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Connecting to Antiquity Through Touch: Gem Impressions in the Long Eighteenth Century

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Abstract

This article seeks to understand what an approach grounded in materiality and tactile engagement can offer to our understanding of why collectors might have been drawn to gem impressions in the long eighteenth century. Instead of looking to a specific collector or producer of gem impressions, this study examines interactions with gem impressions from a more general perspective. I speculate how, through touch, antiquarians may have used gem impressions as an aide-mémoire to bridge connections between eighteenth-century gem impressions and Greco-Roman gem traditions through shared function, materiality, production techniques, and signatures.

Keywords: gem impressions; intaglio gems; dactyliothecae; James Tassie; touch

1. Introduction

Ancient intaglio and cameo gems rose to popularity as a collectable object in conjunction with the Grand Tour in eighteenth-century Italy which in turn led to gem engravers taking their impressions. These ancient intaglio (engraved) and cameo (raised relief) gems were easier souvenirs to bring back than cumbersome statues, and additionally, they were not subject to as many export restrictions (Scott 2003, p. 109). In addition to ancient gems, classically inspired gems produced by eighteenth-century engravers were also available for purchase.[1] Despite ancient intaglio gems being abundant, collecting more than a handful was affordable only to the excessively wealthy. Therefore, travelers also purchased impressions taken from semi-precious hardstone gems. Gem impressions, the subject of this article, were taken from molds of ancient and eighteenth-century hardstone gems alike and created the basis for large collections during the eighteenth century (Seidmann 1996, p. 65). Gem impressions could be made in a variety of materials, each with advantages and disadvantages. For example, plaster was easily dirtied, sulphur was noxious in smell, and vitreous paste failed to capture details well (Marchard 1998, pp. 23–24). Collections of gem impressions were frequently assembled in drawers within cabinets (Figure 1), and it was only later in the early and mid- nineteenth century that gem impressions were mounted into leather bound books (Seidmann 1983, p. 16).

The vogue for gem impressions began in the late eighteenth century following the 1724 publication of Baron Phillip von Stosch's collection of ancient gems signed by artists (Stosch 1724). This book fueled the desire for signed gems, which in turn led to impressions being cast. During the height of collecting gem impressions, the aristocracy and royalty of Europe commissioned collections numbering into the thousands. Those of lesser status and wealth cultivated collections on a more moderate scale of hundreds of impressions. Antiquarians might purchase gem impressions while on the Grand Tour in Rome from a

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purveyor such as the Dehn-Dolce family or Bartolomeo Paoletti, or they might commission a set upon their return home.[2] Collecting of gems and gem impressions fell rapidly out of favor following the 1839 sale of Prince Poniatowski's collection, during which it was discovered that his gems were produced by eighteenth-century engravers and not ancient artists, as had been purported (Gołyźniak 2016, pp. 175–76).

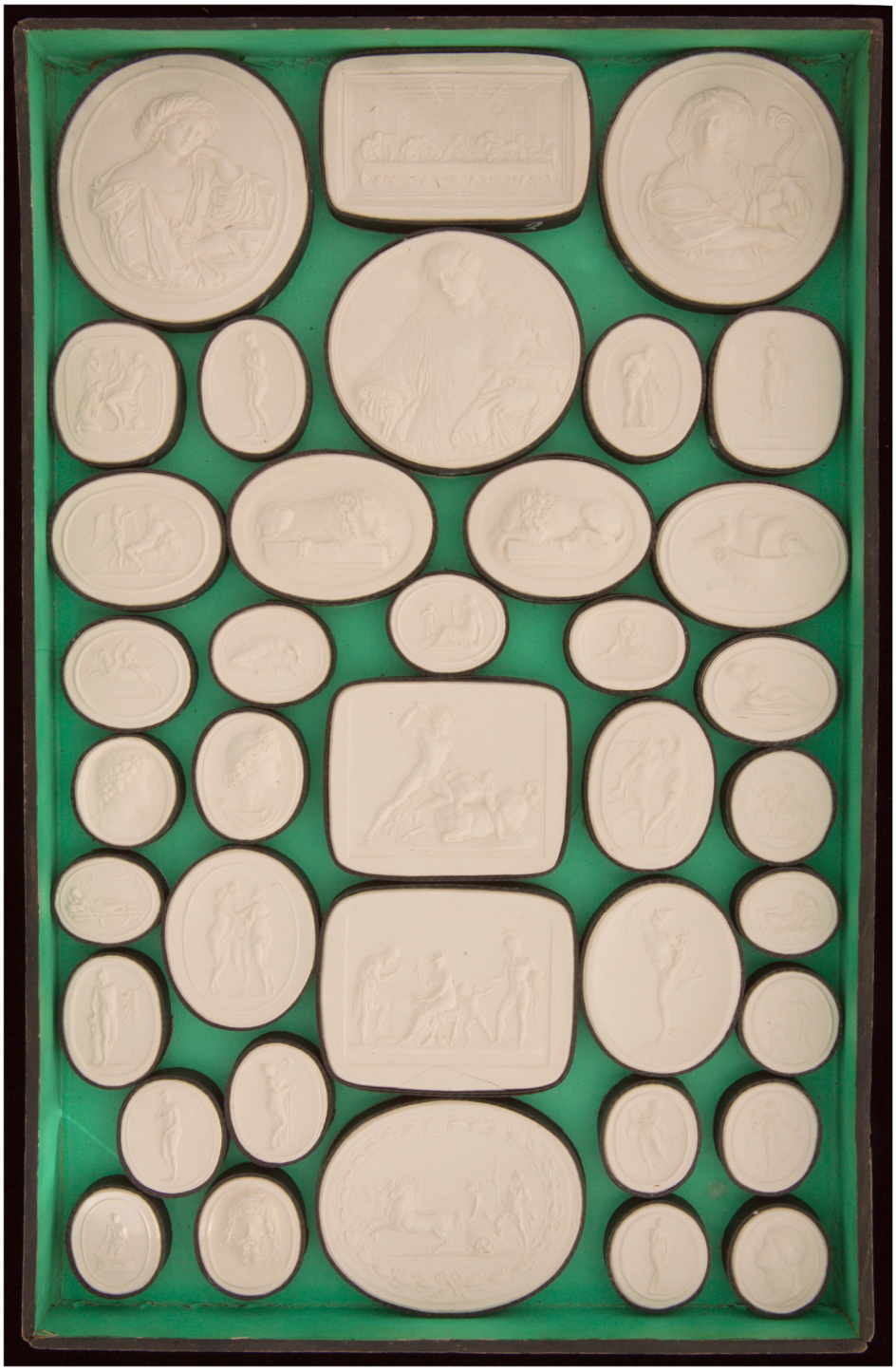

Figure 1. Giovanni Liberotti, Collection of 114 Plaster Casts in a wooden box, Harvard Art Museums/Fogg Museum, Gift of the Massachusetts Historical Society, Photo © President and Fellows of Harvard College, 1910.12.1.1-114.

Gem impressions leave room for further exploration, despite the prolific work of many scholars such as Ulf R. Hansson, Helge C. Knüppel, Gertrud Seidmann, or Gabriella

Tassinari. Many studies have naturally focused on specific collections or the gem engravers who produced them, though there are several publications that focus on gem impressions more generally.[3] This article seeks perspectives beyond the purely didactic to examine what drove antiquarians and connoisseurs to collect gem impressions. Utilizing an approach that speculates how tactile engagement with gem impressions might allow an antiquarian to connect with the ancient allows for a more expansive understanding of how gem impressions "have given pleasure to the most distinguished connoisseurs" (Tassie 1775, p. v). I posit that, through touch and handling of gem impressions, the antiquarian could assess physical properties that prompted connections to Greco-Roman gem traditions related to function, materiality, production processes, and signatures. Gem impressions could appeal to the long eighteenth-century collector precisely because of the ways that their material components bridged connections between the eighteenth-century and Greco-Roman worlds.

2. Methods

This project originated by thinking about how to apply to gem impressions Michael Yonan's call for art historians to investigate how the physical dimensions of an object are paramount to its constructed meaning (Yonan 2011, pp. 243, 246). Prioritization of the materiality of gem impressions led to initial connections between eighteenth-century gem impressions and Greco-Roman gem traditions, such as their shared materials and production processes. These probes evolved into a preliminary inquiry asking whether antiquarians collecting gem impressions in the eighteenth century might be aware of specific connections to Greco-Roman gem traditions. Ancient publications that antiquarians regularly consulted as well as eighteenth-century sources made clear that antiquarians were well educated on the connections to function, materiality, production processes, and signatures that eighteenth-century gem impressions had with ancient gem traditions.

It was through Jules Prown's emphasis on handling the object as an investigative mode that touch emerged as part of a refined research question investigating if it was through touch and handling that an eighteenth-century owner of gem impressions might manifest connections with Greco-Roman gem practices (Prown 1982, pp. 7–10). Classicist Helen Slaney convincingly establishes connections between touch, movement, and the classical during the eighteenth century in *Kinaesthesia and Classical Antiquity*; this work serves as a model for how to investigate the intersections of the haptic and classical material culture during the eighteenth century. Eighteenth-century gem impressions take on a role as active participants in establishing connections to ancient gem practices since they demanded close interactions through their handling by eighteenth-century antiquarians. The tactile exchanges between antiquarian and gem impressions gives rise to the opportunity of how, through Bruno Latour's Actor-Network-Theory, an object might "authorize, allow, afford, encourage, permit, [or] suggest" connections to Greco-Roman gems (Latour 2005, p. 81). This article both establishes the connections between eighteenth-century and Greco-Roman gem traditions, and it also explores how through touch eighteenth-century antiquarians may have used gem impressions as an aide-mémoire to bridge mutual gem traditions with antiquity through shared function, materiality, production techniques, and signatures.

Before turning to an explication of how touch might prompt the antiquarian to make connections between eighteenth-century gem impressions and Greco-Roman gem traditions, some attention to touch, sculpture, and the miniature will help to frame the discussion. This discussion also foregrounds the evidence for the importance of touch in relation to gem impressions specifically.

3. Touch & Sculpture in the Eighteenth Century

Eighteenth-century antiquarians conceptualized the miniature art of engraving on gems as equivalent, or superior, to ancient sculptures. For example, the French antiquarian Comte de Caylus explained in a lecture on engraved gems in 1744 that, "Les originaux grecs ont réellement la même noblesse & la même élévation dans le petit . . . que dans les statues colossales" (de Caylus 1744, p. 244). A dictionary for arts has an entry for "gem-sculpture" making clear this equivalency (Partington 1835, p. 594). One 1804 source rather eloquently discusses a collection of gem impressions as "a library without books, a gallery of pictures without paintings, and *sculpture* [my emphasis] without marble" (Dagley 1804, p. 30). Gems were frequently seen as superior thanks to their better preservation than large sculptures. Gem engraver James Tassie wrote a letter to Alexander Wilson in which he espoused this advantage of gem impressions: "what farther [sic] enhances their value is that no species of the worke of the Ancients is so entirely preserved. Statues has [sic] lost their Heads, limbs, noses &c" (Duncan 2003, p. 24). Because of the close connections made between the relief sculpture on engraved gems and statues in the round, the dialogues about touch and sculpture in the eighteenth century is instructive.

