REFINING THE ASTROLOGER'S ART: ASTROLOGICAL DIAGRAMS IN BODLEIAN MS CANON. MISC. 24 AND CARDANO'S *LIBELLI QUINQUE* (1547)

MONICA AZZOLINI, University of Edinburgh

Sometime in 1518, the Italian astrologer Luca Gaurico cast a chart for his prospective Imperial patron Maximilian I for the day of his sixtieth birthday (Figure 1).¹ Gaurico's political leanings up to that time had been quite different. After having established a privileged relationship with the Marquis of Mantua Francesco II Gonzaga, to whom he dedicated many of his prognostications, Gaurico seems to have aspired to a chair in the Parisian Studium, and he had written to Cardinal Ippolito d'Este to that effect.² His aspirations, however, must have remained unfulfilled. Information about Guarico's whereabouts between 1513 and 1523 is scant, but we know that by 1524 he was back in Venice, editing books for the Giunti press and working for Francesco Maria I della Rovere, Duke of Urbino and general of the Venetian army, a powerful ally of Emperor Charles V who had inherited the throne in 1519, at Maximilian's death.³ Gaurico was certainly aware of Maximilian's penchant for astrology, and in 1518 he offered his services to him. no doubt in the hope of receiving some form of remuneration.

Gaurico's chart is one of many that are preserved in Italian libraries and archives. To political historians, these charts often look obscure and irrelevant, and for this reason many of them are routinely ignored and remain unstudied.⁴ Such documents, however, are clearly relevant to the historian of science, as every one of these charts represents the position of the planets and the constellations of the zodiac in the sky at a given moment in time. Together with ephemerides and calendars, astrological charts therefore represent ways in which astronomical data were visualized on paper, either by numbers or symbols, or a combination of both.

We would generally refer to these charts, somewhat misleadingly, as 'horoscopes', but in the Renaissance their names varied greatly to encompass a number of diverse and distinctive practices. The most common name used in the Renaissance is probably *figura*, often accompanied by other adjectives or explanatory terms, but *thema* and *schema* are not unusual, especially in the sixteenth century. *Figura coeli, schema coeli / coelicum* or *thema coeli / coelicum* are once again generic terms used to define a chart, while *figura nativitatis, thema / schema natalis* or *genitura* already point to a specific practice, namely the casting of a chart tracing the exact position of the planets at the time of someone's birth.⁵ This type of chart, arguably the most common, was cast in order to offer an interpretation of a person's life in its entirety, and was often (but not always) accompanied by interpretations of various lengths and level of detail. Other charts, which employed other astrological techniques such as revolutions and profections (on which more shortly), were often referred to by the names *revolutio* (or, as in Gaurico's example cited above, *conversio*), and *profectio.*⁶

Astrological charts map the position of the celestial bodies in relation to a precise

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FIG. 1. Revolution of Emperor Maximilian I's nativity for the year 1518. Archivo di Stato, Milan, *Archivio Sforzesco*, Miscellanea 1569. By permission of the Archivo di Stato, Milan.

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time and place on Earth. Together with indicating the place of the five planets (Saturn, Jupiter, Mars, Venus and Mercury) and the luminaries (the Sun and the Moon) in the zodiac (that portion of the sky six degrees above and below the ecliptic that is traditionally divided into twelve 'signs'), a chart, or figura coeli, is also divided into twelve 'houses'. Astrological houses are divisions of the ecliptic plane that depend on time and location. These houses are numbered counter-clockwise starting from the position of the eastern horizon, called the *ascendant* (which is taken as the cusp of the first house), moving to the nadir (the cusp of the fourth house), the western horizon (the cusp of the seventh house), the midheaven (the cusp of the tenth house on the meridian), and back to the ascendant. Astrologers traditionally associate each of these houses with an aspect of a person's life: the first house relates to life in general, the second to business and wealth, the third to brothers, the fourth to parents, etc. The complex relationship of the planets and the luminaries with the signs of the zodiac and the houses is the basis of any interpretation of an astrological chart.⁷ To this can be added the position of the planets in relation to one another: planets can be conjunct, opposite, or placed in other meaningful geometric relationships ('aspects') such as trine, sextile and square (respectively 30°, 60° and 90° apart), some of which were considered beneficial and others harmful.8 The technique known as a revolution traced the position of the planets and the luminaries in the sky around the time of a person's birthday (more precisely when the Sun returned to the same degree on the ecliptic that it occupied in the natal chart), and provided information of likely events and circumstances for one year only.9 Their comparison with the natal chart (often referred to as the *radix*) could provide additional insight into the person in question for the following year. Profections, in contrast, somewhat artificially progressed the planets, luminaries, and certain cardinal points in the natal chart at the rate of one whole sign per year.¹⁰ For example, if in the *radix* the ascendant was at 19°36' Scorpio (as in Figure 2), in the profection for the person's thirty-second birthday, that cardinal point would be progressed to 19°36' Cancer (Figure 6). Once again the comparative interpretation of the two charts, the *radix* and the profection, could yield additional information about the person in question.

In the Renaissance, getting one's birth chart cast was certainly not an uncommon experience, and their popularity as collectable items is amply demonstrated by their appearance in print, first in a series of works by Girolamo Cardano,¹¹ then in Luca Gaurico's *Tractatus astrologicus* (1552), and, finally, in their most majestic form, in Johannes Gartze's *Astrologiae methodus* of 1576 (which, in a dedicated section entitled *Iudicia geniturarum*, includes hundreds of charts).¹² The genre became so popular, and so central to any defence of astrology, that, at least in one seventeenth-century book by a detractor of astrology — Sixtus ab Hemminga's *Astrologia ratione et experientia refutata* (1583) — its refutation was carried out by analysing thirty genitures (i.e. birth charts) of famous men drawn from the works of Cardano, Gaurico and the German astrologer Cyprian Leowitz. In this work, the analysis was done so as to disprove their value and demonstrate that their interpretation was arbitrary, contradictory, and untenable.¹³



FIG. 2. Geniture of Duke Galeazzo Maria Sforza. Drawn by the author after Bodleian Library MS Canon. Misc. 24, fol. 16r.

By addressing a few specific examples, in this article I wish to examine how astrological charts of various types — genitures, but also revolutions and profections — were not only the material remains of the astrologer's practice, but also essential training tools of the Renaissance astrologer. I shall concentrate on the manuscript collection of charts by the little-known Paduan physician and astrologer Antonio Gazio, comparing his practice with that of his better-known colleague Girolamo Cardano. I have chosen to limit my analysis to Cardano's *Libelli quinque* as this is probably the text that reveals most about Cardano's astrological practice. The work reflects closely the interests of a practising astrologer and it exhibits a clear didactic, empirical, and exemplary function. For these reasons it affords an informative parallel to Gazio's astrological practice and provides the closest example in print of what Gazio was attempting to do in his manuscript. What I hope to demonstrate is that collections of genitures like those of Cardano and others developed out of a tradition deeply rooted in astrological practice and persistent training, a tradition that can be traced back to late fifteenth- and early sixteenth-century Italian manuscript collections of

charts that, sadly, have been largely lost.

