GEMS

in Renaissance Material Culture

TABLE OF CONTENTS

Introduction 2

1. Talismanic and medical use of gems in literature throughout history 4

1.1. Use of gems through the centuries: an overview 4

1.2 Gems in Renaissance Florence: use and belief 10

2. Case studies: the use of diamonds, emeralds, rubies and sapphires, and some iconographic examples 16

2.1 Diamond 19

2.2 Emerald 23

2.3 Ruby 27

2.4 Sapphire 30

2.5 Case studies – Summary 32

3. Medicine and jewels for the other side of the society 33

Conclusion 38

Figures 40

Bibliography 76

INTRODUCTION

> [In precious stones] the majestic might of Nature presents itself to us,
> contracted within a very limited space,
> though, in the opinion of many, nowhere displayed in a more admirable form
> …
> [Some stones] are regarded as beyond all price,
> and could not be valued at any known amount of human wealth;
> so much so that, in the case of many,
> it is quite sufficient to have some single gem or other before the eyes,
> there to behold the supreme and absolute perfection of Nature's work.
>
> Pliny the Elder, *The Natural History*[1]

The material culture of a society, in connection with contemporary literary sources and paintings, gives us information that can be fundamental in order to understand its development.

Studying the material culture means empathising with our ancestors who inhabited that society, entering their houses and living their lives, sensing their feelings, comprehending their thoughts and absorbing their beliefs.

Precious stones can be studied from several different viewpoints, such as jewellery and exhibitions of social status, amulets and talismans, medicine, collectibles (including ancient engraved gems), and as works of art.

This work aims to contribute to studies on the material culture of gems, with particular focus on Renaissance Florence, through the interaction of the aforementioned fields, and therefore taking into account the idea that precious stones are an interdisciplinary subject.

To accomplish this, in the first chapter, I will provide a general overview of historical literature on gems, and the development of 'Lapidaries' as a literary genre, paying attention particularly at the situation in Florence during the fifteenth and sixteenth centuries.

In the second chapter, I will explore more in depth the virtues and properties that the most valuable and desirable stones, diamonds, emeralds, rubies and sapphires, were believed to have, looking in particular at a selection of visual sources from this

[1] Pliny the Elder, *The Natural History*, ed. and trans. by John Bostock and H. T. Riley, London 1857, vol. VI, book 37, chapter I, p. 386

[2] Valerie Gontero-Lauze, *Sagesses minerales: medecine et magie des pierres preciueuses au Moyen Age*, Paris 2010, p. 79

period, and what these depictions show about the role gems played in Renaissance Florentine society.
In the third chapter I will discuss how this practice influenced the common people, who, for economic reasons, could not afford to own many jewels or precious stones.
Although many books have been written about the meanings of gemstones, nearly all of them essentially refer to the same primary sources. Therefore, where possible, I will refer directly to the primary source itself. Secondary literature mainly describes only the general use of gems, and it is mainly only catalogues of exhibitions that focus on their importance in Florence during the Renaissance. However, in this case their main focus is usually the collection created by the Medici, while the other aspects are not explored in detail.
I will use mainly primary sources from Italian peninsula, especially for examining the early modern period. In order to reconstruct the material culture concerning gemstones in this particular area of Italy, we can assume that the tradition was similar to other parts of Italy.
The economical value of precious stones, and their artistic merit, are outside the scope of this work, and will not be covered in detail. The period covered is limited to the Renaissance, and for this reason I will not discuss the role that gems had during the Counter Reformation and afterwards, nor I will examine the development of the scientific approach that took over from the end of the sixteenth century.

1

TALISMANIC AND MEDICAL USE OF GEMS IN LITERATURE THROUGHOUT HISTORY

1.1 USE OF GEMS THROUGH THE CENTURIES: AN OVERVIEW

Stones, either precious or semiprecious, have long been utilised by human beings. Human imagination has constantly been fascinated with these little minerals, and attributed wondrous powers to them, which led to their use as amulets, for protection, and in concoctions, in order to cure common diseases. In ancient times, belief in occult powers was not seen as magical according to the modern understanding of the word. On the contrary, healing with natural practice was the only available option, and therefore it would be meaningless to try to separate magic and medicine. Stones were employed both as pendants and jewels, or ground and dissolved in water (or other liquids) to be taken internally as concoctions. The power of gems was usually also linked to astral influences or to religious beliefs; gems could either receive their power from planets and stars, or from God as creator of all natural things. There is also evidence that there was a belief that gems had been created underground by the solidifying of light falling through fissures in the earth, like earthly stars, and shining because of this.[2]

The functions that gems performed during the Renaissance are deeply connected to literary tradition, and through this it is possible to establish a thread running between the centuries, which began with Ancient Egyptian, Arab and Greek traditions. It would be impossible to understand the early modern use of precious stones without first providing a historical overview of the development of this belief in their wonderful powers.

While studying the belief in and the use of precious stones from ancient literary sources, it is vital to keep in mind that mistakes in the translation or copying of these texts can threaten the accuracy of the information they contain. Also, it is possible to

---

[2] Valerie Gontero-Lauze, *Sagesses minerales: medecine et magie des pierres preciueuses au Moyen Age*, Paris 2010, p. 79

assume that, sometimes, ancient authors were recording, from memory, some knowledge inherited orally, which may not be a true reflection of common beliefs belonging to a wider community.

This belief in the magic properties of stones was originally part of the wider worship of nature and 'natural creatures', such as animals, trees, herbs, metals and minerals. This ancient faith was particularly common in the peoples of Egypt and Assyria, and was still prevalent in the Greek period.[3]

The first known 'Lapidary', a literary genre that identifies treatises covering stones and 'mineralogy', is attributed to the Greek author Theophrastus (ca 372-287 BC), a pupil of Aristotle. The text, titled *Peri Lithon* ('Of Stones')[4] and probably written around 315 BC, is an early reference to the healing power of gems, and was to be very influential for later works. The author divides the stones between masculine and feminine, generating a theory concerning their ability to reproduce. In this treatise, the use of stones is sometimes linked to medical practice.[5]

A very important source of information, not only relating to mineralogy, is the *Historia Naturalis* ('Natural History') written by the Roman author Gaius Plinius Secundus, better known as Pliny the Elder (23-79 AD). The treatise, published in 77 AD, covers many areas of human knowledge, such as astronomy and geography, and also zoology and natural medicine. The final book is dedicated to precious stones. Pliny takes most of the information from earlier sources, sometimes not very reliable, rather than relying on his own direct observations. He creates groups of stones related to each other by attributes such as external characteristics, like their colour, or by their geographic origin. Nevertheless, sometimes the stones gathered in the same group have little else in common. Stones characterised by similar appearance shared similar notional qualities: most green stones, including green sapphire, turquois, malachite, jasper and green glass, are classified in this treatise as varieties of emerald.[6] Many medieval treatises are based on Pliny's *Historia Naturalis*.[7]

Between the second and the fourth centuries AD many Alexandrian treatises on the magic properties of precious stones were written. Among these are the Orfic poem

---

[3] Ludmilla Bianco, Introduction to *Le pietre mirabili. Magia e scienza nei lapidary greci*, Palermo 1992, p. 11
[4] Bruce G. Knuth, *Gems in myth, legend and lore*, Thornton (Colorado) 1999, p. 9
[5] Guido Devoto and Albert Molayem, *Archeogemmologia. Pietre Antiche- Glittica, Magia e Litoterapia*, Rome 1990, p. 13. See also Frederick George, *The Curious Lore of precious stones*, New York 1971, p. 371
[6] Knuth, pp. 9-10
[7] Ibidem, p. 11

Lithica, *On Rivers* attributed to Plutarch, the treatise written by Damigeron (who claims to be an Arab king named Evax) and *Cyranidi* attributed to Hermes Trismegistus. *Cyranidi* comments mainly on medicine, and establishes a relationship between one herb, one bird, one stone and one fish per chapter, respectively symbols of the elements of earth, air, fire and water. These symbols were to be engraved on the same stone in order to confer healing properties upon it.[8]

Christian lapidaries began being written between the fourth and the sixth century. The earliest is *De Duodecim Lapidibus* by St Epiphanius, Bishop of Salamis in Cyprus (ca. 315- 420 AD), which is the first to speak allegorically about stones mentioned in the Bible, and specifically about the twelve stones in the breastplate of the High Priest (*Exodus* 28:17-21). The author follows the format of the aforementioned ancient texts and assigns therapeutic virtues to the stones, but at the same time he also denounces their magic powers as the fabrications of wizards and charlatans.[9]

A similarly sceptical attitude towards the magical properties of precious stones can be found in the work of St Isidore (ca. 560- 636 AD), Bishop of Seville, entitled *Etymologiarum sive Originum Libri XX.*[10] This treatise is an encyclopaedia that includes more than one thousand texts from classical sources concerning many different fields. The text was subsequently used as a reference dictionary for descriptions of gems, and was often referred to by later scholars.[11]

Many Lapidaries were written during the Middle Ages, sometimes adding invented stones along with anecdotes on their supposed virtues. The most important medieval treatise on stones was written by Marbod (1035- 1123), Bishop of Rennes, between 1067 and 1081. His *De Lapidibus* is a verse lapidary, as the author states that this would be easier to learn by heart, which seems to confirm the existence of an oral tradition concerning the use of gems being passed onto subsequent generations. The text includes descriptions of sixty stones, whose magic properties are highlighted. This allows us to emphasise the fact that even clergymen at this time believed in the extraordinary potential of gems.[12] In the prologue of his work, Marbod praises the beneficial influence of stones over that of herbs: 'Immense is the virtue given to

[8] Devoto and Molayem, p. 14
[9] Devoto and Molayem, p. 15; L. Bianco, Introduction to *Le pietre mirabili*, p. 21
[10] Devoto and Molayem, p. 15
[11] Knuth, p. 11
[12] Devoto and Molayem, p. 15

herbs, even greater is the one given to gems'.[13] Marbod's text has its origin in the writings of Damigeron. This work was very popular and influential through the Middle Ages, and was copied and translated into vernacular languages such as French and Italian.

The overlapping of religion and magic in medical practice is also confirmed by a Lapidary attributed to St Hildegard of Bingen (1098-1179). To give an example, the use of the stone hyacinth (probably a historical name for contemporary orange garnet or zircon) was recommended in exorcism rituals. The stone was to have been rubbed with the sign of the cross on a loaf of warm bread that the possessed person would then eat.[14]

There is even evidence to suggest that this belief in the medical virtues of stones and minerals was officially accepted by the Church. The statutes of the Hôtel-Dieu of Troyes (1263) report that 'one [a religious person] must wear neither rings nor precious stones, except in case of illness'.[15]

A change in methodology is demonstrated by Albertus Magnus (1193- 1280), Bishop of Ratisbon, in his treatise *De Mineralibus,* written around 1260. This author, a lecturer at the University of Paris, treats the topic from a scientific point of view, attempting to clarify the origin and formation of the minerals as well as their physical properties. However, this work is not yet free from the superstitions of his time, still giving great importance to the magic virtues of engraved gems and signets.[16] These particular gems were thought to be the work of divine celestial powers, as the ancient technique of engraving stones had largely been forgotten.[17]

The Jewish and Christian religions had an important role in the connection of stones with the months of the year, and the use of birthstones. There are two writers who connected the twelve stones that were part of the High Priest's breastplate, described in *Exodus* 28:15-21 and 39:6, 10-14, with the months and the zodiacal signs, instigating the fashion for wearing birthstones. They are the Jewish historian Flavius

[13] Marbod, *Liber Lapidum seu De Gemmis*, ed Gottingen 1799, prologue v. 23, p.7: 'ingens est herbis virtus data, maxima gemmis'; *Poeme de pierres precieuses*, ed Pierre Monat, Grenoble 1996, p. 17: 'Immense est la force donnée aux herbes: bien plus grande encore est celle qui fut donnée aux pierres!'. For further information see also Gontero-Lauze, pp. 18-22 and L. Bianco, Introduction to *Le pietre mirabili*, p. 10

[14] Devoto and Molayem, p. 18

[15] Joan Evans, *Magical Jewels of the Middle Ages and the Renaissance, particularly in England*, Oxford 1922, p. 113

[16] Knuth, pp. 12- 13

[17] Devoto and Molayem, p. 16

Josephus[18], writing in the first century AD, and Saint Jerome[19], in the early fifth century. The latter also suggests that the foundation stones of the New Jerusalem described in the book of *Revelations* by St John (21:19) were appropriate for the use of Christian devotees.[20] However, inconsistent translation of the names of stones makes it difficult to determine which stones were included in the High Priest's breastplate, or which were described in *Revelations*. Different scholars provide different translations and interpretations of the holy writings, and probably some of the stones whose names appear in modern translations were in reality not available in Egypt at the time. For example, the stone called *barequeth* and translated into Latin as *smaragdus* can be either the emerald or any other green stone; *nophek*, indicating a red stone and translated as carbuncle or ruby, is probably almandine garnet, as there is no evidence of rubies being used at the time in Egypt. *Sappir*, often translated as sapphire, is more likely to have meant lapis-lazuli, because Pliny and Theophrastus describe it as a blue stone studded with gold; and *yahalom* is not likely to be what is now known as diamond, even if some translations rendered it as such.[21]
Gems were so popular at this time that even a king wrote a Lapidary. Alfonso X (1221- 1284), king of Castile and Leon, forms connections between gemstones and astrology in his text: he separates the gems by colour and assigns a zodiac sign to each one, stating how planets and stars influence their virtues.[22] Alfonso also demonstrated his interest for gemstones and their talismanic powers by commissioning the translation of the Arabic *Ghayat Al-Hakim* ('The Goal of the Wise') into Spanish. This text is better known by the name *Picatrix,* and Alfonso is credited with promoting more widespread knowledge of the Arabic treatise, as a Latin translation was derived from the Spanish version.[23]

A physician from Pesaro, Camillus Leonardi, published his *Speculum Lapidum* in Venice in 1502 with a dedication to Cesare Borgia. This treatise forms a sort of vocabulary of around three hundred stones and gems, which acquired great popularity

