

Peter Paul Rubens and the mineral world

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If we think of early seventeenth-century European court portraits, their surfaces spangled with jewels, we think above all of Frans Pourbus the Younger (1569-1622). When Rubens arrived at the Gonzaga court in 1600 Pourbus was official court artist. Why Rubens went to Mantua is not known but he may, like Pourbus, have met the Duke on one of his many visits to Flanders.¹ Despite frequent absences including a visit to Rome 1601-2, a journey to Spain on behalf of the Duke in 1603 and a further period in Rome from 1606 until the last week of October 1608, he remained in the Duke's service throughout his stay in Italy.² The display of large quantities of precious stones that characterized Pourbus's court portraits was less a flattering fiction of wealth than a requirement. Moreover an understanding (*cognito*) of gems was regarded in the early modern period as a necessity for great princes and prelates who were expected to be able to identify stones and distinguish authentic from fake.³ Marie de' Médicis, for whom Rubens would work later in his career, was typically knowledgeable about gem-stones: as the daughter of the Grand Duke Francesco I (1541-1587), a lapidarist and practitioner in alchemical research, she had been taught gemmology.⁴ Rubens's career following his sojourn in Mantua was so stellar that it is easy to forget that he was a part of this world in which precious stones were ornament, currency, magical, cosmogonic. In this essay I attempt to re-orientate the work of Rubens to take account of this. In addressing jewellery in Rubens's paintings, I am concerned with precious stones (gems) whether they might have existed or were evidently imagined, whether they appear on the bodies of people known to have lived or on mythological and historical figures. My work thus crosses and deliberately blurs boundaries between genres. By focusing on an accessory I propose a chain of historically specific connections that embraces the mine, the museum and the adorned body. Two of the links in this chain are Venice and Genoa.

On his arrival in Italy Rubens first made his way to Venice, and he 'lingered in Genoa on his return from Spain in 1604'.⁵ The importance of the experience of Venetian painting for Rubens is indisputable. However, Venice and Genoa in the sixteenth and early seventeenth centuries had the major European markets for Oriental gems and those markets engendered high levels of skill in jewellery production. Antwerp silversmiths were working in Genoa in the 1600s⁶ while the Flemish Hellemans family, merchants importing precious stones from India, were well established in Venice.⁷ Where there are gold- and silversmiths and gem-

importers there are also jewellers. Attached to the Mantuan court in the 1580s was at least one Flemish ‘orefice’ (jeweller or goldsmith) among artificers, one of whom, Luca Tron ‘da Venezia’, in 1602 sent the Duke three dozen sapphires of the highest possible quality the splendour of which ‘fanno scorno alla natura’ (shames nature) as well as dozens of other jewels.⁸ At least by 1626 the Duke of Mantua’s Palace boasted a ‘Camerino delli Sassi’ next to the Library containing among other rough stones lapis lazuli and jasper while in the Camerino delle Dame were listed quantities of unmounted precious stones (diamonds, sapphires, emeralds and opals) in small boxes.⁹

Italy was the world centre for gemmology in the Renaissance and was home, at least until 1550, to Europe’s major universities.¹⁰ This configuration of economic and cultural interests was the setting for the development at the end of the sixteenth century of several collections of natural history that included stones and fossils and for the publications that accompanied them. It is inconceivable that Rubens was unaware of these economic, scientific and cultural formations during the time he spent in Italy. At the very least, his fragmented portrait of the Genoese *Marchesa Brigida Spinola Doria* of 1606 (fig 1)¹¹ reveals not only that he knew how to paint precious stones but equally that he understood how jewellery was made. Rubens most likely studied and painted the jewellery separately: a drawing survives showing the portrait without the jewellery so, although it was standard practice for an artist to paint clothing and ornaments without the sitter present, it is worth noting that metaphorically speaking Rubens took responsibility himself for the final and all important stage in the Marchesa’s toilet, that of putting on her jewels.¹²

Following attempts to establish the evolution of diamond cuts in Flanders,¹³ attention focused on Rubens's portrait of the artist’s second wife, Helena Fourment (1630), often assumed to be in her bridal gown, in which she wears a range of elaborate jewellery (fig 2). This includes a breast jewel, most probably that listed in an inventory of 1645 as: ‘een groote ronde bagge van diamanten, alle raviesteenen ende sestien triangelen rontsomme op gl 6,900 (a large round jewel of diamonds, all? flat stones and sixteen triangles valued at 6,900 guilders).¹⁴ The entry on this portrait in the *Corpus Rubenianum* is misleading, listing in addition to the string of pearls round the sitter’s neck ‘a large necklace of jewels [sic] hang[ing] on her breast’.¹⁵ Attempts have been made to compare Helena’s ‘large round jewel’ with a rare surviving piece of a similar type¹⁶ but Helena's breast jewel (fig. 2A) has a distinctive feature that is represented by the artist with the clarity of a blue-print: this is the

series of hooks down each side. Only one of these is in use, securing one end of a diamond studded gold chain. Contemporary viewers would have known what was done with the other end of this chain and also whether the second longer chain is independent or part of the first. We can only guess. In *Self-portrait with Isabella Brandt: The Honeysuckle Bower* (hereafter *Honeysuckle Bower*) (fig 3) Isabella, the artist's first wife, wears prominently displayed a ring set with an octahedral diamond as well as bracelets comprising linked agates; this was perhaps a fede ring (fig 4).¹⁷ In Isabella's ring and Helena's breast jewel we see the two most common diamond cuts as described by Conrad Gessner - *figurae quadragulae* (ein diamant puncte) or *quadratus planus* (ein diamant tafel) - in other words a pointed conical cut or a table cut.¹⁸ The fashionable rose cut lay in the future. There is nothing intrinsically novel or fashionable about the jewellery displayed by either of Rubens's wives even though Helena is dressed up in emulation of an aristocrat rather than as the bourgeoisie that the artist claimed to have preferred to a lady of the court.¹⁹ The cameo bracelets worn in *The Honeysuckle Bower* were a commonplace item probably of sentimental (or antiquarian) value.²⁰ It is equally certain that gold chains of the kind Helena owned and in which she was portrayed were in women's jewel boxes in the Low Countries through the second half of the sixteenth century with 'Een gouden ketten' (a gold chain) appearing repeatedly in inventories.²¹

The question underlying this essay is how may historians bring into play in their interpretations of the past, material evidence that now exists barely, if at all, but that lives on as traces in verbal or visual representation. In the case of jewellery, it is a challenge to correlate with known objects, or even to envision what they might reference, descriptions such as: 'een brachelet mit ronde platte cornaline teyckenens tot xvii toe, tusschenbeyden gemengt mit cleyne ronde goude teyckenens ende zess cleyne elantsche ringskens' (a bracelet with round flat Cornelian beads (?) as many as seventeen and between them mixed with small round gold beads and six small elk horn (hoof) rings.).²² Furthermore, the names given to gems in lapidaries, names that were then adopted by jewellers, are often difficult to correlate with precious stones as we know them today. Theophrastus's *De Lapidibus* (ca 371-287 BCE), the oldest scientific treatise dealing expressly with minerals, and Pliny the Elder's texts on minerals in the *Natural History* (77-79 AD, first published 1469), employ terminology that embraces a range of minerals that are not recognizable under the same terms today.²³ And it was upon Pliny that all writers on stones subsequently based their work to one degree or another until the late seventeenth century.

Painted soon after his return from Italy, *Venus at the Mirror* (fig 5) illustrates Rubens's knowledge of gems and their semantic properties. A partially undressed female is seen from behind with her face reflected in a mirror.²⁴ The painting has as much to do with contemporary fashion and luxurious commoditisation in Flanders in the early seventeenth century as with Ovidian narratives and European traditions of the nude; it exemplifies the coalescence of past and present, the merging of veracity and exoticism, and the translation of ideas across geographical borders that are salient characteristics of the artist's work. This figure is not nude: she wears a gauzy length of cloth around her hips, she wears a cascade of golden hair, and she sports extremely distinctive jewellery. The mirror held up by Cupid with its bevelled edges and its dark (oak or perhaps ebony?) frame suggests Venus is in the north and even perhaps in a bourgeois rather than an aristocratic interior – no gilt carving here. Venus's black servant wears a coral necklace reminding us of the sea, from which Venus has emerged, as do Venus's pearls earrings. In these earrings the authentic and the fantastic are positioned in dialogue: in the goddess's left ear is an earring of natural hue and in her right (seen only in the mirror) is a matching earring but this one is black. As Elizabeth McGrath has argued, Venus's black companion is drawing aside the goddess's hair in order to reveal the shadowed side of her face thus making this an image of Night revealing Venus as her resplendent mistress.²⁵ Jewellery here is manifestly critical to an understanding of the subject.

It is however the upper arm bracelet worn by Venus on which I want to focus.²⁶ Rubens had a penchant for this type of bracelet set with coloured jewels. It first appears in very rudimentary form, as little more than a thin band, in one of his earliest mythological works, *Aeneas and his Companions Preparing to Leave Troy*.²⁷ In subsequent paintings of mythological characters, such bracelets are depicted with almost fastidious attention to detail, not least in the *Venus at the Mirror* and in *Venus, Cupid, Bacchus and Ceres* that was painted around the same time (1612/13).²⁸ It appears to have been after his return from Italy that the upper arm bracelet evolved from an encircling device designed to break up an elongated area of naked flesh into a particular feature calculated to draw the eye, and represented in such a way that it would be possible for a jeweller, given the image, to create a convincing replica. The palpable materiality of the jewel-studded bracelet in *Venus at the Mirror* (fig 5) binds us as viewers into an economy that blurs then and now, reality and fantasy, material conviction and ephemeral indulgence. No respectable woman of the early

modern period would have worn a bracelet that required the exposure of the upper arm. Where bracelets were worn above the wrist it was over clothing and just above the elbow to secure the sleeve as in the aforementioned portrait of Helena Fourment (fig 2) (in which bracelets are secured with satin ribbons) and in many images by artists following Rubens's example.²⁹ In *Venus at the Mirror* The deployment of the upper arm bracelet against naked flesh *alludes* to the vernacular – a counterpoint not merely ornamental but also semantic – thus underscoring the very *absence* of clothing. In short, there is no sleeve to be held up: textiles degrade but jewels endure and the fact that Venus wears them in this way reminds us not only that she is beautiful but also that she is immortal.

If we look closely, we observe that the bracelet grips Venus's flesh – we can rest easy that it will not slip – and this knowledge guarantees our ability to believe in the flesh that it encircles. The bracelet is set with rubies (for passion), sapphires (for the sky) and pearls (for the sea). And in case we have not yet got the message, Cupid's gold arrows point outward from each link. With an eye to functionality, Rubens has stepped beyond what we might be tempted to dismiss as a purely symbolic concoction and given the bracelet a gold clasp that is carefully positioned to protect the Goddess from getting scratched under her arm. This is a painting by a man who had not only seen jewellery but who also understood the craftsmanship of the jeweller and empathised with how it felt to wear metal and hard stones against soft flesh. The attention to detail that Rubens's friend Nicolas-Claude Fabri de Peiresc admired when he saw how the artist had depicted the studs on the soldiers' boots in the tapestry cartoons produced in 1622³⁰ extended to all his depictions of jewellery. Indeed, while Roman soldiers' footwear had to be reconstructed, Rubens knew about gems and their settings first hand and applied this knowledge in his paintings. It is perhaps a tribute to both the formal ingenuity and the sense of plasticity of its depiction that this jewellery features so prominently, and in duplicate, in Robert Rauschenberg's 1964 collage *Skyway*.³¹

A partially nude female by Rubens would have resonated with the echoes of ceremonious dressing and undressing; those wisps of drapery around the haunches of Venus bespeak not only classical precedents but also contemporary reality. Being dressed or undressed by someone else (as, for example, is staged in *Het Pelsken*)³² pivots on the idea of becoming someone or something else. According to Richard Trexler, dressing objects (including statues) has been a standard part of the ludic and of the spiritual and cultic life of many peoples and is 'related to obedience and suppliance.'³³ Jewels are also a form of clothing but,

probably reflecting the durability of gold and precious stones, as compared with the perdurable cloth about which Trexler writes, they figure both as references to a palpable real and as links to a quasi-magical and spiritual world of elemental laws and somatic consequences. From this we learn something of the ways in which materials metamorphose into meaning, and how what is put on the body is always more than the sum of its parts. Museology and archaeology effectively sever the link between body and superimposed materials, separating the ornaments from the body and from its context. The historian's task is to attempt a reintegration. Thus the question with regard to *Venus at the Mirror* is not whether her jewellery is based on actuality, though it may well be so, but how it bridges real and ideal.