While the collections of Gazio and Cardano reveal continuity of genre and format, some difference exists between manuscript and print. Understandably, in the transition from manuscript to print many of the 'signs' of the astrologer's practice have disappeared. In changing medium, the relationship between image (i.e. the chart) and text (i.e. its interpretation) changed; the shorthand notes that populate Gazio's pages are often scribbled in the margins of the chart, and were often added at various stages, starting from the moment the chart was drawn until the time when the chart's subject (most often a specific person) fell ill or died. In the printed tradition, instead, astrological shorthand gives way to refined interpretative prose and richer biographical detail. This discontinuity between manuscript and printed collections is also due to the nature of Gazio's manuscript, which was not conceived as a finite product but functioned rather as a private working notebook.¹⁴ While Gazio's collection is clearly the playground in which the practising astrologer constantly refined his art, in Cardano's *Libelli quinque* the working hand of the practitioner is more difficult to detect. With its in fieri nature, therefore, Gazio's notebook helps us discover an aspect of the genre of the geniture collection that is harder to grasp in its printed form, namely its eminently practical function as the astrologer's training tool.¹⁵

Astrological 'Typologies' and Celestial Configurations

In his *Libelli quinque* Cardano indicated that the four charts of famous cardinals he included in the final section of his book, which contained his astrological aphorisms, were copied out from a notebook owned by the Milanese noble and ecclesiastic Bonaventura Castiglioni.¹⁶ First canon of Santa Maria della Scala, then provost of St Ambrogio, and finally inquisitor general of Milan from 1553 till his death in 1555, Castiglioni does not immediately strike the modern historian as the likely owner of such a collection.¹⁷ Yet, in the Renaissance many such manuscript collections must have existed, though it is difficult to say just how common they were.¹⁸

Sixteenth-century collections of charts were clearly the result of a thriving exchange between astrologers, physicians, and other learned men, who sought them and copied them out in order to obtain as ample a collection as possible.¹⁹ One such collection is now housed at the Bodleian Library in Oxford and forms the natural companion to a hefty volume of astrological formulae and precepts that was once assembled by the Paduan astrologer and physician Antonio Gazio.²⁰ Upon close inspection, the two volumes — the *Opus astrologicus* and the *Nativitates virorum illustrium* — clearly appear as two sides of the same coin. In his *Opus astrologicus* Gazio copied out and indexed heavily various astrological principles and doctrines necessary for the casting and interpretation of astrological charts. In the companion volume, the *Nativitates virorum illustrium*, he collected a significant sample of charts that would illustrate the theoretical principles outlined in the former. The *Opus astrologicus* is an unwieldy tome that contains more than one index, which may be interpreted as an indication that Gazio felt the need to reorganize his knowledge more than once

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to locate information swiftly; it opens with general instructions on how to interpret a chart,²¹ and proceeds with a diverse mass of astrological information extracted from various ancient, Arabic and medieval sources, including Hermes Trismegistus, Albumasar, Haly Abenragel, Abubather, Haly ibn Rodoan, Abraham ibn Ezra, Leopold of Austria and Guido Bonatti.²² The manuscript includes basic notions such as those of *melothesia* — the astrological doctrine establishing a connection between the signs of the zodiac and the parts of the body — and astrological chorography the doctrine that indicates which planets rule which cities or countries²³— as well as, most interestingly, a colourful series of what I would call human 'typologies' or 'profiles' and their corresponding planetary configurations.²⁴ In practice what we find here is a series of 'principles' or conditions that can help the astrologer interpret a chart: we are told, for example, that a person will be strong (fortis) if the Sun is in his dignity (namely favourably placed in the zodiac so as to increase its power), especially if in the sign of Aries,²⁵ while s/he will be weak (*debilis*) if the Moon is moving away from a malignant planet (*infortuna*),²⁶ is in an angle, and is combust (that is, very close to the Sun's rays); or, if the Sun is in the ascendant and peregrine²⁷ and Saturn is in either opposition or square aspect with it; or, again, if the Moon is in the ascendant and in the sign of Aries, and Saturn is hindered by a movable sign.²⁸ Similarly, a person will have attractive looks (pulcher) if the Sun is in his dignity, and particularly if it 'receives' another planet;²⁹ or, otherwise, when the Sun is in Venus's dignity, particularly Taurus,³⁰ especially if it is in trine or sextile aspect with the ascendant (horoscopus).³¹

The list of 'human types' collected in Bodleian MS Canon. Misc. 23 is vast and exhaustive, and so are the various combinations of planetary configurations that correspond to these typologies. Not only do we have typologies based on a person's physical appearance (fortis, debilis, pulcher, grossus, pinguis, rudis, and so on), or on their temperament and mental abilities (ebetis ingenii, eloquens, epaticus, facundus, fidelis, foelix, homicida, hippocrita, iracundus, miser, mitis, piger, sceleratus, sapiens, stultus, tristis, tardus and timidus), but also others based on particular physical 'disabilities' (epilenticus, gibbosus, impotens ad coitum, lingue impedite, leprosus, paraliticus, podagricus, pulmoniacus, surdus, sterilis, etc.), sexual preferences (sodomita, immunis a sodomia, cynedus, etc.) and professions (agricola, medicus, rex, servus, etc.).³² We may think that some of the 'principles' that accompany these typologies are rather arbitrary, but in fact, at least in the eyes of Renaissance astrologers, these astrological configurations were rigorous and possessed an internal logic of their own. First and foremost, these typologies were based on the qualities of the planets, which had been established since Antiquity: as Cardano elucidated in his Libelli quinque, dry and warm Sun was associated with a series of positive qualities, including magnanimity, splendour, justice, good manners, pleasant smell, and life in general, while hot and humid Venus indicated idleness, intemperance and poor discernment, and signified pleasure and voluptuousness. Their combination, moreover, expanded further this taxonomy of qualities, so that Mercury with Jupiter, for instance, inclined people to become advocates or patrons and brought ambition,

extreme avarice and injustice, while the union of Mercury and Venus, together with inclining people to become good musicians, also made people commit shameful acts and become gamblers or thieves.³³ Planets, therefore, could incline people to join certain professions, and Gazio's *Opus astrologicum* includes a list of planets and a series of professions that were associated with them: Jews and rustics, for instance, were ruled by Saturn, men of arms, surgeons and physicians were ruled by Mars, while voluptuous Venus ruled people as varied as musicians, singers, jesters, painters, pimps, prostitutes and wantons.³⁴

Zodiacal signs, too, possessed their properties, and these were associated with their triplicities: signs could be fiery, earthy, airy or watery. The placement of one or more planets in these signs, therefore, could expand the astrologer's taxonomy even further. Following a logic grounded in analogies between the macrocosm and the microcosm, for instance, Gazio tells us that if Mercury and Venus are placed near the midheaven and in an earthy sign (either Taurus, Virgo or Capricorn), then that person will be inclined to become a farmer.³⁵ In other cases the analogies are harder to see, and yet some logic is still clearly present. Sometimes, for instance, the presence of one configuration of planets brings about a certain human trait, while the reverse configuration indicates the lack of that same trait. We are told, for instance, that if the sign of the sixth house is masculine and Mars and Venus are placed in it and they are not in aspect with Jupiter, then the person in question will be a sodomite; we are also told, however, that a person will be immune from the sin of sodomy if Venus is in Jupiter's mansion; or, in the ascendant or the midheaven with Jupiter; or, again, if it is 'seen' by it, but not by Mars.³⁶ The key here seems to be the relationship between Venus and Jupiter, on the one hand, and Venus and Mars, on the other. If Mars and Venus are not in aspect with Jupiter, the person will be inclined to sodomy; if Venus is in aspect with Jupiter, but neither of them is with Mars, then the person will be spared this sin.