[18] Flavius Josephus, *The Antiquities of the Jews*, trans. by William Whiston, Peabody (Mass.) 1987, book 3, chapter 7, paragraph 7, p. 90
[19] Santi Eusebii Hieronymi, 'Letter LXIV to Fabiola' in *Epistulae*, ed. Isidorus Hilberg, Vienna 1996, part. 1, pp. 586-615. See also Knuth, p. 236 and Kunz, *The Curious Lore*, p. 307
[20] Knuth, pp. 236- 237 and Kunz, *The Curious Lore*, p. 310
[21] Knuth, pp. 237- 238
[22] Ibidem, p. 13
[23] Patricia Aakhus, 'Astral Magic in the Renaissance. Gems, Poetry and Patronage of Lorenzo de' Medici' in *Magic, Ritual and Witchcraft*, vol. 3, n. 2, Winter 2008, pp. 194- 195

in the Renaissance. In this it is again possible to notice an attempt to classify the gems scientifically, depending on their physical properties, including colour, form and original location. Leonardi also explores in greater depth the possibility of enhancing the power of a gem by engraving symbols on its surface.[24]

The first seriously scientific treatise on mineralogy was written by Georgius Bauer, better known as Agricola (1494- 1555), *De Natura Fossilium* (1546). Contrary to former writers, the author does not rely only on ancient sources, but also has some first-hand knowledge of the topic. His descriptions of physical characteristic of stones and their flaws are accurate and precise.[25]

In 1565 Ludovico Dolce translated Leonardi's work into Italian, but he had it printed under his own name, with the title *Libri tre nei quali si tratta delle diverse sorti delle gemme che produce la natura, delle qualità, grandezza, bellezza e virtù loro* ('Three books on the different kinds of gems produced by nature and their qualities, size, beauty and virtue').[26]

The physician Girolamo Cardano, from Padua, published his *De Subtilitate* in 1550. The seventh book of this treatise is dedicated to gems and bears the title *De Lapidibus*. The author focuses more on the magic powers of stones, rather than their healing virtues. Some examples include the stone hyacinth, which acts as a protector against lightning, the turquois, which, if its owner falls from his horse, would break instead of its owner's bones, the emerald, which would shatter during adulterous intercourse, and the sapphire, which was used to combat melancholy and the bites of poisonous animals. Cardano writes also about engraved gems, which he sees as works of human craft and not as divine products.[27]

This brief historical overview summarises early beliefs associated with precious stones, which is essential in order to understand the usage of gems in Renaissance Florence. The next section will discuss this specific case in greater detail.

---

[24] Knuth, p. 13; Devoto and Molayem, pp. 16- 18
[25] Knuth, p. 13; Devoto and Molayem, p. 18
[26] Kunz, *The Curious Lore*, p. 18
[27] Devoto and Molayem, p. 18

1.2 GEMS IN RENAISSANCE FLORENCE: USE AND BELIEF

The Renaissance saw a dissemination of many of the sources mentioned in the previous section. The printing and publishing process finally allowed them to spread further and made them accessible to a wider audience. For example, the complete edition of the *Naturalis Historia* by Pliny was published in Venice in 1469,[28] the Orfic Lapidary was published in Venice in 1517 and in Florence in 1519,[29] Epiphanius' Biblical lapidary was printed in 1565, as part of *De Omne Rerum Fossilium* by Conrad Gesner of Zurich,[30] Marbod's *De Lapidibus* was published in Vienna in 1511,[31] and Albertus Magnus's *De Mineralibus* in Padua in 1476.[32]

The connection between magic and stones was instigated in particular by the ideas of Microcosm and Macrocosm; in short what is above (in the sky) is reflected below (on Earth). Thus, the stars influence men and their lives, but also anything was present on Earth, including stones. Hence, stones were ruled by specific planets and were given a magic power through this association.

In this context the work of Marsilio Ficino (1433- 1499) deserves particular attention. Ficino was one of the most influential humanist philosophers in Florence, as well as the tutor of Lorenzo the Magnificent. Of particular interest is his *De Vita Coelitus Comparanda* ('On Obtaining Life from the Heavens'), third book of his medical treatise *De Vita*, published in 1489.[33] In this book, Ficino shows himself to be influenced by the astrological beliefs that were popular at this time, and endorses the use of talismans.[34] In order to reinforce his advice, the philosopher borrows from the *Picatrix*, eliminating the practices that would at this time be considered to be against Christian religion,[35] and disentangling the rituals of natural sympathetic magic (such as drawing the beneficial influence of stars and planets into a gem) from the pagan worship of gods, which was forbidden by the Church.[36] Ficino advises the reader: 'At

---

[28] Knuth, p. 11
[29] L. Bianco, Lapidario Orfico in *Le pietre mirabili*, p. 58
[30] Knuth, p. 11
[31] Ibidem, p. 12
[32] Ibidem
[33] Marsilio Ficino, *Three Books on Life*, eds Carol V. Kaske and John R. Clark, Tempe (Arizona) 1998
[34] P. A. Rossi, D. Arecco, I. Li Vigni, S. Zuffi 'Introduction' of Pseudo Maslama al-Magriti, *Picatrix, Ghayat al-hakim, Il fine del saggio*, ed. Paolo Aldo Rossi, trans. into Italian from the Latin version by Davide Arecco, Ida Li Vigni, Stefano Zuffi, Milan 1999, p. 15
[35] Aakhus, in *Magic, Ritual and Witchcraft*, p. 194
[36] Aakhus, in *Magic, Ritual and Witchcraft*, p. 195

least do not neglect medicines that have been strengthened by some sort of heavenly aid, unless perhaps you would neglect life itself. For I have found by long and repeated experience that medicines of this kind are as different from other medicines made without astrological election as wine is from water'.[37]

The popularity of the *Picatrix* grew as the manuscripts of the Latin version spread during the Renaissance, although it was never printed. It was well known by leading philosophers with an interest in magic at that time (apart from Ficino, it was also read by Giovanni Pico della Mirandola, Agrippa of Nettesheim and Giordano Bruno).[38] This book provides the reader with instructions for creating amulets and talismans, by using astrological powers and images engraved on the stones.

Although Ficino does not believe in the power of images,[39] he recounts a story from the *Picatrix* about an Egyptian boy stung by a scorpion.[40] He was reportedly healed by a kind of 'stone' called *bezoar* (a calcification found in the stomach of goats) engraved with the image of a scorpion made when the Moon is in Scorpio, and impressed in frankincense.[41]

By the beginning of the fifteenth century, Greek and Roman engraved gems started being collected by antiquarians and private citizens. A suggestion of the importance that stones had in Renaissance Florence, either engraved or otherwise, is the collection started by Cosimo de' Medici, and continued by his son Piero and his grandson Lorenzo the Magnificent. In Vasari's words 'the art of carving … grew little by little until the Magnificent, Lorenzo de' Medici, who took much pleasure from the engravings of ancient cameos, and Piero, his son, gathered a great number of them, especially chalcedonies, carnelians and other kinds of engraved stones, the most rare, which had different figures inside'.[42]

---

[37] Ficino, *De Vita*, Proemium to book III, pp. 238-41: 'Medicinas saltem coelesti quodam adminiculo confirmatas, nisi forte vitam neglexeris, ne negligito. Ego enim frequenti iamdiu experientia compertum habeo tantum interesse inter medicinas eiusmodi atque alias absque delectu astrologico factas, quantum inter merum atque aquam'.

[38] Rossi, Arecco, Li Vigni, Zuffi 'Introduction' of *Picatrix*, p. 14

[39] Ficino, *De Vita,* book III, chapter 20, pp. 350- 351: 'Non tamen talem opinor, qualem plerique fingunt -et hanc ratione materiae potius quam figurae' translated as 'I do not think that they have the sort of force that many suppose - and what they do have is caused by the material rather than the figure'.

[40] *Picatrix*, book II, chapter 1, p. 60. See also Aakhus, in *Magic, Ritual and Witchcraft*, p. 196

[41] Ficino, *De Vita,* book III, chapter 13, pp. 304- 305: 'Similiter scorpionis effigiem efficacem, quando Scorpii signum Luna ingreditur ac signum hoc tenet angulum ex quattuor unum. Quod in Aegyp to suis temporibus factum ait seque interfuisse, ubi ex sigillo scorpionis in lapide bezaar ita facto imprimebatur thuri figura dabaturque in potum ei quem scorpius ipse pupugerat, ac subito curabatur'.

[42] Giorgio Vasari, 'Vite di Valerio Vicentino, di Giovanni da Castel Bolognese, di Matteo dal Nasaro Veronese e d'altri eccellenti intagliatori di camei e gioie' in *Le Vite dei più eccellenti pittori, scultori e architetti*, ed Maurizio Marini, Rome 2005, pp. 830- 831: 'Le opera dello intagliare … andò crescendo di mano in mano per fino che 'l Magnifico Lorenzo de' Medici, il quale si dilettò assai degli intaglio de' cammei antichi, e fra lui e Piero suo

Gems collected by the Medici family show examples of the scorpion talisman.[43] Examples of the use of the scorpion as an amulet can be seen in the ancient intaglio that is part of a fifteenth-century Italian ring (Fig. 1) and in the portrait of the Duchess of Urbino Elisabetta Gonzaga (1471-1526) painted by Raphael around 1504-06, which shows a gem encased between the claws of a scorpion tied to a lace that encircles her head (Figs 2a - 2b). Another image often found on engraved gems and in other Medici commissions is the chariot. Ficino, in his *Theologia Platonica*, interprets this symbol as the ethereal spirit that enters the human body at birth and leaves at death.[44] An example of the use of the image of the chariot in this context was the Intaglio with *Eros leading a battle chariot*, now lost, which was interpreted as the 'chariot of the soul', and is shown around the neck of an unidentified young man in the bronze bust kept at the Bargello in Florence (Fig. 3). Other instances are the cameo with *Dionysus on a chariot* (Fig. 4), the carnelian with the *chariot of Phaeton* (Fig. 5) and the fragment of a chalcedony cameo with a golden integration, attributed to Benvenuto Cellini, representing a *chariot led by a male figure* (Fig. 6). The *Picatrix* reports that a diamond talisman depicting a woman on a chariot led by four horses, holding a mirror and a stick, and with seven candleholders on her head, would make the wearer feared by all who see him.[45]

In addition, the image of a lion was believed to have magical and healing powers, if engraved at the right time on the right stone, as can be seen in figs 7 - 8.[46]

Both Ficino and Lorenzo the Magnificent were born under the influence of the planet Saturn, which was believed to affect its 'children' with melancholic feelings and depression. Ficino's aforementioned *De Vita Coelitus Comparanda* is fundamentally a treatise on the efforts to neutralise saturnine effects through the beneficial influence of the celestial bodies Venus, Jupiter and the Sun, captured in both natural and man-made products, such as food and gems, as well as in certain activities.[47]

---

figliuolo ne ragunarono gran quantità, e massimamente calcidoni, corgniuole et altra sorte di pietre intagliate, rarissime, le quali erano con diverse fantasie dentro'. See also Jaqueline Herald, *Renaissance Dress in Italy 1400-1500*, London 1981, pp. 166-167

[43] Aakhus, in *Magic, Ritual and Witchcraft*, p. 196

[44] Marsilio Ficino, *Theologia Platonica/ Platonic Theology*, eds James Hankins and William Bowen, trans. by Michael J. B. Allen and John Warden, Cambridge (Mass.) and London 2001- 2006, vol. 6, book 18, chapter IV.

[45] *Picatrix*, book 2, chapter X, p. 99. See Aakhus, in *Magic, Ritual and Witchcraft*, p. 197

[46] The wearer of a talisman with a man riding a lion, engraved under the influence of the planet Mars on a diamond, was thought to be especially useful for evil purposes, while an onyx engraved with a lion accompanied by magic symbols would stop bleeding (*Picatrix*, book 2, chapter X, pp. 98-99). Ficino recommends the use of a lion talisman against all illnesses (*De Vita Coelitus Comparanda*, chapter 10, p. 337). See also Aakhus in *Magic, Ritual and Witchcraft*, p. 193

[47] Aakhus, in *Magic, Ritual and Witchcraft*, p. 204

The Medici collection included ancient engraved stones and gems commissioned by the Medici themselves (Fig. 9). Apart from being used as talismans and being displayed to visiting dignitaries as a sign of power, the gems in the Medici collection had another important function. They were known, studied and copied by artists like Donatello, who reproduced the figures he saw engraved on the gems in his bronze statue of *David,* in Goliath's helmet (Figs 10a - 10b), and in the *tondos* for the Palazzo Medici courtyard.[48]

The importance that Lorenzo the Magnificent gave to astral influences is also noticeable in his *Canzone de' Sette Pianeti* (which means *Song of the Seven Planets*), written for the Carnival in 1490, in which he declares that everything on Earth is subject to planetary powers.[49]

Lorenzo's gems were recorded in the inventory that was carried out upon his death in 1492. Some of them were carved with Lorenzo's name, both to identify himself as a possessor and to demonstrate his importance to his contemporaries, with political resonance.[50] The inventory lists seventy-six engraved gems, of which forty-two are carved with his name or initials.[51] Among the gems owned by Lorenzo were a Roman carnelian intaglio attributed to Dioskourides, Augustus's favourite sculptor, showing Apollo and Marsyas (Fig. 11), also known as the 'seal of Nero', and the so-called *Tazza Farnese*, a carved chalcedony cup considered to be a masterpiece of its type, dating from the third century BC (Fig. 12a – 12b).[52] The first gem is also depicted hanging from the neck of Simonetta Vespucci, as portrayed by Sandro Botticelli (Fig. 13a – 13b). The artist also shows himself to be influenced by the *Tazza Farnese,* in the painting *The Birth of Venus* (Fig. 14), in which the figures of the winds are based

---

[48] The subjects are: the Triumph of Dionysus and Ariadne, the Contest of Athena and Poseidon for Athens, Icarus and Dedalus, a centaur, a satyr, the Triumph of Dionysus, and Diomede and the Palladium. See Aakhus, in *Magic, Ritual and Witchcraft,* p. 197

[49] Lorenzo de' Medici, 'Canzone de' Sette Pianteti' in *Canti Carnacialeschi*, ed. Paolo Orvieto, Roma 1991, pp. 83-84. An excerpt goes: 'Sette pianeti siam, che l'alte sede/ lasciam per far del cielo in terra fede./ Da noi son tutti i beni e tutti i mali,/ quel che v'affligge miseri, e vi giova;/ ciò ch'agli uomini avviene, agli animali/ e piante e pietre, convien da noi muova:/ sforziam chi tenta contro a noi far pruova;/ conduciam dolcemente chi ci crede' translated by Aakhus, in *Magic, Ritual and Witchcraft*, p. 198: 'We are the seven planets,/ We leave our high celestial seats/ And come down to earth/ To make you understand our powers/ From us come all good and evil/ That afflict with misery and joy;/ All men and animals, plants and stones/ Are changed by us./ We drive those who hold proof against us;/ We lead gently those who believe in us'.

