The Open Court

A MONTHLY MAGAZINE

Devoted to the Science of Religion, the Religion of Science, and the Extension of the Religious Parliament Idea

Editor: Dr. Paul Carus. *Associates:* E. C. Hegeler. Mary Carus.

VOL. XXIII. (No. 11.) NOVEMBER, 1909. NO. 642.

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FELIX MENDELSSOHN BARTHOLDY AS A YOUNG MAN.

A crayon drawing by Bendemann. Now in the possession of Frau Lili Wach, *née* Mendelssohn Bartholdy.

Frontispiece to The Open Court.

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ASTROLOGY AND MAGIC.*

BY FRANZ CUMONT.

WHEN we consider the absolute authority that astrology exercised under the Roman empire, we find it hard to escape a feeling of surprise. It is difficult to think that people could ever consider astrology as the most valuable of all arts and the queen of sciences, and it is not easy for us to imagine the moral conditions that made such a phenomenon possible, because our state of mind to-day is very different. Little by little the conviction has gained ground, that all that can be known about the future, at least the future of man and of human society, is conjecture. The progress of knowledge has taught man to acquiesce in his ignorance.

In former ages it was different: Forebodings and predictions found universal credence. The ancient forms of divination, however, had fallen somewhat into disrepute at the beginning of our era, like the rest of the Greco-Roman religion. It was no longer thought that the eagerness or reluctance with which the sacred hens ate their paste, or the direction of the flight of the birds indicated coming success or disaster. Abandoned, the Hellenic oracles were silent. Then appeared astrology, surrounded with all the prestige of an exact science, and based upon the experience of many centuries. It promised to ascertain the occurrences of any one's life with as much precision as the date of an eclipse. The world was drawn towards it by an irresistible attraction. Astrology did away with, and gradually relegated to oblivion, all the ancient methods that had been devised to solve the enigmas of the future. Haruspicy and the augural art were abandoned, and not even the ancient fame of the oracles could save them from falling into irretrievable desuetude. This great chimera changed religion as well

* Translated from the French by A. M. Thielen.

as divination; its spirit penetrated everything. And truly, if, as some scholars still hold, the main feature of science is the ability to predict, no branch of learning could compare with this one, nor escape its influence.

The success of astrology was connected with that of the Oriental religions, which lent it their support, as it in turn helped them. We have seen how it forced itself upon Semitic paganism, how it transformed Persian Mazdaism and even subdued the arrogance of the Egyptian sacerdotal caste. Certain mystical treatises ascribed to the old Pharaoh Nechepso and his confidant, the priest Petosiris, nebulous and abstruse works that became, one might say, the Bible of the new belief in the power of the stars, were translated into Greek, undoubtedly at Alexandria, about the year 150 before our era. About the same time the Chaldean genethlialogy began to spread in Italy, with regard to which Berosus, a priest of the god Baal, who came to Babylon from the island of Cos, had previously succeeded in arousing the curiosity of the Greeks. In 139 a pretor expelled the "Chaldaei" from Rome, together with the Jews. But all the adherents of the Syrian goddess, of whom there was quite a number in the Occident, were patrons and defenders of these Oriental prophets, and police measures were no more successful in stopping the diffusion of their doctrines, than in the case of the Asiatic mysteries. In the time of Pompey, the senator Nigidius Figulus, who was an ardent occultist, expounded the barbarian uranography in Latin. But the scholar whose authority contributed most to the final acceptance of sidereal divination was a Syrian philosopher of encyclopedic knowledge, Posidonius of Apamea, the teacher of Cicero. The works of that erudite and religious writer influenced the development of the entire Roman theology more than anything else.