Eighteenth-century discourse about touch largely centred on sculpture and debates about the primacy of either vision or touch in evaluating the arts. There was a resurgence in the idea of touch in the second half of the eighteenth century that corresponded to interest in ancient sculpture (Hall 1999, pp. 89–90). Helen Slaney argues that despite touch being seen as a crude sense, it was taken seriously by eighteenth-century philosophers (Slaney 2020, p. 12). Anthropologist Constance Classen also presents a case for the continued importance of touch in an eighteenth-century world where it had once waned in importance (Classen 2012, p. 132). Etienne Bonnot de Condillac argued in his 1754 *Treatise on Sensations* that touching something else makes the toucher aware of both the way that their body is continuous with an object and how it creates a boundary of difference. It was through touch, Condillac argued, that we see the possibility of the body as being part of a larger continuum of the world (Lajer-Burcharth 2001, p. 57). He argued that without touch, spatial depth could not be perceived through vision alone (Slaney 2020, p. 12). Later in the century, Johann Gottfried Herder in his 1778 book *Sculpture: Some Observations on Shape and Form from Pygmalion's Creative Dream* argued that sculpture is distinctive from painting in that it is directed by touch rather than vision. Herder's touch is not tactile but an imaginative exercise that, through its three-dimensional envisioning, reveals truth in comparison to painting that only reveals perceptions (Potts 2001). On this point, Herder and Condillac agreed. Rachel Zuckert argues that Herder's imaginative touch is instrumental to the experience of sculpture since it replicates the artist's practice and allows an appreciator of sculpture to understand the sculpture through proprioception. She identifies four types of touch that Herder accounts for: tactile, haptic, proprioception, and kinesthetic perception (Zuckert 2009, pp. 288–89, 291). The focus of this essay is on tactile touch, though kinesthesia is also addressed.

Using James Barry's *Self-Portrait with James Paine and Dominique Lefévre*, art historian Sarah Betzer establishes a corporeal connection to classical statuary using touch (James Barry 1767). In the background of the painting, sculptor James Paine looks upward at the chest of the renowned ancient sculpture, the Belvedere Torso. Betzer notes how as Paine looks at the chest of the statue, he places his left hand on his own chest in a "gesture that elegantly emphasizes that this is a scene of connection between sculptor and sculpture" (Betzer 2022, pp. 68–69). Paine is locating his own body in relation to that of classical antiquity and thus within the larger continuum of time.

Accounts from eighteenth-century travelers comprise evidence of the power of more directly tactile interactions with classical antiquity. Johann Wolfgang von Goethe, himself an owner of many gem impressions, bridges the divide between vision and touch by maintaining that sculpture is appreciated by "see[ing] with a feeling eye, feel[ing] with a seeing hand" (von Goethe 1974, p. 45). English writer Lady Anna Miller at the Vatican Museum used touch to verify truth about the ancient Doves of Pliny mosaic: "one [dove], in particular, is pluming herself and the hollow she makes, by dividing her feathers with her bill, so imposed on me, that I could not resist the impulse of touching it, to convince myself that the surface was really smooth" (Miller 1777, p. 167). German traveler Sophie von La Roche wrote about how touch facilitated connections to antiquity when she visited the British Museum in 1786:

> With what sensations one handles a Carthaginian helmet excavated near Capua, household utensils from Herculaneum… There are mirrors too, belonging to Roman matrons…with one of these mirrors in my hand I looked amongst the urns, thinking meanwhile, "Maybe chance has preserved amongst these remains some part of the dust from the fine eyes of a Greek or Roman lady, who so many centuries ago surveyed herself in this mirror…" Nor could I restrain my desire to touch the ashes of an urn on which a female figure was being mourned. I felt it gently, with great feeling…I pressed the grain of dust between my fingers tenderly, just as her best friend might once have grasped her hand. (La Roche 1933, pp. 107–8)

Constance Classen argues that touch, such as that represented by La Roche's experience, bridges space and time to facilitate an interaction between the toucher and the culture of origin (Classen 2012, pp. 141–42). It is this idea of time that will be key to forging a connection to the classical world from gem impressions.

4. The Miniature & Time

The idea of the collapse of time is also supported by scholars who study the miniature. The wonder and spectacle of the miniature, a cultural product not to be found in nature, essentially places it in a world outside of our own. As Susan Stewart explains in *On Longing*, the metaphoric world of the miniature makes everyday life exterior to itself. She investigates how the miniature can facilitate the infinite and how it can collapse time, which then leads into the creation of a time that exists outside of historical time (Stewart 1984, pp. 55, 65–67). John Mack also credits the miniature with the ability to divorce itself from present contexts to create a different time (Mack 2007, p. 186). As objects that reproduce sculpture on a miniature scale and require artists to work on a small sculptural canvas, gem impressions too are capable of creating this other world that facilitates the collapsing of time. Furthermore, they are objects that are often presented in the context of a collection, and Susan Pearce contends that collections, often sites of fantasy, "make other times and other places open to us" (Pearce 1993, p. 51).

The wonder of an object that replicated sculpture in miniature worked to divorce the collector from their present time and yet handling such an object made possible a continuum that enabled the collector to be aware of their place within this long tradition of gem practices stretching back to the Greco-Roman world. I would like to use this idea of touch as a mode of connecting with past time to speculatively imagine how eighteenth-century antiquarians could have interacted with material aspects of gem impressions.

5. Touch & Gem Impressions

One of the surest and most reassuring senses is that of touch, and this concept was an important element in interacting with gem impressions during the long eighteenth century,

as can be surmised from written and visual sources. For example, the dictionary of the arts warns that sulphur may be a better material with which to replicate gems: "Plasters show the work to better advantage than red or white sulphur, but they are not so durable and are liable to be defaced by rubbing" (Encyclopaedia 1798, vol. 7, p. 608). This concern with materiality indicates that plaster gem impressions were frequently handled and touched to the point to cause defacement by rubbing. The idea of touch is also visually indicated in a late eighteenth-century portrait of an unknown woman by an unknown artist from the Walters Art Museum where the sitter is presented with her hand resting on a cabinet of gem impressions (Figure 2). In one hand she holds a magnifying glass and in the other she holds a gem impression. While gem impressions are typically affixed into drawers and are therefore immovable, the concept of touch was clearly deemed more important by the artist/sitter/patron. Other visual records also attest to the importance of touch in connection to gems. While unclear whether a gem impression or ancient gem, an earlier eighteenth-century portrait of the Second Duke of Devonshire shows him holding a gem with thumb and forefinger that must have come from the cabinet pictured behind him[4]. Shown examining "gems and paste," Antonio Maria Zanetti and Marchese Gerini touch the objects they examine (Scarisbrick 1987, Figure 41).[5] In David Allan's portrait of the gem engraver James Tassie, Tassie is shown holding the tools of his trade: a cameo gem and magnifying glass (Allan 1781). Like *Portrait of a Lady*, the magnifying glass in Tassie's portrait emphasizes the miniature nature of gems and gem impressions. While the presence of gems and gem impressions in these portraits reflect standard conventions of calling attention to classical erudition, they also establish the importance of touch, since tactile engagement was not necessary to communicate learnedness. Gem impressions demanded handling and touch in their interaction with antiquarians, which I propose helps to conjure up physical connections to Greco-Roman gem traditions.

A passage from British traveler Hester Piozzi serves as an apt ending to this discussion of touch, sculpture, and gem impressions. Recounting a trip to Pompeii, Piozzi describes her encounter with the print of the foot of an ancient Pompeian:

> Of all the single objects offered here to one's contemplation, none are more striking than a woman's foot, the *print* of her foot I mean, taken apparently in the very act of running from the river of melted minerals that surrounded her, and which now serves as an *intaglio* [emphasis is mine] to commemorate the misery it caused. (Piozzi 1789, vol. 2, p. 36)

In her account, Piozzi compares the impression that captured the last touch of an ancient body to the earth with an intaglio print. What is striking for the purposes of this essay is the way that Piozzi uses a replica object, the intaglio print, as an aide-mémoire of classical antiquity. While Piozzi does not use her own touch to activate this connection, touch, albeit from the ancient body, facilitates a jump backward to a time in which this woman lived. In this essay, I will suggest that antiquarians used other objects reproduced through contact, namely gem impressions, similarly to the intaglio aide-mémoire of Piozzi to conjure up connections to Greco-Roman gem traditions. This essay will engage in a series of speculative imaginings of how gem impressions would demand tactile interaction from their antiquarian owner and how those interactions with a material object would act as an aide-mémoire to prompt connections to ancient gem traditions.



Figure 2. Unknown artist, *Portrait of a Lady*, ca. 1780–1789, The Walters Art Museum, Baltimore.

6. The Replica & Authenticity in the Eighteenth Century

Before turning to connections between gem impressions produced in the eighteenth century and ancient gems, a discussion on the seriality of gems and gem impressions in the eighteenth century will elucidate why gem impressions are considered signifiers of the ancient despite being a replica of an original object. The gem impressions discussed in this essay replicate three different types of hardstone gem originals. Artists took impressions directly from Greco-Roman hardstone gems. Gem impressions were also taken from modern gems made in emulation of ancient gems either by depicting an existing ancient artwork or a classicizing motif of the artist's own invention. Lastly, there were gem impressions taken from modern gems that purported to be ancient, usually through inclusion of an ancient gem engraver's signature, but could be forgeries. Gem impressions, no matter their original source, were all replicas taken from semi-precious, hardstone gems. This is very much in parallel to the ancient gems that they copy. In the Greco-Roman world, there existed the semi-precious hardstone gems alongside replicas of those originals made in glass called paste. When discussing connections to the Greco-Roman gem tradition, this essay will reference both Greco-Roman semi-precious hardstone gems and ancient replicas of those.

Replicas and seriality were common features of the eighteenth-century world and not unique to gem impressions. Eighteenth-century patrons clamoured for copies of the most famous Greco-Roman works, many of which were reproduced as plaster casts.[6] An example of the range of media into which replicas were made exists with the ancient Furietti Centaurs, sculpted marble centaurs originally found at Hadrian's Villa. The Furietti Centaurs were themselves part of their own ancient replica series alongside the Borghese

and Vatican Centaurs, also known during the eighteenth century. The Furietti Centaurs were replicated in full-scale sculpture, proving particularly popular as pendants for various entranceways in the eighteenth century.[7] Smaller scale replicas too played a large role in supplying their demands with statuettes, gem impressions, and micromosaics reproducing the centaur replica series.[8] For the eighteenth-century patron, a copy facilitated ownership of a famous ancient work of art and served both as a didactic tool and marker of learnedness.

Eighteenth-century attitudes toward these replicas seem not to be preoccupied with authenticity. Take, as an example, the gem impressions of James Tassie, a gem engraver and producer of gem impressions. Included in Tassie's expansive collection of gem impressions are 16 impressions of the so-called "Seal of Michelangelo," a very popular hardstone gem believed during the eighteenth century to be an ancient gem carved by Pyrgoteles for Alexander the Great and owned by Michelangelo who used it as his seal before it eventually settled in the King of France's collection (Raspe 1791, vol. 2, nos. 4373–90).[9] Tassie displays the impressions alongside one another and includes one taken from the original "Seal of Michaelangelo" but then also impressions taken from hardstone gems in imitation of the "Seal of Michelangelo." These include hardstone gems that either replicated or modified the composition of the original, such as those inspired by the engraving of Élisabeth-Sophie Chéron.[10] The text that accompanies Tassie's gem impressions candidly acknowledges the presence of these replicas stating of the impression taken from Count Henry de Bruhl's cornelian gem that it is "a fine copy, which approaches to the beauty of the original" (Raspe 1791, vol. I, p. 275). That impressions taken from the original gem, from replica gems, and from gems that modify the original composition exist side-by-side is testament to eighteenth-century attitudes that prized function over authenticity.[11] The words of Rudolph Erich Raspe from his 1791 introduction to Tassie's collection elucidate that function: "thus exhibiting, at one view, originals, copies and imitations, ancient and modern, good and bad, it shews their characteristic difference in an intuitive manner. These impressions, by frequent study, habituate the eye, better than books or prints, to this science" (Knüppel 2009, p. 58). Including a range of gem impressions taken from ancient and modern gems alike honed the connoisseurial eye. James Tassie, in an advertisement for a subscription to his impressions boasts of his inclusion of impressions from ancient gems but also from gems of "less enlightened ages" and from modern gems purporting that their inclusion was: "calculated to shew the origin, progress, highest perfection, decline, revival, and present state of the art; to satisfy the taste and various pursuits of collectors; and to assist the judgement of those who are desirous of buying originals" (Tassie 1788). An 1804 catalog of gems writes that "the casts or impressions [of gems] are just as valuable as the originals, for the purposes of art, and for their varied information" (Dagley 1804, p. 29). Thus, the use of the replica as a tool for developing aesthetic and erudite taste was valued over any concerns about authenticity.

