depiction of the regular Greek soldier.

⁷³ This is much more prevalent in vase-painting than sculpture. Throughout visual and literary depictions, Amazons typically fight with axes or bow and arrow, but are also seen with the javelin and/or spear (see Fantham et al. 1994).

horseback; mounted Amazons were a staple in 5th century painted Amazonomachies, while Athenians always fought on foot.⁷⁴ As such, a horse model was required. The model used was taken from a free-source website and modified for my own purposes.⁷⁵ It matches the equine depictions in examples such as the falling Farnese Amazon, with narrow torso, tightly sculpted mane and tail, and proportions modified in relation to the figure riding.

Figural Posing

Once the basic models were completed, the rigging process began. The Amazon and Greek, as well as the horse, were each fitted with essentially a digital skeleton, allowing them to be altered to the poses laid out in the mock-up (fig. 18, 19, 20). As such, each of the figures are in fact the same original three models, repeated twelve times each (for the Greek and Amazon, four times for the horse) in modified poses, fitted with weapons, and given clothing. The Amazon's chiton was designed based on the Naples Amazon, then fitted to each model individually, after posing, using the software clothing physics – a process of repeated trial and error. Each completed model was then combined into one file to create the final image (fig. 27).

Conclusions

The Amazons as a construct played a vital role in both the art and ideology of Athens and its successors. An important paradigm of cultural danger, a paradox of attractiveness and abhorrence, their depiction shifted through time in order to suit the needs of society. Like their companions in defeat – the Giants, Persians, and Gauls – they represented the defeat of barbarism by civilization and order. As such, the monument as a whole acted as propaganda for

⁷⁴ Stewart (2004) matches the cuttings on the cornice blocks that would have held horse supports to the Amazon fighters. Mounted Amazons are considered fairly standard in battle depictions; see Cooper (1968) for further.

both the Attalid dedicators and Athenian recipients through both its visual and emotional impact on the audience. It therefore made a gratifying choice as selection for a digital reconstruction: packed with iconographic, ideological, and interpretive meaning, it presented a unique challenge to recreate faithfully, with an outcome promising an abundance of new visual and emotional information to consider. The process included stylistic analysis of the extant copies, as well as (near-)contemporary works of similar subject matter, in order to assimilate a plausible proposition of a product, including the contextual emotional effect. In the end, this attempted reconstruction of a dedication lost to time and memory endeavors to restart the conversation on this remarkable monument.

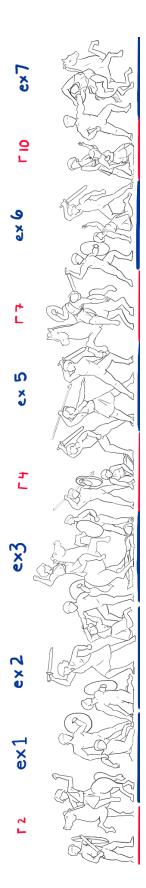


Figure 1 (2D Drawn Mockup, Author's creation for this project)



Figure 2 (British Museum online database)



Figure 3 (Naples Museum; ancientrome.ru)

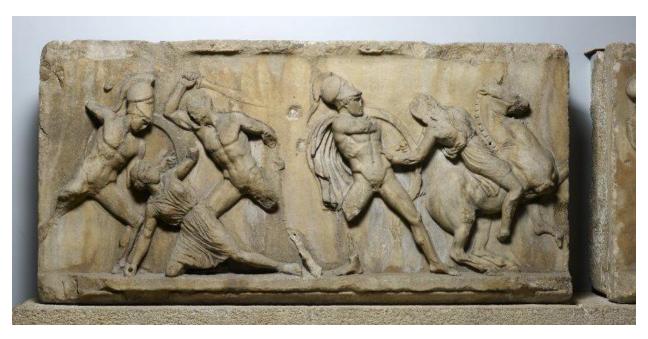


Figure 4 (British Museum online database)



Figure 5 (Bassae; bassaefrieze.co.uk)

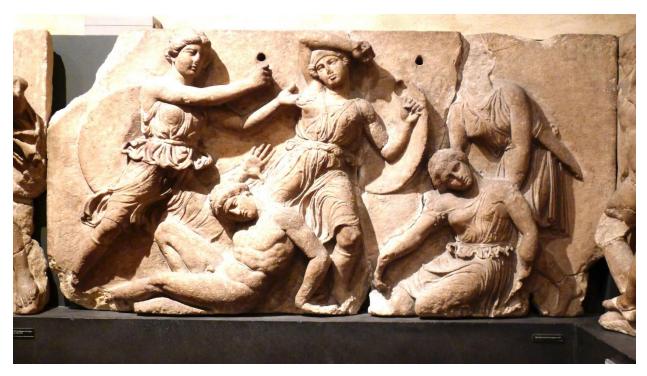


Figure 6 (Bassae; bassaefrieze.co.uk)