Under the empire, while the Semitic Baals and Mithra were triumphing, astrology manifested its power everywhere. During that period everybody bowed to it. The Cæsars became its fervent devotees, frequently at the expense of the ancient cults. Tiberius neglected the gods because he believed only in fatalism, and Otho, blindly confiding in the Oriental seer, marched against Vitellius in spite of the baneful presages that affrighted his official clergy. The most earnest scholars, Ptolemy under the Antonines for instance, expounded the principles of that pseudo-science, and the very best minds received them. In fact, scarcely anybody made a distinction between astronomy and its illegitimate sister. Literature took up this new and difficult subject, and, as early as the time of Augustus

or Tiberius, Manilius, inspired by the sidereal fatalism, endeavored to make poetry of that dry "mathematics," as Lucretius, his forerunner, had done with the Epicurean atomism. Even art looked there for inspiration and depicted the stellar deities. At Rome and in the provinces architects erected sumptuous *septizonia* in the likeness of the seven spheres in which the planets that rule our destinies move. This Asiatic divination was first aristocratic—because the obtaining of an exact horoscope was a complicated matter, and consultations were expensive—but it promptly became popular, especially in the urban centers where Oriental slaves gathered in large numbers. The learned genethlialogers of the observatories had unlicensed colleagues, who told fortunes at street-crossings or in barnyards. Even common epitaphs, which Rossi styles "the scum of inscriptions," have retained traces of that belief. The custom arose of stating in epitaphs the exact length of a life to the very hour, for the moment of birth determined that of death:

Nascentes morimur, finisque ab origine pendet.

Soon neither important nor small matters were undertaken without consulting the astrologer. His previsions were sought not only in regard to great public events like the conduct of a war, the founding of a city, or the accession of a ruler, not only in case of a marriage, a journey, or a change of domicile; but the most trifling acts of every-day life were gravely submitted to his sagacity. People would no longer take a bath, go to the barber, change their clothes or manicure their fingernails, without first awaiting the propitious moment. The collections of "initiatives" (*καταρχαί*) that have come to us contain questions that make us smile: Will a son who is about to be born have a big nose? Will a girl just coming into this world have gallant adventures? And certain precepts sound almost like burlesques: he who gets his hair cut while the moon is in her increase will become bald—evidently by analogy.

The entire existence of states and individuals, down to the slightest incidents, was thought to depend on the stars. The absolute control they were supposed to exercise over everybody's daily condition, even modified the language in every-day use and left traces in almost all idioms derived from the Latin. If we speak of a martial, or a jovial character, or a lunatic, we are unconsciously admitting the existence, in these heavenly bodies (Mars, Jupiter, Luna) of their ancient qualities.

It must be acknowledged, however, that the Grecian spirit tried to combat the folly that was taking hold of the world, and from the

time of its propagation astrology found opponents among the philosophers. The most subtle of these adversaries was the probabilist Carneades, in the second century before our era. The topical arguments which he advanced, were taken up, reproduced, and developed in a thousand ways by later polemicists. For instance, Were all the men that perish together in a battle, born at the same moment, because they had the same fate? Or, on the other hand, do we not observe that twins, born at the same time, have the most unlike characters and the most different fortunes?

But dialectics are an accomplishment in which the Greeks ever excelled, and the defenders of astrology found a reply to every objection. They endeavored especially to establish firmly the truths of observation, upon which rested the entire learned structure of their art: the influence of the stars over the phenomena of nature and the characters of individuals. Can it be denied, they said, that the sun causes vegetation to appear and to perish, and that it puts animals *en rut* or plunges them into lethargic sleep? Does not the movement of the tide depend on the course of the moon? Is not the rising of certain constellations accompanied every year by storms? And are not the physical and moral qualities of the different races manifestly determined by the climate in which they live? The action of the sky on the earth is undeniable, and, the sidereal influences once admitted, all previsions based on them are legitimate. As soon as the first principle is admitted, all corollaries are logically derived from it.