Looking beyond Tassie, another example of eighteenth-century attitudes is found in the collection of Elizabeth Seymour Percy, the Duchess of Northumberland. The duchess made a record of her collection of gems in her nine-volume *Musaeum Catalogue.* In her list of gems she included a gem that she noted as "antique" amongst those noted as "after the antique" that were enamel and made by Dr. Quin, whom James Tassie assisted in taking copies of cameos (Scarisbrick et al. 2017, pp. xxviii–xxix). In her catalog, the duchess did not appear to mind the intermingling of ancient gem and eighteenth-century replicas which would suggest that authenticity was not a key factor at play in the recording of her collection. Furthermore, the presence of an "antique" onyx gem amongst enamel gem impressions of Quin suggests that the duchess regarded an impression as a signifier of the antique even though not authentically an ancient hardstone gem.

Contemporary scholars engaged in the study of eighteenth-century classical reception and souvenirs push back against binary notions of the authentic when it comes to replicas. Classical archaeologist Valentin Kockel suggests that any criticism of the display of ancient and modern gem impressions alongside one another is decidedly one-sided and stems from later interests; in fact, he also proposes that because eighteenth-century gem engravers were carving gems that corresponded to the aesthetic principles of antiquity that we could even understand eighteenth-century hardstone gems as ancient (Kockel 2006, p. 10).[12] Similar arguments about viewing serially produced objects as authentic stem from scholars engaged with study of souvenirs. For example, anthropologist Christopher Steiner, in a discussion on Walter Benjamin and authenticity, argues that tourist arts need to be addressed within the scope of mass production. Steiner suggests that souvenirs that replicate, copy, and provide a series should not be seen as inauthentic. Rather he asserts that the copy becomes associated with the truth since it commands authority through repetition (Steiner 1999, pp. 90–95). Art historian Sarah Benson echoes these same sentiments in her article on Grand Tour souvenirs where she advocates that repeatability created a standard of authenticity (Benson 2004, p. 33). Helen Slaney purports that when it comes to the haptic, "the actual authenticity of the artefact is immaterial." Instead, she locates the perception of authentic antiquity within the person touching the replica and not the object itself (Slaney 2020, p. 209). Thus, I approach gem impressions as signifiers of the ancient, if not necessarily ancient themselves or even taken from ancient gems. It is for this reason that this paper draws from gem impressions taken after ancient and modern hardstones, ancient hardstone gems and their ancient replicas, and collections of both gem impressions and ancient hardstone gems.

7. Function: Dactyliothecae & Seals

Turning to touch and gem impressions, each section in this article will first explore connections between eighteenth-century and ancient gem traditions on function, materials, production processes, and signatures, respectively. Following this, each section will end with an imaginative exploration of how tactile interactions with a gem impression might act as an aide-mémoire to prompt connections to ancient gem traditions. The first facet of touch explored in this article stems from two components of function as it relates to eighteenth-century gem impressions and their preceding Greco-Roman gem tradition: the collecting and storing of gems into *dactyliothecae* and the function of gems as seals. Antiquarians of the long-eighteenth century continued the Greco-Roman tradition of collecting intaglio and cameo gems and storing them in particular containers called dactyliothecae, which ties them back to the Roman world in which they were so interested. That ancient Romans collected and displayed gems is testament to the importance with which gems were also regarded during this time. According to Roman writer Pliny the Elder in his *Natural History*, the first collector of engraved gems was Marcus Aemilius Scaurus, the stepson of Sulla, who lived during the first century B.C.E. (Plin. *HN* 37.5). Pliny the Elder's *Natural History* was a source with which any Grand Tourist or antiquarian would be familiar as it served as a handbook for understanding ancient art and materials. Gem enthusiasts were drawn to his sections discussing material properties of different semi-precious hardstones. Pliny reports that ancient Romans gathered gems into collections called dactyliothecae, even giving these collections as dedications in temples, as demonstrated by Julius Caesar and Marcellus, the nephew of Augustus, who placed six dactyliothecae into the temple of Venus Genetrix (Suet., *Iul.* xlvii; Plin. *HN* 37.5). The term dactyliothecae comes from the Greek for dakytlios (ring) and theke (container), suggesting that these gems were displayed in some sort of box. In an 1805 publication, historian Johann Ferdinand Roth recounts these same ancient collectors of gems and their dactyliothecae (Roth 1805, p. iv). An entry for

dactyliotheca in a dictionary of fine arts begins recounting ancient dactyliothecae owned by the likes of Mithridates and Caesar before continuing to list owners of eighteenth-century dactyliothecae (Elmes 1826). Many dictionaries in the eighteenth century defined the term dactyliotheca; for example, it is included early on in the century in English-Latin dictionaries, such as Dr. Adam Littleton's, or later on in Diderot's *Encyclopedie* that connects the term dactyliothecae to gems under his entry for "écrain," a small container for storing gems (Littleton 1703, p. 91; Diderot and d'Alembert 1759, p. 296). These sources, alongside ancient sources like Pliny, are examples of how information disseminated to antiquarians about the ancient origins of this term. And collectors were eager to store their impressions in dactyliothecae.

When purchasing a collection of gem impressions, the collector of the long eighteenth-century participated in past Roman traditions both by collecting and storing their collection in a container. This container frequently took the shape of a cabinet full of drawers of gems and was also called a dactyliotheca, the form of which was popularized by Phillip Daniel Lippert, a connoisseur of ancient gems (Kockel 2006, p. 11). The distinguishing characteristics of dactyliothecae is that the gem impressions within them were arranged in a systematic way and were often accompanied by a written catalog (Knüppel 2020, pp. 111–12). Catherine the Great, for example, stipulated that her order of gem impressions from James Tassie should be housed in special cabinets (Dmitrieva 2013, p. 78). The cabinets were produced by a London cabinetmaker named Roach and were made in the neoclassical style (Kagan 2010, p. 141).

Interacting with gem impressions in a dactyliotheca was a tactile experience as suggested by a print included in the publication of the Duke of Orléans' collection of gems (Figure 3). Putti busy themselves with the Duke of Orléans' dactyliotheca pulling out drawers and examining their contents. Despite the allegorical nature of the subject, it is instructive of the close looking demanded by gem impressions. One putto in the foreground has nearly inserted himself into the drawer with one hand touching a gem and another that holds a signet ring presumedly plucked from the drawer. Another putto on the right of the composition pulls out a drawer, eyes level with and zeroed in on the contents. The frontispiece made by David Allan for James Tassie's *A Descriptive Catalog of Engraved Gems* depicts Minerva seated in front of a dactyliotheca which has spilled out some of its gem contents (Figure 4). The classical personification of Minerva, representing the collector, holds open the cabinet door as she gazes out at the viewer, as though inviting us to come closer to examine its miniature contents.

Antiquarians cannot interact with gem impressions from a distance; their minuteness makes them an actor in this interaction as they compel the antiquarian into a corporeal exploration through physical proximity, sight, and touch. And while an owner of a collection of gem impressions, such as Catherine the Great, might not actually insert herself into the dactyliotheca drawer in the same manner as the putto, we can imagine how she might have held open the cabinet door, pulled the drawers in and out of the cabinet, and grasped the sides of the drawer as she drew her face for closer viewing. In this sense, provoked by the materiality of the cabinet drawers touched, the dactyliotheca itself could encourage a material simulation of a Greco-Roman collector and their dactyliotheca. This is something that Helen Slaney articulates that collectors of ancient sculpture accomplished in their immersive displays, such as William Weddell's trio of chambers where he displayed his ancient sculpture. To facilitate this material simulation, Weddell's display not only included ancient sculptures that had been restored to completion, but also an architectural environment that echoed Roman buildings. Moving through and interacting with the space, the visitor found themselves in a simulation of ancient Rome (Slaney 2020, pp. 113–14).



Figure 3. Augustin de Saint-Aubin and Charles-Nicolas Cochin, engraving, 1779 (Coquille 1780, p. 2).

Much in the same way, the tactile interactions and corporeal movements of the body as the antiquarian interacted with the dactyliotheca accomplished a simulation of an ancient collector, such as Julius Caesar, with their dactyliotheca. Similarly to Weddell, collectors could also decorate their dactyliotheca with additional markers of antiquity to create an immersive environment. For example, Catherine the Great's dactyliotheca was neoclassical in style and embellished with white Wedgwood plaques, now lost (Kagan 2010, p. 141). Other dactyliothecae associated with Tassie are similarly adorned. For example, the likely British owner of a dactyliotheca from Göttingen also has white enamel medallions inspired by ancient portraits decorating the doors (Graepler 2010, pp. 443–44). Likewise, Tassie's frontispiece includes a dactyliotheca decorated with classical motifs (Figure 4). Furthermore, this dactyliotheca is illustrative of the way that collectors might have surrounded their cabinets with other ancient items in a neoclassical interior to create an immersive ancient environment.

One reason that eighteenth-century gem impressions held such great appeal stems from their state as an impression, a direct reference to the function of Greco-Roman intaglio gems. Ancient intaglios were often mounted in rings and used as seals of authenticity. The seal from an incised intaglio gem was represented in wax in relief. What is so interesting about eighteenth-century gem impressions is that they are most often produced in a raised relief format regardless of whether the impression was taken from an intaglio (engraved) or cameo (raised relief).[13] This would necessitate a multistep process for making a mold for any cameo from which a gem impression in raised relief was made. A gem engraver would need to take a mold of the cameo, which would produce a sunken relief version of the subject. Then a cast was produced from that sunken relief mold to produce an impression with a raised relief. In 1776, gem collector and scholar Johann Friedrich Christ affirms this primacy of the impression over the engraved semi-precious hardstone gem: "Der Abdruck ist das wahre Bild, und der Schnitt wird allein um des Abdruckes halber gemacht" (Knüppel 2009, p. 9). Christ sees the seal impression made from the engraved gem as the true artwork. This sentiment is echoed centuries later by classical archaeologist Daniel Graepler who asserts that it is only the relief gem impression that mattered to the eighteenth-century tourist (Graepler 2010, p. 439). An additional benefit of the raised relief

format of the seal impression was a clearer representation of the subject (Knüppel 2006, p. 17).



Figure 4. David Allan, frontispiece engraving, 1788 (Raspe 1791, vol. I).

Further evidence of the connection of eighteenth-century gem impressions to the function of ancient intaglios as seals is the material finishing of gem impressions. Many ancient intaglios were set in gold rings, which indicated their use as a personal seal. Gem impressions frequently made direct references to these settings via encasement in a gilt paper band. This imitation of a gold setting was evocative of ancient gem practices and served as a material reminder of eighteenth-century gem impressions' connections to Greco-Roman intaglio seals.