 $Figure\ 7\ (Bassae;\ bassaefrieze.co.uk)$



Figure 8 (Bassae; bassaefrieze.co.uk)



Figure 9 (Bassae; bassaefrieze.co.uk)



Figure 10 (Halicarnassus; British Museum online database)

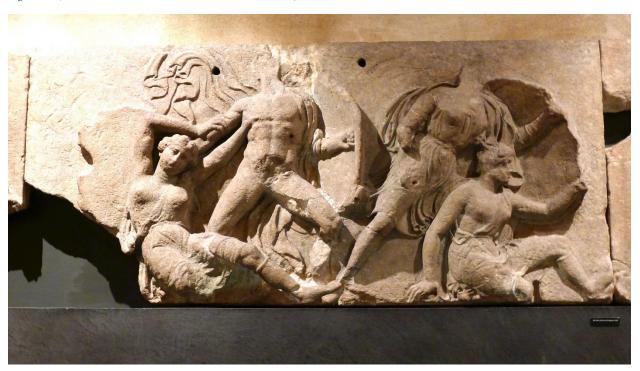


Figure 11 (Bassae; bassaefrieze.co.uk)

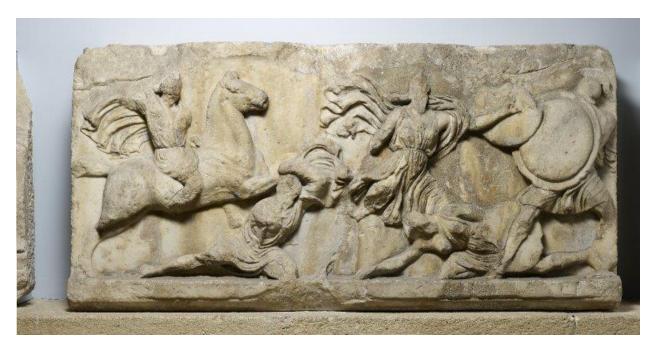


Figure 12 (British Museum online database)



Figure 13 (Bassae; bassaefrieze.co.uk)



Figure 14 (Naples Amazon; hermitagemuseum.org)

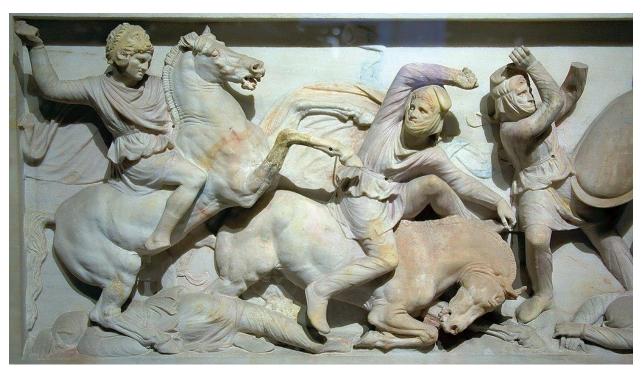


Figure 15 (Alexander Sarcophagus; By Ronald Slabke - Own work, CC BY-SA 3.0, https://commons.wikimedia.org/w/index.php?curid=27275859)



Figure 16 (Demetrios Poliorketes bust; Naples National Archaeological Museum, public domain)



Figure 17 (Kneeling Venice Gaul detail; meravigliedivenezia.it)



Figure 18 (Rigged Horse Model)



Figure 19 (Rigged Amazon Model)

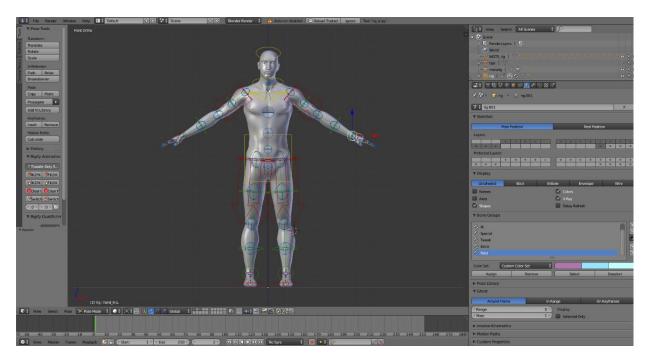


Figure 20 (Rigged Greek Model)