[50] Luke Syson, 'The Medici Study', in *At Home in Renaissance Italy*, eds Marta Ajmar- Wollheim and Flora Dennis, London 2006, p. 291

[51] Aakhus, in *Magic, Ritual and Witchcraft*, p. 191. See also eds Nicole Dacos, Antonio Giuliano and Ulrico Pannuti, *Il Tesoro di Lorenzo il Magnifico: Repertorio delle gemme e dei vasi*, Florence 1980

[52] Aakhus, in *Magic, Ritual and Witchcraft*, pp. 192 and 202. For further information on the Medici's collection see: *Gems of the Medici,* Exhibition Catalogue, Bowers Museum, Santa Ana (CA) 2013, and R. Gennaioli, *Pregio e Bellezza: Cammei e intagli dei Medici*, Exhibition Catalogue, Museo degli Argenti, Palazzo Pitti, Florence 2010.

on those carved upon the original.[53]

On Lorenzo's deathbed, Pier Leone, his doctor, attempted to rescue his patient from his fever by pressing a heliotrope (or bloodstone, considered to be the stone of the Sun) on his skin. Lorenzo did not respond well to this treatment and another doctor, Lazzaro of Pavia, physician of the Duke of Milan was called.[54] He administered a concoction made of ground pearls, considered to be a cooling substance, rather than heliotrope that was considered to produce heat. However, despite these efforts to save his life, Lorenzo died.[55]

Many extraordinary and sinister events were recorded at the moment of Lorenzo's death.[56] Among these, the Florentine coppersmith Bartolomeo Masi noted that a demon that the ruler kept trapped inside his ring was released, causing a furious storm that damaged the bell tower and some other buildings close to the Medici residence.[57] This episode demonstrates that Lorenzo's beliefs in the power of stones were well known throughout his entourage.

Cosimo the Elder, Piero and Lorenzo de' Medici even demonstrated their fondness for gemstones in their family emblem, represented by a diamond ring, also represented on the reverse of Lorenzo's birth tray (Fig. 15a – 15b).[58]

Even Popes belonging to the Medici lineage, Leo X (1513- 1521) and Clement VII (1523- 1534), were known to own precious stones.[59]

In later years, another member of the Medici family acquired popularity for her connection to magic. Catherine de Medici, who became Queen of France in 1549, was very fond of the use of powerful talismans, and she is said to have worn a girdle with twelve stones, probably each attributed to one of the zodiacal signs.[60] She also owned a bracelet composed of gems, a piece of marble, a piece of human skull and a piece of

---

[53] Aakhus, in *Magic, Ritual and Witchcraft*, p. 193

[54] Edward Armstrong, *Lorenzo de' Medici and Florence in the Fifteenth Century*, New York 1896, pp. 309, 314

[55] Aakhus, in *Magic, Ritual and Witchcraft*, p. 191

[56] A scared woman reported to the attendees at Lorenzo's deathbed that a bull with flaming horns was destroying the church of Santa Maria Novella; a gilded ball, emblem of the Medici family, was hit by a bolt of lighting; one of the two lions kept by Lorenzo as lucky symbols of the city of Florence killed the other. See Angelo Poliziano's letter to Iacopo Antiquario dated 18th May 1492, in *Letters*, vol. 1, ed and trans. Shane Butler, Cambridge (Mass.) and London 2006, book IV, letter no 2, pp. 226-251. See also Peter Godman, *From Poliziano to Machiavelli, Florentine Humanism in the High Renaissance*, Princeton (New Jersey) 1998, pp. 24-26.

[57] Bartolomeo Masi, *Ricordanze di Bartolomeo Masi, Calderaio Fiorentino, dal 1478 al 1526*, ed Giuseppe Odoardo Corazzini, Florence 1906, 'Ricordo n. 303', pp 241 ff.

[58] Aakhus, in *Magic, Ritual and Witchcraft*, p. 192

[59] Frederick George Kunz, *The magic of jewels & charms*, Philadelphia and London 1915, p. 387

[60] Jean Henri Prosper Pouget, *Traité des pierres précieuses et de la maniere de les employer en parure*, Paris 1762, p. 5. Kunz, *The Curious Lore*, p. 317

gold with a representation of a *main de gloire* ('hand of glory'),[61] in which each item had a particular virtue or power.[62] Catherine is credited with the introduction of *acqua d'oro* ('golden water') to France, a drink mixed with fragments of gold leaf that was supposed to be beneficial in healing illnesses.[63]

Because of their reputed power, precious stones were considered to be a significant gift from a groom to his bride. Books of *Ricordanze* ('Memories') written by Florentine citizens report many of these cases. The red ruby (called *balascio*) was supposed to guarantee love and, because of its colour, was connected to the heart, burning with love. The blue sapphire was, on the other hand, associated with the soul. Emeralds would maintain the chastity of the wearer, whilst diamonds and pearl were associated with purity and supposed to heal illnesses.[64] Pearls were also supposed to preserve chastity and modesty.[65] Another stone often given as a love token is the turquoise, which was believed to change hue depending on the loyalty of the recipient.[66] This kind of gift highlights the concern of people in the Renaissance with fidelity and sexual decorum.

Having discussed the historical usage of precious stones, and analysed their general usage in Renaissance Florence in particular, the next section will look in more detail at four individual stones, considered to be both the most powerful and most valuable, and their properties and purposes.

---

[61] The 'hand of glory' was the preserved dead hand of a criminal that had been hanged, accompanied by a candle made using the fat from the same person.

[62] Kunz, *The magic of jewels & charms*, pp. 334- 335

[63] William Thomas Fernie, *Precious Stones for curative wear and other remedial use, likewise the nobler metals*, Bristol and London 1907, p. 98

[64] Marco Antonio Altieri, *Li nuptiali*, ed Enrico Narducci, Rome 1995, p. 53. Among the *Ricordanze*: Ugolino di Niccolò Martelli, *Ricordanze dal 1433 al 1483*, ed F. Pezzarossa, Rome 1989, p. 104; Francesco di Matteo Castellani, *Ricordanze A (1436-1459)*, ed Giovanni Ciappelli, Florence 1992, vol. 1, pp. 132, 165; Alessandra Macinghi Strozzi, *Selected Letters*, ed. Heather Gregory, Berkeley, Los Angeles and London 1997, pp. 29- 31: pearls given by Marco Parenti to his future wife, Caterina Strozzi; *Giovanni Rucellai ed il suo Zibaldone*, pt. 1, *Il zibaldone quaresimale*, ed. Alessandro Perosa, London 1960, section 3, chapter 1, p. 29; Guido Biagi ed, *Due corredi nuziali fiorentini, 1320- 1493, da un libro di ricordanze dei Minerbetti*, Florence 1899, p. 13. See Julius Kirshner, '*Li Emergenti Bisogni Matrimoniali* in Renaissance Florence', *Society and Individual in Renaissance Florence*, ed. William J. Connell, London 2002, pp. 87- 88. For further information see also Cora Linn Daniels, Charles McClellan, Stevens, *Encyclopedia of Superstitions, Folklore, and the Occult Sciences of the World,* Vol. 1, Chicago 1903.

[65] Oreste Beltrame, *Le Gemme nella leggenda e nella storia*, Vicenza, 1890, p. 321

[66] Leopold Claremont, *The gem-cutter's craft*, London 1906, p. 86

2

CASE STUDIES:
THE USE OF DIAMONDS, EMERALDS, RUBIES AND SAPPHIRES, AND SOME ICONOGRAPHIC EXAMPLES

Diamonds, emeralds, rubies and sapphires have always been considered the precious stones par excellence, and so they were associated with the most important and potent powers. We have seen in the first chapter that the use of gems could be 'external', as in the case of amulets kept in contact with the naked skin in order to transfer their power to the human body, and 'internal', ground and diluted in water or other liquid substances (oil, milk etc.) to produce concoctions to be ingested in case of illness.[67]
Gems were often set in gold or silver jewels and given as nuptial gifts, especially for their virtues in relation to marital life.[68]
In this chapter I will give a brief description of each of these precious stones, and I will endeavour to provide related visual sources, from Renaissance Florence, which are associated with them.

The most common form of amulet was either that of a pendant, hanging from a necklace, or a ring or bracelet. Setting precious stones, cameos and intaglios in gold was a particularly specialised craft for Florentine goldsmiths and gem-cutters, who at this time were developing new and improved techniques to produce more refined carving and engraving.[69] By their nature, jewels are delicate, and are vulnerable to both natural corrosion and intentional deconstruction by those looking to reuse their

---

[67] Marsilio Ficino highlights this in the first chapter of his *De Vita Coelitus Comparanda*: 'If you want your body and spirit to receive power from some member of the cosmos, say from the Sun, seek the things which above all are most Solar among metals and gems, still more among plants, and more yet among animals, especially human beings; for surely things which are more similar to you confer more of it. These must both be brought to bear externally and, so far as possible, taken internally, especially in the day and the hour of the Sun and while the Sun is dominant in a theme of the heavens' [Original Latin: 'Si optas corpus tuum atque spiritum ex aliquo mundi membro, videlicet ex Sole, virtutem accipere, quaere quae ante alia sunt Solaria inter metalla lapillosque, magis autem inter plantas, sed inter animalia magis, maxime inter homines; similiora enim tibi magis proculdubio conferunt. Haec et extra sunt adhibenda et intus pro viribus assumenda, praesertim in die et hora Solis et Sole in figura coeli regnante']. See Ficino, *Three Books on Life*, eds Carol V. Kaske and John R. Clark, Tempe (Arizona) 1998, pp. 246-249. On many occasions Ficino writes about the necessity of wearing the stone in contact with the flesh, see pages 278-279, 300-301, 314-315, 352-353.

[68] Sara F. Matthews- Grieco, 'Marriage and Sexuality' in *Art and Love in Renaissance Italy*, ed. Andrea Bayer, New Haven and London 2008, pp. 109-110

[69] *Abbigliamento e costume nella pittura italiana- Rinascimento*, ed. Ferruccia Cappi Bentivegna, Rome 1962, pp.322-323

valuable components, and so contemporary paintings are extremely useful in attempts to reconstruct the so-called ‘external’ use of precious stones, particularly in portraits of eminent citizens and devotional paintings (notably altarpieces with the Virgin and Saints). However, it is difficult to establish which particular gem was depicted in each case, as their colour is often the only element which can be used to identify them, and even this can be misleading due to the effects of age on pigments, which can often make it challenging to identify the colour originally intended by the artist.

By studying paintings in Renaissance Florentine it is possible to appreciate that precious stones could perform multiple functions: jewels were not only a setting for a magic gem, but were also clearly a symbol of the wealth and social status of the wearer, in a way that would immediately be apparent to those that saw them.[70] In addition to this, as some gems were particularly connected with specific virtues (i.e. chastity), we can infer clues from their jewellery as to the sitter’s behaviour (such as in the case of a clergyman or young lady).

The earliest resource for information about jewels owned by the Medici family in Florence is an inventory, carried out in 1417. Among the jewels, this document records several rings with diamonds, emeralds, rubies and sapphires. Three other inventories, from 1456, 1463 and 1465, list the possessions of Piero and Cosimo de’ Medici. However, members of the Medici family preferred not to be portrayed wearing costly gems, for fear of being compared to other princely courts and annoying the middle classes, as can be seen in the portraits of Piero the Gouty and Cosimo in Benozzo Gozzoli’s Procession of the Magi (Figs 16a – 16b), and in those made by Ghirlandaio in the Sassetti Chapel (Figs 17a – 17b).[71] Another inventory, probably the best known, was carried out in 1492 after the death of Lorenzo the Magnificent, and lists the jewels kept in Lorenzo’s *studio*, among which were eighteen rings with precious stones with a value of over two thousand florins.[72]

The importance that the Medici rulers gave to jewels was also later demonstrated by the painting that Alessandro Fei del Barbiere (1543-1592) made for the *studiolo* of the Granduke Francesco I de’ Medici in Palazzo Vecchio between 1570 and 1572. In this, the artist depicted busy goldsmith’s workshops, as they were at the time (Fig. 18).[73]

[70] Paola Tinagli, *Women in Italian Renaissance Art. Gender, Representation, Identity*. Manchester and New York 1997, p. 50

[71] M. Sframeli, ‘I gioielli nell’età di Lorenzo il Magnifico’, in *I gioielli dei Medici dal vero e in ritratto*, ed. M. Sframeli, Leghorn 2003, pp. 10-14.

[72] Ibidem, p. 17

[73] Ibidem, cat. 17, p. 78

This painting can be better understood in relation to three other works that depict the recovery of other precious materials: *Pearl Fishing* by Alessandro Allori (Fig. 19), made at the same time for the same *studiolo*, *The Mine* by Jacopo Zucchi (1570- 75; Fig. 20) also for the *studiolo*, and *Coral Fishers* by the same artist (c. 1580; Fig. 21), painted for Cardinal Ferdinando de Medici's *studiolo* in the Villa Medici in Rome.
Goldsmiths' art became so important that many artists who became the painters, sculptors and architects that are now considered to be symbolic of the Renaissance did their apprenticeships in workshops of this type.[74] Taking this into account, it is easy to understand the link between this kind of craftsmanship and other types of art, and we can better appreciate the refined and detailed depictions of jewels observed in Renaissance painting.[75]
In order to better understand how precious stones were employed during day-to-day life in Renaissance Florence, I shall consider four case studies, noting in particular the specific lore associated with each, and some examples of their usage.