This way of reasoning was universally considered irrefutable. Before the advent of Christianity, which especially opposed it because of its idolatrous character, astrology had scarcely any adversaries except those who denied the possibility of science altogether, namely, the neo-academicians, who held that man could not attain certainty, and such radical sceptics as Sextus Empiricus. Upheld by the stoics, however, who with very few exceptions were in favor of astrology, it can be maintained that it emerged triumphant from the first assaults directed against it. The only result of the objections raised to it was to modify some of its theories. Later, the general weakening of the spirit of criticism assured astrology an almost uncontested domination. Its adversaries did not renew their polemics; they limited themselves to the repetition of arguments that had been opposed, if not refuted, a hundred times, and consequently seemed worn out. At the court of the Severi any one who would have denied the influence of the planets upon the events of this world would

have been considered more preposterous than he who would admit it to-day.

But, you will say, if the theorists did not succeed in proving the doctrinal falsity of astrology, experience should have shown its worthlessness. Errors must have occurred frequently and must have been followed by cruel disillusionment. Having lost a child at the age of four for whom a brilliant future had been predicted, the parents stigmatized in the epitaph the "lying mathematician whose great renown deluded both of them." But nobody thought of denying the possibility of such errors. Manuscripts have been preserved, wherein the makers of horoscopes themselves candidly and learnedly explain how they were mistaken in such and such a case, because they had not taken into account some one of the data of the problem. Manilius, in spite of his unlimited confidence in the power of reason, hesitated at the complexity of an immense task, that seemed to exceed the capacity of human intelligence, and in the second century, Vettius Valens bitterly denounced the contemptible bunglers who claimed to be prophets, without having had the long training necessary, and who thereby cast odium and ridicule upon astrology, in the name of which they pretended to operate. It must be remembered that astrology, like medicine, was not only a science (ἐπιστήμη), but also an art (τέχνη). This comparison, which sounds irreverent today, was a flattering one in the eyes of the ancients. To observe the sky was as delicate a task as to observe the human body; to cast the horoscope of a newly born child, just as perilous as to make a diagnosis, and to interpret the cosmic symptoms just as hard as to interpret those of our organism. In both instances the elements were complex and the chances of error infinite. All the examples of patients dying in spite of the physician, or on account of him, will never keep a person who is tortured by physical pain from appealing to him for help; and similarly those whose souls were troubled with ambition or fear turned to the astrologer for some remedy for the moral fever tormenting them. The calculator, who claimed to determine the moment of death, and the medical practitioner who claimed to avert it received the anxious patronage of people worried by this formidable issue. Furthermore, just as marvelous cures were reported, striking predictions were called to mind or, if need were, invented. The diviner had, as a rule, only a restricted number of possibilities to deal with, and the calculus of probabilities shows that he must have succeeded sometimes. Mathematics, which he invoked, was in his favor after all, and chance frequently corrected mischance. Moreover, did not the man, who had

a well-frequented consulting-office, possess a thousand means, if he was clever, of placing all the chances on his side, in the hazardous profession he followed, and of reading in the stars anything he thought expedient? He observed the earth rather than the sky, and took care not to fall into a well.

* * *

However, what helped most to make astrology invulnerable to the blows of reason and of common sense, was the fact that in reality, the apparent rigor of its calculus and its theorems notwithstanding, it was not a science but a faith. We mean not only that it implied belief in postulates that could not be proved—the same thing might be said of almost all of our poor human knowledge, and even our systems of physics and cosmology in the last analysis are based upon hypotheses—but that astrology was born and reared in the temples of Chaldea and Egypt. Even in the Occident it never forgot its sacerdotal origin and never more than half freed itself from religion, whose offspring it was. Here lies the connection between astrology and the Oriental religions, and I wish to draw the reader's special attention to this point.