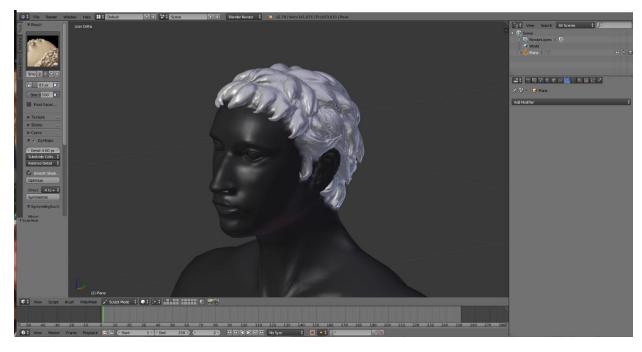


Figure 21 (Greek Model Hair)

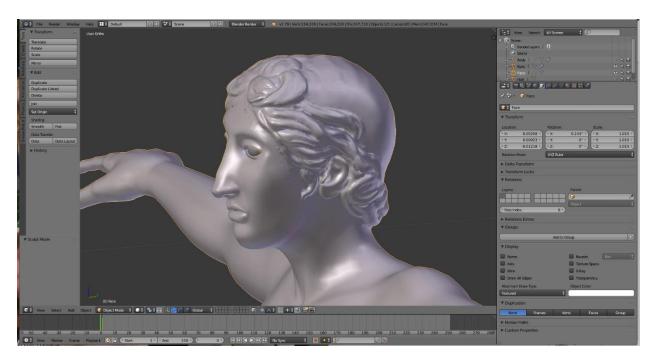


Figure 22 (Amazon Model Hair)

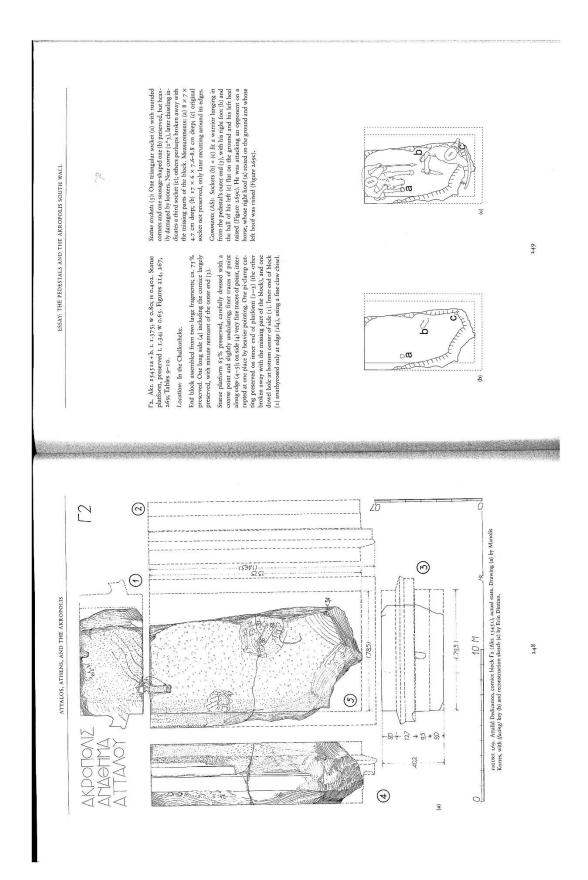


Figure 23 Korres Pedestals 1 (in Stewart, 2004)

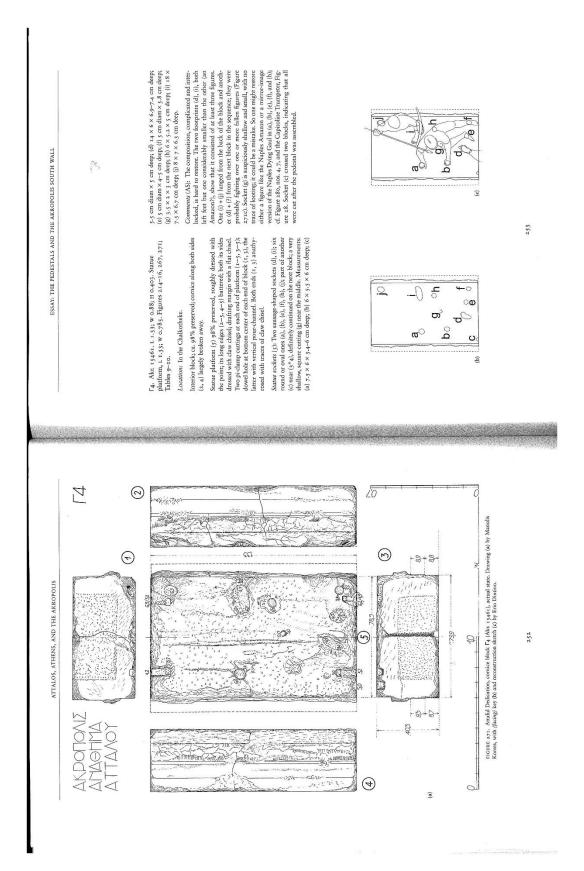


Figure 24 Korres Pedestals 2 (in Stewart, 2004)