In Rubens's art drapery or clothing and jewelled ornament are often coterminous: in *The Crowning of the Virtuous Hero* (1612-1614), the hero sports beribboned garters, a kind of non-functional half-way house between clothing and jewellery.³⁴ Rubens's work (leaving aside portraits for the moment) might be described as characterised by cloths/clothes/jewellery that are in a state of suspension, being accessed or de-accessed. Strange and exotic ties, loops, bracelets, strings, ribbons, horizontal bands, girdles, and jewelled cintures on bodies of women and men inadequately secure textile coverings in a state of what we have come to know as 'wardrobe malfunction', that is a staged and momentary revelation.³⁵ In *Minerva protects Pax from Mars (Peace and War)*, 1629-30 (fig 6) the figure of Peace and Plenty at the left of the image wears a green brocade garment that is inadequately secured by a strange and exotic girdle made of cloth but with a ruby clasp (fig. 6A). The basket she carries contains, by contrast, a huge diamond-studded breast jewel and a string of pearls as reminders of how peace and prosperity were registered in Rubens's home city. In *Diana and Callisto*, ca. 1635,³⁶ a similar girdle is worn by one of Diana's nymphs and both Diana and Callisto wear upper arm bracelets. It would not, perhaps, be extravagant to speak of a mythological wardrobe created by the artist when examining these cintures that, with their jewels and ribbons, might plausibly partly originate in the kind of bracelets that held up sleeves in portraits as described above. Tintoretto, among other artists studied by Rubens, licensed drapery *mouvementé* in the construction of pictorial narrative as we see clearly in for example *Sant Agostino curing the cripples*, 1549-59,³⁷ but the ribbons, tapes, tabs and extensive jewelled accessories are unique to Rubens. These elements conjure Ovid rather than earlier pictorial artists: the fleeing Atalanta, for example, made 'a lovely

picture, as she raced: ... *her hair floated over her ivory shoulders, and the garters with embroidered edges which bound her legs streamed out in the breeze*'.³⁸

Executed while Rubens was in Italy, *Susanna and the Elders*, (fig 7) features a jewelled upper arm bracelet (fig 7A) that is extremely prominent both in its position and as a consequence of the precision with which it is depicted. Like Bathsheba and indeed like Venus, Susanna in art is regularly described as naked or nude. In fact these figures in Rubens's work are invariably in some way draped and/or adorned with jewellery. In a 1974 thesis Susanne Maas discusses the bracelet worn by Susanna, concluding that Rubens depicts it in order to emphasise that Susanna possesses, rather than a matronly body, a young and girlish figure.³⁹ Subsequent authors all reference Maas but they fail to mention the bracelet. Susanna is typically described as 'nuda' and the painting as a pretext for a display of 'il nudo femminile'.⁴⁰ Michael Jaffé is interested in *Susanna and the Elders* exclusively as evidence of an early interest in a nude [sic] in a landscape and for its 'saturated colours'⁴¹ while the entry in the *Corpus Rubenianum* cites Maas but makes no reference to the bracelet.⁴²

The story of the chaste Susanna spied upon by two lustful old men while she bathed in her husband's garden is a mere sixty-three verses added as an appendix to the Book of Daniel; It tells how the elders seek to punish Susanna for not acceding to their desires and is the pretext for Daniel's demonstration of wisdom in judgement in a scene that echoes the Judgement of Solomon. The episode has a long complicated history in visual art; it was much represented in the early Christian period with Susanna standing as an image of the Church under threat and, later, as Eve through association with a woman tempted in a garden.⁴³ Through her chastity and the idea of the hortus conclusus, Susanna was also assimilated into the iconography of the Virgin Mary.⁴⁴ The Susanna theme emerged as one of the most popular among artists from Tintoretto to Veronese and from Domenichino to the Caracci.⁴⁵ Judging by the number of paintings titled *Susanna* listed in inventories of Antwerp residents, it was also a subject extremely popular in Northern Europe.⁴⁶

Susanna and the Elders (fig 7) is the first of four interpretations that Rubens is known certainly to have painted and that are extant.⁴⁷ This claustrophobic nocturnal scene in a garden features three figures none of which is seen in their entirety. One elder is bending towards Susanna with a huge finger to his lips while the other, with his head thrust forward in bearded satyresque profile, clasps tense hands as though restraining himself. He has one

foot on Susanna's seat as if preparing to spring. Her right foot is in the water so we do not see further than her ankle, emphasizing her famously twisting motion.⁴⁸ The idea that the painting, which was in the Borghese Collection by 1650,⁴⁹ was executed for Cardinal Scipione Borghese has been widely rehearsed, with D'Hulst and Vandeven drawing attention to a payment made in 1622 'per una cornice per il quadro dovè Susanna' ('for a frame for a painting in which is [represented] Susanna').⁵⁰ Created a Cardinal in 1605, Scipione Borghese was Director of the Institute for the Protection of German and Netherlandish Artists.⁵¹ However, the assumption that he commissioned or purchased the painting has been questioned by Nicole Dacos who points out that it is surprising, if this were the case, that Bellori does not mention it.⁵² There is also uncertainty about the date: Michael Jaffé assigns it to 1607-8, David Jaffé to 1606, but Frances Huemer, who analyses the changes in Rubens's use of colour during the Rome and Spanish periods, attributes *Susanna* to the artist's pre-Spanish period, 1600-1603, following D'Hulst and Vandeven who give the date 1601-2.⁵³ Others have generally made much of the influence of Tintoretto and of Annibale Caracci, whose lost *Susanna and the Elders* is known from a late sixteenth-century print.⁵⁴ For J.-C. Prêtre who devoted a book to the Susanna theme, this particular painting reveals a double influence: it is Venetian in the representation of Susanna and the treatment of space but Roman in the vivid emotion with which the figure is seized.⁵⁵

For most scholars therefore the Borghese *Susanna* is of interest as a staging post to later, larger, and more elaborate interpretations by Rubens of the theme, and as a painting that indicates stages in the development of Rubens's paintwork, his interest in the nude and in landscape. Rubens's 'special predilection' for the subject is generally explained as merely an excuse to paint voluptuous nudes.⁵⁶ As McGrath has pointed out, although the engraving by Vorsterman of a now lost version of *Susanna and the Elders* (ca. 1620) was dedicated by Rubens to Anna Maria Visscher and its subject announced as 'pudicitiae exemplar', he subsequently offered the painting to Dudley Carleton describing it as a 'galanteria'.⁵⁷ Rubens's salesmanship and knowledge of his client notwithstanding, the exchange indicates an ambivalent attitude to an apocryphal subject that pivots, like that of Lucretia, on the clash between female chastity and male desire. A closer look at the jewellery amplifies this.

The word 'accessory' has both affirmative and pejorative associations. To access means to gain entry, and accession is associated with inheriting a throne as well as with registering the acquisition of a library book. On the other hand accessory is understood as something

additional to the main body of the object and therefore as somehow superfluous. One of the interesting things about accessories, however, is their supplemental character: they may reinforce the solidity of presence but at the same time implicitly draw attention to the existent lack in that presence that requires it to be supplemented.⁵⁸ The gravitas of this theme, alongside that of Bathsheba, as a dramatisation of desire, sight and morality, has been explored in terms of gender and power in relation to the female figure understood as nude.⁵⁹ It is the relationship between what is understood as supplemental and what is understood – in Art Historical terms – as fundamental (which generally means related to tradition and having precedent), that is interesting both historically and conceptually. Susanna wears a number of accessories but by far the most supplemental is her jewelled bracelet. My question is, given that this is the first time Rubens uses in a fully realised configuration this particular and often repeated accessory, what is it, where does it come from, and what work does it do in the painting?

Generally cited sources for the figure of Susanna are the Spinario – even though Susanna's left leg crosses her right at no point, it is simply raised in such a way as to expose her vulva if seen face on – and, more to the point, the classical figure of a crouching Venus that Rubens drew on most effectively for the *Venus Frigida* of 1614⁶⁰ and also for *Venus, Cupid Bacchus and Ceres* of 1612-13.⁶¹ The *Crouching Venus*, one version of which was in the Gonzaga Collection at the time Rubens was in the family's service, wears on her upper left arm a bracelet of the sort that Rubens repeatedly deploys on otherwise naked or semi-naked figures (fig 8).⁶² It appears also as the only ornament on the upper left arm of an otherwise totally nude female figure (possibly a life study) in an undated drawing in which Rubens has, as it were, unfolded the crouching figure of Venus and, extending her body, laid her gently down to sleep (fig 9).⁶³ A further source with which he may have been familiar is the *Sleeping Ariadne* in the Vatican; thought to represent Cleopatra because of the snake form of the bracelet, it was acquired by Pope Julius II in 1512 from the Roman collection of Angelo Maffei.⁶⁴ Rubens would have also seen such a bracelet on the right arm of Olympias in Giulio Romano's *Jupiter Seducing Olympias* (1526-28, Palazzo Te, Mantua); Crispijn de Passe had depicted a similar ornament on a figure of Venus in an engraving after Maarten de Vos in 1596 (fig 10); Jan Massijs painted his Judith wearing matching and very substantial upper arm bracelets in 1563;⁶⁵ and Jacopo Zucchi (1541-1596) had depicted a Bathsheba also with an upper arm bracelet.⁶⁶ But it was undoubtedly through the equation of this piece

of jewellery with desirable femininity in Rubens's work that it became a leitmotif throughout European art: Van Dyck knew to place such a bracelet on the upper arm of Lady Katherine Manners when portraying her as Venus alongside Sir George Villiers as Adonis in 1620-21. The bracelet has remarkable tenacity appearing, for example, in the work of Angelica Kauffmann in the eighteenth century and in the work of Eugene Delacroix (a Rubens admirer and copyist) in the nineteenth.⁶⁷

As the wife of a wealthy man, Susanna would have been expected to wear rich jewels. But Rubens is extremely disciplined: Susanna's only jewellery is the bracelet.⁶⁸ There are no pearls in her hair because it cascades over her body like the gold thread that was incorporated into expensive clothes in Rubens's time. The bracelet marks the exact point at which hair changes to textile. But the cloth makes no sense *as* drapery because it appears slashed into loose strands that pass through Susanna's fingers as though extensions to her hair. Pigments merge and denotation founders: hair is cloth and cloth hair, and neither overlays the other but rather coalesces with flesh through pigment.⁶⁹ The comparison of hair with silk or gold thread is a familiar poetic trope and hair, once it leaves the head, can become yarn like any other. But unlike most yarn it is also springy – hence its use in watches – and it can be twisted just as gold wire is manipulated in jewellery into filigree ornament. Art historians have remarked on Rubens's talent for moving elements about a composition, often designing groups of figures that could be moved around within the picture space.⁷⁰ This was a practice analogous to that of jewellers who for centuries when planning a piece have placed gem-stones on a wax surface to experiment with the intent of producing optimal effect. Susanna's hair is not only part of her covering it also participates in the organisation of her body. Thus one strand creeps round the front of her neck and straggles down to touch her right nipple. These crimson projecting nipples indicate the diagonal line running from the fingers of Susanna's raised right hand across the bracelet to the line of the bearded elder's right hand. Ruby red nipples and rubies in the bracelet Susanna wears are interdependent images, sharing the most vivid hue, the gem-stones assimilated to the body that wears them and nipples acquiring thereby additional visibility in an economy of the female body mapped by physiological evidence of alarm – red cheeks, re-lipped open mouth, whites of eyes, and erect nipples).

Susanna's bracelet is critical to the affect produced by the painting, a key ingredient in the representation of bodily response to emotional trauma. In the slightly later version of

Susanna (fig 11) in which the figure moves with considerably more violence, the bracelet has accordingly slipped and hangs loosely on Susanna's wrist. In construction the Borghese bracelet is a simpler piece of jewellery than that devised by Rubens a few years later for *Venus at the Mirror* (fig 5) In fact it is not dissimilar to pieces in the Cheapside Hoard, generally regarded as the stock in trade of an early seventeenth-century jeweller, though with rubies the size of those in Susanna's bracelet, it would have been, were it made, a great deal more valuable.⁷¹ It comprises (fig. 7A) large rubies set in gold and linked by a diamond; the characteristic slightly polished octahedron or double pyramidal crystal (the lower half disappearing into the setting) that was still regularly seen in the early seventeenth century can clearly be seen represented here.⁷² Diamonds at this time were depicted as dark table-cut stones rather than the glittering multi-faceted jewels we are accustomed to see today. From the links in Susanna's bracelet, pearls on gold wire pins project above and below the diamond, creating the bracelet's characteristic figure of eight appearance.