[74] Among them: Lorenzo Ghiberti, Filippo Brunelleschi, Sandro Botticelli, Domenico Ghirlandaio, Andrea del Verrocchio, Lorenzo di Credi and Antonio del Pollaiolo. See Herald, p. 169
[75] Heral, p. 171

2.1 DIAMOND

Diamonds, produced from carbon crystallised under immense heat and pressure,[76] have not always been regarded as the most valued gems.
The name 'diamond' comes from the Greek *adamas*, which stands for 'extremely hard' or 'invincible'. The Hebrew word *yahalom* referred to one of the twelve stones forming the breastplate of the High Priest in *Exodus* 28. However, those stones are described as engraved, and it is unlikely that techniques for engraving on diamond were available at the time. It was not until the second century BC that the Roman Damigeron used the Latin form, *adamus* or *adamantinus*, to indicate this particular stone.[77]

During the Middle Ages, the diamond was often considered to be a stone of little aesthetic value, especially in comparison to its more brightly coloured cousins, and it seems likely that the difficultly in properly cutting diamond so that it looked as attractive as other precious stones was at least somewhat to blame for its lack of popularity. It was not until the Renaissance that improved techniques for cutting gems were developed along with the escalating popularity of engraving. This improved the clarity and colour of the stones. By cutting and polishing the surface of gems to increase the number of faces, and so the reflection and refraction of light passing through the stone, they were able to create the 'sparkling' effect that has come to make diamond such a popular and valuable stone. [78]

Medieval astrologers were to some degree responsible for restoring the diamond's ancient magical status, in part facilitated by the fact that not many people had the privilege of owning or even seeing this rare gem.[79]
Marbod bestowed great power upon the diamond in his writings, describing it as beneficial in neutralising both insanity and nocturnal spectres, especially if set in gold and worn on the left arm.[80] According to St Hildegard of Bingen, the healing power of

---

[76] Knuth, p. 62
[77] Knuth, p. 63. For further information see Ruth V. Wright and Robert L. Chadbourne, *Gems and Minerals of the Bible*, New York 1970, p. 55
[78] Herald, pp. 166-167
[79] Claude Lecouteux, *Le livre des talismans et des amulettes*, Paris 2005, pp. 107-117
[80] Marbod, *De Lapidibus*, translated from the original Latin by C. W. King (1870), published in Knuth, p. 211: 'Foremost of all amongst the glittering race/ Far India is the Adamas'/ native place;/ Produced and found within the crystal mines,/ Its native source in its pure lustre shines:/ Yet, though it flashes with the brilliant's rays/ A

the diamond could be 'activated' by making the sign of the cross while holding the stone in one hand. She believed that the diamond could be used as a defence against the devil's power.[81]

In Medieval Christianity, the diamond was considered to be a symbol of the hidden mysteries of the Incarnation, because it was thought only to be possible to find it at night; and later Italians even found a hidden meaning in the name of the stone, called in Italian *diamante*, which could be interpreted as *amante di Dio,* literally meaning 'lover of God'.[82]

In the late Middle Ages and in the Renaissance the diamond was thought to be invincible and to be able to fend off any danger, becoming a popular talisman because of this and acquiring more value,[83] even though, according to Florentine artist Benvenuto Cellini (1500-1571), it was still considered less beautiful and less valuable than emeralds and rubies.[84] As further evidence of this it is useful to note that Nofri Tornabuoni reports the dispatch of a diamond ring in 1487, from Pope Innocent VIII, as a wedding gift for Maddalena, Lorenzo the Magnificent's daughter, sent with regrets for not having found a more valuable stone, such as a ruby or an emerald.[85]

Often, the same material could be credited with having both a positive and a negative effect; for example, both healing and causing illnesses. Ground diamonds were used by doctors to heal various ailments, but at the same time diamond powder became popular as a powerful poison. Regarding this, Cellini reports a personal anecdote. While jailed in Rome in 1538, the artist one day realised that his food was contaminated with a stone powder. Afraid of being poisoned, he analysed the powder, and determined that it was not in fact diamond after all. After his release from prison, Cellini confirmed his theory by discovering that someone had given a diamond to a gem cutter to be ground and placed in his food, but that the cutter replaced the

steely stint the crystal still displays./ Hardness invincible which nought can tame,/ Untouched by steel, unconquered by the flame;/ But steeped in blood of goats it yields at length,/ Yet tries the anvil's and the smiter's strength./ With these keen splinters armed, the artist's skill/ Subdues all gems and graves them at his will'.

[81] Knuth, p. 68; Kunz, *The Curious Lore*, p. 70. See also K. Jolly, C. Raudvere, E. Peters, *Whitchcraft and Magic in Europe. The Middle Ages*, London 2002, p. 35

[82] Xavier Barbier de Montault, 'Le Tresor de l'Abbaye de Sainte-Croix de Poitier Avant la Revolution' in *Mémoires de la Société des Antiquaires de l'Ouest,* Série 2, Tome 4, 1881, pp. 105-106; Kunz, *The Curious Lore*, p. 269 cites an Italian manuscript of the fourteenth century fol. 41b kept in Kunz own's library.

[83] Knuth, p. 68; Kunz, *The Curious Lore*, p. 70

[84] Kunz, *The Curious Lore*, p. 154

[85] M. Sframeli in *I gioielli dei Medici dal vero e in ritratto*, p. 16

precious diamond with a less valuable stone.[86] Even the Queen of France, Catherine de Medici, was known to use diamonds for this purpose in order to eliminate her enemies. Diamonds were thought to be poisonous because they were believed to grow in places guarded by venomous snakes, which would transfer their poison to the stones through their blood when their skin was pierced by the sharp diamonds.[87]

Even though the diamond was believed to be a deadly poison, it was also thought to be an antidote for many poisons as early as the Roman period, when Pliny the Elder was writing. Among the many other medical properties that this gem was supposed to bear were protection from apoplexy, gout and jaundice, which could be obtained by drinking water or wine into which a diamond had been placed, as well as protection from the plague. This latter belief was in part based upon the fact that the plague attacked the poorer classes first, while the rich could afford this expensive adornment.[88]

However, despite this belief appearing widespread in Florence, Girolamo Cardano, in his Lapidary, expresses his scepticism towards the beneficial power of the diamond, comparing its effect that of bright sunlight upon the eyes.He states that the diamond renders people truly fearless, but this rather is a negative quality, because fear keeps a person safe.[89]

Because of its strength and beauty, diamond became a symbol of marital fidelity and chastity,[90] an association that persists to this day. The pointed gem in the middle of the shield with which the personification of Chastity defends herself in the fragment of *cassone* with the *Combat of Love and Chastity* (Figs 22a - 22b) has, in some of the literature, been identified as a diamond.[91] Considering, in addition to this, the traditions and folklore surrounding the diamond, along with its various properties relating to strength and fidelity as noted above, it would seem to me that this is likely to be the correct interpretation. To add credence to this, the pointed shape was very common for diamonds at this time. Diamonds are in fact mentioned in the literary

---

[86] *Vita di Benvenuto Cellini orefice e scultore fiorentino da lui medesimo scritta* in *Opere di Benvenuto Cellini,* ed. Gio Palamede Carpani, Milan 1806, vol. 1, p. 444-446; Kunz, *The Curious Lore*, p. 154

[87] Knuth, p. 69; *Lapidario* del Rey D. Alfonso X, Codice Original, Madrid 1881, f. xi cited in Kunz, *The Curious Lore*, p. 379.

[88] Kunz, *The Curious Lore*, p. 377; Devoto and Molayem, p. 227-228

[89] Knuth, p. 71; Kunz, *The Curious Lore*, p. 70

[90] Jacqueline Marie Musacchio, cat. 32a in *Art and Love in Renaissance Italy*, p. 100; Sara F. Matthews- Grieco, 'Marriage and Sexuality' in *At Home in Renaissance Italy,* p. 110

[91] M. W. Brockwell, *The National Gallery: Lewis bequest*, London 1909, p. 5. The gem is described as a sapphire by Prince d'Essling and E. Müntz, *Petrarque: ses études d'art, son influence sur les artistes, ses portraits et ceux de Laure. L'illustration de ses écrits*, Paris 1902, p. 151. However, the sapphire was also believed to be able to control lust (see section 2.3 on sapphires). For the use of rubies on the shield see section 2.4.

source from which this episode originates: Petrarch tells us about a 'chain of diamond and topaz' swung by Chastity above her head.[92]

From this, it can be suggested that diamonds were used to preserve harmony within the married couple. For this reason, it was often used by the upper classes as a betrothal or wedding gift, sometimes also with a dedication inscribed upon it (Figs 23, 24).[93] An example of a diamond used in a wedding ring can be seen worn on the index finger by Eleonora of Toledo, wife of the Granduke of Tuscany Cosimo I de Medici and Duchess of Florence from 1539, in Bronzino's portrait painted in 1543 (Figs 25a – 25b).[94]

In Florentine society, which was brought to its knees by repeated outbreaks of plague that even put the continuation of lineages at risk, diamonds are recorded as an aid for expectant women in order to avoid miscarriage.[95] According to the physician Giovanni Marinello, a diamond could be placed in the woman's private parts for this purpose.[96]

Finally, as well as its supposed power and virtues, the diamond ring in particular was a symbol of the Medici family in Renaissance Florence, and it appears on the reverse of Lorenzo the Magnificent's birth tray employed in this way (see fig. 15), along with three feathers and the motto *SEMPER* ('always').[97] Lorenzo's emblem also appears as in the decoration of the dress that Pallas wears in Botticelli's painting *Pallas and the Centaur* (Figs 26a – 26b). Despite the many specific virtues associated with the diamond, in this case it seems more likely to me that the diamond ring symbol was used mainly to signify wealth and power generally, rather than an association with any particular property of the diamond itself.

---

[92] Francesco Petrarca, *Triumphi*, ed. M. Ariani, Milano 1988, p. 216, line 122: 'catena di diamante e di topazio'.

[93] Musacchio, cat. 32a in *Art and Love in Renaissance Italy*, p. 100; Matthews- Grieco, 'Marriage and Sexuality' in *At Home in Renaissance Italy,* p. 110. For further information on diamond rings owned by the Medici family see Contu, cat. 6 in *I gioielli dei Medici dal vero e in ritratto*, p. 64.

[94] The second ring, which Eleonora of Toledo wears on her little finger and which bears an engraved gem, has been discovered in Eleonora's tomb in the Medici Chapels. The figures engraved on the gem, two cornucopias and a pair of clasping hands, refer to fidelity and fertility. See Contu, cat. 6 in *I gioielli dei Medici dal vero e in ritratto*, p. 66

[95] Jacqueline Marie Musacchio, 'Lambs, Coral, Teeth, and the Intimate Intersection of Religion and Magic in Renaissance Tuscany', in *Images, relics, and devotional practices in Medieval and Renaissance Italy*, eds Sally J. Cornelison and Scott B. Montgomery, Tempe (Ariz.) 2006, p. 142

[96] Giovanni Marinello, *Le medicine pertenenti alle infermità delle donne*, ed. Giovanni Valgrisio, Venice 1574, book III, pp. 261-262. Although Marinello lived and worked in Venice and not in Florence, it is possible to presume that the same belief existed at least throughout Northern Italy. See also Rudolph Bell, *How to do It*, Chicago and London 1999, p. 82 and Jacqueline Marie Musacchio, *The Art and Ritual of Childbirth in Renaissance Italy*, New Haven and London 1999, p. 140

[97] Deborah L. Krohn, cat. 53 in *Art and Love in Renaissance Italy*, p. 125

2.2 EMERALD

Emerald, the green variety of beryl,[98] was known with the name *smaragdoz* in Greek and *smaragdus* in Latin. Aristotle is the first author to write about this gem and its powers. For example, he stated that it was believed to stimulate positive outcomes in business transactions, trials and disagreements, as it was thought to improve eloquence. Furthermore, according to Aristotle, it was also considered to be beneficial for treating eye problems, and he states that emeralds should be worn as a pendent hanging from the neck or as a ring in order to prevent epilepsy.[99] The belief that emeralds were beneficial for eye diseases, and for the sight generally, probably came from its colour, which supposedly simulates the effect that green fields have in resting and soothing tired eyes.[100]

In Roman times, Damigeron highlighted the influence that the emerald had in business, while Pliny the Elder dwelled on the many virtues that this gem bore, giving practical examples of its use, again with particular reference to healing eye diseases or fatigue. For this purpose, emeralds were ground and mixed with water, and used as eyewash in order to reduce irritation and soothe the eyes (although perhaps, in reality, having the opposite effect). [101]

Emeralds arrived in Europe from Egypt, and with them they brought the Egyptian custom of using carved emeralds in the shape of a scarab beetle, as reported by Damigeron.[102]

The 'Emerald Tablets' was a hermetic text attributed to Hermes Trismegistus, reputed to contain all the secrets of the creation of the world. It was extremely popular during the Middle Ages, linking the emerald to occultism and making it a potent talisman of knowledge.[103]

Marbod, in the twelfth century, paraphrases Aristotle's report on the properties of the emeralds, but he adds many other virtues. According to him, they were supposed to provide the wearer with numerous positive qualities, such as honesty, perspicacity, dignity and discretion. Emeralds consequently became the favoured stone of men

---

[98] Knuth p. 76
[99] Kunz, *The Curious Lore*, p. 28
[100] Kunz, *The Curious Lore*, pp. 28, 370; Wright and Chadbourne p. 57
[101] Knuth pp. 77- 78
[102] Ibidem, pp. 78- 79
[103] Devoto and Molayem p. 229

engaged in commercial business at this time.[104] Even in the fifteenth century this idea persisted, as can be noted in Camillo Leonardi's writings, where he remarks upon the ability of the emerald to strengthen the memory and the intellect.[105] In addition, Cardano wrote that the stone was credited with the capacity to make men economical, and consequently rich, but he remained sceptical of this because the stone had neither provided wealth to emerald owners he knew, nor himself.[106] It is interesting to note that direct empirical evidence clearly had some influence over those in a position to test these theories themselves. However, this would not have been the case for the majority of the population, due to their rarity and cost. This perhaps helps to explain why precious stones, in particular, were so effective at maintaining their association with magical powers and medicinal properties.

