Science and Alchemy: A New Interpretation of the Miscellaneous Papers of Don Antonio de' Medici

Giovanna Potenza

Occasionally called "the alchemist prince," Don Antonio de' Medici (1576-1621) is often considered a minor figure in the story of the Florentine dynasty. He was also the illustrious victim of a family conspiracy that—although not surprising in the context of the late Renaissance Italian courts—distinguished itself for its unusual cruelty.

Antonio de' Medici was only eleven years old when his parents—the Grand Duke of Tuscany Francesco I and the Venetian noblewoman Bianca Cappello—died suddenly and within a few hours of each other, after a short but unbearably painful agony. The first to be suspected of the deaths was the brother of Francesco I, Cardinal Ferdinando de' Medici, whose relationship with the couple had always been tense and who was their guest at Poggio a Caiano exactly at the time of the tragic events. It was not by chance, perhaps, that the cardinal rushed to order the autopsy on the bodies, although the diagnosis of malaria didn't erase the doubts that he himself had poisoned the couple in order to take possession of the throne.

Having become the new Grand Duke of Tuscany, Ferdinando buried his brother with all honors, but denied Bianca Cappello a State funeral and her remains were buried in a place that is unknown to this day.

The cardinal abandoned the clergy in 1589 to marry Cristina of Lorraine, from whom he had nine children, and reigned over the Granduchy of Tuscany until his death in 1609. But a piece of the puzzle is missing: what happened to his nephew Antonio, the legitimate heir and only living son of Francesco I?

As mentioned before, the cardinal hated Bianca Cappello—whom he openly and disparagingly called "the very bad Bianca"[1]—and had hostile relations with his brother. We cannot be surprised, then, if the hostility to his parents affected also the innocent nephew Antonio.

[1] See Gaetano Pieraccini, *La stirpe dei Medici di Cafaggiolo* (Firenze: Nardini Editore, 1986), p. 5. The original is "la pessima Bianca". The English translation is mine.

Several clues lead us to believe that Antonio's identity was initially kept hidden from the court. It was probably revealed only in June 1579, when Francesco I decided to introduce Bianca officially as the new Grand Duchess and to announce their secret wedding that had been celebrated on June 5, 1578, shortly after the death of his first wife, Joanna of Austria. After the premature death of Filippo (born in 1577 and dead in 1582), the only son he had from Joanna, the Grand Duke designated his child Antonio as his successor. After having acknowledged him, in 1583, and officially introduced him to the Council of the Two-Hundred, Francesco I tried to obtain a confirmation of the legitimacy of his choice also from the King of Spain. In 1584 the boy, at the request of his father, was awarded the title of Prince of Capistrano by Philip II. The will of Grand Duke Francesco I was unmistakable: Antonio, the legitimate male heir, should succeed him on the grand duchy throne. How to get around the problem of Antonio's legitimacy to the succession, then?

The young prince lived serenely in the tranquility of the Medici villas until October 20, 1587, when his parents died unexpectedly. Recent studies at the University of Pisa seem to confirm the hypothesis, already common at the time, that the death of the grand ducal couple was caused by arsenic poisoning, ordered by Cardinal Fernando de' Medici (Francesco's brother and Grand Duke since October 25, 1587).[2]

A few months later, Antonio de' Medici became victim of another mean conspiracy that deprived him of his title of heir to the throne. On March 5, 1588, his uncle informed him of having discovered documents unquestionably proving that Antonio was not the son of Francesco and Bianca, but instead of a commoner who had given him, while still a newborn, to his supposed mother. Bianca, according to the fake documents created by Ferdinando I with the collaboration of his faithful friend Carlo Antonio Dal Pozzo (a jurist and the Archbishop of Pisa), had staged both the pregnancy and the birth, wishing to give her lover the much longed-for son that his wife had been unable to generate.

Ferdinando even made his brother's will disappear, deleting its registration at the Registry Office. Such machinations meant for the unhappy Antonio, a vulnerable and extremely young orphan, the loss of his name and the annulment of all the donations in his favor. Defamed, defrauded and above all disarmed, the prince had no other choice than to

[2] See Francesco Mari, Elisabetta Bertol and Aldo Polettini, *Un giallo di quattro secoli fa. La morte di Francesco I de' Medici e della sua sposa Bianca Cappello* (Firenze: Editrice Le Lettere, 2007).

accept the offer of his uncle, who with false magnanimity promised to rehabilitate him in the succession of property and to acknowledge him as a member of the Medici family. All this, however, on the condition that he would join, once of age, the Order of the Knights of Malta.