Although Pliny and successive writers on minerals proclaimed the diamond preeminent among gem-stones with ruby in second place,⁷³ Cellini in the second half of the sixteenth century is dismissive of diamonds. He describes the ruby as 'far the most costly' of stones, a reflection of the ready supply of diamonds from India by comparison with the far more restricted import of rubies from Burma.⁷⁴ Moreover, Pliny notwithstanding, there was a tradition dating back many centuries for the primacy of the carbuncle (large ruby): Albertus Magnus in *The Book of Minerals* (ca. 1250) stated that it 'was to other stones as gold to other metals'.⁷⁵ The rubies painted by Rubens appear to be the greatly sought after 'Oriental rubies' from the Levant described as 'very deep and fiery'.⁷⁶ The large rubies are set in Susanna's bracelet, probably with foils behind them to enhance their colour, in gold bezels according to Cellini's instruction that the stone 'must not be set too deep, so as to deprive it of its full value, nor too high, so as to isolate it from its surrounding detail.' Rubens demonstrates his understanding of the uneven surface of such carbuncles in their natural state, gems that Robert de Berquen in 1661 admired as rare and more costly than diamonds - the most beautiful of all coloured stones especially if they are clear and 'au quadrant'.⁷⁷

Bracelets set with jewels were part of any wealthy woman's jewel box in seventeenth-century Flanders but they came not singly but in pairs. 'Une paire de braselettes' is a frequent item in inventories, including among those of the Forchondt family who settled in Antwerp around 1600 before establishing a thriving business in Vienna. The last of the

Antwerp Forchondts died in 1709 in the house Rubens had owned.⁷⁸ Pairs of bracelets can also be seen worn by some of Rubens's female Flemish sitters, as with the cameo bracelets worn in the *Honeysuckle Bower* (fig 3).⁷⁹ It is the asymmetry of the single bracelet as well as its position on a level with the breast that is arresting in *Susanna and the Elders*. I am not suggesting that Rubens copied an existing bracelet. He did not need to do that. The point is not whether or not it is *real*, but that it conveys palpable materiality to a degree that convinces the viewer it could be so. By the middle of the sixteenth century, Antwerp had become the most important commercial metropolis north of the Alps and, like London, a 'knowledge hub'.⁸⁰ It was already becoming renowned as a centre for diamond dealing, cutting and polishing.⁸¹ Moreover diamond and ruby cutters were part of the same 'Natie' according to a statute of 1582.⁸² Rubens, with a penchant for rubies, understood precious stones and their value in commerce and diplomacy. He could not have been unaware of the great merchant families dealing in precious stones who, even after the sack of Antwerp in 1585, maintained a powerful presence. The firm of Van Colen was founded in 1538 and Rubens, through marriage, would ally himself through his father-in-law with a network of influential merchant families connected to the Van Colens. It was Gisbert Van Colen who purchased two of Rubens's most celebrated family portraits.⁸³

Rubens was in contact throughout his life with the global gem trade and understood the importance of precious stones as currency. On his mission to Spain on behalf of the Duke of Mantua, Rubens's companion, Annibale Iberti, had the responsibility of selling precious stones that had belonged to the previous Ambassador to Spain and of retrieving a diamond that had remained there.⁸⁴ In 1616, Rubens was negotiating the sale of a hunting scene to Dudley Carleton in return for 'chaines of diamonds'. In later years he was paid in diamond jewellery for his services to the English court.⁸⁵ The self-portrait that the artist presented to Charles, Prince of Wales in 1623 (fig 12) includes a gold chain with geometrically designed links⁸⁶ as well as what appears to be, given the red glow it casts on Rubens's linen, a large ruby or an intaglio of sard or carnelian (fig 12A).⁸⁷ The hat Rubens is wearing in this portrait has a band with a modest device that appears to be made of twisted gold thread and enamel with a tassel on the end (fig 12B). This cannot plausibly be the 'hoeybant van diamanten' (hatband with diamonds) presented for services to the English court and valued in the 1645 inventory at 900 guilders.⁸⁸ There is nothing like the ornament in the portrait among the contemporary hat jewels discussed by Hackenbroch; the closest thing in structure might be the gold and enamel toggles that terminate the drawstring around the chemise neck of

Raphael's *Dama Velata* which, I have argued elsewhere, Rubens may have known and in which he may have been particularly interested on account of the sitter's cameo necklace.⁸⁹

Rubens's correspondence contains many references to diamonds.⁹⁰ Reporting on 15 June 1628 on the 'Comte Carlisle' travelling through Flanders, Rubens took care to note, 'what is certain is that he is carrying a diamond of very great value' to the Prince of Piedmont. There is evidence that Rubens dealt in diamonds, as did many of the Antwerp elite. He was, for example, from the 1620s associated with Daniel Deegbroot (Deegenbroot or Deechbroot), one of the most eminent diamond and luxury dealers in Antwerp.⁹¹ Moreover it is extremely probable, given his position, that Rubens would have known the Portuguese Jewish merchant family of Diego and Gaspar Duarte (I and II) whose trade in precious stones and other luxury goods extended through the Southern and Northern Netherlands as well as in England. Their home was renowned for its cultural events and Gaspar I collected paintings by Rubens and his contemporaries.⁹² In September 1631 when Marie de' Medicis in exile was worried that Cardinal Richelieu would seize her jewels she spent what was described by Balthasar Gerbier as 'ce long séjour à Anvers' (this long stay in Antwerp) in order to pawn the jewels and it was Rubens who lent money on them.⁹³ In such a delicate affair it is unlikely that he would have involved a third party and we may therefore assume that he was experienced in gem valuation. In the same year he wrote about an unfulfilled commission to Fabricio Valguarnera, a dealer in paintings and the author of a notorious diamond heist.⁹⁴ On 20 June 1631 Rubens is presumed to have contacted the Sicilian nobleman, expressing surprise that the latter had not replied to an earlier enquiry about the dimensions and the subject of a painting he had commissioned, and offering an *Adoration of the Magi* that Rubens had almost finished and that would be suitable for a private chapel.⁹⁵ It seems quite possible that Rubens, who signed his letter 'V.S. molto Illustre servitor affectionatissimo' (your very illustrious and most affectionate servant), was at this point concerned about what might have befallen a man whom he regarded as a friend. It is stated in the deposition in the Roman Court dated 12 July 1631, Rubens 'lo [conosceva] bene' (knew him well) and that Valguarnera had purchased from Rubens in Madrid a painting of Adam.⁹⁶ Valguarnera, it is reported 'conosceva gioellerie e diamantari' (was expert in jewellery and diamond dealing),⁹⁷ and also understood painting though he was not a painter; he claimed when he gave evidence to understand the secret of curing many maladies including pleurisy and gout for which he said he had treated Rubens.⁹⁸ Thus the two men must have met in Madrid where the events of October to December 1629 that led to Valguarnera's arrest in Rome had

unfolded. Rubens reached Madrid in August 1628 and remained there for eight months leaving around April 1629 but the news of the huge theft of diamonds in which Portuguese, Spanish and Flemish merchants had an interest and for which Valguarnera with a Portuguese accomplice was allegedly responsible must have rapidly spread to Antwerp.⁹⁹

What is significant in the context of this essay is the apparent normality of a well connected if impoverished nobleman using diamonds to purchase works of art which he could then sell on. Although Poussin wisely insisted on hard currency for the painting he sold to Valguarnera, others such as Giovanni Lanfranco were content to have at least part of their fee in precious stones.¹⁰⁰ Diamonds were the most common form of currency – high in value and small in size and therefore easily transportable. Both raw stones and jewellery were deployed in this way and citizens who were not ostensibly *diamantari* or *gioielliere* might have in their possession both jewellery and unset stones rough or polished, meaning that they were familiar with the feel and appearance of precious minerals. When Daniel Fourment, Rubens's father-in-law died in 1643 he left a considerable quantity of jewellery but also a great many single diamonds, some polished and some rough (*rouwdiamanten*).¹⁰¹ Similarly Isabella Brandt owned loose pearls.¹⁰² Rough diamonds also passed through Antwerp on their way from India to London and then back or on to Vienna, Lisbon or St. Petersburg.¹⁰³ In addition to raw and polished diamonds, *pierrerie* (stones mounted in jewellery), including many bracelets, exchanged hands as payment for goods or in settlement of debts.¹⁰⁴ The *kunstkasten* and *Kunstschraken* that were a speciality of Antwerp's luxury goods market¹⁰⁵ were inlaid with minerals and comprised drawers for curiosities among which would have been natural rarities and gem-stones. The *Kunstschrack* made for Philip Hainhofer between 1625 and 1631, now at the University of Uppsala, contained stones as well as coins among its treasures.¹⁰⁶ Stones with their economic, exchange, and aesthetic values, were part of Rubens's world.

Arriving in Italy, Rubens would have had access to natural history collections including minerals. Attention has naturally focused on Rubens as a collector of antiquities and works of art. However, the often-quoted passage in Bellori's 1672 'Life' states:

Aveva egli adunato marmi, e statue, che portó, e fece condursi di Roma con ogni sorte di antichità, medaglie, camei, intaglio, gemme, e metalli;¹⁰⁷

(He had collected marbles and statues which he brought [with him, presumably] and had [ie caused to be] sent [to him] from Rome with every sort of antiquity, medals, cameos, carved stones [intaglios], gems, and metals).¹⁰⁸

Metalli was the term used for everything that came out of the ground (whereas objects made of silver, glass, pewter and so on were normally described as such, as in Rubens's will and in the inventory of Isabella Brandt's possessions where a section of the inventory is devoted to silverwork).¹⁰⁹ Thus the work that Georgius Agricola (1494-1555), 'father of modern mineralogy', published in 1556 was titled *De Re Metallica* and Michele Mercati (1541-1593) called the Museum he created for Pope Gregory XVIII in the Vatican, the appearance of which we know from an engraving in his unfinished book, *Metallototeca* (fig 13).¹¹⁰ Unfortunately he died before completing the catalogue of this collection so we do not know what was in the drawer in the right foreground labelled 'Gemmae', whether raw minerals or incised gems. Along with the agates (cameos) and medals ('alle de agaten ende medallien') that Albert and Nicolas Rubens were instructed by their father in 1640 to sell only under certain conditions were also seemingly unworked 'jaspis ende andere costelycke gesteenten' (jaspers and other valuable stones). These were separate from the gold chains with diamonds, three strands of pearls, pendant earrings (een paar oorpendanten met diamanten), gold buttons, rings and the breast jewel discussed earlier.¹¹¹ From this we may infer that Rubens owned a collection of minerals that he regarded as of comparable importance to his vases and medals, and independent of the jewellery listed in the 1645 inventory.¹¹²

The Italian contribution to European geological collecting was pre-eminent before 1650.¹¹³ It seems likely therefore that in Italy Rubens acquired not only his well-documented interest in antique sculpture, cameos and medals but also an interest in minerals that were part of natural history collections, such as that of Ulisse Aldrovandi in Bologna. Unlike the studiolo, Aldrovandi's collection was designed as a public museum, was accompanied by what has been described as 'the first scientific library in the world', and contained plants, animals, birds and fish but also minerals which, like everything else, were classified according to criteria devised by Aldrovandi himself.¹¹⁴ Although Aldrovandi had in his collection works of art, artificialia were a small part compared to the Ambras collection and other Kunst and Wunderkammern. The stress was on materials useful to mankind, as for example in medicine.¹¹⁵ Aldrovandi collected not only the patterned agates admired for how they seemed to bear pictures from nature¹¹⁶ but also agate 'eyes' described as 'Achates colore

corneo obscure, pupilla fusca, iride sanguinea' (Agates the colour of dark horn, dark pupil, red-ochre iris).¹¹⁷ Rubens later painted one such worn as an amulet by the child in green who holds a grape (which similar in form and colour draws attention to the stone) in *Minerva protects Pax from Mars* (fig 6B) thus suggesting a further aspect at a microcosmic level to the overall theme of protection.¹¹⁸ Back in Antwerp Rubens bought Aldrovandi's *Historia Avibus* of 1595, *De Mollibus Crustaceis Testaceis* of 1605 and *De Piscibus* of 1613 for his library. In 1616 he bought the volume on quadropeds published that year.¹¹⁹ Minerals were arranged according to a 'natural order': metals, earth, stones, mixed (including artificialiae) and each of these was subdivided.¹²⁰ Aldrovandi, whose collections were left to his home city, died in 1605, a year after Rubens returned from Spain to Mantua. Not far away in Verona was another museum containing minerals that Rubens is likely to have known and that had been catalogued first in 1584. This was the Musaeum Calceolarium, assembled by a doctor named Calzolari who furnished the Gonzaga family with medicinal preparations in return for gifts. The catalogue of the collection published in 1622 was dedicated to Prince Ferdinando Gonzaga; the frontispiece is not that used by the family in the seventeenth century but the reduced version used by the Gonzagas prior to 1608.¹²¹ Its illustrations include closely observed engravings of minerals such as amethyst crystals (fig 14).¹²² In addition to those collections mentioned above, Rubens is likely also to have known of the collections of Ferrante Imperato in Naples, especially as the first volume of Imperato's *Dell'Historia Naturale* had been available since 1599 and there were close connections between Imperato's family and the Neapolitan Fabio Colonna (1567-1640), one of the first members of the Accademia dei Lincei in Rome.¹²³ Imperato devoted part of his volume to 'Riassunto dell'Generazione, e Condizione dell Gemme' (Summary of the Generation and Condition of Gems) in which he follows Pliny, Cellini and others but then offers his own analytical account of crystals which he accompanies with his own drawings.¹²⁴

We have no specific record of raw minerals purchased by Rubens in Italy but he had, it is clear, already begun to purchase antiquities (the famous head of Seneca was bought in Rome) and since gems were plentiful and cheap and of a size convenient for travelling, they may have been among his first purchases.¹²⁵ Rubens's interest in and knowledge of cameos and intaglios is well established. Indeed he intended to publish a study of cameos in collaboration with his friend the French humanist Peiresc, though the project was never completed.¹²⁶ One of Rubens's earliest signed and dated drawings (1606), the profile of

Alexander the Great as Jupiter Ammon, identified by Michael Jaffé as after an antique coin is now recognised as a copy after an antique cameo or an ‘agate’ which was the word used by Rubens and his friends.¹²⁷ To see such objects solely through the lens of a preoccupation with antiquity is to miss the point that they are worked stones. The term ‘gem’ is used both for a raw stone regarded as rare and valuable, as cited by Pliny and subsequent lapidarists, and for a stone that has been either engraved in intaglio or cut as a cameo.