Constellations, too, could bring about different characteristics: Cardano tells us, for example, that when the Belt of Orion rises on the ascendant, this makes the person extremely learned and zealous, as in the chart of the Milanese senator Gualtiero Corbetta, who was extremely learned in Greek and Latin, or that of his own father Fazio Cardano.³⁷ Finally, the planets' placements in different houses, each designed to represent a particular aspect of a person's life, further expanded the plethora of possible combinations, and thus, also of interpretations. In Book III of the *Libelli quinque* (entitled *De iudiciis geniturarum*), Cardano explains how Mars in the first house will make men violent, stocky and strong, but also prodigal and inclined to fulfil their libidinous impulses. Mars in the second, however, indicates dissipation of one's inheritance, reduction to poverty and exposure to danger, while in the third it brings travels and difficulties, and makes a person wicked. In all these three houses, moreover, Mars will incline the person to become a gambler, be contemptuous of God, and be troubled.³⁸

The list of human 'typologies' in MS Canon. Misc. 23, so rich and varied, was clearly functional in the interpretation of astrological charts, and this is no better

seen than in Gazio's other manuscript, Bodleian MS Canon. Misc. 24, where we can almost observe the astrologer at work. Unfortunately for us, this manuscript has not well survived the passing of time: while this notebook may have originally contained hundreds of astrological charts, only a fraction of these are still legible to the naked eye or under ultraviolet light. Many others are now so faded that only the signs of pricking on the paper, done in order to construct swiftly each chart, are left on the page. In yet other instances, the chart is still relatively well preserved, but Gazio's precious commentary on the margin is so faded that it is impossible to read. In some cases, however, we are lucky enough to be able to read both the chart and its commentary, and in this case we can truly gain unique insight into the workings of a Renaissance astrologer.

From Theory to Practice: Reading and Re-reading Astrological Charts

The explanatory principles outlined in MS Canon. Misc. 23 can now be set in the context of the various charts in MS Canon. Misc. 24. Gazio's collection (or maybe we should speak of collections, since it is possible that groups of charts were collected at different times in his life) is made up of a large number of charts of famous men and women, including Ercole and Eleonora d'Este of Ferrara, the Bentivoglio of Bologna, Alexander VI, the Sforza of Milan, the King of Naples Alfonso of Aragon, Emperor Maximilian I, Roberto Sanseverino, Giovanni Pico della Mirandola, and members of the prominent Paduan family of the Bembo, to name just a few. Like printed collections, however, Gazio's collection includes also the nativities of lesserknown individuals: his friend Vincenzo da Bologna, aromatario;³⁹ the son of a barber (barbitonsore) called Giovanni Antonio; a prostitute named Elizabeth;⁴⁰ a pair of conjoined twins;⁴¹ and his own chart and those of his family members, including his father, his brothers, and, presumably, his own children.⁴² Why did Gazio collect all these charts, and what do they tell us of his astrological practice? Once we start reading the comments that accompany them the purpose and function of these charts become relatively clear. As different as these charts may be in respect to provenance and chronology, what all of them have in common is the fact that they function as a privileged site of astrological investigation. For Gazio — and, we may assume, for many other astrologers like him — these charts have an essentially heuristic function: they allowed him to verify concretely some of the theoretical principles collected in his Opus astrologicus.43

Gazio does this in many ways: on a number of occasions, for example, he writes next to a given chart additional information that he must have collected at a later stage. For example, next to the chart of the Venetian ecclesiastic Gianbattista Zeno, Cardinal of Santa Maria in Portico, he added the note "he died in 1501, in the month of May, on the 8th, not having reached his sixtieth birthday", and the comment "Messer Battista Zeno was a very rich and greedy man".⁴⁴ What made this piece of information significant for Gazio? Next to the chart, presumably at an earlier stage, Gazio had written another note that read: "as at his birth Scorpio was ascending, he will be

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cunning, prone to rage, agile, inclined to pleasures, ostentatious" and, also, somewhat more cryptically, inclined towards religion.⁴⁵ To these comments he added also that "he will be placed in a position of great power, from which position he will accumulate great riches", he will live a maximum of sixty-three years, and suffer illness or be in danger in the years 1487, 1491, 1496, 1498. Gazio's note about Zeno's death and his greediness, therefore, serves the function of confirming his earlier predictions: Zeno had become a cardinal (clearly a position of great power), had accumulated much wealth, and had died only a few years earlier than predicted on the basis of the maximum number of years of his *dator vitae* or *hyleg*. His life thus confirmed what was already written in his chart (and thus promised him by the stars). In Gazio's eyes, therefore, the principles that had guided him in his interpretation were proven sound.

Similar confirmations can be found in many other charts: for example the murder of the Duke of Milan Galeazzo Maria Sforza in 1476 could be clearly explained by the fact that Saturn, the malefic planet *par excellence*, was placed in the eighth house (the house of death) and in a human sign (Gemini), while the luminaries were in their detriment (the Moon was in Scorpio, and the Sun in Aquarius), and so was Jupiter (which was in Gemini). Mars, moreover, was in an angle (in the tenth house, near the midheaven), and Scorpio was in the ascendant (Figure 2). To further elucidate his point, Gazio drew on the strength of his authorities, invoking no less an author than Ptolemy, who had warned the astrologer to "stay away from a chart in which you find Mars in an angle, and particularly with Scorpio ascending".⁴⁶Gazio added, however, that the duke was attractive (pulcher), as the Moon was in his ascendant (in horoscopo), and Saturn, Jupiter, Mars, Venus and the pars fortune were all in human signs (respectively in Gemini, Virgo, and Aquarius). In such a judgement, Gazio followed closely the precepts outlined in his Opus astrologicus, where one of the many 'conditions' that was listed under the 'type' pulcher established that a person would be beautiful if "all, or the majority of, the planets were in the human signs Gemini, Virgo, Libra, Sagittarius and Aquarius".⁴⁷ But Gazio, at least in this case, could go even further, and explain why Galeazzo had died in a church: this was because at the moment of his death on 26 December 1476, Saturn, the planet that had promised him a violent death (malam mortem) in the radix (i.e. the original natal chart), was retrograde and in the ninth house, the house of travels, religion and honours, and in an unfortunate placement because in its own detriment (namely in Leo) (Figure 5).⁴⁸ In the eyes of Renaissance astrologers, violent deaths like that of Galeazzo Maria must have represented particularly desirable examples. Not only does Gazio's collection contain a number of individuals who died this way, but a similar 'pattern' can be found in Luca Gaurico's Tractatus astrologicus (1552), where Gaurico reserves a whole section of his work to those men and women who died a violent death, including — most famously — the first Duke of Florence Alessandro de' Medici and his murderer, his cousin Lorenzino de' Medici. (The section is aptly entitled *De Biothanatis*, hoc est violenta strage peremptis.⁴⁹)