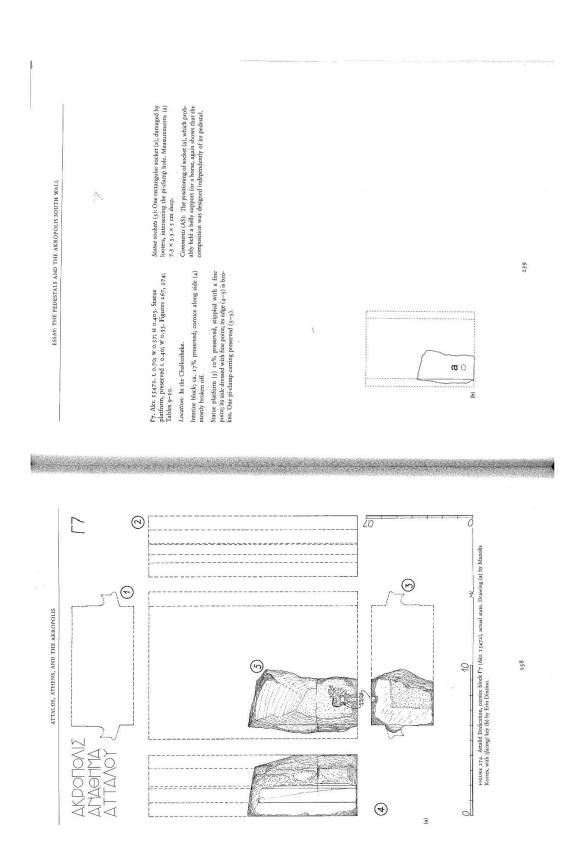


Figure 25 Korres Pedestals 3 (in Stewart, 2004)

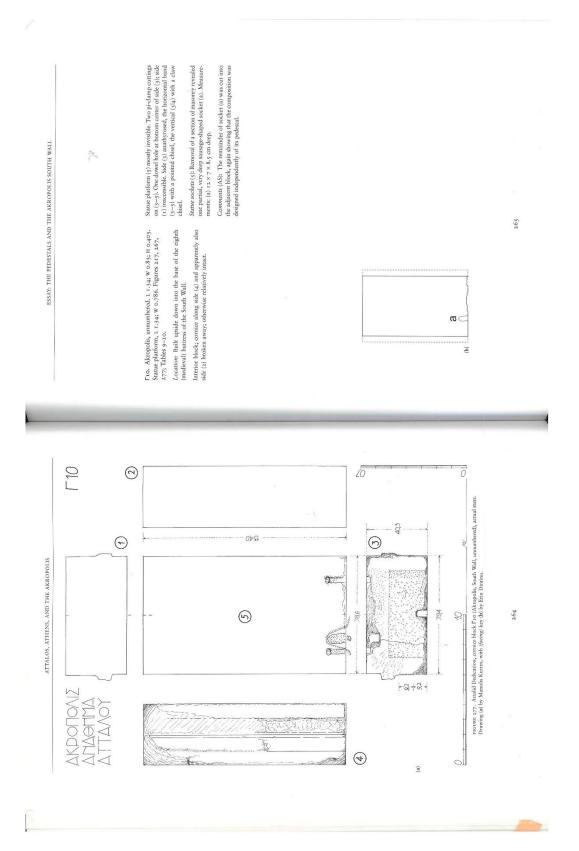


Figure 26 Korres Pedestals 4 (in Stewart, 2004)

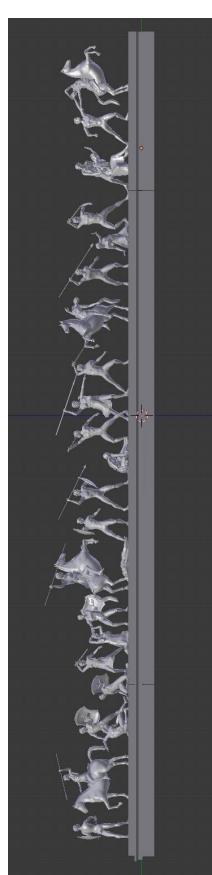


Figure 27 (Digital 3D Reconstruction, Author's Creation for this project)

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Appendix

The appendix is a digital .stl file of the 3D model reconstruction.

The file name is "Amazonomachy Reconstruction".

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