In 1629, a strange treatise, entitled Curiositez inouyes, or, Unheard-of Curiosities, was published in Paris. Its author was Jacques Gaffarel, a French orientalist and a friend of atomist Pierre Gassendi (1592-1655). This work of over six hundred pages in octavo was devoted to the astrology, horoscope and talismans of the Orientals, that is, the «Eastern» Peoples. Originally written in French, it was more widely diffused after being translated into English in 1650 and into Latin in 1676. Its success lasted at least until the early eighteenth century, the dawn of the era of the Enlightenment.

Gaffarel was not a charlatan but a serious and learned scholar, respected by leading minds of the time such as Gassendi. Although his fame was considerable and his work extremely popular, Gaffarel has been unjustifiably neglected by modern scholars and historians. To draw an intellectual portrait of this elusive figure requires a multi-disciplinary approach which might call for the competence of specialists from diverse fields. The present article is only a preparatory contribution to such an attempt. Since Gaffarel established his fame mainly through this masterpiece, its study can be taken as the starting point of any endeavor.

Gaffarel meant by the term «Orientals» the ancient Hebrews of the time of the Patriarchs, that is, those of the Old Testament. He also included other neighboring peoples such as the Chaldeans, the Egyptians and the Babylonians, who acquired all kinds of art and science from the ancient Hebrews according to Scripture. Gaffarel’s conception of the linkage of these ancient peoples was heavily influenced by the belief in the «ancient theology» (prisca theologia). This belief was reactivated by Florentine humanist Marsilio Ficino (1433-1499) and further developed in the stream of Renaissance Platonism, acting as the common thread in the harmonization of

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1 J. Gaffarel, Curiositez inouyes, sur la sculpture talismanique des Persans, horoscope des patriarches, et lecture des estoilles, Paris, 1629, hereafter indicated as cit. I have also used its English and Latin translations.
3 J. Gaffarel, Unheard-of Curiosities concerning the Talismanical Sculpture of the Persians, the Horoscope of the Patriarchs and the Reading of the Stars, London, G. D. for Humphrey Moseley, 1650, hereafter indicated as uc; J. Gaffarellius, Curiositez inouyes, hoc est: Curiositates inauditae de figuris Persarum talismanici, horoscopo Patriarcharum et characteribus coelestibus, Hamburg, Gothofredus Schultz, 1676.
divergent ideas. Not only the Platonists but also Aristotelians such as Julius Caesar Scaliger (1484-1558) and revivers of Stoicism such as Justus Lipsius (1547-1606) called upon this belief at key points in the construction of their respective systems. The *prisca theologia* belief had a major influence on the fundamental ideology of the humanists who sought religious peace.

Besides the *prisca theologia* belief, Gaffarel owed a lot to the Renaissance tradition of Christian Cabala, which is addressed in other contributions to this volume. His work also stands at the cross-roads of diverse fields of knowledge which were in vogue in his time. For example, chronological studies combining a philological survey of the Bible and Greco-Roman classical sources with astronomical data were intensely pursued by figures like Joseph Justus Scaliger (1540-1609). Studies of *mirabilia* or natural wonders received vivid impulses from the work of iconic figures such as Pietro Pomponazzi (1462-1525), Girolamo Cardano (1501-1576) and Girolamo Fracastoro (ca. 1478-1553). The tradition of natural magic was perpetuated by Ficino, Cornelius Agrippa (1486-1535) and Giambattista Della Porta (1540-1615). Finally, eschatological cometology was activated by the works of figures such as Cornelius Gemma (1535-1578), Helisaeus Röslin (1545-1616) and Johannes Kepler (1571-1630). As will be seen below, Gaffarel was also well versed in the most updated medical and chymical literature of his time, especially those written by Paracelsus (ca. 1493-1541) and his followers such as Joseph Du Chesne (1546-1609) and Oswald Croll (ca. 1560-1608).

Gaffarel’s *Curiositez* is divided into four parts. The preliminary discussion of the first part is followed by three others which correspond, respectively, to three fields

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of knowledge: talismans, astrology and the reading of celestial signs, which can be qualified as «astro-semiology». The first part, comprised of two chapters, is devoted to general remarks on the erroneous ideas ascribed to the ancient Hebrews and other Eastern peoples (pp. 1-93). Chapter 1 tries to show the fact that numerous fables had been falsely attributed to those peoples, while Chapter 2 focuses on some of these fables which were judged especially ridiculous and dangerous by the generations of Christian writers without foundation.