Together with the examples of deaths of illustrious men, once again we find those of less famous people who must have been known to Gazio from his local milieu, like

the Venetian patrician Maffeo Bollani, son of the more famous patrician senator and humanist Candiano, who was killed by sword in an altercation. This, Gazio tells us, happened when the Moon — which was the giver of life (*hylec* or *hyleg*) in Maffeo's chart — reached an inauspicious square aspect with Saturn (here considered to be the destructive planet, or *anaereta*). Gazio visualized this planetary configuration (but he did not actually draw it) in a prorogated chart for 24 October 1481 — 24 years, 2 months and 24 days, from Maffeo's birth.⁵⁰ Cardano similarly included charts of people who died a violent death in his *Libelli quinque*. His collection comprised charts as varied as that of the Milanese patrician Gaspare Vimercati, who had died by sword; that of a woman called Veronica, who had been killed because adulterous; the chart of the *condottiere* Giovanni de' Medici, called dalle Bande Nere, who died of a wound from a small canon; and also, not surprisingly given Cardano's Milanese origins, that of Duke Galeazzo Maria Sforza himself.⁵¹

On the whole, death seems to have featured prominently in Gazio's notes, and those related to his family members were not exempt from it. For instance, in commenting the chart of his brother Pietro he tells us that Pietro was born on 12 May 1450, at thirty-seven weeks. His beloved brother Matteo, whose chart followed that of Pietro, died on 9 October 1500, when Saturn - which, Gazio tells us, was the almutez, or lord of Matteo's geniture - reached the sign of Gemini in the sixth house, which had been the sign of the ascendant in the *radix*.⁵² The fact that Saturn was also the lord of the eighth house, that of death, moreover, had made things worse.⁵³ But Gazio clearly felt the urge to provide a more precise explanation of his brother's death, and for this reason, he added that Matteo had died of *squinantia*, a disease of the throat, because Taurus, which in melothesia rules the neck, was in the twelfth house (that of enemies, but also of pains and hardship).⁵⁴ With a similar process of deduction, he also explained how a baby who had died soon after being born did so because the obstetrician had bathed it in water that was excessively cold: its death, Gazio elucidated, could be predicted by the fact that Mars was in Aquarius and in opposition with the ascendant; retrograde Saturn was in opposition with the Sun, which was also the lord of the ascendant and in the tenth house; and the Moon was in the house of death.55

Another theme that occurs often, especially in the charts of the persons whom Gazio knew most intimately, namely his family members and well-known Venetian patricians (some of whom may have even been his patients), was illness. We discover, for instance, that in the chart of a certain Girolamo, canon of St Mark, Mars in Scorpio, in the ascendant, and exalted, meant both that he would be bellicose, dangerous and irritable, and also that he would have a hot head, and thus suffer from illnesses related to this condition.⁵⁶ Of his relative (possibly his own son) Andrea Gazio, born on 26 November 1494 in Venice, he tells us instead that in September 1499 he suffered from dysentery (*fluxu dissinterico*), because Mars was retrograde, in opposition to the ascendant and in the sign of Aries. By September of 1502 Andrea was once again unwell: this time he suffered of continuous fever (*febre continua*),

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as Mars had reached the degree of the ascendant in the *radix* and Saturn had moved into the tenth house. Moreover, Jupiter was trine with the ascendant and Venus was sextile with it, neither planet being in a favourable aspect, and for this reason Andrea needed to be treated with plenty of medications. Gazio added also how Andrea was sick once more on 18 September of the same year, when the Sun reached the degree of the ascendant in the *radix*, and the Moon was in trine with the ascendant and the Sun.⁵⁷ Another case related to Girolamo Gazio, possibly Andrea's brother, born on 22 September 1502 in Venice, who, like Andrea, had suffered from continuous fever in September 1502 (on the 23rd to be precise), when the Sun had reached a trine aspect with Mars in the *radix*; we know that he was sick again in August 1503, this time with fever and vomiting, as the Moon, which was in Sagittarius, was in opposition with Mars and Saturn in the *radix*.⁵⁸

Gazio's collection of genitures reveals how he returned to some charts over and over again to add detailed information about various individuals. The aim in all of these instances was to explain events on the basis of the astrological configurations present in each of those charts. Significant aspects of an individual's life, in other words, were used as keys with which to re-read and re-interpret astrological configurations in order to refine one's astrological techniques. These charts were, therefore, privileged sites on which Gazio painstakingly tested his own skills as an astrologer.

As noted, physical disabilities of various kinds could also be investigated astrologically,⁵⁹ and for this reason both Gazio and Cardano included in their collections the chart of a monstrous birth.⁶⁰ That of Gazio drew once again from his own personal experience and referred to the birth of conjoined twins in the area of Marano Lagunare, near Grado, in the Gulf of Trieste (Figure 3). The two girls were born with two heads, one body, four arms and four legs, two full sets of teeth, and one heart and one liver between them. One of them, we are told, lived for four hours, while the other was already dead at birth. Unfortunately we do not have a commentary to accompany Gazio's chart, but Cardano's chart for a similar event may be illustrative of the way Gazio would have read it (Figure 4).⁶¹ When Cardano's 'monster' was born, as he tells us, with great difficulty in the seventh month, both malificent planets (i.e. Mars and Saturn) were in an angle and in opposition to each other, and with them Mercury, lord of the Moon's house (Gemini), with Jupiter, lord of the ascendant (Cancer), cadens (namely, in the sign opposite to its exaltation, in this case Capricorn) and *combustus* (that is, very close to the Sun's rays).⁶² While we are not told with which kind of birth defect he was born, Cardano is keen to explain that, because the Moon was in trine aspect with Jupiter and Venus, this person would have a monstrous constitution.⁶³ From the chart (*ex radicibus nostris*), however, Cardano could also predict that this person would be lucky with an inheritance, he would make money and take a wife, but would be unlucky with his health and longevity and be put to the test by many external dangers.⁶⁴



FIG. 3. Siamese twins born near Venice. Drawn by the author after Bodleian Library, MS Canon. Misc. 24, fol. 32r.

Refining One's Art Further: Genitures, Revolutions, and Profections

Genitures were certainly among the most common charts in the astrologer's collection, but by no means the only ones, and often not the most significant in providing an accurate prognostication. Natal charts could provide a broad indication of a person's inclinations and of future long-term events, but could not be very precise. At least, not as precise as revolutions and profections, astrological techniques that served the purpose of refining the interpretation provided by the natal chart and offering more specific short-term predictions. By comparing these charts with the natal chart of a person (the *radix*), the astrologer could draw an intricate web of cross-references that served to provide more specific information than that that could be evinced solely from the nativity of a person.⁶⁵

In MS Canon. Misc. 24, charts of revolutions and profections are less common than genitures, but are nonetheless present, and they constitute some of the most



FIG. 4. Chart of a monster. In Girolamo Cardano, *Libelli quinque* (Nuremberg, 1547), fol. 153v. Cambridge University Library, Shelfmark N.3.13. By permission of the Syndics of Cambridge University Library.

interesting examples of 'reading-in-progress', the aspect of Gazio's practice that makes his manuscript so fascinating. Galeazzo Maria Sforza must have proven a particularly attractive case for Gazio, who drew not only his geniture (not once, but twice), but also his *revolutio mortis* and his *profectio* (Figures 5 and 6). In revolutions and profections, elements of the original horoscope (*radix*) are projected forward in order to create new aspects that will help the astrologer forecast specific events in the subject's life.⁶⁶