The Accademia dei Lincei was founded by Federico Cesi in 1603: Rubens’s brother Philip, with whom he lived in Rome, as well as Peiresc, were closely associated with the organisation and its members. We do not unfortunately know when its collection of minerals commenced.¹²⁸ But there is no doubt that Rubens was present in Rome during a period of the organisation’s most intense activity (1603-1609) and that he was directly acquainted with at least one founding member, the German doctor Johannes Faber whose own museum of natural history near the Pantheon was well known.¹²⁹ He also knew Ottavio Pisani, son of a Neapolitan Professor of Medicine and Astronomy, and a correspondent of Della Porta and (from 1613) also of Galileo.¹³⁰ Cesi’s museum included minerals both worked and rough and when it was dismantled although much was lost or dispersed items almost certainly were absorbed into the collection of Cassiano dal Pozzo.¹³¹ Other important contemporary figures in the development of an understanding of minerals included Faber’s and Mercati’s teacher Andrea Cesalpino who had been Director of the Orto Botanico (which included a mineral collection) at the University of Pisa from 1555, and who investigated marbles and crystals.¹³² The Danish born Niccoló Stenone when appointed by Ferdinando II Grand Duke of Tuscany (1621-1670) took a collection of minerals from Pisa to Florence in 1666 where they were absorbed into the Medici collections.¹³³ Furthermore the Lincean objectives in publishing 1648-51 after half a century the so-called *Tesoro Messicano*¹³⁴ were not only botanical but also lapidary including in volume X ‘Gemmas, Mineralia, Sales Diversos’.¹³⁵

Cassiano dal Pozzo’s paper museum records a series of exceptionally beautiful raw agates (fig 15) thought to represent what was in the collection around 1626.¹³⁶ Even if Rubens did not see these, they give us some idea of why and how such things might be valued by a man whose primary profession was that of a painter. The mineral specimens were cut to near uniform size and polished enabling comparison of their remarkable colours and patterning. The cutting to size would have facilitated storage in drawers in a cabinet as illustrated by Michele Mercati (fig 13); it is not hard to imagine that Rubens had a similar arrangement in

his purpose built museum in Antwerp.¹³⁷ Agates were admired not only for their medical virtues¹³⁸ but also for their diversity of colour and design and for the way in which they exemplified Nature's unfathomable inventiveness. The poet Rémy Belleau, who associated agate with Venus in his suite of courtly poems *Les Amours et nouveaux échanges des Pierres précieuses* ... first published in 1576, called it 'agate bigarrée' (having diverse colours).¹³⁹ These are qualities that would have appealed to an artist with the exceptional range of visual and thematic interest of Rubens.

Rubens had the good fortune to live at a time that was epistemologically on the cusp between old and new modes of enquiry. The minerals in Cesi's collection were, unlike the curiosities in the Aldrovandi collection, depicted systematically with clear distinctions being made between those in the rough and those crafted. At the same time, bodies of knowledge on minerals going back to antiquity were still respected. Lapidary knowledge has recently been reassessed in ways that challenge the received idea that the origins of modern geology start in the eighteenth century with James Hutton. In Rubens's time there were important editions of Marbode (published first in 1539 in Cologne though known much earlier).¹⁴⁰ Marbode was of importance for Alard of Amsterdam and for the Bruges born Anselm Boetius de Boodt. The latter was physician to Emperor Rudolf II, and had access to the Hapsburg treasury with its wealth of precious stones. His much re-printed and translated *Gemmarum et Lapidum Historia* was published in 1609.¹⁴¹ Particular gem-stones embodied virtues and were materially part of the elements with an ability to have an immediate effect on human physiological and psychological conditions. Moreover, an issue of immense importance to a painter of Rubens's bent, minerals were of great interest as the source of many pigments and as a measure of the effulgence of colour. The struggle to correlate the descriptive names of colours with the visual and practical application of pigments (finely ground minerals) took place in print and on canvas. The Parisian ceramicist Bernard Palissy, Rubens's contemporary, wrote a speculative treatise in which theory and practice, in Boethian manner, debate over the causes of colour and how colour gets into a stone.¹⁴²

Precious stones like rubies and diamonds were of interest to Rubens's generation not simply on account of their financial value or, in the case of the former, their colour but because of the enigma of their seeming capacity to generate light. The word 'carbunculus' derives from the ruby's resemblance to pieces of burning charcoal or 'carbon'. Johannes De Laet, a follower of De Boodt, drawing his vocabulary from Pliny, describes it as:

a diaphanous gem, glowing red, ruddy with small facets; it is not a perfect red oxide or vermilion but like blood or wine, scarlet, Indian red or crimson [carmine]. The less there is of blue in it when it is placed at the very edge of the fire, the more noble it is. If there is a yellow tint in the gem, it is to be classified as pomegranate or hyacinth.¹⁴³

De Laet was born in Antwerp in 1582 and in 1629 began publishing a remarkable sequence of books on travel, natural history and architecture. Although his work on gems was not published until seven years after Rubens's death it is extremely unlikely that, given the close-knit nature of Antwerp intelligentsia at this period, the well-travelled Rubens was unacquainted with the younger man

Refraction and the phosphorescent characteristics of some gems (especially diamonds) were not fully understood until the experiments of Robert Boyle in 1663.¹⁴⁴ But diamonds as well as pearls feature in emblem books such as Petrasancta's *De Symbolis Heroicis* published in Antwerp in 1634 for which Rubens designed the frontispiece. The epigraph 'Amat Obscurum' accompanies a chest in a dark room the lid of which is open to reveal the flashing light of precious stones (fig 16).¹⁴⁵ While it may seem counter-intuitive to associate the Humanist Catholic Rubens with lapidary learning even when couched in Christian interpretation, it is mistaken to think that in an age of growing rationalism and Cartesian approaches to knowledge, hermetic and alchemical approaches to minerals were irrelevant.¹⁴⁶ The late sixteenth century was a world of symbols and correspondences in which the search for similitudes and resemblances was a guiding principal of thought. William B. Ashworth calls this the 'emblematic world view' and highlights the important interplay of antiquarianism and scientific thought.¹⁴⁷

This model of the world could be drawn on alongside relatively novel and sophisticated thinking about the relationship of human subjects to the world they lived in. Philip Rubens, employs the time-honoured metaphors of precious stones, describing in one of his Odes, 'eloquence adorned with the variegated light of gems'.¹⁴⁸ Gems were vital in the sense that they participated in life forces. At the same time, minerals were economically valuable – it is no accident that Agricola lived in the mining towns of Joachimstal in Bohemia and in Chemnitz where he practised as physician. There was no boundary between mineral practices and investigations. The itemisation of precious stones in the Old Testament Book

of *Ezekiel*¹⁴⁹ and in the description of the Heavenly Jerusalem in the *Book of Revelations* were familiar to people reared on bible-reading; they were a source not only of the exotic but also a litany of well-known and valued materials that feature with almost numbing repetitiveness in seventeenth-century inventories: diamond, topaz, carbuncle (ruby), sardonyx, jasper, emerald, sapphire Precious stones, like other aspects of the natural world, were there to be read and, as Erik Jorink has pointed out collections did not only hark back to the classical *musaeum* but also to the Temple of Solomon or the Tower of Babel.¹⁵⁰

Items of jewellery, like the upper arm bracelet worn by Susanna in Rubens's painting (fig 7A), were in a sense a kind of mineral museum in miniature. Jewellery – gem stones set in metal making possible a direct physical relationship to the body – are the hinge through which the body connects directly to the elements and also to biblical and mythological history. Rings set with gems were especially potent. Pliny the Elder refuting 'the pernicious misinterpretation of Prometheus's fetters' as the origin of the first ring, proposed that the violent passion for gemstones in his own time originated on the crags of the Caucasus. 'It was of this rock [rather than that to which Prometheus was bound] that a fragment was for the first time enclosed in an iron bezel and placed on a finger; and this we are told, was the first ring, and this the first gemstone.'¹⁵¹ The frontispiece to Mercati's *Metallotheca* shows two putti playing with a dish in which are several rings set with stones (fig 17). Conrad Gessner's work on fossils (a generic term for everything that comes out of the earth) published in 1565 includes a detailed discussion, citing examples from antiquity, of rings set with gems made of sard and illustrated with a plate showing two rings and twelve gems (fig 18).¹⁵² The smaller ring contains a diamond the larger a piece of amber while the gems in a circle are the twelve named in the breastplate of the high priest in Ezekiel, which includes agate, Rubens's favoured mineral.¹⁵³ The first museums displayed minerals in rings, as John Evelyn found when visiting the collection of Cassiano dal Pozzo in 1644 where, referring to the authority of Pliny, he described being shown by Dal Pozzo: a stone 'in a ring without foile, paler than Amethyst, which yet he affirmed to be the true *Carbuncle* & harder than the diamond'¹⁵⁴

While the survival rate of rings is better than that of bracelets (which offer more opportunity for culling large stones) a bracelet is a near relation to the ring in its clasping and enclosing form, and in the symbolism of continuity or eternity. In the bracelet worn by the Borghese *Susanna* (fig 7) rubies or carbunculi are visible but while the central one is clear red, the one

on the left is partially clouded. This alteration in colour would have had a narrative implication for a contemporary audience. Neither Pliny nor Marbode assign virtues to the ruby but by the sixteenth century there was general consensus about what the ruby could do for its wearer, even among writers who embraced some vestiges of scientific scepticism.

Here is Johannes De Laet:

The authorities hold that the Carbuncle, or true Ruby, worn or carried, strongly resists poisons and guards against infection, keeps sadness at bay, exhilarates the spirit, keeps the body safe and if the wearer is affected by misfortune it signals this by a change to a darker colour: but when these have passed it recovers its brightness. Meanwhile it reduces sleep, stirs the blood to fire the wearer to swift action. ¹⁵⁵

Susanna's crimson cheeks inflect the ruby's virtues; such colouring would have been seen as an 'abondanza di sangue' (abundance of blood) but this must not be taken simply as stemming from shame. Ripa's Eloquence is dressed in red in order to show that the speech should be arousing, and affecting in manner, causing a blush. ¹⁵⁶ The diamond, everyone agreed, from Pliny onwards, lived up to its name of Adamas or fortitude. As Marbode asserts:

...by its wonderous virtue [it] makes its wearer indomitable Let this stone be borne enclosed in silver or gold. Let the glittering bracelet go around the left arm. ¹⁵⁷

Rubens employs this prominent and distinctive piece of jewellery to alert us not only to the danger that threatens Susanna whose rubies are changing colour but also to endorse the principle of resistance, the law of a stone that resists everything including, or so it was still thought at this time, fire.

There is a further intriguing question mark hanging over Susanna's bracelet and how Rubens might have intended it to be understood. Raphael's portrait of a young woman (fig 19) was seen in 1595 in the house of the Roman Caterina Sforza, Countess of SantaFiore. ¹⁵⁸ In 1618 it was recorded by Fabio Chigi as in the possession of the powerful Roman Buoncompagni family. ¹⁵⁹ It now hangs not far from *Susanna* in the Borghese Gallery on loan from the Barberini. Such is the emotional impact, it has been suggested, that few pay attention to the fact that the Fornarina wears three jewels: a hat brooch, a barely visible wedding ring, and a

bracelet. This last has been described as an object of stupefying novelty that, however, reminds us in a suggestive and emotional manner of classical antiquity.¹⁶⁰ It is, asserts the writer important to understand that this is not a question of a bracelet that was worn ‘on the pulse’ (‘al polso’ means ‘on the wrist’ but also ‘on the pulse’). By contrast, circling the upper arm it presupposes the partial or total nudity of the body.¹⁶¹ Taken to its logical conclusion, this would imply that the single upper arm bracelet, the origins of which as I have demonstrated lie in sculptural representations of Venus, not only signals the erotic character of the subject or narrative but equally the whole gamut of possibilities for the subject who wears it ranging from fully dressed to totally naked.

The novel accessory worn by the Fornarina comprises a band of blue enamel edged by a gold border studded with pearls in which is inscribed in splendid gold capital letters the artist’s name. Epigraphical (like an inscription on a building or a medal) this artist’s signature is publicly inscribed on the exterior surface of the bracelet in contrast to the common practice of a dedication on the inside of a wedding ring or posy ring. With Raphael’s portrait of his mistress, Rubens would have had a precedent for the invention in paint of items of jewellery that in all probability never existed and for which there was never any intention that they should be manufactured. To support the overall narrative such jewellery had to appear authentic – ‘do-able’. Titian, Veronese and Tintoretto all depict female figures wearing gem-studded jewellery but it is never sufficiently detailed to envisage it as a blue-print for a jeweller: Tintoretto’s *The Rape of Helen* (1578-9)¹⁶² is a typical example – Helen’s bracelets are glitzy but generalised. The shift from the ill-defined bracelet of *Aeneas and his Companions Preparing to Leave Troy* to Rubens’s extremely specific treatment of jewellery in *Susanna* marks a recognition of the semantic possibilities of jewellery in historical and mythological paintings that would inform his subsequent work.