For all the virtuous attributes that this gem would confer to its owner, and due to its power of keeping the evil away and helping the owner to resist temptation[107], it became even a symbol of divine glory and was in this respect used by clergymen.[108] Andreas, Bishop of Cesarea (seventh century AD), associated the emerald listed as part of the 'Foundation Stones' in the Book of *Revelations* 21 with St John. [109]

Emeralds have also been advocated for the purpose of intensifying love since the time of the Ancient Egyptians. Indeed, this stone was thought to bring fertility, chastity and fidelity, because it was believed to be able to reveal adultery by shattering if the wife was unfaithful. A beautiful example of an emerald ring, with a heart-shaped gem held by two hands, is kept at the National Museum of the Bargello in Florence (Fig. 27).[110] Another example of a betrothal or wedding present is the jewel kept at the Metropolitan Museum in New York, which shows a small diamond, pearls and an emerald mounted in gold, from which letters forming the word 'amor' ('love' in Italian) hang (Fig. 28). In the thirteenth century, referring to the power of emeralds in

[104] Knuth, p. 80
[105] Camillo Leonardi, *Speculum Lapidum*, Venice 1502, fol. XLIII cited in Kunz, *The Curious Lore*, p. 78
[106] Girolamo Cardano, 'De gemmis' in *Philosphi Opera Quaedam*, Basileae, 1585, p. 328; Kunz, *The Curious Lore*, p. 79; Knuth, p. 83
[107] Knuth, p. 81
[108] Elizabeth Rodini, 'The Language of Stones' in *Renaissance Jewelry in the Alsdorf Collection*, The Art Insititute of Chicago, Museum Studies Vol 25, No. 2, Chicago 2000, p. 25
[109] Knuth, p. 81
[110] C. Contu, cat. 27 in *I gioielli dei Medici dal vero e in ritratto*, p. 94.

love, Albertus Magnus reports that this gem, worn by Bela, King of Hungary, broke when he embraced his wife after returning from travel, indicating her infidelity.[111]

Members of the Medici Family wore emerald rings as well, as is demonstrated by one of the rings discovered in Eleonora da Toledo's tomb (Fig. 29).[112] The connection between emeralds and love was so well established that even Catherine de Medici, in a letter to her jeweller François Dujardin in 1561, requests that he forge a ring composed of an emerald, together with two clasped hands to symbolise faith, and accompanied by a *motto* about fidelity and friendship. This jewel has been identified as being the one kept in the Cabinet des médailles of the Bibliothèque nationale in Paris (Fig. 30).[113]

Emeralds were believed to be the gems of love, and so were also considered to be a symbol of Venus, for example as depicted in the goddess' crown by Bronzino in his *Allegory,* painted in the mid-sixteenth century (Figs 31a – 31b).

Also, emeralds had attributed to them the power of helping women during labour.[114] In this respect, the anonymous author of the treatise entitled *Thesoro di secreti naturali* ('Treasure of natural secrets') recommends that expectant mothers wear two emerald amulets, one on their neck as a pendent reaching the abdomen, and the other on their left arm, in order to prevent miscarriage. The latter amulet was to be moved to the mother's thigh shortly before giving birth.[115]

Travellers, especially at sea, made use of emerald talismans, probably due to its connection with the goddess Isis, with the moon, and the tides.

Much like the diamond, the emerald was also reputed to be useful to combat poison, both as a preventive talisman and as a medication to cure the bites of insects or snakes.[116]

During the Renaissance emeralds were often engraved in *cameos* and *intaglios*, and collected as works of art.[117] As Benvenuto Cellini reports, during this time emeralds

---

[111] Knuth, p. 81

[112] Contu, cat. 6 in *I gioielli dei Medici dal vero e in ritratto*, p. 64

[113] Ian Wardopper 'Between art and nature: Jewelry in the Renaissance' in *Renaissance Jewelry in the Alsdorf Collection*, The Art Insititute of Chicago, Museum Studies Vol 25, No. 2, Chicago 2000, p. 9

[114] Devoto and Molayem, p. 229. See also Wright and Chadbourne p. 57

[115] Bell, p. 82

[116] Knuth, p. 82; *Lapidario del Rey Alfonso X*, Codice Original, Madrid 1881, f. XV cited in Kunz, *The Curious Lore*, p. 379

[117] Claremont, p.183

were worth four times the value of a diamond of the same weight, but half the one of a ruby.[118]

Finally, it is possible that emeralds can be recognised in some of the rings worn by a young lady portrayed by Filippo Lippi around 1445, on the end of her middle finger and on her index finger, although it is likely that the original colour has faded over time, making a definite identification difficult (Figs 32a – 32b).

[118] Ibidem, p. 184

2.3 RUBY

The name ruby, the red variety of corundum,[119] comes from the Latin *ruber*, which means 'red', and this gem was classified with other red stones under the name *carbunculus*.[120]

Rubies were popular talismans in ancient Greece. An example of their use as protection against fire appears in the romance *Aethiopica,* written by Heliodorus, in which it is described how a ruby, set in a ring, allowed Chariclea to safely escape from the pyre to which she was condemned.[121]

According to St Epiphanius, rubies were able to shine in the darkness, and they could even be seen through clothing. [122]

The stone *nophek*, in the breastplate of the High Priest described in the book of *Exodus*, is often translated as ruby. This stone was associated with the tribe of Judah, and because this tribe was the source of Israel's royalty, the ruby has been regarded as the stone of noblemen and of leaders of the church.[123] For this reason, rubies often appear in the decoration of the Virgin Mary's dress, as in Domenico Veneziano's altarpiece for the church of Santa Lucia de' Magnoli in Florence[124] (Figs 33a – 33b) and in the *Virgin and Child* painted by Verrocchio and Lorenzo di Credi (in which the same type of brooch also ornaments the dress of the Angel on the left side of the painting, Figs 34a – 34c), or hanging from her neck, as we can see in *The Nativity* painted by Piero della Francesca (Figs 35a – 35b).

Rubies, as with all red stones (spinel, garnet, carnelian, bloodstone etc.) were always thought to have an association with the planet Mars, and so the god, and therefore with feelings of anger and competitiveness.[125] Broadly speaking, they were associated with passion, but at the sane time they were also reputed to have a positive effect in calming wrath.[126] Bearing this association in mind, it might be possible to interpret the red stone worn by the goddess Venus in Botticelli's painting with *Venus and Mars*, as a ruby (Fig. 36a – 36b). The painting shows Mars 'defeated' by the power of

[119] Knuth, p. 150
[120] Ibidem, p. 151
[121] Eliodoro, *Le Etiopiche*, ed. Aristide Colonna, Turin 1987, VIII, 2. See also Claremont, p. 138
[122] Knuth, p. 153; Devoto and Molayen p. 220
[123] Knuth, p. 153
[124] Patrizia Castelli, 'Le virtù delle gemme. Il loro significato simbolico e astrologico nella cultura umanistica e nelle credenze popolari del Quattrocento. Il "recupero" delle gemme antiche' in *L'Oreficeria nella Firenze del Quattrocento*, ed M. G. Ciardi Duprè dal Poggetto, Firenze 1977, p. 345
[125] Ficino, *De Vita,* book III, chapter 2, p. 253
[126] Kunz, *The Curious Lore*, pp. 28, 370

love, while Venus sits vigilant showing her dominance over him.
According to Camillo Leonardi, rubies were effective in dispelling evil thoughts and controlling lust.[127] Considering this, it seems probable that it is rubies that decorate Chastity's shield in the small panel painted by Gherardo di Giovanni del Fora (see fig. 22b) mentioned previously (see Section 2.1), in order to utilise their protective and virtuous properties. In my opinion it seems probable that it is for a similar reason that rubies were worn around the neck of young ladies, to promote the preservation of their innocence, as can be observed in portraits painted by Piero del Pollaiolo (Fig. 37 and Fig. 38).[128]

In the fourteenth century, Sir John Mandeville reports many properties that were attributed to this gem in his writings. The ruby, especially if worn on the left side of the body as a ring, bracelet or brooch, would supposedly give peace to the owner, and the protection was not limited to himself, but also covered his properties and lands.[129]

In medicine, rubies were connected to diseases of the blood, due mainly to their colour. They were, for example, used to treat haemorrhages and inflammations.[130] In the Renaissance, ruby, together with sapphire and other gems, was part of the concoction administered to Lorenzo the Magnificent when he was dying.[131]

At this time rubies had the highest value among precious stones. Benvenuto Cellini states that the value of a carat ruby was eight times that of a diamond and eighty times that of a sapphire.[132] Therefore, only people belonging to the upper classes could afford to wear them. A ruby hangs from the complex collar wore by Battista Sforza, the wife of the Count of Urbino Federico da Montefeltro, in the double portrait of her and her husband painted by Piero della Francesca around 1465 (Figs 39a – 39b). It is possible that the patrons wanted the painter to depict a real jewel in their belongings, for a public display of their prosperity. In this specific case, it is almost certain that the ruby was chosen because it was considered to neutralise lust, together with the

[127] Camilli Leonardi, *Speculum Lapidum,* Venice 1502, fol. XXVI cited in Kunz, *The Curious Lore,* p. 102
[128] See also Luke Syson and Dora Thornton, *Objects of Virtue: Art in Renaissance Italy*, Los Angeles (CA) 2001, p. 46
[129] *Le grand lapidaire de Jean de Mandeville* (1561), ed. J. S. del Sotto, Vienna 1862, p. 8 cited in Kunz, *The Curious Lore*, p. 103
[130] Kunz, *The Curious Lore*, pp. 28, 370
[131] Wright and Chadbourne p. 106
[132] Claremont 138

virtues of purity and chastity symbolised by the pearls, as the same message is conveyed on the reverse of the painting. Battista Sforza is depicted on a chariot led by two unicorns, alluding to the 'Triumph of Chastity' (Figs 40a – 40b), a very popular subject at the time taken from the literary *Triumphs* written by Francesco Petrarca between 1351 and 1374. In this second painting, much like in her portrait, Battista Sforza is pictured wearing the same necklace with a ruby pendent.[133]

[133] See Dora Liscia Bemporad, 'Il gioiello al tempo di Piero', in *Con gli occhi di Piero. Abiti e gioielli nelle opere di Piero della Francesca*, eds Maria Grazia Ciardi Dupré and Giuliana Chesne Dauphiné Griffo, Venice 1992, pp.82, 84-85. This work also shows interesting modern reproductions of six of the jewels depicted by Piero della Francesca, created by the jeweller Giulio Manfredi. See also Castelli, pp. 344-345.

2.4 SAPPHIRE

A sapphire is corundum of any colour apart from red; however historical sources write mostly about the blue variety.[134]

In the Biblical tradition, God engraved the Ten Commandments on sapphire tablets.[135] Damigeron, in the second century BC, reports that sapphires were worn by kings around their necks as a protective amulet, and that this gem would keep envy away and render the wearer likeable to God. However, it is likely that Damigeron was not writing about the sapphire that we know, but about lapis lazuli.[136] There is some confusion regarding the distinction between sapphire and lapis lazuli. Both Teophrastus and Pliny describe the stone that they called *sapphirus* as being dotted with golden spots, but it is actually lapis lazuli that corresponds to this description.[137]

Sapphires have been used throughout the centuries in medicine for the treatment of eye diseases, much like to the emerald, and Marbod[138] and Albertus Magnus[139] both mention this usage. The gem was to be washed with cold water before and after the treatment, and could be heated while over the eye in order to purge it from all foreign materials. This use is demonstrated by an illustration from the botanical treatise *Hortus Sanitatis* ('The Garden of Health'), first printed in Mainz by Jacob Meydenbach, around 1491 (Fig. 41).[140]

The sapphire was also supposed to detect poison,[141] to elevate the thoughts towards the heavens,[142] and to promote chastity and virtuousness.[143] For this purpose, sapphires were mounted in jewels and worn, as we can see in the portrait of a young woman painted by Lorenzo di Credi, in which a sapphire pendent hangs from a necklace (Figs 42a – 42b).

The sapphire had great importance in the Christianity, especially because it was particularly known for encouraging chastity and fidelity, although it is true that many precious stones were thought to possess these attributes to some degree. Pope

---

[134] Knuth, pp. 155-156

[135] *Exodus*, 24:10 in *The new English Bible- Old Testament*, Cambridge 1970. See also Wright and Chadbourne p. 115

[136] Knuth, p. 157

[137] Kunz, *The Curious Lore*, p. 293

[138] Marbod, p. 213

[139] Albertus Magnus, *Opera Omnia*, ed. Borgnet, Paris 1890, vol. v, p. 44; Kunz, *The Curious Lore*, p. 387

[140] Johannes de Cuba, *Hortus Sanitatis*, ed. Strassburg c. 1499, section 'De Lapidibus', chapter 109 (ms. kept at the Public Library in Boston)

[141] Bartolomaeus Anglicus (1495), cited in Knuth, p. 159

[142] John Mandeville, *Le Lapidaire*, cited in Knuth, p. 159

[143] Camillus Leonardus, *Speculum Lapidum*. See also Claremont, p. 160

Innocent II made all his bishops wear sapphire stones mounted in rings. Andreas, Bishop of Cesarea, associated the sapphire listed in *Revelations* 21 with St Paul.[144]

Blue stones were linked to the heavens, and were believed to attract the favour of spirits of light and wisdom.[145] It is probably because of this meaning that Andrea del Castagno depicted it mounted on the tiara worn by the Cumaean Sybil, together with crystals and pearls, in the series of *Illustrious People* for the Villa Carducci di Legnaia in Florence (Figs 43a – 43b).

The value of sapphires in the Renaissance is reported by Cellini as being one tenth that of the diamond.[146] Rubies and sapphires had also a symbolic meaning when put together in wedding rings, as the nobleman Marco Antonio Altieri from Rome explains in his dialogue *Li nuptiali* (1506-29). He states that the blue sapphire indicates the soul, which derives from heaven, while the red ruby denotes the body and the heart, so as to symbolise a complete gift of the soul and the body to the lover.[147]

These two stones often appear together in the decoration of the crown of the Virgin in paintings. Some examples are the *Coronation of the Virgin* painted by Agnolo Gaddi (Figs 44a – 44b), and the *tondo* with the *Virgin and Child with Saint John and two Angels* attributed to the workshop of Botticelli (Figs 45a – 45b).