Revolutions were based on the idea that the moment when the Sun returned to the specific point of the ecliptic where it stood at the time of a person's birth was particularly significant for the events related to that year. By casting the chart of Galeazzo's thirty-second birthday, therefore, Gazio used the *revolutio mortis* of the Duke of Milan to gain futher insight into the events that surrounded his death (Figure 5).⁶⁷ On the *revolutio*, the ascendent, for instance, stood in the same sign, and nearly the same degree, where Mars had stood in Galeazzo's nativity (14° Virgo in the *revolutio*, 13° 36' Virgo in the *radix*), and this was not auspicious, as Mars is a malefic planet.⁶⁸ Moreover, Mercury, the lord of the house of death in the *radix*, was in the fourth house with the Moon, which was in its own detriment and thus



FIG. 5. Revolution of Duke Galeazzo Maria Sforza's nativity for the year 1477. Drawn by the author after Bodleian Library, MS Canon. Misc. 24, fol. 118r.

unfavourably placed, while Jupiter was in Saturn's mansion. All this did not bode well for the duke, but what was particularly significant, at least for Gazio, was that Mars was in the sixth house, that of servants, and this promised him death at the hands of a servant. This was further reinforced by the fact that in the *revolutio* retrograde Saturn was in the twelfth house, that of hidden enemies. Once the prediction was compared with real life events, the picture became quite clear: Gazio knew that Galeazzo Maria was killed by three of his subjects in an ambush in Milan's cathedral, and this was amply confirmed by the planetary configuration of his revolution. But, as if this was not enough, using another astrological technique that was believed to be particularly useful for short-term predictions, Gazio drew also a *profectio*. From this chart he could see that the Moon, which signified the body,⁶⁹ was in the sixth house, the house of servants, together with Mercury, which, as noted before, was the lord of the house of death in the *radix*, while the fact that the sign on the cusp of



FIG. 6. Profection for the thirty-third year of Duke Galeazzo Maria Sforza. Drawn by the author after Bodleian Library, MS Canon. Misc. 24, fol. 118r.

the eighth house was the human sign of Aquarius confirmed once more that death would come from a man. 70

Revolutions and profections provided short-term predictions related to a specific point in time or a given year. We may assume, therefore, that their relevance was limited to particular times or specific events in an individual's life. Much like annual calendars, therefore, revolutions and profections would be discarded after a time as no longer relevant, unless, as in Gazio's case, they were used to verify specific events and test the reliability of his own art. This is probably one of the reasons why we hardly find them in collections of genitures, the only exception being revolutions of death (*revolutio mortis*), which Cardano included in the *Libelli quinque* relatively often in the form of explanatory prose within the text,⁷¹ or more rarely in numerical form (Figure 8).⁷² Interestingly enough, the vast majority of charts of revolutions we find in the *Libelli quinque* are neither in Cardano's explanatory text on revolutions



FIG. 7. Chart of a parricide. In Girolamo Cardano, *Libelli quinque* (Nuremberg, 1547), fol. 181v. Cambridge University Library, Shelfmark N.3.13. By permission of the Syndics of Cambridge University Library.

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DE	GENITVRIS. 182
	. mense Februario, idest 3 : reuolut
	netæ fuerunt in reuolutione fic.
Saturnus	4 Libræ
Iupíter	o Leonis retrog.
	Aquaríj
Venus	3 Scorph
Mercurius	3 Capricorni
Sol 2	9. 7. Sagittarij
Luna 17	30. Tauri
	9 Cancri

Iupiter igitur hoftis, pullauit Solē trina radiatione, & Luna fuit in oppofito Veneris, & Luna domina alcendentis, & Mars in fes ptima, & cum hoc peruenit alcendens ad Iouem infortunio affectum.

Et non eft homo intelligens in hac arte, qui perspecta hac ges nitura, non iudicaret hunc aliquod magnum facinus perpetras turum, paffurum'et detrimentum magnum ea ætate, nihilominus quod patrem effet occisurus, hoc dicere non posset adeo constanter. Et ideo recte ille apud Quintilianum declamat, ad tantam scientiam tam'et firmam ac exquisitam no posse astrologum peruenire.



FIG. 8. Revolution of the death of a parricide. In Girolamo Cardano, *Libelli quinque* (Nuremberg, 1547), fol. 182r. In the copy at the Bayerische Staatsbibliothek (Shelfmark 4 Astr. u. 35a) an anonymous reader used Cardano's data on the top of the page to draw the chart of the revolution of the parricide. By permission of the Bayerische Staatsbibliothek, München.



FIG. 9. Chart of the Milanese patrician Stefano Trivulzio. In Girolamo Cardano, *Libelli quinque* (Nuremberg, 1547), fol. 228v. Cambridge University Library, Shelfmark N.3.13. By permission of the Syndics of Cambridge University Library.

(Book IV of the *Libelli*), nor in the collection of genitures (Book V), but scattered among the many aphorisms that comprise the last book of his work. Once again the majority of these are revolutions of death (Figures 9 and 10).⁷³

Conclusion

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The chart with which this article opened (Figure 1), that of Gaurico for Holy Roman Emperor Maximilian I, was a revolution for Maximilian's sixtieth birthday.⁷⁴ Charts of this type aimed at addressing specific concerns that the client may have had, and we can speculate that Maximilian may have asked Gaurico to pronounce on certain points in particular: travel and religion, and health. As Gaurico explained, the degree of the ascendant in Maximilian's nativity, together with Jupiter, was now in the ninth house, that of travel and religion. Both religion and travel were particularly sensitive issues for the Holy Roman Emperor, who ruled over a vast Empire constantly



FIG. 10. Revolution of the death of Stefano Trivulzio in the twenty-first year since his birthday, with the positions of the planets at the moment of his death (foot). In Girolamo Cardano, *Libelli quinque* (Nuremberg, 1547), fol. 229r. Cambridge University Library, Shelfmark N.3.13. By permission of the Syndics of Cambridge University Library.

threatened by the Turks. It is not surprising, therefore, to see Maximilian consult Gaurico in search of confirmation that his troubles with the infidels were actually under control. Darin Hayton's recent work has amply documented Maximilian's keen interest in astrology and the way in which he cleverly exploited its political value as a means of propaganda against the Turkish threat.⁷⁵ Gaurico was able to reassure the Emperor that he would not be plagued by religious issues, but this seems to have been at the cost of requiring long travels. The celestial configuration at the time of his sixtieth birthday, however, would also bring him great honour and riches. As to his health, Gaurico commented, this would not be too bad for a man of sixty, but the presence of the *cauda draconis* (the southern node) in the revolution of his nativity warned him to be cautious of poisoned food, and also of looseness of his bowels!⁷⁶

Gaurico's chart was similar to those drawn by Gazio and Cardano, but here it possessed a sense of immediacy and preserved the function of predicting future

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events, two of the characteristics that we still commonly associate with the casting of horoscopes. Cardano's and Gazio's charts, instead, had largely a different function: they were the playing field in which the astrologer measured and refined his art.

Collections of astrological charts, it has been noted, were to astrology what clinical studies or *consilia* were to medical theory.⁷⁷ They had, therefore, a specifically empirical and practical nature, and provided a privileged space in which to verify the core principles of one's art and, when necessary, to refine and reconfigure knowledge.