Could it be that Rubens (following Raphael) intended Susanna’s ruby bracelet (fig 7) as a form of signature? The latinized form of his own name Petro Rubenio reminds us, after all, that *petra* is a stone as well as a rock and *rubinus* a ruby. It has been suggested that in painting himself with a ruddy complexion Rubens was alluding wittily to his own name.¹⁶³ Furthermore, Matthias Winner has proposed that both the crimson gown of Juno in *Juno and Argus* (1611)¹⁶⁴ as well as the rock and the rosy evening sky in Rubens’s *Self Portrait* (fig. 12) are references to the artist’s name.¹⁶⁵ A more subtle and nuanced signature was surely the repeated appearance of rubies in his work often partially occluded and in contact with

flesh (12A). If we turn to *Achilles discovered by Ulysses* (fig. 20) a painting executed 1617-18 in Rubens's workshop on which his pupil Van Dyck is thought to have worked,¹⁶⁶ we notice a casket full of precious objects more varied than those painted in *Minerva protects Pax from Mars* (fig 6A). This casket has been delivered by Ulysses as a way of catching Achilles who is hiding among the daughters of Lycomedes and who, finding a sword among the jewels, seizes it and thus reveals himself to be a man and not a woman.¹⁶⁷ In the left background, glimpsed behind the central figure, that of the pregnant Deidamia who has fallen in love with Achilles, is her mother with an expression of doubt and cupidity on her face and another sister fascinated as they all are, who between them handle an enormous ruby suspended from a chain (fig. 20A). Is this perhaps Rubens's way of declaring his affiliation to a painting that he described as 'the work of my best disciple entirely retouched by my hand'?

From a close examination of jewelled accessories depicted in Rubens's paintings, a picture emerges of an artist who was intimately acquainted with precious minerals both crafted and in the rough, who understood the mineral characteristics of stones and the construction of jewellery, and who was aware of the values (pharmaceutical, colouristic, mythological and financial) invested in minerals. Precious stones were a major form of exchange currency in Rubens's time. Moreover the artist was a denizen of Antwerp one of the greatest trading centres for dealing in diamonds and other precious stones in the early modern world and, not least through his brother Philip Rubens, the artist became part of a knowledge network in a period when minerals were objects of scrutiny and speculation. With an attention to accuracy in depicting jewels and jewellery far in excess of anything found in the work of earlier artists who inspired him in other respects in their representation of sumptuous materials, Rubens represented precious stones in ways that were subtly allusive, always meaningful and never incidental.

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¹ Barbara Furlotti and Guido Rebecchini, *The Art and Architecture of Mantua: Eight Centuries of Patronage and Collecting* (London: Thames and Hudson, 2008). The authors remark (223) on Vincenzo's passion for Northern art and (225) on his purchases of luxury fabrics, embroidered bed linens, jewellery and arms in Brussels and Antwerp.

² Germano Mulazzani et al, *Rubens a Mantova* (Milano: Electa Editrice, 1977) provides a general summary.

³ Andrea Bacci, *Le XII Pietre Pretiose, le quali per ordine di dio nella santa legge adornuano i vestimenti del sommo sacerdote* (Roma: Bartolomeo Grassi, 1587) 3-4.

⁴ Louis Batiffol, *Marie de Médicis and the French Court in the XVII the century*, ed. H.W. Carless David, trans. Mary King (Edinburgh: Ballantyne, 1908) 5-6.

⁵ Michael Jaffé, *Rubens and Italy* (Ithaca, New York: Cornell University Press, 1977) 11, 17.

⁶ A.M. Claessens-Peré, *Zilver voor Sir Anthony. Silver for Sir Anthony* (Gent and Antwerp: SDZ, 1999) 9-14, 18. The Spinola family, who patronized Rubens, were clients.

⁷ Christina M. Anderson, 'Merchants as collectors and art dealers: the cases of Daniel Nijs and Carlo Hellemans, Flemish merchants in Venice' in Christina M. Anderson, ed., *Early Modern Merchants as Collectors* (London: Routledge, 2017) ch. 10 and Christina M. Anderson, 'Diamond-studded paths: Lines of communication and the trading network of the Hellemans family, jewellers from Antwerp' in Michael Bycroft and Sven Dupré eds., *Gems in the Early Modern World: Materials, Knowledge and Global Trade, 1450-1800* (London: Palgrave Macmillan 2019)

⁸ Quoted in A. Bertolotti, *Artisti di relazione coi Gonzaga Signori di Mantova* (Modena: Vicenzi, 1885) 99. Among Flemings mentioned by Bertolotti (97; 100; 101) are Filippo Cardano 'fiammingo', an 'orefice' working for the Duke (1 June 1581); 1606 Idocco Otts 'fiamengo'; in 1611 a jeweller in Rome called Giovanni Zacharia, who Bertolotti suggests may have been Flemish, wrote to request payment from the Duke. Wilfrid Brulez, *Marchands Flamands a Venise (1568-1605)*, (Brussels and Rome: Institut Historique Belge de Rome, 1965) VI, nos. 977-1095 lists one hundred and eighteen Flemish families (often covering several individuals) resident in Venice as merchants in 1600.

Anderson points out that merchants dealt in mixed cargoes including jewels and that Venice was the hub of a global trade in gems overseen by various members of the Hellemans family from the late sixteenth century, Christina M. Anderson, 'Diamond-studded paths'.

⁹ Raffaella Morselli, ed., *Le Collezioni Gonzaga: L'Elenco dei Beni del 1626-1627* (Milano: Silvana Editoriale, 2000).

¹⁰ Annibale Mottana, 'Italian gemology during the Renaissance: A step toward modern mineralogy' in Gian Battista Vai and W. Glen Caldwell eds., *The*

Origins of Geology in Italy (Boulder, Colorado: The Geological Society of America, 2006) Special Paper 411, 4.

¹¹ Frances Huemer, *Corpus Rubenianum*, XIX, Portraits I (London: Phaidon, Brussels: Arcade Press, 1977) no. 41. The author makes no mention of the jewellery worn by the sitter.

¹² Entitled 'A Lady', New York: Pierpont Morgan Library (41A). A further drawing without jewellery is known from a lithograph by P.F. Lehnert. Both are reproduced in Huemer, *Corpus Rubenianum*, figs. 120 and 121.

¹³ Jan Walgrave, *Een eeuw van schittering: diamantjuwelen uit de 17 de eeuw* (Antwerp: Board of the Province Council of Antwerp, 1993). The significance of the design of diamond cuts for pattern-making in architectural and other forms of ornament in the early modern period is analysed in Marcia Pointon, *Rocks, Ice and Dirty Stones: Diamond Histories* (London: Reaktion Books, 2017) ch. 3 while the global trade and valuation in particular cuts of diamonds are discussed in Marcia Pointon, 'Good and Bad Diamonds in Seventeenth-century Europe', forthcoming in Bycroft and Dupré eds., *Gems in the Early Modern World*.

¹⁴ 'Uittreksel uit de staat van goederen van het sterfhuis van PIETRO PAULO RUBENS, ridder, heer van Steen, etc., weduwnaar van ISABELLA BRANT en echtgenoot van HELENA FOURMENT', 17 November 1645, transcribed in Erik Duverger, *Antwerpse Kunstinventarissen* (Brussel: Koninklijke Academie voor Wetenschappen, Letteren en Schone Kunsten van Belgie, 1991), V, 263-284, original missing, transcription from a copy. Jewellery is listed under items 12-15. The two types of stone appear from Rubens's painting to be table-cut and point-cut diamonds. This piece is not mentioned in the jewels listed in Rubens's 1640 will (P. Génard, 'Het Laatste Testament van P.P. Rubens' in *Rubens-Bulletijn Jaarboeken IV* (Antwerp and Brussels, 1890) 136-141. Gold chains and pearl earrings are mentioned in both.

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- ¹⁵ Hans Vlieghe, *Corpus Rubenianum*, XIX, Portraits, ii, Antwerp-Identified Sitters, (New York: Oxford University Press, 1987) no. 96.
- ¹⁶ Jan Walgrave, *Een eeuw van schittering...*, 118-121. Victoria and Albert Museum (M.143-1975).
- ¹⁷ The term ‘fede’ derives from the Italian *mani in fede*, ‘hands in faith’.
- ¹⁸ Conrad Ge[s]sner, *De Omni Rerum Fossilium Genere, Gemmis, Lapidibus, Metallis, et Huiusmodi, Libri Aliquot, Pleriquenunc Primun Editi, Opera Conradi Gesneri*, (Zurich: J. Gesner, 1565) 1665, 47. In the inventory after the death of Daniel Fourment, Rubens’s father in law, are several ‘rinck taefel’ and ‘rinck punt van diamant’ (ring with table; ring with point diamond) (23 July 1643) transcribed in *Duverger, Antwerpse Kunstinventarissen*, V, 106-7.
- ¹⁹ Rubens to Nicolas Fabri de Peiresc 18 December 1634, Max Rooses and Charles Reulens eds., *Correspondence de Rubens, et documents épistolaires concernant sa vie et ses oeuvres (Codex diplomaticus Rubenianus)*, (Antwerpen: sous le patronage de l'administration communale de la ville d'Anvers, 1887-1909) VI, 1909. Hereafter *Codex diplomaticus*.
- ²⁰ On the cameo bracelets in this and in Rubens's portrait of Jan Brueghel the Elder and his family (Courtauld Gallery) see Marcia Pointon, ‘The Importance of Gems in the Work of Peter Paul Rubens 1577-1640’ in Ben van den Bercken and Vivian Baan eds., *Engraved Gems from Antiquity to the Present* (Leiden, Sidestone, 2017) 99-113. Open access.
- ²¹ See for example, Elisabeth Van Culemborg (d. 1551) and Prinses Anna Van Oranje (d. 1587) transcribed in M.H. Gans, *Juwelen en Mensen: De geschiedenis van het bijou van 1400 tot 1900, voornamelijk naar Nederlandse bronnen* (Amsterdam: J.H. Bussy, 1961), 377, 387; Marvin Lowenthal, *The Memoirs of Glückel of Hameln* (New York and London: Harper, 1932) 33-34.
- ²² Testament Elisabeth Van Culemborg’, 1555, Rijksarchief in Gelderland, Inventory 7, in M.H. Gans, *Juwelen en Mensen*, 376. Teyckenens is normally the term used for large rosary beads.

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- ²³ John F. Healy, *Pliny the Elder on Science and Technology*, (Oxford: Oxford University Press, 1999) 241-245.
- ²⁴ Michael Jaffé gives the date as 1613-14, *Rubens: Catalogo Completo*, trans. Germane Mulazzani (Milano: Rizzoli, 1989); Elizabeth McGrath in an important intervention titles the painting ‘Venus of the Night’, Elizabeth McGrath, ‘Goltzius, Rubens and the Beauties of Night’ in Esther Schreuder and Elmer Kolfin, eds., *Black is Beautiful: Rubens to Dumas* (Amsterdam: De Nieuwe Kerk and Zwolle: Waanders Publishers, 2008) 63.
- ²⁵ McGrath, ‘Goltzius, Rubens and the Beauties of Night’, 64.
- ²⁶ The term ‘bracelet’ follows Catherine Johns, *The Jewellery of Roman Britain: Celtic and Classical Traditions* (London: Routledge, 2013) 108.
- ²⁷ Paris: Musée du Louvre. Scholars have given the painting a date in the early years of Rubens's Italian stay, Elizabeth McGrath et al, *Corpus Rubenianum Ludwig Burchard XI, Rubens: Mythological Subjects Achilles to the Graces* (London and Turnhout: Harvey Miller, 2016) no. 2. McGrath has also suggested (personal communication 2014) that it could have been painted as early as 1600 before Rubens left for Mantua. David Jaffé, et al, *Rubens: A Master in the Making*, London: National Gallery, 2005, pp. 56-7, as *Aeneas preparing to lead the Trojans into exile*, give a later date of 1602-4.
- ²⁸ Kassel: Museumslandschaft GK85.
- ²⁹ See for example Jacob Jordaens, *Cupid and Psyche*, c. 1645, Antwerp: Koninklijk Museum voor Schone Kunsten; Aert van Gelder *Esther and Mordecai*, 1685, Oxford: Ashmolean Museum.
- ³⁰ This is discussed in Kristin Lohse Belkin, *Rubens* (London: Phaidon, 1998) 191.
- ³¹ Oil and silk screen on canvas, Dallas Museum of Art.
- ³² Margit Thøfner, ‘Helena Fourment’s *Het Pelsken*’, *Art History*, 27:1 (February 2004) 1-33 (6) states that ‘Helena is wearing what appears to be a mildly exotic piece of male clothing’.

³³ Richard C. Trexler, ‘Dressing and Undressing Images: An Analytic Sketch’ in Trexler, *Religion in Social Context in Europe and America 1200-1700* (Tempe, Arizona: Arizona Center for Medieval and Renaissance Studies, 2002, 374-408), 376, 395.