Returning to *Portrait of a Lady* (Figure 5), the antiquarian holds the gem impression on either side with her fingers touching the gilt band. The textural elements of the band would command attention to its materiality when touched. We can also imagine how this antiquarian would interact with the gem impressions in the drawer, running her fingers over the raised relief of the impression before encircling the gilt band with her touch. The textural differentiation between the smooth surface of the impression and the ridges of the gilt band would encourage attention to two material elements evocative of ancient sealing practices. Gem impressions prompted their antiquarian with another opportunity to bridge

connections between material components of eighteenth-century gem impressions and the way that intaglios functioned in the Greco-Roman world as seals.



Figure 5. Closeup of the hand holding the gem impression. Unknown artist, *Portrait of a Lady*, ca. 1780–1789, The Walters Art Museum, Baltimore.

8. Materials

Eighteenth-century gem impressions connect to Greco-Roman gems through the materials used to produce them. Take, for example, a gem impression of eighteenth-century engraver Nathaniel Marchant's Sleeping Ariadne included in Giovanni Liberotti's wooden box with three trays of plaster gem impressions from the most celebrated museums in Italy (Figure 6).

The plaster material with which these gems were copied was not limited to eighteenth-century use in facilitating gem impressions (Penny 1993, p. 191). In classical antiquity plaster was a commonly used medium and is attested as early as the seventh millennium B.C.E in the form of death masks from Jericho. Egyptians, Greeks, and Romans continued the production of death masks in the medium of plaster as well (Frederiksen 2010, p. 18). Eighteenth-century connoisseurs would have knowledge of the Greco-Roman tradition of casting in plaster thanks to ancient authors who discussed it. Pliny the Elder's *Natural History* documented that plaster was first employed as an artistic medium during the reign of Alexander the Great in the 4th century B.C.E. by Lysistratus of Sicyon who used it to take casts of faces to make more accurate portraits; Pliny then goes on to report that this same technology was also used to take casts from statues (Plin. *HN* 35.44). Pytheas is another artist that Pliny records who made metal cups that were prohibited from being reproduced via casting because the fine details of the cup would be liable to damage (Plin.

HN 33.55). Rune Frederickson suggests that several other passages from ancient authors also attest to making casts, even when authors do not explicitly use that terminology. For example, Plutarch writes about how envoys of Ptolemy I took away a statue of Pluto after having copied it and Pausanias notes a statue of Dionysus he observed made of plaster (Frederiksen 2010, pp. 21–22, 26). Therefore, the plaster material and its use in the process of casting was shared between Greco-Roman and eighteenth-century traditions. Earlier eighteenth-century antiquarians, well versed in these ancient authors who discussed plaster and casting, might also make these same connections as did Charles C. Perkins in his later 1869 publication (Perkins 1869), *Du moulage en plâtre chez les anciens*, in which he outlined the ways in which ancient people understood plaster casting. An eighteenth-century collector of plaster gem impressions could display learnedness of ancient materials and methods of production as they assessed the materiality of their own gem impression collection.



Figure 6. Nathaniel Marchant, Ariadne, after antiquity, Harvard Art Museums/Fogg Museum, Gift of the Massachusetts Historical Society, Photo © President and Fellows of Harvard College, 1910.12.1.43.

The material composition of gem impressions also contributed to the didactic functions of an eighteenth-century collection of gem impressions. An antiquarian interested in beginning a collection would acquire casts of famous gems in the same manner as they purchased plaster copies of the most famous statues (Scott 2003, p. 109). These sorts of collections were so popular because they facilitated comparison and study of gem types in a way that was not possible with the original semi-precious gems. Gem impressions allowed a connoisseur to own a greater variety of objects and the uniform nature of the impressions in either plaster or sulphur material made the gems physically similar, which better facilitated comparisons amongst works of different regions, styles, size, or time period (Gampp 2010, p. 510). Furthermore, the subject was more easily discernible with sulphur or plaster gem impressions, which were less translucent than the original hardstone gems from which they were taken (Riedl 2006, p. 127).

Anticipating the textural repetition that the eyes perceived, an antiquarian would verify the material sameness of their gem impressions via touch, much like Lady Anna Miller touching the Doves of Pliny mosaic to verify its materiality. Knowing that plaster was easily affected by touch, we can imagine how the antiquarian's fingertips might follow wear patterns on the surface of their gem impressions. The impulse to touch both ancient sculpture and its copy in the early modern world is testified by wear patterns on statues in museums.[14] While the white enamel and plaster materials would have been more challenging for the antiquarian eye to discern, the fingertip would note the rougher quality of the plaster's materials. Tactile engagement could elicit commentary on materials, manifesting connections between eighteenth-century plaster gem impressions and sculptures made of the same materials in ancient Rome. After Lady Anna Miller touched the mosaic stones of the Doves of Pliny, she discussed an artist's difficulties of working with such small tesserae on a copy of the Doves of Pliny mosaic (Miller 1777, pp. 167–68). The materiality of the ancient mosaic reminds Miller of the difficulties of working with those same materials in a copy. I suggest that the reverse could also be true, where the materials of a copy, such as the plaster of a gem impression, remind an antiquarian of the ancient material. Helen Slaney advances that the material of the souvenir excited its purchaser, and it was tactile interaction with an object made from the same materials as antiquity that enabled connections (Slaney 2020, p. 126).

9. Production Processes: Casting & Gem Engraving

Alfred Gell locates the power of objects in technological production suggesting that it is their "becoming rather than their being" where importance lays (Gell 2009, p. 214). The shared connection of the same production methods has the potential to collapse time between Greco-Roman and eighteenth-century gem traditions creating a powerful locus for eighteenth-century engravers who followed similar casting methods. In this section, two production processes shared by the eighteenth century and antiquity are explored: casting techniques and gem engraving processes.

Ancient artists utilized a casting process like that in the eighteenth century. Pliny the Elder in his discussion of Lysistratus making casts documents this process; Lysistratus first takes a plaster cast from the face and next pours wax into the plaster negative (Plin. *HN* 35.44). The process for taking a gem impression in the eighteenth century was very similar. First, a plaster mold was taken of the original gem and then the material, such as sulphur, was poured inside of it (Encyclopaedia 1798, vol. 7, p. 607; King 1866, p. 387). Therefore, by taking cast impressions of gems, gem engravers of the long eighteenth century were simply participating in ancient traditions of production linked to the very Roman culture by which they were inspired.

Even more striking is that in antiquity, Hellenistic and Roman artists took clay molds to produce copies of gems. These then resulted in glass copies called paste that were sometimes in imitation of the original semi-precious hardstone material (Boardman 1968, p. 25). A terracotta copy of a cameo depicting the bust of either a maenad or Apollo that dates to the 1st B.C.E.–1st C.E. is an example of an ancient copy in another medium (Henig 1994, no. 1071). Scholars in the eighteenth century were aware of such ancient cast reproductions of gems. For example, Johann Joachim Wincklemann was excited by an ancient paste copy of a drunken satyr (Boardman 1968, p. 30). In an entry on gems discussing gem impressions in a dictionary of the arts, the author suggests that taking gem impressions was an ancient practice:

> This art [of gem impressions], though only lately restored to any degree of perfection, is of very considerable antiquity. The great prices which the ancients paid for the elegant gems engraved by the celebrated Greek artists, could not but

> early suggest to them the idea of multiplying their numbers, by taking off their impressions in wax, in sulphur, in plaster, or in clay; but more particularly in coloured glass, or that vitrified substance commonly called paste. (Encyclopaedia 1798, vol. 7, p. 608)

The author goes on to write about how thanks to these pastes, they have impressions of lost ancient gems and lauds the value of these copies (Encyclopaedia 1798, vol. 7, p. 608). What these ancient examples of plaster casting and copying suggest is that gem engravers of the long eighteenth century utilized not only the same materials, but also engaged in the same production methods as were used in antiquity (Rudoe 1992, p. 24). Contemporary publications in the eighteenth century make clear that antiquarians were aware of these similarities in casting in the ancient world.

Reproduction through casting was a key material advantage for gem impressions in connection to their didactic function. A 1798 entry on gems in a dictionary of art purports that gem impressions are "...great objects of study and often require much learning to explain them. They have unquestionably served to extend and improve the art of engraving on stones; and have been of infinite use to painters, to statuaries, and to other artists, as well as to men of classical learning and fine taste" (Encyclopaedia 1798, vol. 7, p. 608). This continued utilization of gem impressions as a tool of learnedness is confirmed in a later 1866 publication on ancient gems, when Reverend King writes that the collector of gems should take every opportunity to examine cabinets of gem impressions since "he will have an opportunity of comparing every style, and thus by degrees of gaining the almost intuitive perception of antiquity, only to be acquired by practice" (King 1866, p. 385). The power of gem impressions lies precisely in their ability to reproduce for didactic purposes.[15] Naturally, no single connoisseur could own every possible kind of gem, hence the encouragement that King gives to examine any cabinet of gem impressions that you stumble upon. Plaster or sulphur was less expensively reproduced allowing for the assemblage of many gems in a single location where antiquarians and connoisseurs could hone their classical knowledge of subjects and style without the distraction of multi-colored hardstones.[16] Wealthy patrons, who could very well afford ancient gems, purchased and collected gem impressions, signaling the importance of the function of these collections as tools of learnedness (Seidmann 2004, p. 76).

Casts of objects lend themselves well to the idea of touch because they are, "contact relics...from the surface of the divine prototype, thus giving their own peculiar kind of authenticity" (Camille 1996, p. 198). Take, for example, a gem impression taken by Tassie from an ancient onyx gem from the Marlborough collection depicting Athena wearing a Corinthian helmet (Figure 7).[17] The sense of touch facilitated that interaction with "the surface of the divine prototype," the ancient gem, for the antiquarian. And even gem impressions whose "divine prototype" was a modern hardstone gem, remained capable of this transmission thanks to the sameness of their surfaces that also relayed a cast relief of a modern gem equally as evocative of ancient casting techniques. Helen Slaney suggests that ancient objects were relics of sorts and by handling the object, the antiquarian was able to re-enact ancient contact (Slaney 2020, p. 125). Touch itself would encourage thoughts about the surface the impression had once touched, thus facilitating connections much like the intaglio aide-mémoire of Hester Piozzi.



Figure 7. James Tassie, gem impression of a bust of Athena taken from a cameo in the Duke of Marlborough's collection, late eighteenth century, Victoria and Albert Museum, accession no. 748 toC-1870 (Raspe 1791, vol. I, no. 1595). © Victoria and Albert Museum, London.

Not only did gem impressions follow similar casting processes from antiquity, but eighteenth-century gem engravers also used the same tools for engraving gems as in antiquity. Ancient and modern engraver used the wheel cut method in which a bronze wheel rubs a powder made of emery into the stone that creates enough friction to cut into the hard surface. This section will examine the technical processes used to make the semi-precious hardstone gems from which gem engravers made casts to create gem impressions since gem impressions were linked closely to their hardstone sources.