With this condition the new Grand Duke, who shrewdly reserved the possibility of revoking the rehabilitation at any given time, successfully implemented his plan against his nephew. The statute of the Order of the Knights of Malta, in fact, included the vows of poverty and chastity. That meant not only that Antonio had to renounce his properties, on which he could only keep the title of usufruct (although he was granted an annuity from the Medici family and the income of the Priory of Pisa, given him by Pope Clement VIII), but also that he was obliged to stay celibate and unable to generate legitimate descendants, who might one day assert troublesome claims.

After the ceremony of investiture to the knighthood, that took place in April 1594, the young Medici was employed by the usurper Ferdinando I for diplomatic and military assignments, in the hope perhaps that a glorious death in battle would free the court of his uncomfortable presence.

In July of the same year, in fact, Antonio left for Hungary in command of a military force to bring help to Emperor Rudolph II of Austria who was fighting the Turkish offensive. The following year he participated in some important battles, among them the one that allowed the Christian army to capture the castle of Višegrad. During the expedition, however, the first signs of a weak health became evident—weak health that was an unwelcome companion all his life and that obliged him to frequent periods of enforced rest.

Nevertheless, in 1607 Antonio had a new opportunity to serve the grand duchy with arms when he was employed in the expedition against Cyprus, an initiative of Pope Paul V. Plagued by new health issues caused by a battle wound, Antonio was eventually employed to perform diplomatic and representative functions on behalf of the court. In 1600, he commanded the five Maltese galleys escorting his step-sister Maria de' Medici (future queen of France and Navarre) to Marseille, where her husband-to-be, the French King Henry IV, was waiting for her.

Although in his public role Antonio de' Medici distinguished himself for the loyalty with which he served the dynasty that had dispossessed him, he deserves to be

remembered today above all as a scholar. His most authentic human dimension, in fact, can be perceived not at the court of Palazzo Pitti, but in a much more intimate context, such as the Casino di San Marco, the palace created by the famous architect Buontalenti, that was his beloved residence and the center of his numerous passions.

There, the prince even built a theater that, thanks to the enrolling of skilled actors, became an important focal point for the theater world of the time and offered remarkable plays to illustrious guests. Antonio also managed to hire excellent musicians and singers, among them the famous Giovanni Gualberto Magli. In the musical field, the prince went well beyond simple amateurism, engaging personally with the guitar and the *pentagramma* (five-line musical staff).

This was not the only field where he showed his practical skills, however. His special predisposition toward technical and artisanal aspects, in fact, led him to become an able builder of clocks and weapons, forged in his Casino's foundry. His weapon production was also supported by ballistic studies.

Besides these interests, Antonio's greatest passion, undoubtedly inherited from his father, were alchemic research and experimentation, to which he devoted the best part of his resources. Alchemy was, after all, the great field of studies that fascinated, together with art, all the Medicis from the 1400s to the first half of the 1700s. At the turn of the seventeenth-century, Florence was one of the greatest centres of alchemical activity in Europe. Alchemy was sponsored at the highest level by the Medici family, beginning with Grand Duke of Tuscany Cosimo I (1519–1574), and continuing with his son Francesco I (1541–1587). Later, the patronage was continued by Francesco's son Don Antonio.

The princely alchemy they oversaw was carried out initially in the Fonderia of the Palazzo Vecchio, then on several other sites: the Boboli Gardens, the Galleria degli Uffizi, the Casino di Parione and the Casino di San Marco. In the Uffizi corridors, where avant-garde experiments took place, the grand dukes themselves worked side by side with workmen and artisans. The learned Francesco I used to chisel at his "desk of jewels" in his room, while his little boy Antonio played nearby and his wife Bianca Cappello slept in her room not far away, a family picture that is very revealing of the eccentricity of Florence of the time.

It is undeniable that, to a great extent, we are actually indebted to the Medici family for "the rebirth of ancient paganism in the fifteenth-century and for the subsequent flourishing of studies and interests that will transform Renaissance Florence into an important center of hermetic culture," as Paola Maresca justly observes (136). The Medicis, in fact, unrivalled patrons, were immediately protagonists on the European cultural stage for their important artistic and architectonic achievements—achievements that, although outwardly celebrating power, also hid unthinkable secrets and occult symbolism.