---

[144] Knuth, p. 160. See also Kunz, *The Curious Lore*, p. 370-371

[145] Kunz, *The Curious Lore*, p. 370

[146] Claremont, p. 158

[147] Sara F. Matthews- Grieco in *Art and Love in Renaissance Italy*, p. 110. Marco Antonio Altieri, *Li nuptiali*, ed. E. Narducci, Rome 1995: 'Lo zaffiro di color celeste, ce denoti la anima nostra, qual da quello se deriva; e'l balascio poi, come de ignea material, denoti lo corpo, receptaculo del core, infocato da amorevil fiamma, et per questo demostrase dunarli la anima ello core'.

2.5 CASE STUDIES - SUMMARY

Through the analysis of these four stones, it is possible to identify some common themes, and from these we can infer some notable details about these lives of the people in Renaissance Florence.

They are all credited with general protective powers, particularly in the case of the diamond, due to its physical strength. All the stones studied apart from ruby offer some form of protection specifically against poisons. It is interesting to note that, despite the wide range of dangers and diseases affecting people during this period, being poisoned was considered so worthy of defence. It could be presumed that the owners of such valuable jewels would be both rich and powerful with many influential political enemies, and so would have been possible targets for assassination by such means.

Another clear area of particular concern at this time is marital virtues and fidelity. All of the stones in some way are connected with preserving matrimonial harmony, by encouraging chastity or countering lust, or, in the case of the emerald, shattering to expose adultery. A related topic is the continuation of the lineage, which was a constant concern in a time of plague and other diseases, and protection from miscarriage and during labour was highly valued. Another common medical usage is in treating conditions of the eyes, for which both emerald and sapphire were used.

In addition, each stone has some unique characteristics that differentiate it from the others. Emerald is associated particular with business transactions and economic affairs; Sapphire has an association with wisdom; and Ruby with passion and leadership.

3

MEDICINES AND JEWELS FOR THE OTHER SIDE OF THE SOCIETY

As we have seen, Renaissance Florentines sought the assistance of precious stones both for protection, and to heal themselves from illness. However, for the most part it was only the affluent classes that were able to afford precious stones.

This issue had already been noted by Gilles de Corbeil, a French physician who belonged to the *Schola Medica Salernitana,* in the first half of the thirteenth century. In his *De Laudibus et Virtutibus Compositorum Medicaminum*, Gilles mentions and praises the quality of the treatments prescribed by Mauro, a physician from the same School, but in the same passage condemns the popular use of precious stones as remedies for any kind of illness, and wonders if ill people who could not afford these expensive therapies would be left to fend for themselves.[148]

In this context a new kind of literature developed, addressed especially towards the poor, in which expensive medicine made out of gems and pearls were generally neglected in favour of cheaper substitutes.[149] Particularly important among them is the *Thesaurus Pauperum* ('Poor man's Treasury'), written in the thirteenth century by the Portuguese bishop and physician Pedro Juliani, better known as Petrus Hispanus, and who in 1276 became Pope John XXI. This treatise became very popular, and was often copied and translated into vernacular languages for the benefit of poor people who could not read Latin, highlighting the properties of natural remedies, including products of the garden, such as specific plants, herbs and flowers, which were widely available.[150] Although the purpose of this treatise was to help the poor, the author also

[148] Aegidius Corboliensis or Aegidius Monachus, *De laudibus et Virtutibus Compositorum Medicaminum*, liber II, section on 'Diamargariton', vv. 100-104, in *Carmina Medica*, ed. Ludovicus Chovlant, Lipsia 1826, p. 79. See Adalberto Pazzini, *Le pietre preziose nella storia della medicina e nella leggenda*, Rome 1939, p. 107; Stefano Rapisarda, 'Introduzione', in *Il 'Thesaurus Pauperum' in Volgare Siciliano*, ed. S. Rapisarda, Palermo 2001, pp. XV-XVI; *Collectio Salernitana ossia documenti inediti e trattati di medicina appartenenti alla scuola medica salernitana*, ed Salvatore de Renzi, Napoli 1852, vol. 1, p. 241

[149] Poor people were not the only recipients of these treatises - they also addressed travellers such as pilgrims and crusaders who did not have the possibility of obtaining other kinds of medicines during their journeys.

[150] Pazzini, pp. 107-108; Kunz, *The magic of jewels & charms*, p. 119

mentions recipes using mineral ingredients, such as red chelidonius and 'iris' as a cure for epilepsy, and emerald and sapphire to treat eye diseases.[151]

The register of retail sales from an apothecary shop called Speziale del Giglio, which existed from 1464 and 1568, found in the archive of the Ospedale degli Innocenti in Florence,[152] shows that many treatments and medicines were economical enough to be afforded at least by the urban working class, including shopkeepers and artisans. The price was determined by the materials used as ingredients for these potions. Among the most expensive ingredients were rhubarb, manna, musk, and, obviously, precious metals and gems. Sometimes, what was essentially the same type of medicine was sold to rich people coated in gold foil, and to poor people without the gold, for half the price.[153]

The herbal medicines sold at the Giglio were distinct from those that were part of the countryside self-medication tradition. For example, rosemary, which was commonly described in contemporary herbals as being beneficial for several kinds of illnesses, does not appear in the Giglio records; rather, the apothecary sold exotic imported herbs such as pudding pipe.[154] It is possible to assume that peasants were not among the customers of the apothecary, and instead they relied upon the help of their alternative remedies.[155]

This attitude was criticised in a treatise from 1577 written by Giovanni Battista Zapata, entitled *Li maravigliosi secreti di medicina e chirurgia* ('The wonderful secrets of medicine and surgery'), in which the author consoles the poor, stating that 'even if you will not have gems, gold, and precious stones, like the rich and powerful people, to drive the said ailments away (medications that are truly vain and of no benefit), you will at least have simple remedies, that the wise nature made and produced for your benefit.'[156]

Apart from herbs and plants, poor people could also count on another type of magical aid for the protection of their health. Specific words and ancient names were

---

[151] Kunz, *The magic of jewels & charms*, p. 120

[152] James Shaw and Evelyn S. Welch, *Making and Marketing Medicine in Renaissance Florence*, Amsterdam and New York 2011, p. 19

[153] Ibidem, p. 258

[154] Other herbs used by the peasants were mint, parsley and sage.

[155] Shaw, p. 259

[156] Giovanni Battista Zapata, *Li maravigliosi secreti di medicina e chirurgia: nuovamente ritrovati, per guarire ogni sorte d'infirmità*, ed. Turin 1580 cited in Shaw, p. 259: 'se ben non havrete gemme, oro, e pietre pretiose, come I ricchi e potenti per discacciar detti mali (medicamenti che veramente sono vani, e di niun porfitto [*sic*]) havrete almeno rimedii facili, che la sagace natura ha fatto, e prodotto in util vostro'.

considered to be very powerful, and therefore they became objects of honour and worship. Words and formulas could be invoked orally, or could even be written on pieces of parchment to be used as charms and talismans that were constantly worn in order to ensure long-lasting protection.[157] In the struggle against disease, herbs and learned medicine were combined with amulets and prayers, in order to obtain a faster and more powerful result.[158]

As discussed above, Florentine brides often received jewels and gems as gifts. This applied not only to girls from the rich upper classes, but also to members of less wealthy families. An example is given by the apothecary Luca Landucci, who, in his *Florentine Diary* lists the expenses that he covered for his bride-to-be, including jewels with pearls, a diamond, a sapphire and a ruby. [159]

The professional garland maker Niccolò di Bastiano, who lived in the fifteenth century and who was known by the name of Niccolò 'delle Grillande', used pearls to pay for the services of prostitutes. The way in which he acquired the pearls was, however, quite singular, and worth mentioning. Aside from his official work, he was also a professional thief. Whilst delivering his work to brides in their houses, he would place the garland upon them, using the opportunity to remove pearls from other garlands or necklaces that they were wearing.[160]

The same tradition of presenting the bride with valuable gifts was also present among the peasants in the countryside around Florence.[161] Unfortunately, peasant families left very few traces of their everyday lives. The scarce information about them is mainly conveyed to the present through notarial deeds and reports, writings of their lords and of their creditors, and their notifications to the *catasto,* the land tax registry. Sometimes, these families also needed to have an inventory of their belongings compiled (mainly goods and furnishings, and occasionally also real estate properties), especially after the death of the head of the household, which can provide further useful information about their lives.[162]

---

[157] Already in the Roman Empire the physician Quinctus Serenus (Severus?) Sammonicus, in his *Liber Medicinalis,* recommends the use of the word 'Abracadabra', written in shape of a triangle and worn around the neck to protect them from mortal diseases. See Evans, pp. 121-122

[158] Shaw, p. 260. See also Bianco, Introduction to *Le pietre mirabili*, pp. 10-11

[159] Luca Landucci, *Diario Fiorentino dal 1450 al 1516*, ed. Iodoco del Badia, Florence 1888, pp. 6-8.

[160] Carlo Carnesecchi, 'Niccolò "delle Grillande"', *Rivista d'Arte*, 4, 1906, pp. 56-61

[161] Kirshner, pp. 87-88

[162] Maria Serena Mazzi and Sergio Raveggi, *Gli uomini e le cose nelle campagne fiorentine del Quattrocento*, Florence 1983, p. 76

In the countryside, marriages in fifteenth-century Tuscany were mainly convenient agreements (as was also true for the middle and upper classes inside towns). Firmly connected to this was the necessity for provision of a dowry. Without a dowry, no wedding was possible.[163] Debts relating to dowry payments were the main cause of shortfalls in a family's finances.[164] The amounts could vary, and would normally comprise the bride's trousseau, including clothes, linen, possibly furniture, and sometimes also tools and animals.[165] Usually a dowry would include better quality items of clothing, more colourful and fashionable,[166] and sometimes even jewellery such as a necklace,[167] to be worn only for special occasions that required some extent of *decorum*. These more valuable items were probably to be passed between and borrowed from the members of the same family. Events where it was appropriate to wear them included attending mass, and participation in dances. Young girls, especially, might borrow items from older female family members, as they wanted to appear beautiful in order to attract the interest of a boy, and begin the ritual of courtship so that they could get married.[168] It is possible to interpret this custom of dressing up in the poor as escapism, even though only ephemeral, for perhaps only a single day, whilst always being aware that this 'luxury' was destined to disappear again. By displaying their best belongings, they were imitating the typical grandiosity that distinguished the wealthier classes that lived inside the town, possibly with a certain degree of ambition towards this themselves.[169]

Literary sources can be helpful in order to imagine what kind of jewels these people might have worn. Affordable jewels were often the product of counterfeiting. Some handbooks circulating at the time provided instructions for producing these imitations. For example, the Bolognese treatise entitled *Segreti per colori*, written in 1440, offers many recipes for creating colours, but also explains how to make false pearls out of

[163] Mazzi and Raveggi, p. 105
[164] Ibidem, p. 98
[165] Ibidem, p. 107
[166] Piccinni, p. 172
[167] Piccinni, p. 173; Mazzi and Raveggi, p. 230
[168] Piccinni, p. 167
[169] Mazzi and Raveggi, p. 231

small shells, powdered crystal glass and fish bones.[170] Even a great artist such as Leonardo da Vinci mentions the topic in his *Notebook* (1480-82).[171]

Prostitutes, for whom the use of real pearls was condemned because of their connection with the virtues of chastity and purity, instead wore jewels with mother-of-pearl, glass or silver beads.[172] It is also reported that at this time in England precious stones were being imitated by setting coloured foil behind glass or a semi-transparent stone,[173] and so it can be inferred that similar practices were common in Renaissance Florence. In 1565, Benvenuto Cellini also reports that 'double crystals' were used to make fake rubies and emeralds, mounted in brass or silver, of very little value and intended for the use of the poor peasants; however, they were also sometimes sold as if they were true gems, deceiving the buyer.[174]

Another way in which less wealthy people might come into possession of jewels was through the gifts given by Popes to pilgrims in the fifteenth and sixteenth century. These were mainly large but rough rings, with a crystal or a semi-precious stone mounted in gilded bronze or copper, and so again of little value.[175]

Finally, it is worth mentioning a contemporary technique called *niello*[176], which consisted of filling engraved designs and inscriptions in jewels (particularly in silver rings and pendants) with a black substance made of a metallic alloy, which was cheaper to produce than other kinds of jewellery and so more widely affordable among the less affluent classes.[177]

---

[170] *Segreti per colori*, in *Original treatises on the arts of painting*, ed. Mary Merrifield, II, 509, 1849, cited in Joan Evans, *A history of jewelry. 1110-1870*, Mineola (N. Y.) 1989, p. 69, footnote 4, and in Robin Arthur Donkin, *Beyond price: pearls and pearl-fishing: origins to the age of discoveries*, vol. 224, Philadelphia 1998, p. 263

[171] Leonardo, *Notebooks*, ed. and transl. Edward McCurdy, 1938, cited in Donkin, p. 263

[172] Isabella Campagnol Fabretti, 'The Italian Renaissance' in *The Greenwood Encyclopedia of clothing through world history: 1501- 1800*, ed. Jill Condra, Westport (CT) 2008, vol.2, p. 31

[173] Alison Slim, *Pleasure and Pastimes in Tudor England*, Thrupp-Stroud 2002, p. 50; Marian Campbell, 'Gold, Silver and Precious Stones' in *English Medieval Industries: craftsmen, techniques,* products, ed. John Blair, Nigel Ramsay, London and Rio Grande (Ohio) 1991, pp.116-117

[174] Benvenuto Cellini, *Due trattati di Benvenuto Cellini scultore Fiorentino, uno dell'oreficeria, l'altro della scultura*, ed. Florence 1731, Treatise 1, chapter 1, p. 7

[175] Herald, p. 174

[176] An expert artist in *niello* products in Florence at this time was Maso da Finiguerra (1426-1464).

[177] Herald, p. 173

CONCLUSION

As we have seen, precious stones could have many purposes. Worn as jewels, they became a visual demonstration of wealth, and especially in painted portraits they were intended to convey this particular message to the viewer. In addition to this, a gem mounted on a jewel was believed to act as a protector on the wearer, both magically working against evils, and for medicinal purposes.