The Greek works and treatises on astrology that have come down to us, reveal this essential feature only very imperfectly. The Byzantines stripped this pseudo-science, always regarded suspiciously by the Church, of everything that savored of paganism. Their process of purification can, in some instances, be traced from manuscript to manuscript. If they retained the name of some god or hero of mythology, the only way they dared to write it was by cryptography. They have especially preserved purely didactic treatises, the most perfect type of which is Ptolemy's Tetrabiblos which has been constantly quoted and commented upon; and they have reproduced almost exclusively expurgated texts, in which the principles of the various doctrines are drily summarized. During the classic age works of a different character were commonly read. Many "Chaldeans" interspersed their cosmological calculations and theories with moral considerations and mystical speculations. In the first part of a work that he names "Vision" (Ὅρασις) Critodemus, in prophetic language, represents the truths he reveals as a secure harbor of refuge from the storms of this world, and he promises his readers to raise them to the rank of immortals. Vettius Valens, a contemporary of Marcus Aurelius, implored them in solemn terms, not to divulge to the ignorant and impious the arcana he was about to acquaint them with. The astrologers liked to as-

sume the appearance of incorruptible and holy priests and to consider their calling a sacerdotal one. In fact, the two ministries sometimes combined: A dignitary of the Mithraic clergy called himself *studiosus astrologiae* in his epitaph, and a member of a prominent family of Phrygian prelates celebrated in verse the science of divination which enabled him to issue a number of infallible predictions.

The sacred character of astrology revealed itself in some passages that escaped the orthodox censure and in the tone some of its followers assumed, but we must go further and show that astrology was religious in its principles as well as in its conclusions, the debt it owed to mathematics and observation notwithstanding.

The fundamental dogma of astrology, as conceived by the Greeks, was that of universal solidarity. The world is a vast organism, all the parts of which are connected through an unceasing exchange of molecules or effluvia. The stars, inexhaustible generators of energy, constantly act upon the earth and man—upon man, the epitome of all nature, a "microcosm" whose every element corresponds to some part of the starry sky. This was, in a few words, the theory formulated by the stoic disciples of the Chaldeans; but if we divest it of all the philosophic garments with which it has been adorned, what do we find? The idea of sympathy, a belief as old as human society! The savage peoples also established mysterious relations between all bodies and all the beings that inhabit the earth and the heavens, and which to them were animated with a life of their own endowed with latent power, but we shall speak of this later on, when taking up the subject of magic. Even before the propagation of the Oriental religions, popular superstition in Italy and Greece attributed a number of odd actions to the sun, the moon, and the constellations as well.

The Chaldaei, however, claimed a predominant power for the stars. In fact, they were regarded as gods *par excellence* by the religion of the ancient Chaldeans in its beginnings. The sidereal religion of Babylon concentrated deity, one might say, in the luminous moving bodies at the expense of other natural objects, such as stones, plants, animals, which the primitive Semitic faith considered equally divine. The stars always retained this character, even at Rome. They were not, as to us, infinitely distant bodies moving in space according to the inflexible laws of mechanics, and whose chemical composition may be determined. To the Latins as to the Orientals, they were propitious or baleful deities, whose ever-changing relations determined the events of this world.

The sky, whose unfathomable depth had not yet been perceived, was peopled with heroes and monsters of contrary passions, and the struggle above had an immediate echo upon earth. By what principle have such a quality and so great an influence been attributed to the stars? Is it for reasons derived from their apparent motion and known through observation or experience? Sometimes. Saturn made people apathetic and irresolute, because it moved most slowly of all the planets. But in most instances purely mythological reasons inspired the precepts of astrology. The seven planets were associated with certain deities, Mars, Venus, or Mercury, whose character and history are known to all. It is sufficient simply to pronounce their names to call to mind certain personalities that may be expected to act according to their natures, in every instance. It was natural for Venus to favor lovers, and for Mercury to assure the success of business transactions and dishonest deals. The same applies to the constellations, with which a number of legends are connected; "catasterism" or translation into the stars, became the natural conclusion of a great many tales. The heroes of mythology, or even those of human society, continued to live in the sky in the form of brilliant stars. There Perseus again met Andromeda, and the centaur Chiron, who is none other than Sagittarius, was on terms of good fellowship with the Dioscuri.

These constellations, then, assumed to a certain extent the good and the bad qualities of the mythical or historical beings that had been transferred upon them. For instance, the serpent, which shines near the northern pole, was the author of medical cures, because it was the animal sacred to Æsculapius.