Many eighteenth-century gem engravers produced their own neoclassical gems from which gem impressions were taken. An example of this can be found in Giovanni Liberotti's collection of gem impressions with a cast of a gem depicting Venus that is signed by one of the Pichlers, an eighteenth-century gem engraving family (Figure 8). The catalog for Tassie's collection, written by Raspe, in which this gem impression is also included mentions that the original semi-precious hardstone from which the cast was taken was cornelian (Raspe 1791, vol. I, p. 127). This is common practice for this catalog with impressions taken from ancient and modern gems alike and indicates the importance assigned to the hardstone gem source of the impression. Further connecting gem impressions to their engraved hardstone gem sources is the way that sources on gem impressions typically discuss technical production methods. For example, in his introduction to Tassie's catalog, Raspe lays out the process to engrave a gem and cites Pliny as his source: "It implies a complex knowledge and skilful use of metals and mechanical powers: and by the drill and wheel, which Pliny calls terebra and rola, it gives to the Lapidary, Engraver, and Statuary a full and easy command of the hardest stones, when properly assisted with sharp powders of emery or diamond" (Raspe 1791, vol. I, p. viii). Raspe then continues on to give a very detailed history of gem engraving dating back to ancient times. Johann Ferdinand

Roth makes plain the connection between ancient cutting of stones described by Pliny and eighteenth-century production: "Wenn man das, was Plinius d) von der Art, wie man in edle Steine schnitt, sagt, genauer untersucht, so entdekt man, daß die Alten beym Steinschneiden fast eben so verfuhren, wie die Neuern. Sie haben sich des Rades bedienet, wie die Unsrigen, so, wie der eisernen oder metallenen Werkzeuge, welche man Grabeisen nennet. . ." (Roth 1805, p. 102). Eighteenth-century antiquarian publications, such as Roth's, made the connection between the similarities in the practices of cutting gems in antiquity and in the eighteenth century.



Figure 8. After Skopas; Pichler family, Capitoline Venus, after Skopas, Harvard Art Museums/Fogg Museum, Gift of the Massachusetts Historical Society, Photo © President and Fellows of Harvard College, 1910.12.1.37.

The links between eighteenth-century and Greco-Roman production of gems was important to antiquarians. Eighteenth-century voices taut the ways in which their production methods match or rival those of the ancients. For example, a discussion of gems in a dictionary of art recounts that "this art, though only lately restored to any degree of perfection, is of very considerable antiquity" (Encyclopaedia 1798, vol. 7, p. 608). So similar were the results between ancient and eighteenth-century gem engraving, in fact, that George Cumberland writes that one must be wary of distinction between modern and ancient gems: ". . .for some [engravers] have by practice arrived in executing intaglios and cameos much nearer the Greeks than in any other branch of the fine arts and in copying fine ancient pastes" (Cumberland 1796, p. 23). Gem impressions preserved the cuts of the drill and wheel technology of both ancient and modern hardstone originals alike, further reinforcing material similarities between eighteenth-century and ancient production for collectors. The

gem impressions gave collectors an opportunity to voice knowledge of ancient production, and how eighteenth-century gem engravers had matched it.

The fascination of a miniature object lies in its production processes that appear to require more skill due to the minute scale on which the artist is working (Flechsig 2004, p. 16). This preoccupation with the miniature is exemplified by Johann Ferdinand Roth who in his publication expresses incredulity that some scholars speculate that ancient gem engravers did not use a magnifying glass during their production processes (Roth 1805, p. 110). In depictions of gems, the magnifying glass often works as a signifier for the minute scale of gem impressions and by extension, their production processes. An engraving for *Traité des Pierres Gravées* by Pierre Soubeyran and Edmé Bouchardon explicitly connects the act of production with tactile and visual investigation (Figure 9). One putto cuts gems while looking back at the goddess Minerva who acknowledges the putto's craft. The other putto leans over a tray of gems, holding one gem in his hand and a magnifying glass with which to study the gem in the other. His task in which he is engrossed is corporeal; the putto is drawn close to the dactyliotheca drawer and uses his hands to facilitate further understanding of the gem. The alignment of the putto studying gems with the putto above him who cuts a gem visually unites production processes with the tactile and visual modes that the minute composition demands. The antiquarian too would marvel at the technical wonder of their gem impressions taken from these cut hardstones, aided by their magnifying glass. We can imagine the antiquarian in *Lady in a Portrait* (Figure 2) bending over a drawer of gem impressions, using one hand to encircle an impression and the other to hold her magnifying glass looking in awe of the skilled production methods of the gem engraver.



Figure 9. Pierre Soubeyran and Edmé Bouchardon, engraving, 1750. (Mariette 1750, p. 1).

An engraving in Roth's *Mythologische Daktyliothek* connects gem cutter and collecting as the gem engraver is busy at work cutting the stone next to a dactyliotheca (Figure 10). Interestingly, the drawer of the cabinet is opened to reveal the gems inside inviting a comparison between the finished product and technical process of production. The embellishment of the room with medallions of classical busts and classicizing statuette atop the dactyliotheca contribute to creating an immersive environment in which the gem engraver enacts a material simulation of the ancient world. As Alfred Gell argued, the power of objects "resides in the symbolic processes they provoke in the beholder" (Gell 2009, p. 215). In the case of gem impressions and their hardstone sources, the symbolic process is how, with touch, temporality is abolished, and the antiquarian marvels over the shared atemporal locus in which ancient and modern gem engraver come together and use the same awe-striking technical processes.

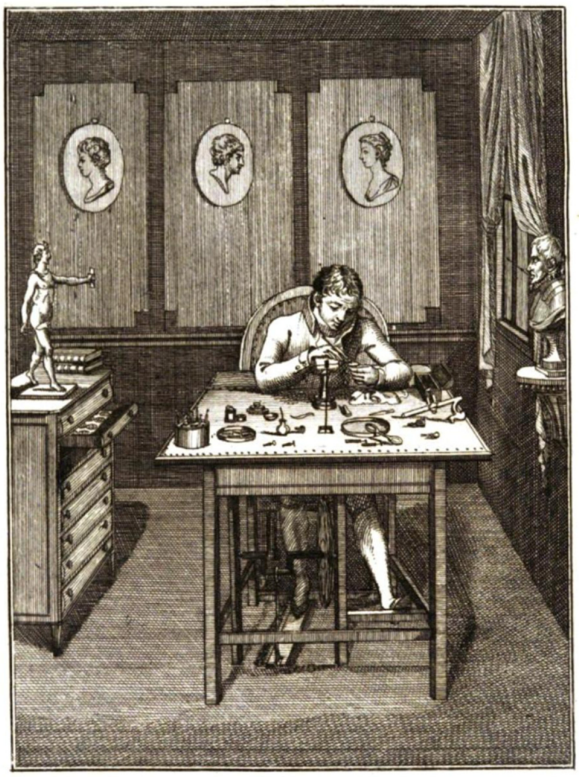

Figure 10. Johann Ferdinand Roth, the stone cutter at work at his workbench, 1805. (Roth 1805, Figure 1).

10. Artistic Production: Ancient & Modern Artists' Names on Gems

The presence of the artist's name on gems and gem impressions evoked the renown of the artist's skills for both modern and ancient artist alike. Modern artists frequently added their name in the same ancient languages as ancient artists did on Greco-Roman gems. This section will highlight how the name of the artist on gems and gem impressions acted as a signifier of the ancient and for the production processes of the artist.

Alfred Gell's framework of the power of enchantment translates to the production process of gem impressions that was frequently linked intimately with the artist. The enchantment of the production stems from the "fact that it was created by the agency of another person, the artist" (Gell 2009, p. 218). Jean Baudrillard also discusses how fascination with an object often derives from the artist whose marks of labor are "still inscribed thereupon" (Baudrillard 2009, p. 43). The marker of that agency of the artist on the gem impression is the inclusion of their name, a material mark of the artistic production processes that would evoke awe in the antiquarian who marveled at the miniature letters.

The very presence of the name of the artist evoked the technical mastery and renown of the gem engraver, which connects the Greco-Roman and eighteenth-century traditions related to the signature. One of the most famous gem engravers from antiquity was the Roman artist, Dioskourides. Roman historian Suetonius attests that Dioskourides was the maker of the emperor Augustus's intaglio seal that featured a portrait of the emperor; so influential was this intaglio that it served as the basis for future emperors who also used portraiture on their own intaglio seals (Suet., *Aug*. 50). Dioskourides' renown is attested not only by literary sources and his clientele, but also by his surviving signature in Greek on highly crafted gems. The discussion of Dioskourides, and other gem engravers, in literary sources suggests the esteem with which these artists were held in Roman times. Eighteenth-century collectors recognized that esteem and clamored to collect gems by known ancient gem engravers, which led to an increase in market value of signed gems.

Take, for example, the publication by Stosch that included seven engravings of gems by Dioskourides (Stosch 1724, pl. XXV, XXVI, XXVII, XXVIII, XXIX, XXX, XXXI). This is double the number of any other named ancient gem engraver reproduced from the collection revealing a clear focus on an ancient artist established as great by Pliny.

Eighteenth-century gem engravers also had important patrons and were likewise noted for their artistry. For example, the Pichler family, who frequently signed their works, had important patrons such as Francis I of Vienna (Seidmann 2006, pp. 211–12) or the Empress Josephine (Rollett 1874, p. 46). Nathaniel Marchant was a prominent engraver both in Rome and in London where he acquired many important clientele, including his early patron, the Fourth Duke of Marlborough (Seidmann 1985, p. 59). In a 1768 letter, he made clear his position as a confident artist stating that he was increasingly disassociating himself from mere seal-engravers who were only concerned with mechanical reproduction (Seidmann 1989, p. 7). In his 1792 catalog, *One Hundred Impressions from Gems*, Marchant is praised as a connoisseur of ancient art:

> He is the first Englishman who has examined those inestimable remains of ancient art on the spot, where alone they can be studied to advantage. . .the copies from the antique are rendered with all the fidelity he is capable of bestowing upon them; and a particular attention has been shewn to preserve, as much as possible, the distinguishing character and style of execution which pervade the originals. (Edwards 1792, pp. ii–iii)

That Marchant was the first Englishman to study statues in person in Rome relays his devotion to the art of gem engraving since previously artists had only studied from prints or plaster casts (Seidmann 2004, p. 77). The importance of this stay in Rome is demonstrated by a gem impression taken after his gem of the sleeping Ariadne that Marchant signed in Latin, "MARCHANT F. ROMAE" (Figure 6). The "F." in this phrase was short for "fecit" which communicated that Marchant produced this in Rome. James Tassie, who carved gems and produced gem impressions alike, was also renowned for his work. Perhaps his most famous patron was Catherine the Great who in 1786 requested the entirety of Tassie's impressions, along with a scientific catalog, for her comparative studies (Holloway 1986, p. 13). And while Tassie's artistry was not materially included with his name like Pichler or Marchant, his collection was acclaimed for its great size and artistry: "But of all the artists and ingenious men who have taken impressions of engraved gems in sulphur and in paste, no one seems to have carried that art to such perfection as Mr. James Tassie" (Encyclopaedia 1798, vol. 7, p. 609).

When choosing to sign their works to convey their renown, many eighteenth-century gem engravers engraved their name in Greek letters, making a clear reference to Greco-Roman gem traditions (Seidmann 1983, p. 15). This practice further blurs the boundary between ancient and modern, providing fodder for Valentin Kockel's argument that we should think of modern gems as ancient. For example, the gem impression made by the Pichler family that depicts the Capitoline Venus has "ΠΙΙΚΛΕΡ" inscribed to the left of Venus (Figure 8). Another example is eighteenth-century engraver Johann Lorenz Natter who signed his own gems in Greek or Latin translating as, "Natter made me," a common convention also in ancient Greco-Roman signatures (Rudoe 1996, p. 209).[18] The practice of signing names in Greek extends back to when ancient Roman gem engravers would transliterate their names into Greek in order to maintain the connection to Greek gems with artist signatures in Greek.[19] Therefore, eighteenth-century gem impressions preserve an enchantment of artistic production linked to the artist that manifests materially through their names, often in Greek, that would prompt their viewers to think of the long tradition of signatures extending back to the Greco-Roman world.