There may have existed many more collections of charts like that of Antonio Gazio analysed in this article, but, sadly, many of these may now be lost. What I have tried to illustrate here, however, is how these collections were crucial to the practice and training of Renaissance astrologers, who used them as a means with which to verify their techniques against real events. Astrologers had two privileged sources that could be used to this effect: first there were the charts of famous people, whose lives were well known to contemporaries or were recounted in books and chronicles; then there were those of less famous people who were closely connected to the astrologer's milieu. For this reason, not surprisingly, Gazio's collection includes a large number of Venetian patricians as well as himself and his own family members. Similarly, Cardano's Libelli quinque includes many members of the Milanese nobility, as well as his own chart (which he scrutinized constantly, almost obsessively, one would say) and that of his family members. Once Cardano's international career took off, and he came in direct contact with intellectuals and astrologers of other countries in Europe, his collection expanded accordingly to include charts of people such as Martin Luther and John Hamilton, Archbishop of St Andrews, whom Cardano had treated in 1552.78 These charts, therefore, also somewhat reflect the universe inhabited by Renaissance astrologers, the more local and Italian one of Gazio, versus the more varied and international one of his sixteenth-century colleague Cardano. No doubt this was also due to the marvel of the printing press, which made Cardano popular among European élites, but relegated Gazio's name to oblivion.

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- 1. Luca Gaurico, Revolution of Maximilian I's nativity, Archivio di Stato, Milan, *Archivio Sforzesco*, Miscellanea 1569.
- Franco Bacchelli, "Gaurico, Luca", Dizionario biografico degli Italiani (henceforth DBI), lii (1999), 697–705, p. 699.

- 3. *Ibid.*, 700. On Gaurico see also Lynn Thorndike, *History of magic and experimental science* (New York, 1923–58), v, *passim*, and esp. 252–63, 279.
- Rather unjustly, one may add, considering the political dimension of astrology and the type of information contained in many of these charts. For astrology as a political art, see the perceptive remarks of Anthony Grafton in "Girolamo Cardano and the tradition of Classical astrology. The Rothshild Lecture, 1995", *Proceedings of the American Philosophical Society*, cxlii (1998), 323–54, esp. pp. 337–41.
- 5. Almost all these terms, as well as variations of these, are to be found in Luca Gaurico, *Tractatus astrologicus* (Venice, 1552). All the square charts included in this article are drawn in the same way: we can think of them as three intersecting squares that divide the space limited by the larger square in twelve separate sections, or houses. There were, however, variations to this model. On the various forms of horoscope, see J. D. North, *Horoscopes and history* (London, 1986), 2 (for the squared horoscopes), and 157 (for the spherical ones).
- 6. It seems that at this time *conversio* was used as a synonym of *revolutio*. See Luca Gaurico, *Tractatus iudicandi conversiones sive revolutiones nativitatum* (Rome, 1560).
- 7. There are many different methods of house division. Cardano was famous for using the method of equal houses, but in Gazio's time the most common method was probably that of Alcabitus (which John North defines as the 'standard' method). On houses and house division, see North, *op. cit.* (ref. 5), 1–69; and J. C. Eade, *The forgotten sky: A guide to astrology in English literature* (Oxford, 1984), 41–51. Eade explains how to erect a figure at pp. 51–9.
- 8. Eade, op. cit. (ref. 7), 82.
- "revolutio annorum mundi est motus solis sive introitus solis in priumum punctum arietis; revolutio vero alicujus nativitatis est reversio solis as eundem punctum zodiaci in quo fuit hora nativitatis." See Les Tables alphonsines avec les canons de Jean de Saxe, edition, commentary and translation by Emannuel Poulle (Paris, 1984), 46.
- See Alcabitius, *Liber introductorius* (Venice, 1485), fols. dd₂v-dd₃v. I have consulted Bayerische Staatsbibliothek, Munich, 4 Inc.c.a. 394 (digital copy: http://daten.digitale-sammlungen. de/~db/0004/bsb00045289/image_1; accessed 10/07/2010).
- 11. Cardano can be credited with having launched the genre in print. He first published ten charts in an early Milanese edition of his *Libelli duo* (1538). He then expanded it into one comprising sixty-seven charts (*Libelli duo*, 1543), and then into one of a hundred (*Libelli quinque*, 1547). These charts were later subsumed into the *Opera omnia* of 1664 (v, 458–502). Cardano, however, seems to have had the ambition of publishing two hundred charts, as can be inferred from his edition of *De libris propriis* of 1544, 1557 and 1562. The notoriously complex chronology of Cardano's works has been treated exhaustively in Ian Maclean, "A chronology of the composition of Cardano's works", in Girolamo Cardano, *The Libris propriis. The editions of 1544*, 1550, 1557, 1562, with supplementary material, ed. by Ian Maclean (Milan, 2004), 43–111. On the genesis of Cardano, *Come si interpretano gli oroscopi* (Pisa and Rome, 2005), 9–22.
- Johannes Gartze (Garcaeus), Astrologiae methodus (Basel, 1576). For an engaging discussion of this 'genre' and its most famous exponents, see Anthony Grafton, "Geniture collections, origins and uses of a genre", in Nicholas Jardine and Marina Frasca-Spada (eds), Books and the sciences in history (Cambridge, 2000), 49–68.
- Sixtus ab Hemminga's Astrologia ratione et experientia refutata (1583) is probably the most remarkable attack against astrology 'in practice'. On this text, see Grafton, op. cit. (ref. 12), 64, and Steven Vanden Broecke, The limits of influence: Pico, Louvain, and the crisis of Renaissance astrology (Leiden and Boston, 2003), 252–6.
- 14. For other examples of astrological notebooks, see Sophie Page, "Richard Trewythian and the uses of astrology in late medieval England', *Journal of the Warburg and Courtauld Institutes*, lxiv (2001), 193–228; and Lauren Kassell, *Medicine and magic in Elizabethan London: Simon Forman, astrologer, alchemist, and physician* (Oxford, 2005).
- 15. An exception to this are readers' annotations of various charts. In this case the printed text is open

to further interpretations and revisions, this time not made by the author, but by his reader. It is therefore the reader that tests his knowledge and refines his skills. For examples of this kind of textual manipulation, see Grafton, *op. cit.* (ref. 12).