The religious foundation of the rules of astrology, however, can not always be recognized. Sometimes it is entirely forgotten, and in such cases the rules assume the appearance of axioms, or of laws based upon long observation of celestial phenomena. Here we have a simple aspect of science. The process of assimilation with the gods and catasterism were known in the Orient long before they were practiced in Greece.

The traditional outlines that we reproduce on our celestial maps are the fossil remains of a luxuriant mythological vegetation, and besides our classic sphere the ancients knew another, the "barbarian" sphere, peopled with a world of fantastic persons and animals. These sidereal monsters, to whom powerful qualities were ascribed, were likewise the remnants of a multitude of forgotten beliefs. Zoolatry was abandoned in the temples, but people continued to regard as divine the lion, the bull, the bear, and the fishes, which

the Oriental imagination had seen in the starry vault. Old totems of the Semitic tribes or of the Egyptian divisions lived again, transformed into constellations. Heterogeneous elements, taken from all the religions of the Orient, were combined in the uranography of the ancients, and in the power ascribed to the phantoms that it evoked, vibrates the indistinct echo of ancient devotions that are often completely unknown to us.

Astrology, then, was religious in its origin and in its principles. It was religious also in its close relation to the Oriental religions, especially those of the Syrian Baals and of Mithra; finally, it was religious in the effects that it produced. I do not mean the effects expected from a constellation in any particular instance: as for example the power to evoke the gods that were subject to their domination. But I have in mind the general influence those doctrines exercised upon Roman paganism.

When the Olympian gods were incorporated among the stars, when Saturn and Jupiter became planets and the celestial virgin a sign of the zodiac, they assumed a character very different from the one they had originally possessed. It has been shown how, in Syria, the idea of an infinite repetition of cycles of years according to which the celestial revolutions took place, led to the conception of divine eternity, how the theory of a fatal domination of the stars over the earth brought about that of the omnipotence of the "lord of the heavens," and how the introduction of a universal religion was the necessary result of the belief that the stars exerted an influence upon the peoples of every climate. The logic of all these consequences of the principles of astrology was plain to the Latin as well as to the Semitic races, and caused a rapid transformation of the ancient idolatry. As in Syria, the sun, which the astrologers called the leader of the planetary choir, "who is established as king and leader of the whole world," necessarily became the highest power of the Roman pantheon.

Astrology also modified theology, by introducing into this pantheon a great number of new gods, some of whom were singularly abstract. Thereafter man worshiped the constellations of the firmament, particularly the twelve signs of the zodiac, every one of which had its mythologic legend; the sky (*Caelus*) itself, because it was considered the first cause, and was sometimes confused with the supreme being; the four elements, the antithesis and perpetual transmutations of which produced all tangible phenomena, and which were often symbolized by a group of animals ready to devour each other; finally, time and its subdivisions.

The calendars were religious before they were secular; their purpose was not, primarily, to record fleeting time, but to observe the recurrence of propitious or inauspicious dates separated by periodic intervals. It is a matter of experience that the return of certain moments is associated with the appearance of certain phenomena; they have, therefore, a special efficacy, and are endowed with a sacred character. By determining periods with mathematical exactness, astrology continued to see in them "a divine power," to use Zeno's term. Time, that regulates the course of the stars and the transubstantiation of the elements, was conceived of as the master of the gods and the primordial principle, and was likened to destiny. Each part of its infinite duration brought with it some propitious or evil movement of the sky that was anxiously observed, and transformed the ever modified universe. The centuries, the years and the seasons, placed into relation with the four winds and the four cardinal points, the twelve months connected with the zodiac, the day and the night, the twelve hours, all were personified and deified, as the authors of every change in the universe. The allegorical figures contrived for these abstractions by astrological paganism did not even perish with it. The symbolism it had disseminated outlived it, and until the Middle Ages these pictures of fallen gods were reproduced indefinitely in sculpture, mosaics, and in Christian miniatures.