Eighteenth-century antiquarians had great familiarity with the convention of ancient names of artists on ancient gems. Not only did they have the material evidence that survived, but it was a frequent topic of eighteenth-century publications. For example, an early 1717 French antiquarian Charles Cesar Baudelot de Dairval published a book on gems inscribed by the ancient artist Solon (de Dairval 1717). Baron von Stosch published *Gemmae Antiquae Caelatae* in 1724 which focused on discussing ancient gems with ancient signatures. Raspe wrote about how many ancient Roman artists signed their names in Greek and speculated that this was because they were Greeks living in Rome (Raspe 1791, vol. 1, p. xxx). There were also ancient sources, such as Pliny the Elder, who served as an authority on ancient artists during the eighteenth-century as tourists delighted in seeing works of art credited to artists from his writings. Pliny records the names of ancient gem engravers including Pyrgoteles, Apollonides, Cronius, and Dioskourides (Plin. *HN* 37.4). Baron von Stosch's publication augmented the known corpus of ancient gem engravers previously known from Pliny. Any purchaser of gem impressions would be familiar with sources like Pliny and the signatures on gem impressions would present a collector with an occasion to forge connections between the artistic renown of eighteenth-century and ancient gem engravers.

A gem impression from Tassie's collection that depicts Perseus and includes the name of the famous ancient engraver Dioskourides serves as a case study in understanding eighteenth-century attitudes toward the name of the artist as a signifier of the antique (Figure 11). This gem impression, however, is not taken from an ancient gem. Instead, it is an impression from a modern gem inspired by an ancient gem of Perseus by Dioskourides that was illustrated by Bernard Picart in *Gemmae Antiquae Caelatae* (Figure 12). The Medusa on Perseus' shield depicted on Tassie's gem impression does not follow the traditional iconography of Medusa on the original gem illustrated by Picart. While some gem engravers inscribed gems with made up Greek names or with those recorded by ancient authors, such as Pliny, in order to pass off a gem as ancient, others carved gems and ascribed an ancient name onto them as an exercise in copying masterworks (Rudoe 1992, pp. 24–25; Hansson 2014, p. 22). Inclusions of gem impressions taken from modern gems that modified an ancient original, such as this one of Perseus, were frequently displayed next to other similar subjects, as was the case with the "Seal of Michelangelo." For example, this impression of Perseus lays in a tray next to the impression taken from the original ancient gem.[20] Gem impressions taken from eighteenth-century gems that imitated ancient gems, like this one with Dioskourides' name, should be interpreted through an eighteenth-century lens of attitudes toward the authentic that prioritized aesthetics and didacticism, as discussed at the beginning of this essay. It matters not that a modern artist made the Perseus gem and not Dioskourides; the inclusion of the ancient artist's name on a modern gem of the same subject gives the antiquarian an opportunity to reflect on that ancient artist and their work. The presence of the artist's name signifies the renown of the production skills of an ancient artist.

Turning to Picart's engraving of the original gem, the signature of the artist is clearly delineated in the drawing of the gem (Figure 12). But more striking is the font proclaiming the gem to be the work of Dioskourides in the plaque below; it is larger than any of the surrounding identifying information about the gem. Thus, the engraving demands that its viewer takes note of the ancient artist. This large proclamation illustrates the importance of the inclusion of an ancient artist's name on a gem during the eighteenth century. Thus, modern artists frequently included either their own name transliterated into Greek, or the name of an ancient artist in Greek on their gems; its presence asserts connections to the Greco-Roman gem cutting tradition and therefore acted as a signifier of ancient artistic production.



Figure 11. James Tassie, Perseus with the shield of Medusa taken from a cornelian gem in the collection of the Duke of Marlborough made by Toricelli or Natter, late eighteenth century, Victoria and Albert Museum, accession no. 748 toC-1870 (Raspe 1791, vol. 1, no. 8868). © Victoria and Albert Museum, London.

The frontispiece from the publication of the Duke of Orléans' gem collection is instructive for thinking about how an antiquarian, such as Catherine the Great, might have interacted with the name of Dioskourides on the gem impression of Perseus (Figure 13). Both of putti in this illustration hold intaglio gems embedded in signet rings from the dactyliotheca of the duke, at left, directly in front of their eyes, emphasizing the minute nature of the compositions and the agency that gems have for demanding close, corporeal investigations (Figure 14). Much like the open gem catalog next to the putto on the right, we can imagine how Catherine the Great would similarly consult her own scientific catalog of impressions that she requested from Tassie while interacting with her gem impressions. These catalogs typically note the material, subject, and any artist associated with the gem and its proximity to the putto during his study is telling of its integral role in examining gems. In her own investigation, Catherine the Great might similarly consult the catalog next to her as she notes how Raspe writes that the gem impression of Perseus is "a modern engraving by Toricelli or Natter. ΔΙ'ΟCΚΟΥΡΙΔΟΥ" (Raspe 1791, vol. II, p. 521). She then might turn to her tray of gem impressions to corroborate the artist's name with touch, much like Lady Anna Miller used touch to verify materials. The gem impression would demand

the kind of tactile and corporeal close looking illustrated by the frontispiece (Figure 14). The putto on the right bends over as he holds a magnifying glass to augment his inspection of the signet ring he holds right before his eyes. While Catherine the Great might have not picked up her gem impression, we can imagine how she would bend over her tray from her dactyliotheca while tactilely investigating the Greek letters on the gem impression, recalling the great works that Dioskourides produced. As she touched the letters, they would call attention to their miniature size as her finger eclipsed each one, stimulating her to marvel at the skill of the modern artist to produce such minute letters. A magnifying glass in her other hand, as the putto models, would facilitate a closer visual investigation of the artist's name, allowing for an additional opportunity to consider the artist's skills. Perhaps Catherine the Great then moved on within the drawer closely examining other renditions of the same Perseus as she used one hand to touch gem impressions and the other to look closely with the aid of a magnifying glass. The impressions lined up in rows would prompt careful comparison and the empress would lean in closer. She would notice slight iconographic differences between the impressions of Perseus with the name of Dioskourides. Being an antiquarian with a self-described "gluttony" for gems (Kagan 2010, p. 139), she might use this opportunity to recall ancient gem engravers more generally or more specifically how ancient engravers carved the same subjects and then affixed different names to them, such as with the case of a representation of Diomedes and the Palladium signed by five different well-known ancient Roman gem engravers (Richter 1971, p. 6).

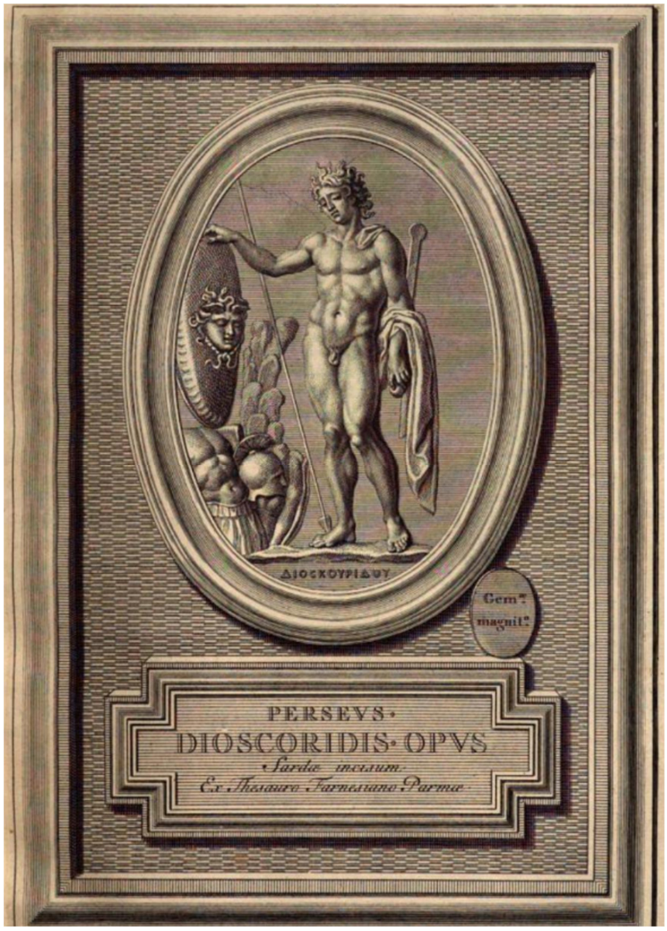

Figure 12. Bernard Picart, Perseus, work of Dioskourides, engraved sard from the Farnese treasury of Parma, 1722 (Stosch 1724, pl. XXX).



Figure 13. Augustin de Saint-Aubin after Charles-Nicolas Cochin, frontispiece engraving, 1778 (Coquille 1780, vol. I).

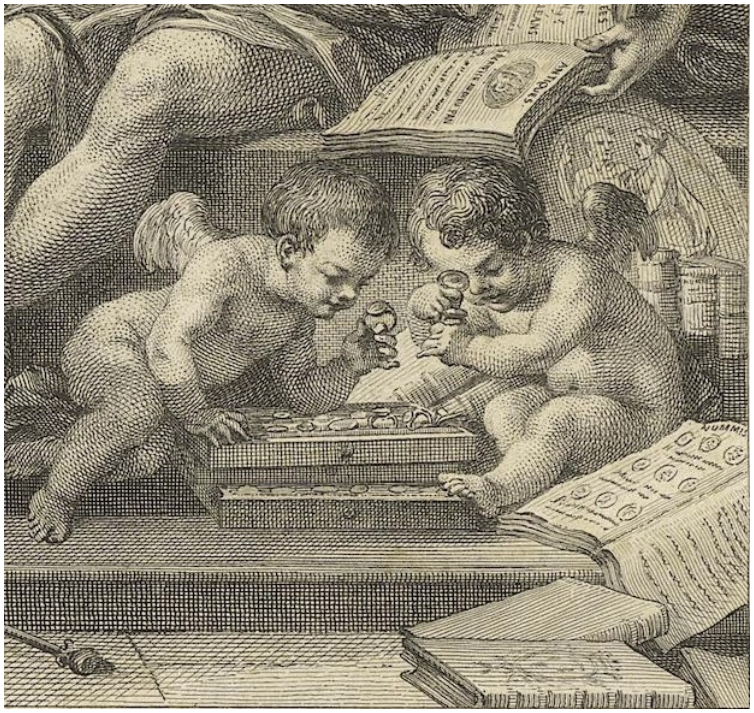

Figure 14. Closeup of Augustin de Saint-Aubin after Charles-Nicolas Cochin, frontispiece engraving, 1778 (Coquille 1780, vol. I).

11. Conclusions

Throughout this article, I have imagined how antiquarians explored their gem impressions through tactile and corporeal interactions with their physical components. The impressions themselves were active agents in inviting these interactions at a close physical proximity thanks to their miniature scale. Touching a miniature object that was a signifier of the ancient served to activate material connections, creating a locus where the eighteenth-century and Greco-Roman worlds come together much in the way that Hester Piozzi imagines how an intaglio could evoke the suffering of an ancient Pompeian.

In his essay "On Weaving a Basket" Tim Ingold advocates that we should not see the surface of an object as dividing the material's nature, whether natural or synthetic, from the human mind, but rather that we should conceptualize them as engaged in a process of continual interweaving. Too often, Ingold asserts, we see culture as something that "...wraps itself around the universe of material things, shaping and transforming their outward surfaces without ever penetrating their interiority" (Ingold 2009, pp. 82, 89–90). In some ways, what Ingold writes is literally attested in the case of gem impressions. Antiquarians hold gem impressions as though extension of self, inserting themselves into a long continuum of historical gem traditions. I have suggested that touch has served to activate connections to the classical world, thus melding the gem impression with the corporeal through handling. Constance Classen writes that "touch annihilates distance and physically unites the toucher and touched" (Classen 2012, p. 141). In this case the antiquarian is united with classical antiquity through touch. Conceptually too gem impressions are exemplary of Ingold's ideas that materials and the mind are continually engaged in an interwoven process. It is difficult to untangle from one another all the connections that existed in eighteenth-century gem impressions that conflated the temporal worlds of the eighteenth century with Greco-Roman antiquity. The use of similar functions, materials, production techniques, and the material markers of artists' names led to a blurred division between the eighteenth-century and Greco-Roman worlds, which I suggest contributes to the impetus to collect gem impressions alongside didacticism. Through touch, a collector could tout their learnedness of the ancient world as they used the material object at their fingertips to elucidate ancient gem practices.