³⁴ Alte Pinakothek, Munich. There is nothing in the book that Rubens’s son Albert wrote about the clothing of the Romans, or in the great cameo of France that Rubens copied, to suggest these kinds of sartorial embellishments; see Alberti Rubeni, Petri Pavli F., *De Re Vestiaria* (Antwerp: Officina Plantiana Balthasar Moreti, 1665).

³⁵ On February 1st 2004, Justin Timberlake tore Janet Jackson’s clothing exposing her breast; it was widely reported and the media apologized for a ‘wardrobe malfunction’.

³⁶ Madrid: Prado.

³⁷ Vicenza: Museo Civico.

³⁸ *The Metamorphoses of Ovid*, trans. Mary M. Innes (Harmondsworth: Penguin, 1955) book X, italics added. For Rubens’ ownership of *The Metamorphoses* see Frans Baudouin, Lia Baudouin, Elly Cockx-Indestege, Jacques De Bie and Marcus de Schepper, *De Bibliotheek van Pieter Pauwel Rubens een reconstructive* (Antwerp: Vereniging der Antwerpse Bibliofielen, 2001) 198 and index.

³⁹ Susanne Maas, *Das Bildthema der “Susanna” bei Rubens. Seine Bedingungen in der Italienischen und Niderländischen Malerei und Seine Unmittelbaren Auswirkungen*, doctoral thesis (Kiel: Christian Albrechts-Universität 1974) 86.

⁴⁰ Stefania Agarossi and Laura Benini eds., *Rubens e il Suo Secolo* (Ferrara: Palazzo dei Diamanti, 1999) no. 15. See also Didier Bodart, *Pietro Paolo Rubens* (Padova: Palazzo della Ragione, 1990) no. 25 and Beverly Louise Brown, *The Genius of Rome 1592-1623* (London: Royal Academy of Arts, 2001) no. 107.

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- ⁴¹ Michael Jaffé, *Rubens and Italy*, 90, see also 78, 98.
- ⁴² R.-A. D'Hulst and M. Vandenvan, *Corpus Rubenianum Ludwig Burchard*, III, *The Old Testament*, trans. P.S. Falla (London: Harvey Miller, 1989) no. 58.
- ⁴³ On the tradition of representing Susanna see Paola della Pergola, 'Della Susanna al Bagno', *Musées Royaux de Belgique, Bulletin*, 16: (1967) 7-34; Joséphine Le Foll, 'Le Jardin de Suzanne entre Sacre et Profane' in *Le Serment des Horaces: Revue d'Art Internationale*, 1 (autumn 1988-winter 1989) 113-122; Marie-Louise Fabre, *Suzanne ou les Avatars d'un Motif Biblique* (Paris: Ed. L'Harmattan, 2000); Kathryn A. Smith, 'The Iconography of Susanna and the Elders in Early Christian Art', *Oxford Art Journal*, 16:1 (1993) 3-24.
- ⁴⁴ Cordula Bischoff, 'Albrecht Altdorfer's *Susanna and the Elders*: Female Virtues, Male Politics', *RACAR*, XXIII, 1-2 (1996) 22-35.
- ⁴⁵ According to Le Foll, 'Le Jardin de Suzanne' it was not until the fifteenth century that the bath scene superseded other more general garden scenes. Tintoretto painted seven versions and Veronese eleven.
- ⁴⁶ Jan Denucé, *De Antwerpsche 'Konstkamers': inventarissen van kunstverzamelingen te Antwerpen in de 16e en 17e eeuwen* (Amsterdam: De Spiegel, 1932).
- ⁴⁷ The others are ca. 1609, St. Petersburg: State Hermitage Museum; ca. 1610, Madrid: Museo de la Real Academia de Bellas Artes de San Fernando; Stockholm: the National Museum; Munich: Alte Pinakothek. D'Hulst and Vandenvan, *Corpus Rubenianum*, nos. 59, 60, 64, 65. There are also a number of missing paintings with this title including D'Hulst and Vandenvan. no. 62 delivered in 1618 to Sir Dudley Carleton.
- ⁴⁸ Michael Jaffé, *Rubens and Italy*, 102, speculates that Bernini must have been inspired by this movement.
- ⁴⁹ 'La Susanna sollecitata da i vecchi, è di Pietro-Paolo Rubens', Iacomo Manilli, *Villa Borghese* (Roma: Lodovico Grignani, 1650).

⁵⁰ The source for this is Della Pergola, ‘Della Susanna al Bagno’, 7, quoted also in Bodart, *Pietro Paolo Rubens*, no. 25. D’Hulst and Vandenven, *Corpus Rubenianum*, no. 58.

⁵¹ See Bodart for full details of Borghese’s relations with artists.

⁵² Nicole Dacos, ‘Peter Paul Rubens’ in E. Borea and C. Gasparri eds., *L’Idea del Bello: Viaggio per Roma con Giovan Pietro Bellori* (Roma, Ed. de Luca, 2000) vol II, 289.

⁵³ David Jaffé et al, *Rubens: A Master in the Making*, 78; Michael Jaffé, *Rubens and Italy*, caption to pl. VIII; Frances Huemer, *Rubens and the Roman Circle: Studies of the First Decade* (New York and London: Garland, 1996) 232.

⁵⁴ After Annibale Caracci, ca. 1730-50, British Museum 1865,0520.739.

⁵⁵ J.-C. Prêtre, *Suzanne: Le Procès du Modèle* (Paris: Bibliotheque des Arts, 1990) 82-3: ‘Jouant de la triple influence italienne du nord, du sud et de Caravage, et en y adaptant des éléments plus anciens encore, Rubens réussit, pourtant, a représenter une première Suzanne non depourvue d’originalité.’ (playing with the triple Italian influence, northern, southern, and from Caravaggio, and modifying it with even older elements, Rubens succeeded, however, in representing a first Susanna not without originality’). After a few remarks of this kind he moves rapidly to the version in Madrid. See also Karolien De Clippel, Katharina Van Cauteren & Katlijne Van der Stighelen, *The Nude and the Norm in the Early Modern Low Countries* (Turnhout: Brepols, 2011).

⁵⁶ Agarossi and Benini, *Rubens e il Suo Siecolo*, no. 15; Della Pergola, ‘Della Susanna al Bagno’, 7-8.

⁵⁷ Dated Antwerp 12 May 1618, transcribed in *Codex Diplomaticus*, II, clxviii. Elizabeth McGrath, ‘*Susanna and the Elders* and moralizing inscriptions on prints’ in Herman Vekeman and Justus Müller Hofstede eds.,

Wort und Bild in der niederländischen Kunst und Literatur des 16 und 17 Jahrhunderts (Erfstadt:Lukassen,1984) (73 – 90) 81-85.

⁵⁸ I am drawing here on Jacques Derrida's well-know exploration in *Of Grammatology* (1974), ch. 4, trans. Gayatri Spivak (Baltimore: Johns Hopkins University Press, 1976).

⁵⁹ See Mieke Bal *Reading 'Rembrandt'* (Amsterdam: Amsterdam University Press, 2006); Mary Garrard, *Artemesia Gentileschi: the Image of the Female Hero in Italian Baroque Art* (Princeton: Princeton University Press, 1989) and Mary Garrard, *Artemesia Gentileschi around 1622: the Shaping and Reshaping of an Artistic Identity*, Part II (Berkeley: University of California Press, 2001). Both authors focus on nudity and do not discuss clothing and jewellery.

⁶⁰ Antwerp: Koninklijk Museum voor Schone Kunsten, inv. 709.

⁶¹ D'Hulst and Vandeven, *Corpus Rubenianum* no. 58 cite the *Spinario* (Rome: Palazzo dei Conservatori) which Rubens drew (British Museum T, 14.1). David Jaffé et al, *Rubens: A Master in the Making*, 78-9 cite the *Spinario* while also mentioning a well-known print after Sebald Beham *Three Women in a Bath House* which, however, shows a standing not a seated figure.

⁶² Roman copy of 3rd c BCE bronze sculpture on loan to the British Museum from the Royal Collection. Prior to 1598 it was in the gallery of Cardinal Montalto in Rome and was purchased in 1627-8 from the Gonzaga collection by Charles I. For details of the Gonzaga provenance see Barbara Furlotti, *Le Collezioni Gonzaga. Il Carteggio tra Roma e Mantova (1587-1612)* (Milano: Silvano Editoriale, 2003) 61-2.

⁶³ I am grateful to Elizabeth McGrath for drawing my attention to the bracelet in this drawing.

⁶⁴ Copy of a Second century BCE sculpture, Vatican Museum 548.

⁶⁵ Antwerp: Koninklijk Museum voor Schone Kunsten (inv. 5076).

⁶⁶ Rome: Palazzo Barberini.

⁶⁷ The Van Dyck portrait is in a private collection, reproduced in Emilie E.S. Gordenker, *Anthony Van Dyck (1599-1641) and the representation of dress in seventeenth-century portraiture* (Turnhout: Brepols, 2001) pl. 59. Gordenker discusses the portrait (43) but mentions neither the sitter's pearls nor her bracelet. See, for example, Angelica Kauffmann, *Portrait of a Young Woman dressed as a Bacchante*, Rome: Palazzo Barberini; Eugène Delacroix, *The Death of Sardanapalus*, 1827, Paris: Musée du Louvre.

⁶⁸ By contrast for example with Goltzius's version, 1615, Boston: Museum of Fine Arts, 200974.

⁶⁹ On Rubens's manner of painting see Svetlana Alpers, *The Making of Rubens* (London and New Haven: Yale University Press, 1995) and Nico van Hout and Arnout Balis, *Rubens Unveiled: Notes on the Master's Painting Technique* (Antwerp: Koninklijk Museum voor Schone Kunsten, 2012).

⁷⁰ See David Jaffé et al, *Rubens: A Master in the Making 24-5*; Jeremy Wood, ed. *Lives of Rubens by Giovanni Baglione, Joachim von Sandrart, Roger de Piles* (London: Pallas Athene, 2005) 19.

⁷¹ On the hoard see Hazel Forsyth, *The Cheapside Hoard: London's Lost Jewels* (London: Museum of London, 2013).

⁷² These diamonds are listed in inventories as 'point diamonds'; typical is 'Eenen rinck punt van diamant' (a ring with a point diamond) see note 17.

⁷³ See in particular Marbodius (1035-1123), John M. Riddle, *Marbode of Rennes (1035-1123), 'De Lapidibus', considered as a medical treatise with text, commentary and C.W. King's translation* (Wiesbaden: Franz Steiner Verlag, 1977); Anselmus Boëtius de Boodt (1550-1632), *Gemmarum et Lapidum Historium*, (Hanoviae: Apud Mari[um] & haeredes J. Aubril) 1609.

⁷⁴ *The Treatises of Benvenuto Cellini on Goldsmithing and Sculpture*, trans. C.R. Ashbee (1888) (New York: Dover, 1967) 23. Cellini's reputation in his own time was not for bronze statues but for small objects and jewels in which

gem stones had to be set in such a way as to be ostentatious (Mottana ‘Italian gemology during the Renaissance’, 11).

⁷⁵ Albertus Magnus, *Book of Minerals*, trans. Dorothy Wyckoff (Oxford: Clarendon Press, 1967) 77.

⁷⁶ *The Treatises of Benvenuto Cellini*, ch. IV, 22. On the trade in gems during the sixteenth and seventeenth centuries see Bycroft and Dupré, eds. *Gems in the Early Modern World*.

⁷⁷ Robert de Berquen, Marchand Orphèvre à Paris, *Les Merveilles des Indes Orientales et Occidentales, ou Nouveau Traité des Pierres Précieuses et Perles* (Paris: Christophe Lambin, 1661) p. 23.

⁷⁸ J. Denucé, ‘Exportation d’Oeuvres d’Art au 17e siècle a Anvers: La Firme Forchoudt [sic]’, *Sources pour l’Histoire de l’Art Flamand*, 1 (Gravenhage: Martinus Nijhoff, 1931) 19. Denucé 206-7 lists five pairs of bracelets in the transcript of a receipt dated December 1680, Lintz, relating to debt owed by the Venetian Ambassador Julio Justima, probably in respect of paintings and tapestries. On the Forchondt see Sandra van Ginhoven, *Connecting Art Markets: Guiliam Forchondt’s Dealership in Antwerp (c.1632–78) and the Overseas Paintings Trade*, Christian Huemer, ed., *Studies in the History of Collecting & Art Markets I*, (Boston: Brill, 2017).

⁷⁹ See note 19.

⁸⁰ Sven Dupré, ‘Trading Luxury Glass, Picturing Collections and Consuming Objects of Knowledge in Early Seventeenth-Century Antwerp’ in Sven Dupré and Christoph Lüthy eds., *Silent Messengers: the circulation of material objects of knowledge in the early modern Low Countries* (Munster: LIT Verlag, 2011) 261.

⁸¹ See Iris Kockelbergh, Eddy Vleeschdrager and Jan Walgrave, *The Brilliant Story of Antwerp Diamonds* (Antwerp:MIM, 1992) 36-57.

⁸² Meaning literally nation but in fact signifying a business association. Ordinances, declarations and other documents on this Natie, Antwerp Stadsarchief, GA 4477.