Generally, people from all social classes, rich and poor, were attracted to the beauty and the power of precious stones, from rulers and wealthy urbanites, to clergymen, to the destitute and the peasants in the countryside.

People belonging to the upper classes were so fond of gems and precious ornaments that some special 'sumptuary laws' were established in the Renaissance to control and regulate the flaunting of wealth and luxury in favour of more modest appearances, in accordance with religious precepts. A statute issued in Florence in 1415 stipulates limitations on the wearing of rings for women.[178]

However, we have also seen how the less affluent sought a similar protection, although perhaps from more commonplace dangers than murderous poisoners. Cheap copies of the precious and expensive stones discussed in the earlier sections were substituted instead, affording a degree of comfort to the owner without the extravagant expense. It is also possible that this imitation was to some extent aspirational for those who had little – the opportunity to fantasise that they were one of the wealthy elite.

The belief in the powers of precious stones has not yet disappeared. The interpretation of the properties of gems and of the magic they bear and transmit when in contact with the skin is part of the collective memory, like the remains of a primordial mentality. As evidence of this, we still present brides with pearls and babies with coral, and use a diamond ring to represent everlasting love.

However, unfortunately, today the experience of modern people with stones is often relegated to the sections on occult and esoteric knowledge in bookshops, and

[178] A woman 'cannot wear on one or more fingers more than a total of three rings. And across all the rings and fingers she may not have more than one pearl or another precious stone. These restrictions apply to both hands.' Cited in Herald, p. 173

specialised jewellers that sell birthstones and gems connected with the zodiacal signs but without the original meaning, and often mixing the powers indiscriminately.

Word Count: 14563

FIGURES

Fig. 1
Scorpion Ring
Setting: North Italy; Onyx Intaglio: Roman
1400-1425; First or Second century BC
Victoria and Albert Museum, London

Figs 2a - 2b (detail)
Raphael
Elisabetta Gonzaga
1504-06
Galleria degli Uffizi,
Florence

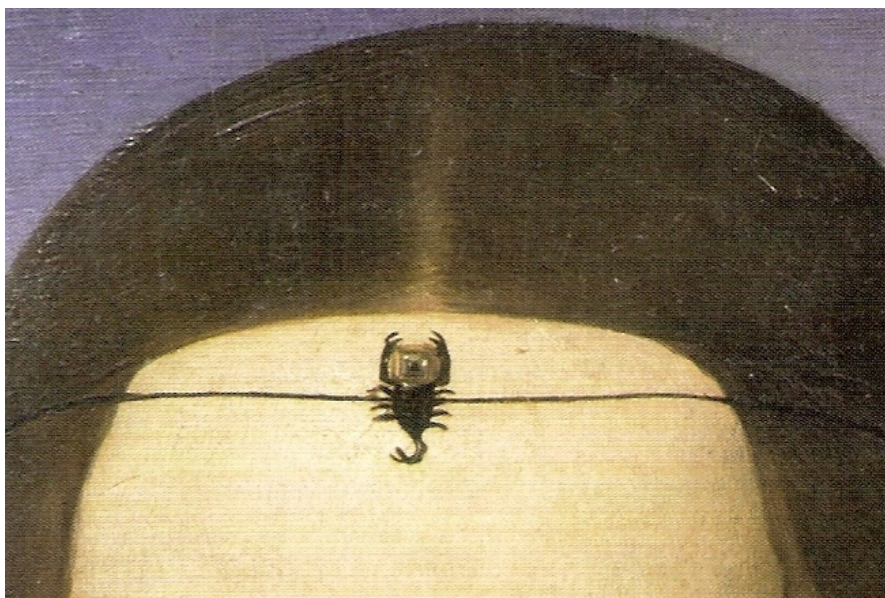


Fig.3
Attributed to Bertoldo di Giovanni or Donatello
Bust of young man wearing a medallion with the 'chariot of the soul'
Museo Nazionale del Bargello, Florence

Fig.4
Dionysus on a chariot
Museo Archeologico Nazionale, Naples

Fig.5
The chariot of Phaeton
Museo Archeologico
Nazionale, Naples

Fig.6
Chariot led by male figure
Golden Integration by Benvenuto Cellini; Hellenistic chalcedony cameo fragment
c. 1535-45; First century BC
Museo Archeologico Nazionale, Florence

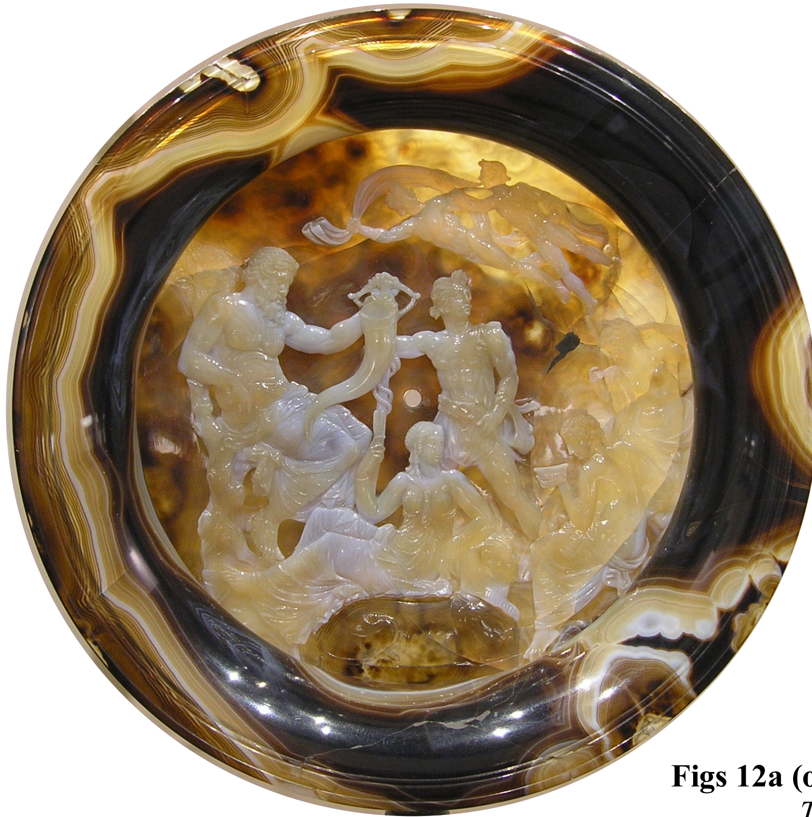
Fig. 7
Leaping Lion
Roman Intaglio in carnelian
Second half of First century AD
Roman Baths Museum, Bath

Fig. 8
Lion in profile, prone figure, bearded bust in profile between a star and a crescent
Roman, gold and jasper finger ring
Third- Fourth century AD
Private collection, Connecticut

Fig. 9
Giovanni delle Corniole
Portrait of Lorenzo the Magnificent
Cameo in carnelian
1556-58
Museo degli Argenti, Palazzo Pitti, Florence

Figs 10a- 10b (detail)
Donatello
David with Goliath's head
1440s
Museo Nazionale del Bargello, Florence

Fig. 11
Attributed to Dioskourides
Apollo and Marsyas, called ‘seal of Nero’
Roman, Intaglio on carnelian
Museo Archeologico Nazionale, Naples



Figs 12a (obverse)- 12b (reverse)
Tazza Farnese
Cameo in agate sardonyx
Third century BC
Museo Archeologico Nazionale, Naples

Fig. 13a – 13b (detail)
Sandro Botticelli
Portrait of Simonetta Vespucci
Probably before 1478
Stadel Museum, Frankfurt

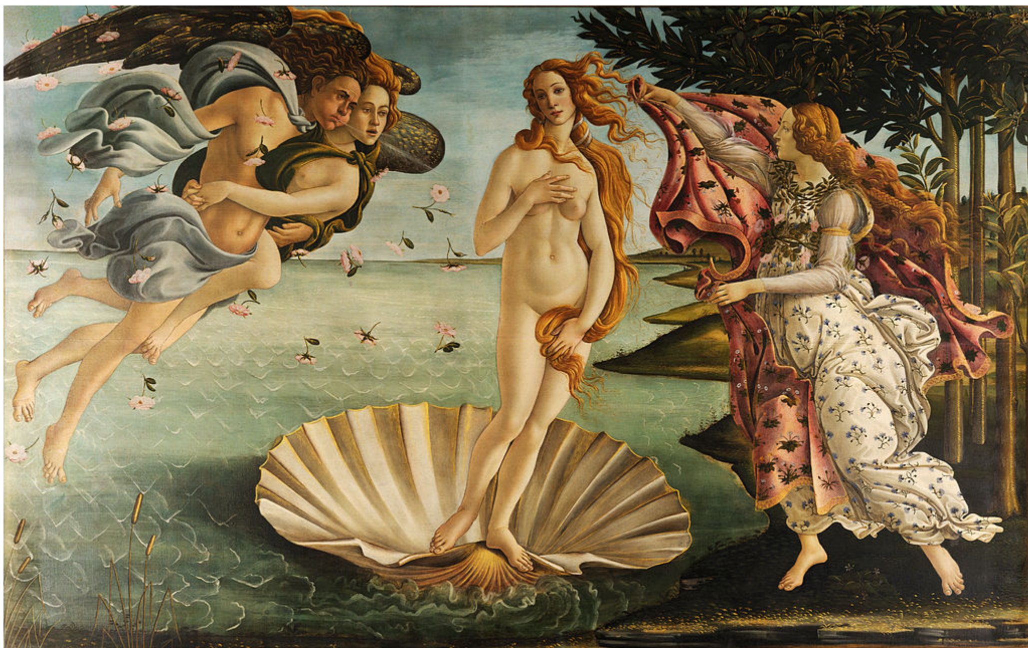


Fig. 14
Sandro Botticelli
The Birth of Venus
c. 1486
Galleria degli Uffizi, Florence

Figs 15a (obverse) - 15b (reverse)
Giovanni di Ser Giovanni called Lo Scheggia,
Triumph of Fame
1448-9
The Metropolitan Museum of Art, New York

Figs 16a – 16b (detail)
Benozzo Gozzoli
The Procession of the Magi
1459
Chapel in Palazzo Medici Riccardi, Florence

Figs 17a – 17b (detail)
Domenico Ghirlandaio
Confirmation of the Franciscan Rule
1482-85
Sassetti Chapel, Church of Santa Trinita, Florence

Fig. 18
Alessandro Fei del Barbiere
The Goldsmith's shop
1570-72
Studiolo of Francesco I de Medici, Palazzo Vecchio, Florence

Fig, 19
Alessandro Allori
Pearl fishing
1570-72
Studiolo of Francesco I de Medici, Palazzo Vecchio, Florence

Fig. 20
Jacopo Zucchi
The Mine
1570-75
Studiolo of Francesco
I de Medici, Palazzo
Vecchio, Florence

Fig. 21
Jacopo Zucchi
Coral Fishers
c. 1580
Galleria Borghese, Rome

Figs 22a – 22b (detail)
Gherardo di Giovanni del Fora
The Combat of Love and Chastity
1475-97
National Gallery, London

Fig. 23
Golden ring with faceted diamond
Northern Italy, 15th century
Inscribed: 'LORENSO A LENA LENA'
The British Museum, London

Fig. 24
Diamond Rings
Western Europe, c. 1525- 1575
Victoria and Albert Museum, London

Figs 25a – 25b (detail)
Agnolo Bronzino
Eleonora of Toledo
1543
National Gallery, Prague

Figs 26a – 26b (detail)
Sandro Botticelli
Pallas and the Centaur
c. 1482
Galleria degli Uffizi, Florence

Fig. 27
Ring with heart-shaped green stone (emerald?)
Central Europe
End 16th century
Museo Nazionale del Bargello, Florence

Fig. 28
Jewel with gold letters spelling
'amor'
French
mid 15th century
Metropolitan Museum of Art,
New York

Fig. 29
Eleonora of Toledo's ring
Ruby and two emeralds
Italy, first half of the 16th century
Museo degli Argenti, Palazzo Pitti, Florence

Fig. 30
Catherine de Medici emerald ring (?)
c. 1561
Cabinet des médailles, Bibliothèque nationale, Paris

Figs 31a – 31b (detail)
Agnolo Bronzino
Allegory with Venus and Cupid
About 1545
National Gallery, London

Figs 32a -32b
Filippo Lippi
Profile portrait of a young woman
About 1445
State Museum, Berlin

Figs 33a – 33b (details)
Domenico Veneziano
Santa Lucia de' Magnoli's Altarpiece
c. 1445-47
Galleria degli Uffizi, Florence

Figs 34a, 34b, 34c (details)
Andrea del Verrocchio and Lorenzo di Credi
The Virgin and child with two Angels
1476-78
National Gallery, London

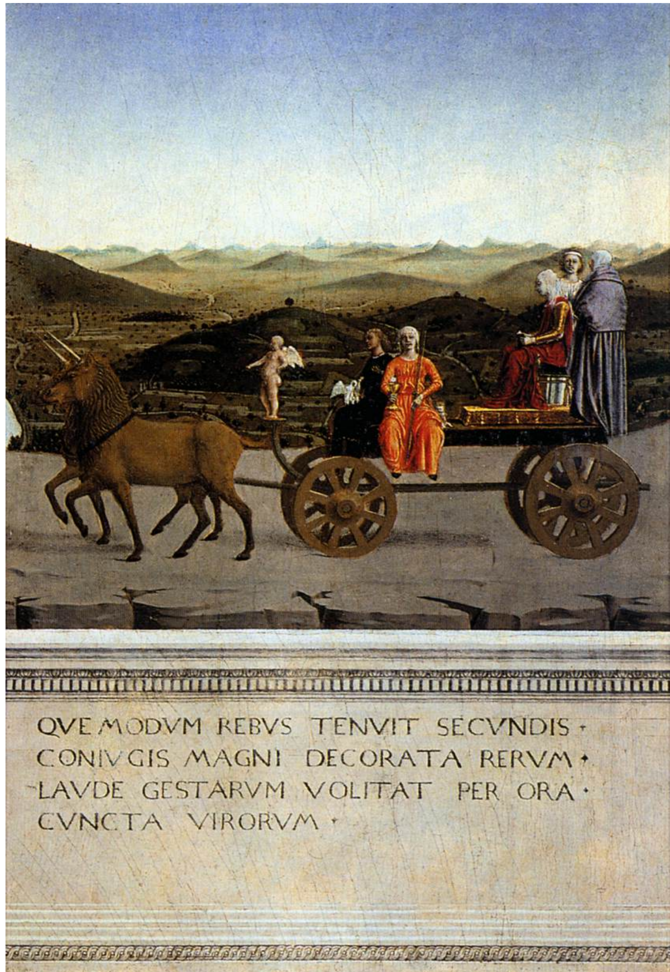
Figs 35a – 35b (detail)
Piero della Francesca
The Nativity
1470-75
National Gallery, London