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Notes

1 Contemporary accounts often refer to these gems as "modern" so I will use this same term.

2 James Byres, for example, referred returning British Grand Tourists to James Tassie, a gem engraver who made impressions and was based in London (Holloway 1986, p. 11).

3 Examples of more general studies include: Marchard (1998) and Kockel and Graepler (2006).

4 Charles Jervas, *William Cavendish, 2nd Duke of Devonshire,* 1710s. Chatsworth House, Bakewell.

5 Giuseppe Zocchi, *Portrait of Antonio Maria Zanetti with Marchese Gerini examining gems and paste*, c. 1740, Museo Correr, Venice.

[6] See Haskell and Penny (1981) for an overview of copies of sculpture.

[7] A select few examples: Joseph Nollekens acquired casts from Cavaceppi in 1765 for the entrance hall at Shugborough in Staffordshire (Haskell and Penny 1981, p. 178). Popular pendants, for example, include two casts that flanked the entrance hall of the Somerset House in London, two centaurs that flanked a bridge in a park of the Schloβpark von Pawlowsk, and the two centaurs also that decorated another bridge in the park of the Château de Malmaison of the Empress Josephine (Morawietz 2005, pp. 60–61).

[8] A select few examples: Giacomo and Giovanni Zoffoli produced small-scale bronze sculptures of the Furietti Centaurs (Teolato 2010, p. 234) and the Borghese in bronze (See Appendix in Haskell and Penny 1981, p. 179), a biscuit pairing of the Borghese and Vatican Centaurs by the Real Fabbrica Ferdinanda in the Galleria Nazionale di Capodimonte (Stefani 2011, Figure 86), a biscuit statuette of the Borghese Centaur by Filippo Taglioni from the Real Fabbrica Ferdinandea in the Galleria Nazionali di Capodimonte (Caròla-Perrotti 1986, Figure 441b), a biscuit statuette of the Vatican centaur by Volpato in the Pianoteca Capitolina (Brook and Cruzi 2010, cat. 102), a micromosaic plaque of a Centaur with a Cupid in a private collection (Grieco and Gambino 2001, p. 108), and a gem of Borghese Centaur by Paoletti (Stefanelli 2012, vol. 2, p. 322).

[9] Michelangelo's seal turned out not to be made by Pyrgoteles but instead by the Renaissance artist Pier Maria de Pescia, as was revealed in 1804 (Altun 2024, p. 122).

[10] For more on this see Altun (2024).

[11] Rachel Kousser makes a similar interpretive argument for ancient sensibilities regarding replica series of sculpture. She argues that it was neither fidelity nor innovation that mattered to Roman patrons but rather the way that the work fulfilled a function in the Roman house. She advocates that the priority of function accounts for the fact that both exact copies and eclectic modifications from the original existed simultaneously (Kousser 2008, p. 150).

[12] This is realized by gem engraver Giovanni Pichler who writes in his catalogue that his imitation of ancient art had reached such a state of perfection that his works of art should be considered ancient (Knüppel 2006, p. 22).

[13] Connell attributes the preference for relief impressions for easier viewing (Connell 2023, p. 241).

[14] An example of this same thing with a copy is illustrated by a bronze copy of an ancient sculpture of a wild boar in the Uffizi. The nose of the boar is worn shiny with touch (Haskell and Penny 1981, p. 163).

[15] That gem impressions were a copy seemed an easily dismissed issue in the eighteenth century as one antiquarian flippantly wrote of gem impressions: "...and as to the false notion, that by multiplying impressions, we lessen the value of our original; let us ask what liberal mind has less enjoyment of a fine Arabian horse, because it is exposed to the eyes of the multitude?" (Cumberland 1796, p. 36).

[16] An extremely wealthy collector of gems, such as the Duke of Marlborough, could make semi-precious hardstone copies of his engraved gems, however, many collectors of more modest means chose sulphur, plaster, or vitreous paste (Seidmann 1997, p. 265). Occasionally gem impressions would be reproduced in many different colored sulphurs, but this was the exception.

[17] The Marlborough gem, though ancient, was reworked some during the eighteenth century (Boardman 2009, no. 491). This was a very common eighteenth-century practice both with sculpture and with engraved gems (Graepler 2010, pp. 441–42; Ramage 2002, pp. 61–78).

[18] Natter even went so far as to sign his own name to unsigned ancient gems, extending his ownership as an artist to ancient gems as well. He was frank about how he signed ancient names to modern gems. For example, he admitted to engraving the name of ancient engraver Aulos on a gem that he copied from Francesco Vettori's gem collection (Hansson 2014, p. 22).

[19] This is the example with the Roman gem engraver Aulus who signed his name in Greek as Aulos, "ΑΥΛΟΣ" (Richter 1971, pp. 129–30).

[20] This was common practice and is attested in the first dactyliotheca of Lippert who places an impression of Lorenz Natter's imitation of the "Aspasia gem" next to the impression of the original (Knüppel 2020, p. 122).

References

Allan, David. 1781. *James Tassie, 1735–1799, Sculptor and Gem Engraver*. Scotland: National Galleries. Available online: https://www.nationalgalleries.org/art-and-artists/3956?artists%5B4483%5D=4483&search_set_offset=5 (accessed on 11 October 2025).

Altun, Yasemin. 2024. 'Michelangelo's Seal' in Translation: Élisabeth-Sophie Chéron and the Polemics of Print. *Studies in Eighteenth-Century Culture* 53: 119–66. [CrossRef]

Barry, James. 1767. *Self-Portrait with James Paine and Dominique Lefévre*. London: National Portrait Gallery. Available online: https://www.npg.org.uk/collections/search/portraitExtended/mw00371/James-Barry-Dominique-Lefvre-James-Paine-the-Younger (accessed on 11 October 2025).

Baudrillard, Jean. 2009. Subjective Discourse or the Non-Functional System of Objects. In *The Object Reader*. Edited by Fiona Candlin and Raiford Guins. London: Routledge.

Benson, Sarah. 2004. Reproduction, Fragmentation, and Collection: Rome and the Origin of Souvenirs. In *Architecture and Tourism: Perception, Performance, and Place*. Edited by D. Medina Lasansky and Brian McLare. Oxford: Berg.
Betzer, Sarah. 2022. *Animating the Antique: Sculptural Encounter in the Age of Aesthetic Theory*. University Park: Pennsylvania State University Press.
Boardman, John. 1968. *Engraved Gems: The Ionides Collection*. London: Thames and Hudson.
Boardman, John. 2009. *The Marlborough Gems: Formerly at Blenheim Palace*. Oxfordshire: Oxford University Press.
Brook, Carolina, and Valter Cruzi, eds. 2010. *Roma e l'antico: Realtà e visione nel '700*. Milano: Skira Editore.
Camille, Michael. 1996. Rethinking the Canon: Prophets, Canons, and Promising Monsters. *Art Bulletin* 78: 198–201. [CrossRef]
Caròla-Perrotti, Angela, ed. 1986. *Le Porcellane dei Borbone di Napoli*. Napoli: Guida editori.
Classen, Constance. 2012. *The Deepest Sense: A Cultural History of Touch*. Urbana: University of Illinois Press.
Connell, David. 2023. Hiding in Plain Sight: Collections of Sulphur Gem Impressions by Christian Dehn, Surviving Unrecognized in British Country Houses. *Journal of the History of Collections* 35: 241–54. [CrossRef]
Coquille, Henri. 1780. *Description des Principales Pierres Gravées du Cabinet de S.A.S. Monseigneur le duc d'Orléans, vol. I*. Paris: La Chau and Le Blond.
Cumberland, George. 1796. *Thoughts on Outline, Sculpture, and the System That Guided the Ancient Artists in Composing Their Figures and Groupes: Accompanied with Free Remarks on the Practice of the Moderns, and Liberal Hints Cordially Intended for Their Advantage. To Which Are Annexed Twenty-Four Designs of Classical Subjects Invented on the Principle Recommended in the Essay*. London: W. Wilson, St. Peter's-Hill, Doctors'-Commons.
Dagley, Richard. 1804. *Gems Selected from the Antique*. London: J. Murray.
de Caylus, Anne Claude. 1744. Mémoire su les pierres gravées. *Historie de l'Académie royale des inscriptions et belles-lettres* 19: 239–49.
de Dairval, Charles Cesar Baudelot. 1717. *Lettre sur le pretendu Solon des pierres gravées: Explication d'une médaille d'or de la famille Cornuficia*. Paris: Chez Jean-Baptiste Lamesle.
Diderot, Denis, and Jean Le Rond d'Alembert. 1759. *Encyclopédie, ou Dictionnaire raisonné des sciences, des arts et des métiers, t. 5*. Paris: Chez Briasson.
Dmitrieva, Elena. 2013. On the Formation of the Collection of Gem Impressions in the State Hermitage Museum. *Journal of the History of Collections* 25: 77–85. [CrossRef]
Duncan, Thomson. 2003. The Letters of James and William Tassie to Alexander Wilson: 1778–1826. *The Volume of the Walpole Society* 65: 1–87.
Edwards, James. 1792. *A Catalog of One Hundred Impressions from Gems*. Engraved by Nathaniel Marchant. London: J. Edwards.
Elmes, James. 1826. Dactyliotheca. In *A General and Bibliographical Dictionary of the Fine Arts*. London: Printed for Thomas Tegg.
Encyclopaedia. 1798. *Encyclopaedia; or, A Dictionary of Arts, Sciences, and Miscellaneous Literature. . . Compiled from the Writings of the Best Authors, in Several Languages . . . Illustrated with Five Hundred and Forty-Two Copperplates*. Philadelphia: Thomas Dobson, vol. 7.
Flechsig, Katrin S. 2004. *Miniature Crafts and Their Makers: Palm Weaving in a Mexican Town*. Tucson: The University of Arizona Press.
Frederiksen, Rune. 2010. Plaster Casts in Antiquity. In *Plaster Casts: Making, Collecting, and Displaying from Classical Antiquity to the Present*. Edited by Rune Frederiksen and Eckart Marchand. Berlin: De Gruyter.
Gampp, Axel. 2010. Plaster Casts and Postcards: The postcard edition of the Musée de Sculpture Comparée at Paris. In *Plaster Casts: Making, Collecting, and Displaying from Classical Antiquity to the Present*. Edited by Rune Fredericksen and Eckart Marchand. Berlin: De Gruyter.
Gell, Alfred. 2009. The Technology of Enchantment and the Enchantment of Technology. In *The Object Reader*. Edited by Fiona Candlin and Raiford Guins. London: Routledge.
Gołyźniak, Paweł. 2016. The Impact of the Poniatowski Gems on Later Gem Engraving. *Studies in Ancient Art and Civilization* 20: 173–92. [CrossRef]
Graepler, Daniel. 2010. A Dactyliotheca by James Tassie and Other Collections of Gem Impressions at the University of Göttingen. In *Plaster Casts: Making, Collecting, and Displaying from Classical Antiquity to the Present*. Edited by Rune Fredericksen and Eckart Marchand. Berlin: De Gruyter.
Grieco, Roberto, and Arianna Gambino. 2001. *Roman Mosaic: L'arte del micromosaico tra '700 e '800*. Milano: De Agostini Rizzoli Arte & Cultura.
Hall, James. 1999. *The World as Sculpture: The Changing Status of Sculpture from the Renaissance to the Present Day*. London: Chatto and Windus.
Hansson, Ulf R. 2014. 'Ma passion. . .ma folie dominante': Stosch, Winckelmann, and the Allure of the Engraved Gems of the Ancients. *MDCCC 1800* 3: 13–33.
Haskell, Francis, and Nicholas Penny. 1981. *Taste and the Antique: The Lure of Classical Sculpture 1500–1900*. New Haven: Yale University Press.
Henig, Martin. 1994. *Classical Gems: Ancient and Modern Intaglios and Cameos in the Fitzwilliam Museum, Cambridge*. Cambridge: Cambridge University Press.