The five chapters of the second part address figures and talismans of the «Persians» (pp. 93-379). Chapter 3 opens the discussion by refuting common ideas on the magic of the Persians and their astrological talismans. Chapter 4 explains why figures were condemned without cause by modern philosophers. Then in Chapter 5, one of the longest chapters, Gaffarel fully develops his theory on the power of figures and images to act. Chapter 6 tries to establish that the Persians fashioned talismans under specific celestial constellations in a natural way without appealing to the help of demons. Chapter 7, in its turn, answers the objections related to the use of talismans by emphasizing its legitimacy.

Then the third part of the *Curiositez*, in three chapters, takes up the astrology of the ancient Hebrews and the horoscopes of the Patriarchs (pp. 380-505). Chapter 8 refutes the accusation that the astrology of the ancients was the origin of idolatry. Chapter 9 discusses whether the ancient Hebrews used mathematical instruments in their astrology. Chapter 10 deals with recent authors’ attacks on astrology. Chapter 11 addresses the ancient Hebrews’ observations regarding nativity.

Lastly, the fourth part in two chapters addresses the reading of celestial or atmospheric and meteorological phenomena as signs and their interpretations (pp. 506-643). Chapter 12 shows the possibility of reading celestial signs such as comets. Chapter 13 closes the treatise by explaining that the ancient Hebrews saw celestial bodies arranged in the form of letters and that every important event to come in the universe can be predicted by decoding these astral ciphers.

In this article I will focus on the second part, which is the longest section of the work and which establishes the theoretical foundation of Gaffarel’s science of figures and images. Through this analysis I wish to explore his ideas on the power of images to operate and their eventual relationship with the medical current of his time.


Gaffarel’s Defense of the Science of Figures

After a broader refutation of widespread views on the idolatry of the ancient Hebrews, which occupies the first part of the Curiositez, Gaffarel proceeds to discuss the talismans of the Persians in the next part. For him the term «Persians» is synonymous with «Babylonians», who, according to his reading of the works of Rabbis, discovered the secret power of figures and images, a power which was acknowledged and admired by all the ancient peoples.

However, observing that this secret is condemned in his day, Gaffarel laments that the Persians are broadly accused of sorcery. Here his aim is to save them from this suspicion. He thus develops a lengthy defense of the Persians' science of figures and images. According to Gaffarel, this science was attacked for four major reasons: 1) its origin is believed to be that most wicked person, Cham or Ham, one of the three sons of Noah.1 This person was also confused with Zoroaster; 2) the Persians are believed to have recognized only the heavens as divinity, which amounts the most dangerous blasphemy for the eyes of Christians; 3) the Persians were said to have worshipped statues conveying demons; and 4) the Persians are told to have fashioned figures and images to receive benefits of all sorts through witchcraft and enchantments.2

To these objections, Gaffarel tries to answer one by one. He first mentions a certain obscure Hamahalzel, who was, according to him, the author of a book on the astrology of the Persians, the treatise itself now lost, but the content preserved in a Hebrew tradition.3 Based on this treatise, Gaffarel reports that the Persians unanimously considered Zoroaster a good and pious man and that the treatise, entitled Kingdom of God attributed to him, was in the hands of every religious person.4

Then rejecting the identification of Ham with Zoroaster, Gaffarel counters the second objection. According to him, although Zoroaster devoted himself to the contemplation of the celestial bodies, he did not worship them. What he taught is only the observation of these stars, which prepares a way to acknowledge a single God thanks to the accumulated data on the universe composed of these celestial bodies.5 For Gaffarel the admirable regularity seen in the movement of these heavenly bodies as well as the wonderful structure of the universe fully show the potency of the almighty God. In this connection he explains the real meaning of «magic» often ascribed to the Persians as follows:

This observation of the stars was so holy that the first ones who devoted themselves to it were therefore called «magi», which means «wise men»; hence the word «magic» was derived and signifies only a perfect knowledge of the works of God and their effects, which

1 On Ham, see Genesis 9.20-27.
2 C.I., pp. 97-98.
3 Hamahalzel’s astrological work is said to have been written in Persian and translated into Hebrew by Khomer. Cf. P. Yung, Alphabetische Liste aller gelehrten Juden und Jüdinnen, Patriarchen, Propheten und berühmten Rabbiner von Anfang der Welt bis auf unsere Zeiten, Leipzig, 1817, p. 103. 4 C.I., pp. 98-102.
appear most visibly in these celestial bodies. [...] all men of learning have ever affirmed that this magic was the source of all good doctrines [...] .