Thus astrology entered into all religious ideas, and the doctrines of the destiny of the world and of man harmonized with its teachings. According to Berosus, who is the interpreter of ancient Chaldean theories, the existence of the universe consisted of a series of "big years," each having its summer and its winter. Their summer took place when all the planets were in conjunction at the same point of Cancer, and brought with it a general conflagration. On the other hand, their winter came when all the planets were joined in Capricorn, and its result was a universal flood. Each of these cosmic cycles, the duration of which was fixed at 432,000 years according to the most probable estimate, was an exact reproduction of those that had preceded it. In fact, when the stars resumed exactly the same position, they were forced to act in identically the same manner as before. This Babylonian theory, an anticipation of that of the "eternal return of things," which Nietzsche boasts of having discovered, enjoyed lasting popularity during antiquity, and in various forms came down to the Renaissance. The belief that the world would be destroyed by fire, a theory also spread abroad by the Stoics, found a new support in these cosmic speculations.

Astrology, however, revealed the future not only of the uni-

verse, but also of man. According to a Chaldeo-Persian doctrine, accepted by the pagan mystics, a bitter necessity compelled the souls that dwell in great numbers on the celestial heights, to descend upon this earth and to animate certain bodies that are to hold them in captivity. In descending to the earth they travel through the spheres of the planets and receive some quality from each of these wandering stars, according to its positions. Contrariwise, when death releases them from their carnal prison, they return to their first habitation, providing they have led a pious life, and if as they pass through the doors of the superposed heavens they divest themselves of the passions and inclinations acquired during their first journey, to ascend finally, as pure essence to the radiant abode of the gods. There they live forever among the eternal stars, freed from the tyranny of destiny and even from the limitations of time.

This alliance of the theorems of astronomy with their old beliefs supplied the Chaldeans with answers to all the questions that men asked concerning the relation of heaven and earth, the nature of God, the existence of the world, and their own destiny. Astrology was really the first scientific theology. Hellenistic logic arranged the Oriental doctrines properly, combined them with the stoic philosophy and built them up into a system of indisputable grandeur, an ideal reconstruction of the universe, the powerful assurance of which inspired Manilius to sublime language when he was not exhausted by his efforts to master an ill-adapted theme. The vague and irrational notion of "sympathy" is transformed into a deep sense of the relationship between the human soul, an igneous substance, and the divine stars, and this feeling is strengthened by thought. The contemplation of the sky has become a communion. During the splendor of night the mind of man became intoxicated with the light streaming from above; born on the wings of enthusiasm, he ascended into the sacred choir of the stars and took part in their harmonious movements. "He participates in their immortality, and, before his appointed hour, converses with the gods." In spite of the subtle precision the Greeks always maintained in their speculations, the feeling that permeated astrology down to the end of paganism never belied its Oriental and religious origin.

The most essential principle of astrology was that of fatalism. As the poet says:

"Fata regunt orbem, certa stant omnia lege."

The Chaldeans were the first to conceive the idea of an in-

flexible necessity ruling the universe, instead of gods acting in the world according to their passions, like men in society. They noticed that an immutable law regulated the movements of the celestial bodies, and, in the first enthusiasm of their discovery they extended its effects to all moral and social phenomena. The postulates of astrology imply an absolute determinism. Tyche, or deified fortune, became the irresistible mistress of mortals and immortals alike, and was even worshiped exclusively by some under the empire. Our deliberate will never plays more than a very limited part in our happiness and success, but, among the pronunciamentos and in the anarchy of the third century, blind chance seemed to play with the life of every one according to its fancy, and it can easily be understood that the ephemeral rulers of that period, like the masses, saw in chance the sovereign disposer of their fates.