⁸³ R. Baetens, ‘Een Antwerps Handelhuis uit de XVIIe Eeuw de firma Van Colen’, in *Tijdschrift voor Geschiedenis*, 2 (1960), 198-214. Gisbert Van Colen purchased Rubens’s portrait of Helena Fourment with Frans Rubens, Vlieghe, *Corpus Rubenianum*, no. 98 and also the ‘wedding’ portrait of Helena, no. 96, both now in the Alte Pinakothek, Munich.

⁸⁴ 26 May 1603, *Codex Diplomaticus*, I, xxix, Annibale Iberti to Duca di Mantova.

⁸⁵ The diamonds Rubens received for work at the English court were well known and are frequently mentioned, see for example Balthasar Gerbier to Lord Cottington, 17 February 1630, *Codex Diplomaticus*, III, dclxi and the mandate from Charles I of 1638 when Rubens was knighted and given a jewel studded sword and hat ornament with diamonds, *Codex Diplomaticus* VI, dclxiii. The will drawn up in 1640 by Rubens and Helena Fourment includes ‘eenen rinck met gooten diamant gecommen van Engellant’ (A ring with a big diamond that came from England) as well as several chains, one ‘met diamanten’ (with diamonds) P. Génard, ‘Het Laatste Testament van P.P. Rubens’, 137-138. The inventory of 1645 contains several gold chains, ‘Uittreksel uit de staat van goedern van het sterfhuis van Pietro Paulo Rubens ...’, Inventory no. 7

⁸⁶ The design of this gold chain may have been something similar to gold bracelets described in an inventory of 1555 as being made of ‘S S’ or ‘mit golden Grieksch AA’, transcribed Gans, *Juwelen en Mensen*, inventory no. 7.

⁸⁷ It can be inspected in detail at

<https://www.royalcollection.org.uk/collection/search#/25/collection/400156/a-self-portrait>. Accessed 2 January 2018. The following year Rubens would sell

the bulk of his collection of engraved gems and intaglios to the Duke of Buckingham.

⁸⁸ Duverger, *Antwerpse Kunstinventarissen*, V, 268. Nor is there any ‘hat band’ answering this description among the several portraits Rubens painted of himself wearing a hat.

⁸⁹ Yvonne Hackenbroch, *Renaissance Jewellery* (New York: Sotheby, 1979); *La Dama Velata*, 1515, Firenze: Pitti Palace; for my discussion see Pointon, ‘The Importance of Gems’, 111.

⁹⁰ *Codex Diplomaticus*, I, xxix; II, cxliii; IV, dliv; V, dccvi.

⁹¹ On 4 March 1632 Rubens signed a letter addressed to Sieur Daniël Deechbroot along with Adriaen Brouwer and P. de Breuseghem (See: Erik Duverger, *Antwerpse Kunstinventarissen uit de Zeventiende Eeuw*, Vol. 3: 1627-1635 (Brüssel: Koninklijke Academie, 1987) no. 760). Dr. Nils Büttner who has extensively studied Rubens’s business dealings (see Nils Büttner, *Herr P.P. Rubens: Von der Kunst, berühmt zu werden* (Gottingen: Vandenhoeck and Ruprecht, 2006) has stated: ‘They all knew each other, knew who owed what to whom, and stayed, more or less, within the set bounds of their own class.’ Nils Büttner, ‘Aristocracy and Noble Business: Some Remarks on Rubens’s Financial Affairs’ in *Minuscule Amicorum: Contributions on Rubens and his Colleagues in Honour of Hans Vlieghe*, ed. Katlijne van der Stighelen (Turnhout: Brepols, 2006) I, 67.

⁹² On the Duarte family see Timothy De Paepe, ‘Een Netwerk van Luxe: De Familie Duarte in het zeventiende-eeuwse Antwerpen’, <http://www.divaantwerp.be/nl/research/een-netwerk-van-luxe>.

⁹³ *Codex Diplomaticus*, V, dccxxii, Balthasar Gerbier to King Charles I, September 1631.

⁹⁴ On the Valguarnera case, see Jane Costello, ‘The Twelve Pictures “Ordered by Velasquez” and the Trial of Valguarnera’, *Journal of the Warburg and Courtauld Institutes*, vol XIII, no. 3/4 (1950) 237-284, especially 255-269.

⁹⁵ Archivio di Stato, Rome, Tribunale Criminale del Governatore, Processo 1621-1631, MSS. 265 bis. Hereafter ‘Processo’. The letter from Rubens, which is transcribed in *Codex Diplomaticus*, V, dccvi, is missing from the dossier with a copy inserted at that point (f.1384). Rooses and Ruelens editors of *Codex Diplomaticus* relied on A. Bertolotti’s ‘P.-P. Rubens, Corneille de Wael, Jean Roos, Antoine Van Dyck. Lettres et renseignements inédits’, *Rubens-Bulletijn Jarboeken* (1888) III, 197-217, transcript of letter at 214. Jane Costello ‘The Twelve Pictures’ is primarily concerned with Valguarnera’s relationship with artists rather than with the diamond theft.

⁹⁶ ‘Processo’ f. iii4 r.

⁹⁷ Gioellerie means jewellers in the sense of those who sell jewels and jewellery. Diamantari is plural of diamantario which has the sense in English of diamond dealer and merchant as well as cutter and polisher, ie all who work with diamonds.

⁹⁸ Some of Valguarnera’s evidence is transcribed as appendices by Costello ‘The Twelve Pictures’, along with depositions from witnesses and lists of the contents of Valguarnera’s house, see ‘Processo’ f. 1181-1205.

⁹⁹ For a detailed description of the diamonds involved in this theft and the ‘laundering’ of the stolen goods see Pointon *Rocks, Ice and Dirty Stones ...* 176-184.

¹⁰⁰ See Costello, ‘Twelve Pictures’, 274-279 for the testimonies of artists at Valguarnera’s trial.

¹⁰¹ 23 July 1643, will transcribed in Duverger, *Antwerpse Kunstinventarissen*, V, 106: for example ‘Sesse bruyne rouwdiamanten wegende seven caraeten’ (six brown rough diamonds estimated at seven carats).

¹⁰² ‘eenighe peerlen weert onbegrepen elf hondert oft tweelft hondert guldenen die metentijt vercocht selen worden ...’ (some pearls worth approximately 1100 to 1200 guilders that will eventually be sold...), ‘Staet van den

streffhuyse van Jouffrouwe Isabella Bran[d]t', transcribed in, *Rubens-Bulletijn, Jaarboeken IV* (1890) 158.

¹⁰³ Though the focus is on Amsterdam, the fullest account of the diamond trade remains Gedalia Yogev, *Diamonds and Coral: Anglo-Dutch Jews and Eighteenth-Century Trade* (Liecester: Leicester University Press, 1978).

¹⁰⁴ The Fourchondt payment cited in Denucé, 'Exportation d'Oeuvres d'Art', 206-7, contained five pairs of bracelets.

¹⁰⁵ Ria Fabri, *De 17de-eeuwse Antwerpse Kunstkast Typologische en historische aspecten* (Brussel: Paleis der Academien, 1991).

¹⁰⁶ Hans-Olof Boström, 'Philipp Hainhofer and Gustavus Adolphus' Kunstschränk in Uppsala', in Oliver Impey and Arthur MacGregor, eds., *The Orgins of Museums: The Cabinet of Curiosities in sixteenth- and seventeenth-century Europe* (1985) (London: House of Stratus, 2001)121-136.

¹⁰⁷ Giovanni Pietro Bellori, *Le Vite De' Pittori, Scultori Ed Architetti Moderni: Co' Loro Ritratti Al Naturale* (1672), Roma, 1728, *Vita di Pietro Paolo Rubens d'Anversa Pittore*, 131-150, 148.

¹⁰⁸ The standard English translation of Bellori gives 'metalli' as 'bronzes' which is not I believe correct, Alice Sedgwick Wohl with Hellmut Wohl and Tomaso Montanari eds., *Giovan Pietro Bellori, The Lives of the Modern Painters, Sculptors and Architects*, (Cambridge: Cambridge University Press, 2005) 204.

¹⁰⁹ '...huysen, lant, renten, gout, silver, gemunt ende ongemunt schulden ...' (houses, lands, rents, gold, silver); 'Staet van den streffhuyse van Jouffrouwe Isabella Bran[d]t', 158. There were, however, cross overs. Rubens made a number of designs for silverware and it was Jan Lescornet II, an important Antwerp silversmith who, along with Elias Voet, had responsibility for the valuation of jewellery in Rubens's possession in 1640. See Claessens-Peré, *Zilver voor Sir Anthony*, 273.

¹¹⁰ The title is given by Frank Dawson Adams, in *The Birth and development of the Geological Sciences* (1938) (NewYork: Dover 1954) 175. On Agricola,

see Annibale Mottana, ‘Italian gemology during the Renaissance’, 4; on Michele Mercati, see Bruno Accordi, ‘Michele Mercati (1541-1593) e la Metallotheca’, *Geologica Romana*, XIX (1980), 1-51. Michaelis Mercati, *Metallotheca, Opus Posthumum, Auctoritate, & Munificentia Clementis Undecimi Pontificis Maximi* (Roma: Mariae Salvioni, 1717). This posthumously published catalogue would have been circulated in manuscript in the seventeenth century.

¹¹¹ ‘Het Laatste Testament van P.P. Rubens’.

¹¹² Duverger, *Antwerpse Kunstinventarissen*, V, 266.

¹¹³ Hugh Torrens, ‘Early Collecting in the Field of Geology’ in Impey and MacGregor, eds., *The Origins of Museums*, 285. See also Paula Findlen, *Possessing Nature: Museums, Collecting, and Scientific Culture in Early Modern Europe* (Los Angeles: University of California Press, 1994) 31.

¹¹⁴ Gian Battista Vai and William Cavazza, ‘Ulisse Aldrovandi and the origin of geology and science’, in Vai and Caldwell, *The Origins of Geology*, 51.

¹¹⁵ Giuseppe Olmi, *Ulisse Aldrovandi: scienza e natura nel secondo cinquecento* (Trento: Libera università di Trento, 1978) 88-9.

¹¹⁶ On these marvels see Lorraine Daston and Katharine Park, *Wonders and the Order of Nature 1150-1750* (New York: Zone Books, 1998) ch. 7.

¹¹⁷ Ulyssis Aldrovandi, *Musaeum Metallicum in Libros III* (Bononiae: I.B Ferronii, 1648), 910, no. 13; the agate ‘eyes’ are illustrated 908-9.

¹¹⁸ For a series of such amulets in the paper museum of Cassiano dal Pozzo, see Windsor RL 25496, *Natural History: Fossils V*, fol. 14.

¹¹⁹ See Baudouin et al *De Bibliothek van Pieter Pauwel Rubens*, 134, 139, 149.

¹²⁰ Christiana Scappini and Maria Pia Torricelli, *Lo Studio Aldrovandi in Palazzo Pubblico (1617-1742)* (Bologna: Cooperativa Libreria Universitaria Editrice Bologna, 1993) 15-16; After Aldrovandi’s death his Museum was moved in 1617 to the Palazzo Pubblico. He described the contents of the

Museum in his *Trattato Naturale*, 1595, 50 v- 51 r (quoted in Sandra Tugnoli Pattaro, *Metodo e sistema delle scienze nel pensiero di Ulisse Aldrovandi* (Bologna: CLUEB, 1981) 34. They included 'cose sotteranee, come terre, succi concreti magri e grassi, pietre, marmi, sassi, metalli...' (things from below the ground, like earths, meagre and fat concrete juices, stones, marbles, rocks, metals).

¹²¹ Bruno Accordi, 'Contributions to the history of the geological sciences. The Musaeum Calceolarium (XVIth century) of Verona illustrated in 1622 by Ceruti and Chiocco', *Geologica Romana*, XVI (1977) 23, 25. See also William B. Ashworth Jr., 'Natural History and the emblematic world view' in David C. Lindberg and Robert S. Westman, *Reappraisals of the Scientific Revolution* (Cambridge: Cambridge University Press, 1990) 304-5, 313-7.

¹²² B. Ceruti and Andrea Chiocco, *Musaeum Franc. Calceolari* (Veronae apud A. Tamum, 1622) 192.

¹²³ Torrens, 'Early Collecting in the Field of Geology' 284 on the connection between Imperato and Colonna.

¹²⁴ On Imperato's interest in minerals and his connections with the Lincei, see Enrica Stendardo, *Ferante Imperato: Collezionismo e Studio della Natura a Napoli tra Cinque e Seicento* (Napoli: Accademia Pontaniana, 2001) 30-39, 57-59, 81-85.

¹²⁵ The supposition is made by Nancy Thomson de Grummond, *Rubens and Antique Coins and Gems*, University of North Carolina at Chapel Hill, Ph.D. 1968 (Ann Arbor, Michigan: University Microfilms, 1968) 8.

¹²⁶ For a discussion of this project see Pointon, 'The Importance of Gems'.

¹²⁷ Jaffé, *Rubens in Italy*, fig. 311, now Winterthur, Kleinmeistersammlung Jakob Briner Stiftung, inv.no.BIII, engraved 1622 by Lucas Vorsterman under Rubens's supervision and collected in *Varie Figueri de Agati Antique*, British Museum no. 1891, 0414,1238.