To reinforce this argument, Gaffarel argues that it is not reasonable to condemn the teachings of the Persian magi because those three famous magi who followed the comet to Bethlehem to witness the birth of Christ have been praised since antiquity.

To the third reason regarding the worship of demoniac statues, Gaffarel answers that the Persian magi learned the use of figures from the Patriarchs who had lived in their land. For him the ancient Persians like Zoroaster used these figures only following the example of the Patriarchs of the Old Testament. So their custom related to figures is just an imitation of the ancient Hebrews. In this context Gaffarel even emphasizes the divine nature of celestial or atmospheric figures by considering them to be the signs sent by God:

In all ages God had made known his wonders. Whatever accident of importance was to happen in the world by some sensible things, God still will do the same in the future, when he shall come to judge the quick and dead, giving a sign of his coming by the falling of the stars, the darkening of the sun and moon, and by a deep astonishment cast upon all mortals.

As for the fourth point regarding witchcraft and enchantment, Gaffarel admits that the Persian magi fashioned images and figures under certain constellations. But he absolutely denies that this was made by enchantment or witchcraft. For him the power of these images is not demoniac at all but perfectly natural and is therefore lawful from a religious point of view. This is the fundamental attitude and strategy of Gaffarel to defend the Persian magi from the misunderstandings and accusations directed at them. The wonderful powers ascribed to figures and images work only in the realm of nature and can be perfectly explained in terms of natural and licit, «white magic», which is, according to Gaffarel, completely distinct from dangerous and illicit «black magic», which depends on demons.

The Science of Figures and Its Theoretical Foundation

In Chapter 4 Gaffarel tries to explain why the power of figures was rejected by philosophers. Drawing some Greek words such as eidos, entelecheia and theos from Ar-
istotle’s work as examples, he first enumerates their traditional misinterpretation and corrects their meanings.\(^1\) After these examples, Gaffarel addresses the case of «figure» (figura) and posits a question as to whether it is considered to be «quantity» (quantitas). There he concludes that figure must be regarded not as «quantity» but as «quality» (qualitas).\(^2\) In Aristotle quality comprised first of all the four primary ones (hot, cold, dry and humid) which are considered the instruments of the four elements in the transformation of substances as is discussed namely in his treatises On Generation and Corruption, Book 2 and Meteorology, Book 4. Although the Aristotelian tradition usually counted colors, odors, tastes, etc., as secondary qualities consisting of the primary ones, figure was not included in this category. Thus Gaffarel’s position was very particular in history.

Even to our modern eyes, Gaffarel’s reasoning, which tries to establish a link between figures and qualities, is difficult to accept. On the basis of this theoretical maneuver, however, Gaffarel comes to argue that figures cannot produce anything by themselves but, when they are applied, can produce something or can at least cause changes. He even goes further to state that, according to Aristotle’s notion of quality, figures can produce something because quality is considered a «faculty which produces» (facultas faciendi) something.\(^3\)

Next Gaffarel divides quality into four sets of pairs: 1) a way of being (habitus) and disposition; 2) a passive quality and passion; 3) a natural potency and impotency; and 4) form and figure. For the first three sets he easily finds examples to confirm that quality is a capacity to produce something. So he wonders why only figures, a sort of quality, should be regarded to be deprived of this capacity. For him a figure should be qualified as a «productive quality» (poiotês effectrix). What is important in this theoretical maneuver, in which figure is compared to quality in an unusual way, is that Gaffarel tries to establish a linkage between figure and «form» (forma) via the notion of quality.

From a theoretical point of view, Gaffarel develops crucial discussions in Chapter 5. There he tries to explain the hidden cause of the power of talismanic figures. As he observes a whole bunch of wonderful effects in natural things such as animals, plants, minerals and even rough pebbles, he proclaims that he has no problem believing in things usually considered ridiculous and fabulous by «semi-learned men».\(^4\) To explain the power of figures in natural things, Gaffarel divides figures into three kinds: 1) natural; 2) accidental; and 3) artificial. The first two categories are discussed in Chapter 5, the third in Chapter 6. To Gaffarel accidental figures are produced without purpose, while natural ones are always made with a definite end. But he adds that the role of accidents is considerably reduced in the realm of natural marvels because divine design is omnipresent in nature. He says:

For if we are taught by theology, and reason also confirms it, that there is a certain providence which leads all things to their own end and which does nothing without any design,

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\(^1\) Ci, pp. 130-143. 
\(^2\) Ci, p. 145. 
\(^3\) Ci, p. 146. On the meaning of the term «applied», see below. 
\(^4\) Ci, pp. 150-151. For Ci, ch. 5, see also J. Odger’s study in this volume.
why should we then ascribe to fortune anything that causes us to admire the power of God and to impute to chance the most marvelous things?¹

Gaffarel then addresses the kingdom of minerals. Focusing on «figured stones», he divides them into three categories: painted, embossed and engraved. He enumerates painted stones such as dancing muses, a harp player and Jesus crucified. For Gaffarel these figures are more frequently observed in eastern and southern countries than Europe because of the intense heat governing these countries and because of the power of the stars, as Albertus Magnus witnessed in his De mineralibus.² In this section Gaffarel’s main sources of information are Pliny the Elder among the ancients, Albertus Magnus among medieval writers and Agricola (1494-1555), Cardano, Gesner (1516-1565) and Johannes Goropius Becanus (1519-1572) among the more recent authors.³

From minerals Gaffarel turns to plants. Observing plenty of wonderful figures in this kingdom of nature, he directly appeals to the doctrine of «signatures of things» (signaturae rerum):

[…] I find that in all the kinds [of plants] there are an infinite number of admirable figures which are called signaturae rerum by philosophers. Now only a figured part of a plant, and not the whole plant, is called signatura, or you may say, the signature is something in that part. Here I do not speak of internal signatures since this doctrine belongs to chymists alone. My purpose here is to discuss only those which are found among plants, rarely considered in the past […].⁴

Thus leaving aside the theory on the «internal signatures» of things, which could be recognized only by an internal anatomy, that is, fire analysis, promoted by the chymical philosophers of his time, Gaffarel focuses on the «external signs» or shapes of plants as well as their presupposed correspondence with the human body parts. According to this doctrine, the similarity between the visible figures or shapes of certain plants and the parts of the human body constitutes the «sign» (signatura) of their curative powers given by God.⁵ In this framework, Gaffarel explains what kind

¹ ci, pp. 153-154 : « Car si la theologie nous apprend, & la raison nous confirme, qu’il y a une providence certaine qui conduit toutes choses à leur fin, & qui ne fait rien sans dessein ; pouquoi veut-on donc attribuer au cas fortuit ce qui nous fait admirer la puissance de Dieu, & donner à l’aventure les choses plus merveilles? »


⁴ ci, pp. 177-178 : « […] je trouve donc aux unes & aux autres une infinité de figures admirables, que les philosophes ont appelé signaturae rerum. Or une partie de la plante figurée, & non pas toute la plante, est appelée signatura: ou bien signature, est quelque chose en la partie. Je ne parle point des signatures internes, ceste doctrine appartient aux chymistes, je n’avance ici que celles qui se rencontrent aux plantes, peu considérées aux siecles passœ […]».

⁵ Cf. J. Quercetanus (Du Chesne), De simplicium signaturis externis tractatus and De signaturis rerum internis specificis, in Idem, Liber de priscorum philosophorum verae medicinae materia, Saint-Gervais, 1603, pp. 70-88 and 89-130; O. Croll, Tractatus de signaturis rerum internis, in Idem, Basilica chymica, Frankfurt,
of remarkable figures can be found in the parts of plants such as roots, bark, wood, branches, leaves, flowers, fruits and seeds, followed by the case of the whole body of a plant.\(^1\) After describing these figures, Gaffarel tries to prove that these figures in plants can produce marvelous effects because they do not, according to him, exist in nature in vain but by divine design. Significantly enough, he emphasizes medical virtues by arguing that figures exert a natural power if they are «applied». By the term «applied», he means the direct usage on parts of the human body such as a wound, a bleeding part or a part bitten by animals. Thus their featured effects are mostly medicinal. In this way Gaffarel’s science of figures was significantly connected to a practical end, medicine, by way of the doctrine of «signatures of things» in vogue among the medical and chymical writers of his time.