- 16. Under the chart of Cardinal Carretti, Cardano noted: "Apposui quatuor has Cardinalium genituras a Bonaventura Castellioneo acceptas ut quivis intelligat, decreta nostra esse firmissima." Girolamo Cardano, *Libelli quinque* (Nuremberg, 1547), fol. 232v.
- 17. Together with Giovanni Angelo Arcimboldi, Archbishop of Milan, Castiglioni drew up the index of prohibited books issued in Milan in 1554. The ban included work related to the 'occult arts' of chiromancy, geomancy, hydromancy, piromancy, nigromancy, and ars notoriae, but not astrology. The only Italian astrologer to be banned was the Bolognese Bartolomeo Cocles, most probably, however, for his work on chiromancy and geomancy. The banned author 'Bononatus' cannot be definitively identified with the medieval astrologer Guido Bonatti. See J. M. de Bujanda, Index des livres interdits, iii (Index de Venise 1549, Venise et Milan 1554) (Geneva, 1987). Divinatory astrology was not banned until 1559. On Bonaventura Castiglioni, see M. Palma, "Castiglioni, Bonaventura", DBI, xxii (1979), 124-6. The controversial horoscope of Christ that Cardano had included in collections of genitures of 1454 and 1455 was later expunged, presumably because of religious concerns. His brushes with the Inquisition, however, are to be related to the accusation of Averroism and to the content of some of his philosophical and natural philosophical works and not, it seems, to his astrology. Even when Cardano's non-medical works were put on the Index in 1580, however, this does not seem to have deterred churchmen from owning them. On these issues, see Ian Maclean, "Cardano and his publishers 1534–1663" in Eckhard Keßler (ed.), Girolamo Cardano: Philosoph, Naturforscher, Arzt (Wiesbaden, 1994), 307-8, pp. 322, 329 [now republished in Ian Maclean, Learning and the market place: Essays in the history of the early modern book (Leiden and Boston, 2009), 131-61]; Eugenio di Rienzo, "La religione di Cardano: Libertinismo e eresia nell'Italia della Controriforma", in Keßler, op. cit., 49–76; and Nancy G. Siraisi, The clock and the mirror: Girolamo Cardano and Renaissance medicine (Princeton, NJ, 1997), 225–9 (epilogue), and particularly the quotation with which the book ends.
- 18. British Library, MS Arundel 88 (end of 15th cent.) for instance, contains a small number of royal charts by the Italian astrologer Giovanni Battista Boerio. Two small collections of charts exist for fourteenth- and early fifteenth-century France. See Thorndike, *op. cit.* (ref. 3), iv, 99; Jean-Patrice Boudet and Thérèse Charmasson, "Une consultation astrologique princière en 1427", in *Comprendre et maîtriser la nature au Moyen Âge: Mélanges d'histoire des sciences offerts à Guy Beaujouan* (Geneva, 1994), 225–78; and Emmanuel Poulle, "Horoscopes princiers des XIVe et XVe siècles", *Bulletin de la Société Nationale des Antiquaires de France, séance* of 12 Feb. 1969, 63–77. So far, however, I have not come across a fifteenth-century Italian manuscript collection as rich as that of Gazio.
- 19. Cardano explicitly says so in his *De supplemento almanach*, first printed in the *Libelli duo*, and, later, in his *Libelli quinque*. See Anthony Grafton, *Cardano's cosmos: The world and works of a Renaissance astrologer* (Cambridge, MA, 1999), 65. That some of his charts came out of his daily exchange with other physicians and astrologers and from his own practice can be inferred from Cardano's friendships with the physician-astrologers Niccolò de Symis and Giovanni Antonio Castiglione, cited in Grafton, *op. cit.*, 72–3.
- 20. The two manuscripts are, respectively, Bodleian Library, MS Canon. Misc. 23 (*Opus astrologicus*) and MS Canon. Misc. 24 (*Nativitates virorum illustrium et alia astrologica notabilia*). Little is known of Gazio. A biographical note within the manuscript indicates that he was born on 10 December 1461 in Padua and died in 1528 (fol. 122r). Gazio's most popular medical work is his *Florida corona medicinae sive de conservatione sanitatis* (1491). See Thorndike, *op. cit.* (ref. 3), v, 170–1.
- 21. MS Canon. Misc. 23, fol. 12r: "Erecta nativitatis figura et per animodar rectificata et locatis planetis et stellis fixis in locis suis non devenias precipitanter ad iudicium, ut multi facere consueverunt. Sed primus considera planetarum debilitatem aut fortitudinem...." On the margin is written "Iudicia stellarum introductorius".

- 22. All these authors are citied at various times in the manuscript.
- 23. MS Canon Misc. 23, fols 42v-43v. On melothesia, its classical origins, and the zodiac man, see Charles W. Clark, "The zodiac man in medieval medical astrology", Ph.D. dissertation, University of Colorado, 1979; and *idem*, "The zodiac man in medieval medical astrology", *Journal of the Rocky Mountain Medieval and Renaissance Association*, iii (1982), 13–38. On the zodiac man, see also Sachiko Kusukawa's contribution to this issue.
- 24. MS Canon. Misc. 23, fols 46r-49r.
- 25. The Sun is in his mansion in Leo, and exalted in Aries. It may acquire dignities also when it is in Sagittarius, as by day the Sun rules the fiery triplicity of Aries, Leo and Sagittarius, or if it is in one of its *faces* (namely 1–10° Virgo, 11–20°Aries or Scorpio, 21–30° Gemini or Capricorn). For an explanation of essential and accidental dignities, see Eade, *op. cit.* (ref. 7), 59–88.
- 26. For a definition of *fortuna* and *infortuna* as, respectively, benefic and malefic planets, see Gerolamo Vitali, *Lexicon mathematicum astronomicum geometricum* (reprint of the 1668 Paris edn), ed. by Giuseppe Bezza (La Spezia, 2003), 237–8, and 290.
- 27. A planet is defined peregrine when in a degree which affords it no essential dignities. See Eade, *op. cit.* (ref. 7), 84.
- 28. MS Canon. Misc. 23, fol. 46r. These are only some of the many 'criteria' listed by Gazio. Movable signs are the 'cardinal' signs Aries, Cancer, Libra and Capricorn. See Eade, *op. cit.* (ref. 7), 70.
- 29. 'Reception' between two planets can be mutual, and in this case each planet is in the other's sign of dignity (either the ruling sign, or the sign in which they are exalted, or one of those ruled by triplicity, or each other's terms or *faces*). On reception, see Eade, *op. cit.* (ref. 7), 69, and Vitali, *op. cit.* (ref. 26), 458.
- 30. Venus's essential dignities are Taurus and Libra (its signs or mansions), Pisces (its exhaltation), the earthy triplicity of Taurus, Virgo and Capricorn by day, and a series of terms and *faces* that would be too long to list here. See Eade, *op. cit.* (ref. 7), 67–8.
- MS Canon. Misc. 23, fol. 46r. Venus is indicated elsewhere in the same manuscript as "significator pulchretudinis et formositatis". See fol. 42r.
- 32. *Cf.* this list with the 'typologies' listed by Cardano to describe his own collection of genitures in the *Libelli duo*, as quoted in Grafton, *op. cit.* (ref. 19), 80.
- 33. Cardano, op. cit. (ref. 16), 24v-25r.
- 34. MS Canon. Misc. 23, fol. 42v-r. On Venus's influence on sexual inclinations see Cardano, op. cit. (ref. 16), 63v-64v. On sexuality and astrology, see also Helen Lemay, "The stars and human sexuality: Some medieval scientific views", *Isis*, 1xi (1980), 127–37; P. G. Maxwell-Stuart, "Representations of same-sex love in early modern astrology", and, especially with reference to Cardano, Darrel H. Rutkin, "Astrological conditioning of same-sexual relations in Girolamo Cardano's theoretical treatises and celebrity genitures", both in Kenneth Borris and George Russeau (eds), *The sciences of homosexuality in early modern Europe* (London, 2008), 165–82, 183–200.
- 35. MS Canon. Misc. 23, fol. 48v.
- 36. MS Canon. Misc. 23, fol. 47v. Here Gazio uses the term 'respecta' probably to indicate a generic favourable aspectual relation between Venus and Jupiter.
- Cardano, op. cit. (ref. 16), fol. 25v. Cardano, however, was never an astrological determinist. Grafton, op. cit. (ref. 19), 85.
- 38. Cardano, op. cit. (ref. 16), fol. 48r. An Italian translation of the *De iudiciis geniturarum* is now available in Girolamo Cardano, *Come si interpretano gli oroscopi*, transl. by Teresa Delia and Ornella Pompeo Faracovi (Pisa and Rome, 2005).
- 39. MS Canon. Misc. 23, fol. 57v.
- 40. Ibid., fol. 27r.
- 41. Ibid., fol. 32r.
- 42. *Ibid.*, fols. 18v–19r, and 64v–67v.
- 43. Cardano states two criteria for his choice: that these charts had something remarkable about them,

and that he possessed solid knowledge of the lives of the people he was investigating. Grafton, *op. cit.* (ref. 19), 66.