Figs 36a – 36b (detail)
Sandro Botticelli
Venus and Mars
c. 1483
National Gallery, London

Fig. 37
Piero del Pollaiolo
Portrait of a Lady
1450- 1500
Museo Poldi Pezzoli, Milan

Fig. 38
Piero del Pollaiolo
Portrait of a Lady
c. 1475
Metropolitan Museum of Art, New York

Figs 39a – 39b (detail)
Piero della Francesca
Portrait of Battista Sforza
c. 1465
Galleria degli Uffizi,
Florence



Figs 40a – 40b (detail)
Piero della Francesca
Battista Sforza on a chariot as
Triumph of Chastity
c. 1465
Galleria degli Uffizi, Florence

Fig. 41
Use of the sapphire to remove foreign objects from the eye
From Johannes de Cuba (?), *Hortus Sanitatis*,
Ed. Strasbourg c. 1499
Public Library, Boston

Figs 42a – 42b (detail)
Lorenzo di Credi
Portrait of a young woman
(Ginevra di Giovanni di Niccolò?)
c. 1490- 1500
The Metropolitan Museum, New York

Figs 43a – 43b (detail)
Andrea del Castagno
Cumaean Sybil
1449-51
Galleria degli Uffizi, Florence

Figs 44a – 44b (detail)
Agnolo Gaddi
Coronation of the Virgin
1380-85
National Gallery, London

Figs 45a – 45b (detail)
Workshop of Sandro Botticelli
The Virgin and Child with St John and two Angels
1490- 1500
National Gallery, London

BIBLIOGRAPHY

PRIMARY SOURCES

Aegidius Corboliensis/ Aegidius Monachus, *De laudibus et Virtutibus Compositorum Medicaminum*, in *Carmina Medica*, ed. Ludovicus Chovlant, Lipsia 1826

Albertus Magnus, *Opera Omnia*, ed. Borgnet, Paris 1890

Altieri, Marco Antonio, *Li nuptiali*, ed. Enrico Narducci, Rome 1873 and ed. Rome 1995

Cardano, Girolamo, 'De gemmis' in *Philosphi Opera Quaedam*, ed. Basileae 1585

Cellini, Benvenuto*, Vita di Benvenuto Cellini orefice e scultore fiorentino da lui medesimo scritta* in *Opere di Benvenuto Cellini,* ed. Gio Palamede Carpani, Milan 1806

Cellini, Benvenuto, *Due trattati di Benvenuto Cellini scultore Fiorentino, uno dell'oreficeria, l'altro della scultura*, ed. Florence 1731

Eliodoro, *Le Etiopiche*, ed. Aristide Colonna, Turin 1987

Santi Eusebii Hieronymi (Jerome), 'Letter LXIV to Fabiola' in *Epistulae*, ed. Isidorus Hilberg, Vienna 1996

Ficino, Marsilio, *De Vita*/ *Three Books on Life*, eds Carol V. Kaske and John R. Clark, Tempe (Arizona) 1998

Ficino, Marsilio, *Theologia Platonica/ Platonic Theology*, eds James Hankins and William Bowen, trans. Michael J. B. Allen and John Warden, Cambridge (Mass.) and London 2001- 2006

Flavius Josephus, *The Antiquities of the Jews*, trans. by William Whiston, Peabody (Mass.) 1987

Francesco di Matteo Castellani, *Ricordanze A (1436-1459)*, ed. G. Ciappelli, Florence 1992

Johannes de Cuba (?), *Hortus Sanitatis*, ed. Strassburg c. 1499, section 'De Lapidibus', kept at the Public Library in Boston

Landucci, Luca, *Diario Fiorentino dal 1450 al 1516*, ed. Iodoco del Badia, Florence 1888

Leonardi, Camillo, *Speculum Lapidum*, Venice 1502

Lorenzo de' Medici, 'Canzone de' Sette Pianteti' in *Canti Carnacialeschi*, ed. Paolo Orvieto, Roma 1991

Macinghi Strozzi, Alessandra, *Selected Letters*, ed. Heather Gregory, Berkeley, Los Angeles and London 1997

Marbod, *Liber Lapidum seu De Gemmis*, ed. Gottingen 1799

Marbod, *Poeme de pierres precieuses*, ed. Pierre Monat, Grenoble 1996

Marinello, Giovanni, *Le medicine pertenenti alle infermità delle donne*, ed. Giovanni Valgrisio, Venice 1574

Masi, Bartolomeo, *Ricordanze di Bartolomeo Masi, Calderaio Fiorentino, dal 1478 al 1526*, ed. Giuseppe Odoardo Corazzini, Florence 1906

Ortus Sanitatis, printed by Johann Prüss, Strasbourg 1499

Pazzini, Adalberto, *Le pietre preziose nella storia della medicina e nella leggenda*, Rome 1939

Petrarca, Francesco, *Triumphi*, ed. M. Ariani, Milano 1988

Pliny the Elder, *The Natural History*, ed. and trans. by John Bostock and H. T. Riley, London 1857

Poliziano, Angelo, *Letters*, vol. 1, ed. and trans. by Shane Butler, Cambridge (Mass.) and London 2006

Pouget, Jean Henri Prosper, *Traité des pierres précieuses et de la maniere de les employer en parure*, Paris 1762

Pseudo Maslama al-Magriti, *Picatrix, Ghayat al-hakim, Il fine del saggio*, ed. Paolo Aldo Rossi, trans. into Italian from the Latin version by Davide Arecco, Ida Li Vigni, Stefano Zuffi, Milan 1999

Rucellai, Giovanni, *Giovanni Rucellai ed il suo Zibaldone*, pt. 1, *Il zibaldone quaresimale*, ed. Alessandro Perosa, London 1960

The new English Bible- Old Testament, Cambridge 1970

Ugolino di Niccolò Martelli, *Ricordanze dal 1433 al 1483*, ed. F. Pezzarossa, Rome 1989

Vasari, Giorgio, *Le Vite dei più eccellenti pittori, scultori e architetti*, ed. Maurizio Marini, Rome 2005

SECONDARY LITERATURE

Aakhus, Patricia, ‘Astral Magic in the Renaissance. Gems, Poetry and Patronage of Lorenzo de' Medici’ in *Magic, ritual and witchcraft*, vol. 3, n. 2, Winter 2008, pp. 185- 206

Ajmar- Wollheim, Marta and Flora Dennis (eds.), *At home in Renaissance Italy*, London 2006

Armstrong, Edward, *Lorenzo de’ Medici and Florence in the Fifteenth Century*, New York 1896

Barbier de Montault, Xavier, ‘Le Tresor de l’Abbaye de Sainte-Croix de Poitier Avant la Revolution’ in *Mémoires de la société des antiquaires de l’Ouest,* Série 2, Tome 4, 1881

Bell, Rudolph, *How to do It*, Chicago and London 1999

Beltrame, Oreste, *Le Gemme nella leggenda e nella storia*, Vicenza, 1890

Biagi, Guido, *Due corredi nuziali fiorentini, 1320- 1493, da un libro di ricordanze dei Minerbetti*, Florence 1899

Bianco, Ludmilla (ed.), *Le pietre mirabili. Magia e scienza nei lapidary greci*, Palermo 1992

Brockwell, Maurice Walter *The National Gallery: Lewis bequest*, London 1909

Campbell, Marian, ‘Gold, Silver and Precious Stones’ in *English Medieval Industries: craftsmen, techniques,* products, ed. John Blair, Nigel Ramsay, London and Rio Grande (Ohio) 1991

Cappi Bentivegna, Ferruccia (ed.), *Abbigliamento e costume nella pittura italiana-Rinascimento*, Rome 1962

Carnesecchi, Carlo, ‘Niccolò “delle Grillande”’, *Rivista d’Arte*, 4, 1906

Castelli, Patrizia,‘Le virtù delle gemme. Il loro significato simbolico e astrologico nella cultura umanistica e nelle credenze popolari del Quattrocento. Il “recupero” delle gemme antiche’ in *L’Oreficeria nella Firenze del Quattrocento*, ed. M. G. Ciardi Duprè dal Poggetto, Firenze 1977

Ciardi Dupré, Maria Grazia and Giuliana Chesne Dauphiné Griffo eds, *Con gli occhi di Piero. Abiti e gioielli nelle opere di Piero della Francesca*, Venice 1992

Claremont, Leopold, *The gem-cutter’s craft*, London 1906

Dacos, Nicole, Antonio Giuliano and Ulrico Pannuti (eds.), *Il Tesoro di Lorenzo il Magnifico: Repertorio delle gemme e dei vasi*, Florence 1980

Daniels, Cora Linn and Charles McClellan Stevens, *Encyclopedia of superstitions, folklore, and the occult sciences of the world,* Vol. 1, Chicago 1903

De Renzi, Salvatore (ed.), *Collectio Salernitana ossia documenti inediti e trattati di medicina appartenenti alla scuola medica salernitana*, Naples 1852

Devoto, Guido and Albert Molayem, *Archeogemmologia. Pietre antiche- Glittica, magia e litoterapia*, Rome 1990

Donkin, Robin Arthur, *Beyond price: pearls and pearl-fishing: origins to the age of discoveries*, vol. 224, Philadelphia 1998

Evans, Joan, *Magical jewels of the Middle Ages and the Renaissance, particularly in England*, Oxford 1922

Evans, Joan, *A history of jewelry. 1110-1870*, Mineola (N. Y.) 1989

Campagnol Fabretti, Isabella, 'The Italian Renaissance' in *The Greenwood Encyclopedia of clothing through world history: 1501- 1800*, ed. Jill Condra, Westport (CT) 2008, vol.2, p. 31

Fernie, William Thomas, *Precious stones for curative wear and other remedial use, likewise the nobler metals*, Bristol and London 1907

Godman, Peter, *From Poliziano to Machiavelli. Florentine Humanism in the High Renaissance*, Princeton (New Jersey) 1998

Gontero-Lauze, Valerie, *Sagesses minerales: medecine et magie des pierres preciueuses au Moyen Age*, Paris 2010

Herald, Jaqueline, *Renaissance dress in Italy 1400-1500*, London 1981

Jolly, Karen, Catharina Raudvere, Edward Peters, *Whitchcraft and magic in Europe. The Middle Ages*, London 2002

Kirshner, Julius, 'Li Emergenti Bisogni Matrimoniali in Renaissance Florence' in *Society and individual in Renaissance Florence*, ed. William J. Connell, London 2002

Knuth, Bruce G., *Gems in myth, legend and lore*, Thornton (Colorado) 1999

Kunz, Frederick George, *The Curious Lore of precious stones: being a description of their sentiments and folk lore, superstitions, symbolism, mysticism, use in medicine, protection, prevention, religion, and divination, crystal gazing, birthstones, lucky stones and talismans, astral, zodiacal and planetary*, New York 1971 (1st edition 1913)

Kunz, Frederick George, *The magic of jewels & charms*, Philadelphia and London 1915

Lecouteux, Claude, *Le livre des talismans et des amulettes*, Paris 2005

Matthews- Grieco, Sara F., 'Marriage and Sexuality' in *Art and love in Renaissance Italy*, ed. Andrea Bayer, New Haven and London 2008

Mazzi, Maria Serena and Sergio Raveggi, *Gli uomini e le Cose nelle campagne Fiorentine del Quattrocento*, Florence 1983

Musacchio, Jacqueline Marie, 'Lambs, Coral, Teeth, and the Intimate Intersection of Religion and Magic in Renaissance Tuscany', in *Images, relics, and devotional practices in Medieval and Renaissance Italy*, eds Sally J. Cornelison and Scott B. Montgomery, Tempe (Ariz.) 2006

Musacchio, Jacqueline Marie, *The art and ritual of childbirth in Renaissance Italy*, New Haven and London 1999

Piccinni, Gabriella, 'Le donne nella mezzadria Toscana delle origini: Materiali per la definizione del ruolo femminile nelle campagne', *Ricerche storiche* 15, 1985

Prince d'Essling and Eugéne Müntz, *Petrarque: ses études d'art, son influence sur les artistes, ses portraits et ceux de Laure. L'illustration de ses écrits*, Paris 1902

Rapisarda, Stefano (ed.), *Il 'Thesaurus Pauperum' in Volgare Siciliano*, Palermo 2001

Rodini, Elizabeth, 'The Language of Stones' in *Renaissance jewelry in the Alsdorf Collection*, The Art Insititute of Chicago, Museum Studies Vol. 25, No. 2, Chicago 2000

Sframeli, Maria, 'I gioielli nell'età di Lorenzo il Magnifico', in *I gioielli dei Medici dal vero e in ritratto*, ed. M. Sframeli, Leghorn 2003

Shaw, James and Evelyn S. Welch, *Making and Marketing Medicine in Renaissance Florence*, Amsterdam and New York 2011

Slim, Alison, *Pleasure and Pastimes in Tudor England*, Thrupp-Stroud 2002

Syson, Luke and Dora Thornton, *Objects of virtue: art in Renaissance Italy*, Los Angeles (CA) 2001

Tinagli, Paola, *Women in Italian Renaissance Art. Gender, representation, identity*. Manchester and New York 1997

Wardopper, Ian, 'Between art and nature: Jewelry in the Renaissance' in *Renaissance jewelry in the Alsdorf Collection*, The Art Insititute of Chicago, Museum Studies Vol. 25, No. 2, Chicago 2000

Wright, Ruth V. and Robert L. Chadbourne, *Gems and minerals of the Bible*, New York 1970