Since the beginning of the Medici dynasty, conversations about a renewed interest in hermetic teachings took place in their grand palaces and elegant gardens. The gradual development and affirmation of the family's power found a counterpart in a growing study and rediscovery of the ancient pagan knowledge. It will be through the munificent Medici patronage and the works of the major humanists of the time that this knowledge will thrive again first in Florence and later in all of Renaissance Europe.

Thanks to the help of valid collaborators and to an extensive net of relationships—among whom we find Galileo Galilei, a dear friend—as well as to the support of a rich scientific library, Antonio managed to transform his laboratory into one of the most active centers for research and experimentation in the Tuscany of his time. Two precious manuscripts, kept in the National Library of Florence, bear witness to the richness and the variety of Antonio's interests and expertise. The first one is titled *Equipment of the foundry of the illustrious Lord Antonio Medici. In which it is contained all the spagyric art of Paracelsus and his medicines. And other beautiful secrets* and was published in 1604. The second one, *Secrets experimented by the illustrious Lord Antonio de Medici in the foundry of his casino,* was published in the same year.

Antonio's epistolary, precious testimony of his relationship network and of his interest in natural phenomena, also includes the letters to and from Galileo Galilei starting in 1604 when he asked the scientist to send him "a ball [in his possession] that, once thrown into the water, stays between the two waters" (vol. X, p. 110). The ball in question was a wax sphere used for an experiment that Galileo will describe in the first day of his *Discourses and Mathematical Demonstrations Relating to the New Sciences* (1638).

The correspondence between Galileo and Don Antonio de' Medici is not extensive, but among the letters sent to the latter there are some of capital importance for the study

of the evolution of the astronomical discoveries of the Pisan scientist. In 1611, when he went to Rome in the hope of convincing the doubters of the existence of the Medici planets, Galileo obtained from Antonio several recommendation letters for high prelates, among them Maffeo Barberini (1568-1644), later Pope Urbano VIII, and Francesco Maria del Monte (1549-1626), his friend and supporter since the times of the Pisan professorship.

Antonio de' Medici's writings, collected in three tomes and kept at the Florence National Archive, contain hundreds of recipes. Most of them have a medical nature and offer interesting information about the most frequent pathologies of the time. In the first tome it is explained how to make several "oils, bandages, ointments, potions, electuaries, pills and infinite other medicaments" (7). In the second tome it is shown how "to make different kinds of wines and very salutary waters" (67). The third tome contains some very important "secrets of Alchemy and of other nature, delectable and curious" (135).

Among the recipes of the first tome we find some remedies against the plague, such as the "odoriferous remedy" (24):

> Take laudanum, purified, an ounce. The best *stirax calamita*, three ounces. Myrtle leaves, myrrh, carnation, 5 drachmas. Citrine sandal, 2 drachmas. Camphor, 3 ounces. Aloe wood, aromatic calamus, heliotrope juice, a drachma. Musk and amber, a carat. What needs to be crushed must be crushed thoroughly: put the crushed ingredients in a bronze mortar, very warm, and similarly the pisto, and mix everything together with lemon balm juice, or endive, the needed quantity, mix well every ingredient and make a paste. Hold the paste in your hand, smelling it, it is good against the plague; this is perfect. (24)

It also included the following recipe to cure "every lung infirmity" (35):

> Take some acrimony grass and grind it well, make two poultices and, warm, put them in front and behind on the lungs. Or take some fox' lung, dry it carefully, then take licorice, fern, fennel's seed, three ounces of each, and grind them into dust; chew together and drink every morning, fasting, with two ounces of wine or with broth or with sugared water. (37)

We also find a curious antidote against the poison of the "snake bite or poisonous thorn" (45):

> Against every snake bite, or the bite of any other poisonous vermin, take some skin of the snake and crush it well with pork fat: then put it on the bitten place. For every poisonous bite of snake, scorpion or any other poisonous thing, urinate a little and throw away the first urine; then urinate again and drink that urine: the first was poisonous, the second is theriac and eliminates any poison from the body. Or take egg yolks and chew them with salt, then put the poultice two or three times and you will be free from poison. (45)

Together with medicine, in some cases mixed with superstition, we find in Antonio's writings also botany,[3] astrology, chiromancy,[4] alchemy and horse care. Many recipes are devoted to cooking, to beauty care, and to aphrodisiacs. Among the mixtures for beauty care, some are really interesting, such as the "Second Table of the remedies for the whole human body," found in the second tome and devoted to the beauty of the body. Among other fascinating items, it contains a list of substances to be used to solve hair problems:

> For alopecia, this is a good cure: myrrh, cane, laudanum, myrtle, walnut, hazelnuts, hedgehog, hare, hippopotamus, frogs, goat nails, mice droppings, bear fat, cynoglossum amabile, goat manure, fern, trichomanes fern, cabbage, amphodilli asphodelus, onion, garlic, mustard, delphinium staphisagria, nasturtium, cyclamen, thassia, buttercup, aloe, belgioino, nymphaea, iron rust, andaraca, halcyon, cote nassia. For the head dandruff: willow, myrtle, bull's gall, human urine, Greek hay, mallow, beet, garlic bulbs, lily, alum. (102)

In the same "Second Table" it is suggested shaving with "animal scolopendrium, sea hare, salamander, ivy, driopterium, sarmenti, orpiment" (105). The Table also contains directions for the care of teeth and gums, with several suggestions for the hygiene and beauty of the teeth: "to clean teeth, use purpura, whelks, mussels, clams, sepia, deer horn, plantain, smearwort, pumice, halcyon quinto, Arabic stone" (104).

Antonio's attention to beauty care is perfectly in line with his times. Until the late fifteenth-century the Church had condemned the use of cosmetics, on the assumption that

[3] Antonio was known to use several different kinds of plants; he even cultivated some of them in the gardens of the Casino di San Marco.

[4] Also known as palmistry, palm reading or chirology, chiromancy is the practice of fortune-telling through the study of the palm of the human hand.

physical aspect is a gift from God and cannot or should not be modified; using make-up, therefore, suggested an idea of seduction and loose morals. However, during the Renaissance a new interest in the care and the beauty of the female body developed and spread. The Florentine court, one of the richest and most refined of Europe, boasted several famous perfume makers and the ladies were often in competition when it came to the use of powders and ointments.

The fashion of the time required, in fact, that women take care of their skin, correcting any visible imperfection (small pox scars, reddening, freckles) and showing a very clear complexion. At court, the ladies used to powder not only their face, neck and cleavage, but also their arms and hands, using thin powder brushes (often of expensive and elegant manufacture) to spread delicate hues on their skin.[5]

Antonio de' Medici, who certainly had a more mundane than religious vocation, had four natural children. His daughter Maria Maddalena, who became a nun, was born presumably in 1610 from his union with a woman of humble origins. From his relationship with Artemisia Tozzi he had later Paolo (1616), destined to the military career, Giulio (1617), who entered the clergy, and Antonfrancesco (1618).

Antonio died on May 2, 1621, in Florence, probably from syphilis. Only two days after his death, Grand Duchess Cristina, wishing to take possession of the properties granted her nephew in usufruct, ordered the compilation of an inventory of the content of the Casino, content that bore witness to the scientific interests and the refined artistic taste of the prince.

The contents of Antonio's residences and his valuable art collections, together with his money and his estates, immediately became object of a fight between the court and his natural sons. The controversy had actually started when the prince was still alive, because he attempted several times to obtain for his children the legitimation and the right to succession to his properties—things that he had been obliged to renounce in 1594 when he became a knight. Notwithstanding some good initial results (Pope Paul V and the Emperor

[5] For more detailed information on the topic of Renaissance beauty care and cosmetics, see Patrizia Turrini, "Bellezza di ieri … rivisitata oggi. Con un libretto di "segreti" di cosmetica del seicento." 6-7 July 2000, Scuola di Specializzazione in Scienza e Tecnologia Cosmetiche, Università degli Studi di Siena, published student paper.

Ferdinand II seemed to support him), the matter transformed soon into a judiciary trial that lasted until 1630, with a victory for the court.

The unjust accusation of an illegitimate birth was an infamous mark that stigmatized Antonio all his life and that still today makes some scholars doubt his lineage, although it is enough to look at his numerous portraits to notice the undeniable resemblance to Bianca and Francesco. At court, on the other hand, nobody ever doubted the legitimacy of his birth, a sign that everyone knew about the machinations of ambitious Ferdinando to exclude his unlucky nephew from his legitimate right to the succession.

In conclusion we can say that, although he was a victim of an atrocious injustice, Antonio de' Medici was able to live a varied and interesting life, to cultivate his passions, and to surround himself with some of the most illustrious artists and scientists of his time, whom he charmed with his eclectic personality and his wide culture. After centuries of undeserved neglect, modern scholars are finally rediscovering the fascinating figure of Antonio and acknowledging the relevant position in the cultural life of seventeenth-century Florence that he unquestionably and rightfully occupied.

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