At this stage Gaffarel is aware of the following objection: it is not the figure but some hidden and insensible «occult quality», enclosed in figured stones or plants, that produces marvelous effects.\(^2\) To refute this objection, he reveals a further element in the causality of the figures’ power:

And this is the strongest objection that our modern philosophers advance and by which, they believe, they can completely destroy the power that the ancients ascribed to figures. [...] it is true indeed, to answer to these objections, that the sole figure represented in stones has no power to operate and act, though applied, unless there be some internal or external agent, which may cooperate with and assist the figure, or unless matter be proper and apt to operate [...]. In like manner, if a stone had not received either from the stars or from its own nature some quality proper to such and such an effect [...], it is vain to expect to find any perfect power in the figure.\(^3\)

According to Gaffarel, it is erroneous to say that a certain specific internal agent such as occult qualities alone produces those effects and that figures have nothing to do with their cause. Otherwise one might deny the famous axiom «nature does nothing in vain», while nature actually assigns certain specific figures to natural


1 ci, pp. 178-189.


3 ci, pp. 193-194: «Et voila la plus forte objection que nos philosophes modernes ont mis en avant, & par laquelle ils croient destruire entièrement la puissance que les anciens ont establi aux figures [...]. Il est donc certain, pour répondre à ces objections, que la seule figure representee aux pierres n’a pas la puissance toute seule de faire & d’agir, quoy qu’appliquée, s’il n’y a quelque agent ou interieur ou exterieur qui agisse & qui concoure avec la figure, ou bien si la matière n’est propre [...]. De meme, si la pierre n’a desia eu des astres, ou de sa nature, quelque qualite propre a tel ou tel effect [...], en vain cerchera-t’on une parfaite puissance aux figures.»
images, talismans and medicine in unheard-of curiosities

things. What is important here is that Gaffarel still considers figures to be main causes, which must be assisted by secondary causes, whether they are external or internal, such as celestial influences and occult qualities.

Scorpions, Palingenesis and Ghosts

One of the medicinal powers highlighted by Gaffarel is the use of the figure of a scorpion against scorpion bites. Why does the figure of a venomous beast heal a wound caused by scorpion bites rather than harm it? Proud of himself, Gaffarel answers this question which, he thinks, has been resolved by no one before him. When the figure of a scorpion, represented on a stone, encounters in nature a poisonous humidity suitable for a living scorpion, the figure absorbs this humidity and gradually perfects itself to become a living scorpion. To explain this extraordinary transformation from a simple figure to a real living being, Gaffarel appeals to Pietro Pomponazzi (1462-1525) and Tommaso Campanella (1568-1639). Indeed their works recounted Ficino’s discussion, which led to the idea of the conversion of a fetus into a dog-like monster when its mother was bitten by an enraged dog.

When the scorpion figure finds the poisonous qualities imprinted by the living scorpion in such humidity and absorbs them as food, the wound is no longer affected by these poisonous qualities and will be cured. According to Gaffarel, this phenomenon is also evident when mashed or powdered scorpion is used to cure scorpion bites. To reinforce his argument, Gaffarel draws similar observations from the works of the most prominent Paracelsians of the age, Oswald Croll and Joseph Du Chesne.

As for the particular figures found in plants, Gaffarel thinks that their power can be understood in a similar way to the case of special figures in stones. Here again, the doctrine of « signatures of things » is in play. In this development he relies on the important and successful treatise in the genre, Phytognomonica (Naples, 1588) written by Della Porta (Fig. 1). He also refers to the most successful exponent of the doctrine, Croll, who proceeds « more methodically in describing the marvels of this resemblance » between plants and the human body.

There is still a significant objection that Gaffarel wants to address: these mar-

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2 Ci, pp. 199-200.
6 Ci, pp. 206-207.
velous plants, when reduced to ashes, produce the same effects although they no longer have the figure they had before. Therefore it might be necessary to attribute the cause of their power not to the original «figure» of the plants but to their internal «essence» since they are now rendered into powders. Here is Gaffarel’s answer which, in my view, is of great importance for its relation to the medical and chymical current of the day:

I answer that, although they are hashed, smashed, and even burned, they retain entirely the same form and figure they had beforehand in their juice or ashes by a secret and admirable power of nature. Although their figure or form is not visible, we can render it visible when we stimulate it by art.