- 44. MS Canon. Misc. 24, fol. 13v. At his death Zeno, who was the nephew of Paul II, bequeathed the sum of 60,000 ducats to the Venetian Senate to help with the war against the Turks launched by Alexander VI. In his lifetime apparently Zeno was notorious for this greediness. On him, see Giovanni Soranzo, "G. B. Zeno, nipote di Paolo II, cardinale di S. Maria in Portico (1468–1501)", *Rivista di storia della Chiesa in Italia*, xvi (Rome, 1962), 249–74; and Kenneth M. Setton, *The Papacy and the Levant (1204–1571)* (Philadelphia, 1976–84), i, 533.
- 45. MS Canon. Misc. 24, fol. 13v.
- 46. *Ibid*.

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- 47. MS Canon. Misc. 23, fol. 46r.
- 48. MS Canon. Misc. 24, fol. 16r.
- 49. Gaurico, op. cit. (ref. 5), fols 87r–115v. The book is divided into six sections, each dedicated to a specific 'type': the first part contains the foundation charts of cities, the second the charts of popes, cardinals and prelates, the third those of emperors, kings, and princes, the fourth famous men in the arts, the fifth those men that died a violent death, and the sixth those with some disability. Gaurico's 'typologies' cover all the areas included in Gazio's own list of human types, but, unlike Gazio's, they are mostly scant in astrological details and rich in biographical information. This may be because Gaurico's text was meant to appeal to a broad audience of intellectuals and not so much to practising astrologers. On Gaurico's charts of Alessandro and Lorenzino, see now Steven Vanden Broecke, "De Laurier en de Kosmos: Astrologie en de moord op Alessandro de' Medici (1537)", in T. Verschaffel (ed.), *Koningsmoorden* (Leuven, 2000), 175–86.
- 50. MS Canon. Misc. 24, fol. 30v. Nothing is known of Maffeo, son of Candiano Bollani. He is not listed among Bollani's sons in G. Pillinini, "Bollani, Candiano", *DBI*, xi (1969), 287–9. For a similar example of prorogation used to explain somebody's death, see Stadius's analysis of René de Châlon's chart in Vanden Broecke, *op. cit.* (ref. 13), 229–31.
- 51. These are in Cardano, op. cit. (ref. 16), respectively, at fols 130r, 132r, 138v, and 147r.
- 52. The *almuten* (or *almutez*) of a chart is the planet that governs the horoscope, and it is determined by adding up the dignities and debilities of each planet. See Eade, *op. cit.* (ref. 7), 88–9.
- 53. Scorpio was the sign on the cusp of the eight house, and for this reason Saturn was the lord of this house.
- 54. Charts and commentary are in MS Canon. Misc. 24, fols 18v–19r.
- 55. Ibid., fol. 32v.
- 56. Ibid., fol. 31r.
- 57. *Ibid.*, fol. 72r. The Sun was considered particularly important for establishing the course of chronic illnesses, and continuous fevers must have fallen into this category. On the way to establish the outcome of an illness Cardano advises: "si sit ex genere chronicarum, considera Solem, si acutarum Lunam." Cardano, *op. cit.* (ref. 16), fol. 92r.
- 58. MS Canon. Misc. 24, fol. 72v.
- 59. Together with the list provided in Gazio's manuscript, see also Gaurico, op. cit. (ref. 5), fols 116r–121r.
- 60. In his Astrologiae methodus (1576), Johannes Gartze (Garcaeus) included a whole series of charts
 - of monsters. See Gartze, op. cit. (ref. 12), 41-6.
- 61. Cardano, op. cit. (ref. 16), fol. 153v.
- According to Vitali, Jupiter was *combustus* if it was within 6 degrees from the Sun, or, if one was to follow Vitali's near-contemporary Andrea Argoli, within 8¹/₂ degrees. See Vitali, *op. cit.* (ref. 26), 157–8.
- 63. In interpreting his own chart, Cardano said that he, too, would have been a monster, were it not for his own knowledge of his own weak body and his great efforts to overcome his own shortcomings. See Grafton, *op. cit.* (ref. 19), 83–4.
- 64. Cardano, op. cit. (ref. 16), fol. 153v.
- 65. These techniques are already explained in Ptolemy's *Tetrabiblos* (IV, 10), but were expanded substantially in the work of Arabic authors and were treated in detail by both Cardano and

Gaurico. In his *Libelli quinque*, Cardano first treats the theme of revolutions briefly in relation to genitures in Book III (*De iudiciis geniturarum*) and then comprehensively in Book IV (*De revolutionibus*). See also Gaurico, *op. cit.* (ref. 6).

- 66. On the techniques of revolutions and profections, see Vanden Broecke, op. cit. (ref. 13), 227–31, esp. notes 1, 4, 11.
- 67. MS Canon. Misc. 24, fol. 118r.
- Cardano's considerations were slightly different, but reached similar conclusions. See Cardano, op. cit. (ref. 16), fol. 147r.
- 69. See Cardano, op. cit. (ref. 16), fol. 123v, on the Moon as his hylec and significator corporis.
- 70. MS Canon. Misc. 24, fol. 118r.
- 71. Cardano, op. cit. (ref. 16), fol. 145v.
- 72. *Ibid.*, fols 144v, 182r. In the copy now at the Bayerische Staatbibliothek the owner of the book drew the chart himself in order to visualize the celestial configuration properly. The one exception where Cardano draws revolutions in his collection of genitures is his own geniture, which he scrutinized in unprecedented detail.
- 73. See, for example, Giacomo Attendolo's chart and his *revolutio mortis* in Cardano, *op. cit.* (ref. 16), fol. 237v.
- 74. Gaurico, op. cit. (ref. 6). See also Vitali, op. cit. (ref. 26), 162.
- 75. Darin Hayton, "Astrologers and astrology in Vienna during the era of Emperor Maximilian I (1493– 1519)", Ph.D. dissertation, University of Notre Dame, 2004, and *idem*, "Astrology as political propaganda: Humanist responses to the Turkish threat in early sixteenth-century Vienna", *Austrian history yearbook*, xxxviii (2007), 61–91.
- 76. Gaurico, op. cit. (ref. 1).
- 77. Thorndike, op. cit. (ref. 3), vi, 100–1, and Ann Geneva, Astrology and the seventeenth-century mind: William Lilly and the language of the stars (Manchester, 1995), 156. Cardano himself said that his collection of genitures stood to Ptolemy's Tetrabiblos as Hippocrates's Epidemics stood to the Aphorisms. Quoted in Pompeo Faracovi, op. cit. (ref. 11), 11.
- 78. On Cardano's contacts with German astrologers and physicians, and on his trip to Edinburgh to treat Hamilton's, see Grafton, *op. cit.* (ref. 19).

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