¹²⁸ On the origins of the *Accademia dei Lincei* see Giuseppe Gabrieli, *Contributi alla Storia della Accademia dei Lincei* (Roma: Accademia Nazionale dei Lincei, 1989) 2 vols.

¹²⁹ Irene Baldriga, *L'Occhio della Lince: I Primi Lincei tra Arte, Scienza e Collezionismo (1603-1630)* (Roma: Accademia Nazionale dei Lincei, 2002) 54. Rubens's letters to Faber, dated 10 April 1609 and 14 January 1611 now in the archive of the Accademia dei Lincei (Faber correspondence) are transcribed in Baldriga's appendix 292-296.

¹³⁰ A print by Michel Lasne after Rubens' *Saint Francis of Assisi receiving the Child Jesus from the Madonna*, published in Antwerp by Theodoor Galle (*Corpus Rubenianum*, VIII no. 94) was dedicated to Pisani, British Museum R, 4.21. See Antonio Favaro, *Amici e Corrispondenti di Galileo*, 3 vols. (Firenze: Libreria editrice Salimbeni, 1983) I, 37-64, 54-57.

¹³¹ Count Cesi's interest in fossilized wood has been well rehearsed, not least by David Freedberg, *The Eye of the Lynx: Galileo, His Friends, and the Beginnings of Modern Natural History* (Chicago and London: Chicago University Press, 2002) Part III, 'Fossils'. It is, however, clear that Cesi was also interested in minerals: the partial posthumous inventory of his collection (Archivio Linceo, Rome, MS. 32 ff. 84v-88v) is reprinted as Appendix 11 in Henrietta McBurney et al, *Birds, Other Animals and Natural Curiosities: The Paper Museum of Cassiano dal Pozzo, series B Natural History parts four and five, a Catalogue Raisonné* (Turnhout: Royal Collection in association with Harvey Miller Publishers, 2017) 2 vols. The inventory includes: 'Various small pieces of polished, unpolished and partially worked stones'. According to Francis Haskell, *Patrons and Painters* (New Haven and London: Yale University Press, 1980) 100 when Cesi died in 1630 Cassiano bought a large number of his books and scientific instruments; medals, prints and precious stones were stored with books, sculpture and mechanical instruments.

¹³² See for example his observations on crystals in letter from Pisa to Signor Baccio Valori in Firenze 17 April 1590 in Ugo Viviani, *Vita ed Opere di Andrea Cesalpino* (Arezzo, 1922) 105-6. In 1596 Cesalpino published *De Metallicis*. See McBurney et al, *Birds, Other Animals and Natural Curiosities*, 601, n. 27.

¹³³ Curzio Cipriani, Luciana Fantoni, Luisa Poggi, Alba Scarpellini, *Le Collezioni Mineralogiche del Museo di Storia Naturale dell'Università di Firenze a Oggi* (Firenze, 2011) 4; Gary D. Rosenberg ed., *The Revolution in Geology from the Renaissance to the Enlightenment* (Boulder: Colorado, 2009) 79.

¹³⁴ A Natural History of the new world originally prepared by Philip II's doctor Francisco Hernández (1517-1587). For a brief history see <http://www.lincci-celebrazioni.it/imessicano.html>. Accessed 20 July 2017.

¹³⁵ 'Gems, Minerals, Diverse Salts'. Francisco Hernández, *Rerum Medicarum Novae Hispaniae Thesaurus*, facsimile (Rome: Istituto Poligrafico e Zacca dello Stato, 1992) Liber X, 335. Mottana finds the lack of images and the dependence on earlier writers disappointing, Annibale Mottana, 'Il Tesoro Messicano: il commento di Fabio Colonna (1628) e i contributi innovati alle conoscenze mineralogiche', in Maria Eugenia Cadeddu e Marco Guardo, *Il Tesoro Messicano: Libri e Saperi tra Europa e nuovo mondo* (Firenze: Leo Olschki 2013) 175-218. But it is significant that 'minerali' remained in the titlepage from the first iteration.

¹³⁶ Royal Library, Windsor Castle, Cassiano del Pozzo Museo Cartaceo, *Natural History: Fossils V*; ff. 25492, 25493, 25494, 25495 show agates intermingled with other minerals such as jasper, jade and bloodstone (McBurney et al, *Birds, Other Animals and Natural Curiosities* nos. 259, 260, 263, 264). Identification of the specimens represented cannot be conclusive. See W.D. Ian Rolfe, 'Materia Medica in the seventeenth-century Paper Museum of Cassiano dal Pozzo' in C.J. Duffin, R.T.J. Moody and C. Gardner-

Thorpe, eds., *A History of Geology and Medicine* (London: The Geological Society of London, Special Publications, 375, 2013) 137-156; C.E.N.

Bromehead, 'A Geological Museum of the Early 17th Century', *The Quarterly Journal of the Geological Society of London*, 103 (1947) 65-87. The most authoritative account of Cassiano's mineral collecting is Caterina Napoleone with Ian Rolfe, 'Minerals and Natural Curiosities in the Paper Museum' in McBurney et al. *Birds, Other Animals and Natural Curiosities II*, 591-603. Cassiano's library included texts on minerals such as Bacci, *Le XII Pietre Pretiose*, see Donatella L. Sparti, *Le Collezione dal Pozzo. Storia di una famiglia e del suo museo nella Roma sicentesca* (Modena: Franco Cosimo Panini, 1992) 131.

¹³⁷ Paul Huvenne in collaboration with Hans Nieuwdorp, *The Rubens House, Antwerp* (Brussels: Cultura Nostra, 1990).

¹³⁸ Rolfe, 'Materia Medica', 139. Stones were more highly valued in the pharmacy than plants, McBurney et al, *Birds, Other Animals and Natural Curiosities*, 162.

¹³⁹ Rémy Belleau, *Les Amours et Nouveaux Eschanges des Pierres Précieuses* (1576), ed. Maurice F. Verdier (Geneva and Paris: Librairie Droz, 1973) no. XIII, stanza 145.

¹⁴⁰ Riddle, *Marbode of Rennes*.

¹⁴¹ De Boot, *Gemmarum et Lapidum Historia*; the second expanded edition 1647 was edited by Antwerp resident Johannes De Laet. De Boodt is described by Dawson Adams (*Birth and development of the Geological Sciences* 161-2) as 'in many respects the most important lapidary of the seventeenth century [who] exerted a widespread influence'. On Alard see Evelien Chayes, *L'Éloquence des Pierres Précieuses: De Marbode de Rennes à Alard d'Amsterdam* (Paris: Honoré Champion, 2010).

¹⁴² Bernard Palissy, *Discours admirables de la Nature des Eaux et Fontaines, tant naturelles qu'artificielles, des métaux, des sel & salines, des pierres, du feu & des émaux*, (Paris: chez Martin le Jeune, 1580) 232-233.

¹⁴³ Johannes De Laet, *De Gemmis et Lapidibus Libri Duo*, (Antwerp: Ioannis Maire, 1647) Ch. XV, 50-51. On the significance of red and the problems of nomenclature, see John Gage, *Colour and Meaning: Art, Science and Symbolism* (London: Thames and Hudson, 1999) 110-112.

¹⁴⁴ Robert Boyle, 'The Origin and Virtues of Gems', reprinted in *The Philosophical Works of the Honourable Robert Boyle, Esqu.; abridged, methodized and disposed under General Heads ... by Peter Shaw*, 3 vols (London: J. Osborn and T. Longman, 1725) III, 99-143.

¹⁴⁵ Rubens owned a copy of the first edition published in Antwerp by Balthasar Moretus, 1634, see Baudouin et al, *De Bibliothek van Pieter Pauwel Rubens* 128. The exemplum accompanying the device explains that gems take their light from the sun and preserve it if kept in the dark.

¹⁴⁶ Teresa Esposito's work on alchemical traditions and secret networks demonstrates clearly this fallacy. Teresa Esposito, 'Peter Paul Rubens and the Distribution of Secret Knowledge in Antwerp and Italy', Ph.D., University of Gent, 2018.

¹⁴⁷ Ashworth, Jr. 'Natural History and the emblematic world view', 306, 324.

¹⁴⁸ Quoted in Huemer, *Rubens and the Roman Circle*, 184.

¹⁴⁹ Book XVI, 8-14.

¹⁵⁰ Eric Jorink, 'Noah's Ark Restored (and Wrecked): Dutch Collectors, Natural History and the problem of Biblical Exegesis', in Sven Dupré and Christoph Luthy eds., *Silent Messengers: the Circulation of Material Objects of Knowledge in the Early Modern Low Countries* (Munster: LIT Verlag, 2011) 156.

¹⁵¹ Pliny the Elder, *Natural History*, Book XXXVII, i-ii, p.165,

https://www.loebclassics.com/view/pliny_elder-

natural_history/1938/pb_LCL419.165.xml, accessed 8 Jan 2018. Rubens completed his painting *Prometheus Bound* (with Frans Snyders painting the eagle) in 1618, Philadelphia Museum of Art.

¹⁵² Gessner, *De Omni Rerum Fossilium*, 96-99. This may be the first representation of a cameo. Gessner considered his essay the outline for a much larger work which he did not survive to undertake. Rubens owned volume V of his *Historiae Animalium*, published in 1587, which he gave to Plantin for binding in 1613. See Baudouin et al, *De Bibliothek van Pieter Pauwel Rubens*, 135.

¹⁵³ *King James's Bible*, Exodus 28, 1-21. On Rubens's love of agate see my 'In Praise of Agate: Peter Paul Rubens - Painter – and the love of stones' forthcoming.

¹⁵⁴ *The Diary of John Evelyn*, ed. E.S. de Beer (London, New York, Toronto: Oxford University Press, 1959) 146.

¹⁵⁵ De Laet, *De Gemmis et Lapidibus*, ch. XIV, 146.

¹⁵⁶ Cesare Ripa, *Iconologia overo Descrittione d'Imagini delle Virtu, Vitij, Affetti, Passioni humane, Corpi celesti, Mondo e sue parti*, (1593) (Padua: Pietro Paolo Tozzi, 1611) 86-7; 139.

¹⁵⁷ Riddle, *Marbode of Rennes*, 35, I *De Adamante* (Marbode lines 43-9).

¹⁵⁸ Richard Cocke and Pierluigi di Vecchi, *The Complete Paintings of Raphael* (London: Weidenfeld and Nicolson, 1969) no. 146.

¹⁵⁹ Cocke and di Vecchi, *The Complete Paintings of Raphael*, citing Fabio Chigi, *Commentario alla Vita di Agostino Chigi*.

¹⁶⁰ Maria Grazia Ciardi Dupré Dal Poggetto, 'I gioielli della *Fornarina*' in Lorenzo Mochi Onori, ed., *La Fornarina di Raffaello* (Milan: Skira, 2002) 93.

¹⁶¹ Dal Poggetto 'I gioielli della *Fornarina*' 96.

¹⁶² Madrid: Prado.

¹⁶³ James Hall, *The Self-Portrait: A Cultural History* (London: Thames and Hudson, 2014). 25. Elizabeth McGrath in *Corpus Rubenianum XIII (Rubens:*

Subjects from History) (London: Harvey Miller, 1997) II, 22, n. 7, points out that in a commentary on *The Head of Cyrus brought to Queen Tomyris* (I.M. Silos, *Pinacotheca sive romana picture et sculptura*, Rome 1673, epigram CXII) appears the description: ‘Arte Rubens docta pulchre tantum exprimit irae: / Illa rubet Cyri sanguine, & ille suo’ (Rubens has the knowledge and the skill to express such anger beautifully: she reddens in the blood of Cyrus, he is his own gore).

¹⁶⁴ Cologne: Wallraf-Richartz Museum.

¹⁶⁵ Matthias Winner, ‘Peter Paul Rubens’ *Juno und Argus*, in Ekkehard Mai and Eva Hartmann eds., *Die Zukunft der Alten Meister*, Köln Weimar Wien: Böhlau Verlag, 2001), 187-215, p. 207.

¹⁶⁶ The painting's authorship is discussed in E. McGrath et al, *Corpus Rubenianum* XI no. 1 where it is claimed (i, p. 74-5) that 'beyond dispute is Rubens's invention of the design in the modello ... and his responsibility for its realisation on a large-scale in his studio in the form finally devised for the Prado picture.' It has also been ‘widely regarded as a collaboration between Rubens and Van Dyck’, Friso Lammertse and Alejandra Vergara eds., *The Young Van Dyck* (Madrid: Prado, 2014) no. 60. The authors in both cases do not mention jewellery. Rubens offered Dudley Carleton, 28 April 1618, ‘Un quadro di un Achille vestito di donna fatto del miglior mio discepolo, i tutto ritocco de mia mano, quadro vaghissimo e pieno de molte fanciulle bellissime’ (A painting of Achilles dressed as a woman done by my best pupil, retouched by my hand, a lovely painting full of many very beautiful girls) *Codex Diplomaticus* II, cxlvi.

¹⁶⁷ On the treatment of this narrative by Rubens and other artists, see Marcia Pointon, *Brilliant Effects: A Cultural History of Gem Stones and Jewellery*, London and New Haven: Yale University Press, 2009, 101-105.