Gaffarel claims that this phenomenon is verified in the work of Du Chesne, «one of the best chymists that our century produced». He refers to the famous Chapter 23 of this chymist’s masterpiece Ad veritatem Hermeticae medicinae (Paris, 1604), according to which a skillful Polish physician from Cracow performed palingenesis or chymical regeneration of plants from vegetable ashes. This chapter of Du Chesne’s work was to become the authority for later generations in propounding the idea of palingenesis. Gaffarel quotes the verses about this event from Du Chesne’s work, which were actually drawn from the second edition of Du Chesne’s own earlier cosmological poem, Le Grand miroir du monde (Geneva, 1593):

The secret proves, that, though the body die,
The form doth still within its ashes lie.
(Secret dont on comprend que, quoy que le corps meure,
Les formes font pourtant aux cendres leur demeure).

Gaffarel adds that this phenomenon is no longer kept as a secret, because Étienne de Clave (fl. 1624-1641), «one of the most excellent chymists» of his time, reproduces the same experiment on a daily basis. De Clave was a follower of Du Chesne and very famous in 1620s Paris. These elements show clearly that Gaffarel was well

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1. *Ci, p. 209:* «Je responds que, bien qu’elles soient hachees, brisees, et meme bruslees, elles ne laissent point de retenir au jus, ou aux cendres, par une secrete & admirable puissance de la nature, toute la meme forme & figure qu’elles avoient auparavant; & bien qu’on ne la voye pas, on peut pourtant la voir, si par art on la scat exciter».


familiar with the most up-to-date trends among chymists. His theory of the power of figures is intimately connected to ideas developed in this current of medico-chymical philosophy. Although it appears totally odd to our modern eyes, the reasoning of Gaffarel, working in the 1620s, was a product of the time.

What is more significant in the same quotation is the fact that Gaffarel understands « figure » as « form » in the meaning of Aristotelian hylomorphism. In the traditional framework of hylomorphism, every natural thing was believed to be a composite of « matter » (hulê) and « form » (morphê or eidos). Matter was conceived as a principle, namely the indefinite substrate, completely passive and inert in itself, to which the form provides the « quiddity » (quidditas) or « whatness » to define it. The form was then belied to play the role of the active principle in the change of substances. Many historians have acknowledged the importance of the reinterpretation of the traditional, difficult notion of « form » as external « figure » in the rise of early modern science, especially in corpuscular philosophy. Indeed the permanence of form in dissolution and mixture was a prominent theme in contemporary chymical literature as is observed in the works of Andreas Libavius (1555-1616) or Daniel Sennert (1572-1637). Later in the course of the seventeenth century, the problem of the permanence of the particles’ figure continued to be a fundamental issue among corpuscular philosophers such as Gassendi and Robert Boyle (1627-1691). Although the result goes in the opposite direction, it is still in the same vein that Gaffarel identifies figure with form. That is why he can argue that although the body is reduced into powder, its figure (i.e., the form) is not lost! On the basis of this unusual interpretation of the notion of figure as form, Gaffarel concludes:

Now it is possible to draw the following conclusion: the ghosts of dead men, which are often seen to appear in cemeteries, are natural effects, being the forms of bodies buried in those places, or their exterior figures, and not their souls nor phantoms produced by demons as many had believed.

What Gaffarel wants to prove is that those strange events once considered supernatural are totally natural phenomena, which can be perfectly explained by reason and experience, as Boyle would try to show some decades later. Surely, Gaffarel was

4 Ci, pp. 212-213: « D’ici on peut tirer ceste consequence, que les ombres des trespasses, qu’on void souvent paroistre aux cimetières, sont naturelles, estant la forme des corps enterrez en ces lieux, ou leur figures exterieure, non pas l’ame, ny phantosmes bastis par les demons, comme plusieurs ont creu ».
basing himself on a «naturalistic» attitude, which can be observed in the current of the study of *mirabilia* or natural wonders, promoted by Pomponazzi and followed by Cardano and Fracastoro. According to this tradition, the cause of many strange and unusual, or «preternatural», phenomena were explained only by agents such as the substantial form, the soul, occult qualities and celestial influences, all of which were totally natural and legitimate explanatory tools in natural philosophy.

However, Gaffarel’s reasoning and conclusion were particular in his defense of the science of figures and images. In his theorization of the power of figures and images, the reinterpretation of figure as form is the key notion, and there is no boundary for him between artificial figures like talismans and natural figures. Thus, according to Gaffarel, the power of talismans must be understood in the same way as that of natural figures. Fashioned under certain specific celestial constellations, the talismans of the Persian *magi*, says Gaffarel, produced marvelous effects in a completely natural way without the help of demons. Here too, his aim is constant: to show that the power of talismanic figures is natural and lawful.1

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