Holloway, James. 1986. *James Tassie*. Edinburgh: National Galleries of Scotland.
Ingold, Tim. 2009. On Weaving a Basket. In *The Object Reader*. Edited by Fiona Candlin and Raiford Guins. London: Routledge.
Kagan, Julia. 2010. *Gem Engraving in Britain from Antiquity to Present: With a Catalogue of the British Engraved Gems in the State Hermitage Museum*. Oxford: Archaeopress.
King, Rev C. W. 1866. *Antique Gems and Their Origins, Uses, and Value*. London: John Murray.
Knüppel, Helge C. 2006. Daktyliotheken- Konzepte einer historischen Publikationsform. In *Daktyliotheken: Götter & Caesaren aus der Schublade: Antike Gemmen in Abdrucksammlungen des 18. Und 19. Jahrhunderts*. Edited by Valentin Kockel and Daniel Graepler. München: Biering & Brinkman.
Knüppel, Helge C. 2009. *Daktyliotheken. Konzepte einer Historischen Publikationsform*. Ruhpolding: Rutzen.
Knüppel, Helge C. 2020. 'Klassiche Observanz' oder 'dem Auge wohlgefallen': Strukturelle Regelsysteme in Daktyliotheken. In *Europäische Regelsysteme des Klassischen: Zur Funktion der Klassik-Referenz in Literatur, Archäologie, Architektur und Kust im 17. Und 18. Jahrhundert*. Edited by Heribert Tommek, Christian Kunze and Drik Steuernagel. Regensburg: Schnell & Steiner.
Kockel, Valentin. 2006. Antike aus zweiter Hand. In *Daktyliotheken: Götter & Caesaren aus der Schublade: Antike Gemmen in Abdrucksammlungen des 18. Und 19. Jahrhunderts*. Edited by Valentin Kockel and Daniel Graepler. München: Biering & Brinkman.
Kockel, Valentin, and Daniel Graepler, eds. 2006. *Daktyliotheken: Götter & Caesaren aus der Schublade: Antike Gemmen in Abdrucksammlungen des 18. Und 19. Jahrhunderts*. München: Biering & Brinkman.
Kousser, Rachel Meredith. 2008. *Hellenistic and Roman Ideal Sculpture*. Cambridge: Cambridge University Press.
Lajer-Burcharth, Ewa. 2001. Pompadour's Touch: Difference in Representation. *Representations* 73: 54–88. [CrossRef]
La Roche, Sophie. 1933. *Sophie in London, 1786: Being the Diary of Sophie Von La Roche*. Translated by Clare Williams. London: Jonathan Cape.
Latour, Bruno. 2005. *Reassembling the Social: An Introduction to Actor-Network-Theory*. Oxford: Oxford University Press.
Littleton, Adam. 1703. *Linguæ Latinæ Liber Dictionarius Quadripartitus. Dr. Adam Littleton's Latine Dictionary, in Four Parts*. London: Printed for W. Rawlins, R. Chiswel, C. Harper, S. Sprint, J. Place, D. Midwinter, and T. Leigh.
Mack, John. 2007. *The Art of Small Things*. Cambridge, MA: Harvard University Press.
Marchard, Scott K. 1998. The Production and Collecting of Plaster and Sulpher Paste "Impronte" as Grand Tour Souvenirs in the 18th and 19th Centuries. Master's thesis, University of St. Andrews, Scotland, UK.
Mariette, Pierre-Jean. 1750. *Traité des Pierres Gravées*. Paris: L'Imprimerie de L'auteur.
Miller, Anna Riggs. 1777. *Letters from Italy: Describing the Manners, Customs, Antiquities, Paintings, &c of That Country in the Years MDCCLXX and MDCCLXXI*. London: Printed for Edward and Charles Dilly.
Morawietz, Georg. 2005. Die Kentauren des Aristeas und Papias und die Repliken der Beiden Statuentypen. *Antike Plastik* 29: 47–67.
Partington, Charles Frederick. 1835. *The British Cyclopaedia of the Arts and Sciences*. London: Orr & Smith, vol. I.
Pearce, Susan. 1993. *Museums, Objects, and Collections: A Cultural Study*. Washington, DC: Smithsonian Institution Press.
Penny, Nicholas. 1993. *The Materials of Sculpture*. New Haven: Yale University Press.
Perkins, Charles C. 1869. *Du moulage en plâtre chez les anciens*. Paris: Hennuyer & Fils.
Piozzi, Hester Lynch. 1789. Observations and Reflections Made in the Course of a Journey Through France, Italy, and Germany. London: Printed for A Strahan and T Cadell, vol. 2.
Potts, Alex. 2001. Classical Figures. In *The Sculptural Imagination: Figurative, Modernist, Minimal*. New Haven: Yale University Press.
Prown, Jules David. 1982. Mind in Matter: An Introduction to Material Culture Theory and Method. *Winterthur Portfolio* 17: 1–19. [CrossRef]
Ramage, Nancy H. 2002. Restorer and Collector: Notes on Eighteenth-Century Recreations of Roman Statues. In *The Ancient Art of Emulation: Studies in Artistic Originality and Tradition from the Present to Classical Antiquity*. Edited by Elaine K. Gazda. Ann Arbor: The University of Michigan Press, pp. 61–77.
Raspe, Rudolf Erich. 1791. *A Descriptive Catalogue of a General Collection of Ancient and Modern Engraved Gems, Cameos, as well as Intaglios: Taken form the Most Celebrated Cabinets in Europe; and Cast in Coloured Pastes, White Enamel, and Sulphur*. London: J. Murray, vol. II.
Richter, Giesla. 1971. *Engraved Gems of the Romans: A Supplement to the History of Roman Art*. London: Phaidon.
Riedl, Nanna. 2006. Von der Kunst Helden zu schaffen: Techniken der Steinbearbeitund und der Herstellung von Repliken. In *Daktyliotheken: Götter & Caesaren aus der Schublade: Antike Gemmen in Abdrucksammlungen des 18. Und 19. Jahrhunderts*. Edited by Valentin Kockel and Daniel Graepler. München: Biering & Brinkman.
Rollett, Hermann. 1874. *Die Drei Meister de Gemmoglyptik: Antonio, Giovanni, und Luigi Pichler*. Wien: Wilhelm Braumüller.
Roth, Johann Ferdinand. 1805. *Mythologische Dakytlothek*. Nürnberg: Steinischen Buchhandlung.
Rudoe, Judy. 1992. The Faking of Gems in the Eighteenth Century. In *Why Fakes Matter: Essays on Problems of Authenticity*. Edited by Mark Jones. London: British Museum Press.
Rudoe, Judy. 1996. Eighteenth and Nineteenth-Century Engraved Gems in the British Museum; Collectors and Collections from Sir Hans Sloane to Anne Hull Grundy. *Zeitschrift für Kunstgeschichte* 59: 198–213. [CrossRef]

Scarisbrick, Diana. 1987. Gem Connoisseurship- The 4th Earl of Carlisle's Correspondence with Francesco de Ficoroni and Antonio Maria Zanetti. *The Burlington Magazine* 129: 90–104.
Scarisbrick, Diana, Claudia Wagner, and John Boardman. 2017. *The Beverley Collection of Gems at Alnwick Castle*. London: Philip Wilson Publishers.
Scott, Jonathan. 2003. *The Pleasures of Antiquity: British Collectors of Greece and Rome*. New Haven: Yale University.
Seidmann, Gertrud. 1983. The Taste for Engraved Gems. *The Ashmolean* 4: 14–17.
Seidmann, Gertrud. 1985. A Gem Engraver's Life: Nathaniel Marchant. *Jewellery Studies* 2: 59–63.
Seidmann, Gertrud. 1989. Nathaniel Marchant, Gem-Engraver, 1739–1816. *The Walpole Society* 53: 1–105.
Seidmann, Gertrud. 1996. The Grand Tourist's Favourite Souvenirs, Cameos and Intaglios. *RSA Journal* 144: 63–66.
Seidmann, Gertrud. 1997. An Eighteenth-Century Collector as Patron: The 4th Duke of Marlborough and the London Engravers. *Studies in the History of Art* 54: 262–79.
Seidmann, Gertrud. 2004. The Reception of Classical Art- Neoclassical Gems. In *Reception of Classical Art, An Introduction*. Edited by Donna Kurtz. Oxford: Archaeopress, pp. 73–83.
Seidmann, Gertrud. 2006. The Pichler Family. In *Grove Encyclopedia of Decorative Arts*. Edited by Gordon Charles. Oxford: Oxford University Press.
Slaney, Helen. 2020. *Kinaesthesia and Classical Antiquity: 1750–1820*. London: Bloomsbury Academic.
Stefanelli, Lucia Pirzio Biroli. 2012. *La collezione Paoletti: Stampi in vetro per impronte di intagli e cammei*. Roma: Gangemi Editore, vol. II.
Stefani, Chiara, ed. 2011. *Ricordi in Micromosaico: Vedute e paesaggi per I viaggiatori del Grand Tour*. Roma: De Luca Editori D'Arte.
Steiner, Christopher B. 1999. Authenticity, Repetition, and the Aesthetics of Seriality: The Work of Art in the Age of Mechanical Reproduction. In *Unpacking Culture: Art and Commodity in Colonial and Postcolonial Worlds*. Edited by Ruth B. Phillips and Christopher B. Steiner. Berkeley: University of California Press, pp. 3–19.
Stewart, Susan. 1984. *On Longing: Narratives of the Miniature, the Gigantic, the Souvenir, the Collection*. Baltimore: Johns Hopkins University Press.
Stosch, Phillip. 1724. *Gemmæ Antiquæ Cælatæ, Scalptorum Nominibus Insignitæ. Pierres Antiques Gravées, Sur Lesquelles Les Graveurs Ont Mis Leurs Noms*. Amsterdam: Bernard Picart.
Tassie, James. 1775. *A Catalogue of Impressions in Sulphur, of Antique and Modern Gems from Which Pastes Are Made and Sold*. London: J. Murray.
Tassie, James. 1788. *Proposals for Printing a Descriptive Catalogue of a Collection of Pastes and Impressions of Ancient and Modern Gems: Formed and Selling by James Tassie*. London.
Teolato, Chiara. 2010. Artisti imprenditori: Zoffoli, Righetti, Volpato e la riprodiuzione dell'antico. In *Roma e l'antico: Realtà e visione nel '700*. Edited by Carolina Brook and Valter Cruzi. Milano: Skira editore, pp. 175–82.
von Goethe, Johann Wolfgang. 1974. *Roman Elegies and Venetian Epigrams*. Translated by Robert Lind Ray. Lawrence: University Press of Kansas.
Yonan, Michael. 2011. Toward a fusion of art history and material culture studies. *West 86th* 18: 232–48. [CrossRef]
Zuckert, Rachel. 2009. Sculpture and Touch: Herder's Aesthetics of Sculpture. *The Journal of Aesthetics and Art Criticism* 67: 285–99.

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