The power of this fatalist conception during antiquity may be measured by its long persistence, at least in the Orient, where it originated. Starting from Babylonia, it spread over the entire Hellenic world, as early as the Alexandrian period, and towards the end of paganism a considerable part of the efforts of the Christian apologists was directed against it. But it was destined to outlast all attacks, and to impose itself even on Islam. In Latin Europe, in spite of the anathemas of the Church, the belief remained confusedly alive all through the Middle Ages that on this earth everything happens somewhat

> "Per ovra delle rote magne,
> Che drizzan ciascun seme ad alcun fine
> Secondo che le stella son campagne."

The weapons used by the ecclesiastic writers in contending against this sidereal fatalism were taken from the arsenal of the old Greek dialectics. In general, they were those that all defenders of free will had used for centuries: determinism destroys responsibility; rewards and punishments are absurd if man acts under a necessity that compels him, if he is born a hero or a criminal. We shall not dwell on these metaphysical discussions, but there is one argument that is more closely connected with our subject, and therefore should be mentioned. If we live under an immutable fate, no supplication can change its decisions; religion is unavailing, it is useless to ask the oracles to reveal the secrets of a future which nothing can change, and prayers, to use one of Seneca's expressions, are nothing but "the solace of diseased minds."

And, doubtless, some adepts of astrology, like the Emperor

Tiberius, neglected the practice of religion, because they were convinced that fate governed all things. Following the example set by the stoics, they made absolute submission to an almighty fate and joyful acceptance of the inevitable a moral duty, and were satisfied to worship the superior power that ruled the universe, without demanding anything in return. They considered themselves at the mercy of even the most capricious fate, and were like the intelligent slave who guesses the desires of his master to satisfy them, and knows how to make the hardest servitude tolerable. The masses, however, never reached that height of resignation. They looked at astrology far more from a religious than from a logical standpoint. The planets and constellations were not only cosmic forces, whose favorable or inauspicious action grew weaker or stronger according to the turnings of a course established for eternity; they were deities who saw and heard, who were glad or sad, who had a voice and sex, who were prolific or sterile, gentle or savage, obsequious or arrogant. Their anger could therefore be soothed and their favor obtained through rites and offerings; even the adverse stars were not unrelenting and could be persuaded through sacrifices and supplications. The narrow and pedantic Firmicus Maternus strongly asserts the omnipotence of fate, but at the same time he invokes the gods and asks for their aid against the influence of the stars. As late as the fourth century the pagans of Rome who were about to marry, or to make a purchase, or to solicit a public office, went to the diviner for his prognostics, at the same time praying to Fate for prosperity in their undertaking. Thus a fundamental antinomy manifested itself all through the development of astrology, which pretended to be an exact science, but always remained a sacerdotal theology.

Of course, the more the idea of fatalism imposed itself and spread, the more the weight of this hopeless theory oppressed the consciousness. Man felt himself dominated and crushed by blind forces that dragged him on as irresistibly as they kept the celestial spheres in motion. His soul tried to escape the oppression of this cosmic mechanism, and to leave the slavery of Ananke. But he no longer had confidence in the ceremonies of his old religion. The new powers that had taken possession of heaven had to be propitiated by new means. The Oriental religions themselves offered a remedy against the evils they had created, and taught powerful and mysterious processes for conjuring fate. And side by side with astrology we see magic, a more pernicious aberration, gaining ground.

If, from the reading of Ptolemy's Tetrabiblos, we pass on to read a magic papyrus, our first impression is that we have stepped from one end of the intellectual world to the other. Here we find no trace of the systematic order or severe method that distinguish the work of the scholar of Alexandria. Of course, the doctrines of astrology are just as chimerical as those of magic, but they are deduced with an amount of logic, entirely wanting in works of sorcery, that compels reasoning intellects to accept them. Recipes borrowed from medicine and popular superstition, primitive practices rejected or abandoned by the sacerdotal rituals, beliefs repudiated by a progressive moral religion, plagiarisms and forgeries of literary or liturgic texts, incantations in which the gods of all barbarous nations are invoked in unintelligible gibberish, odd and disconcerting ceremonies,—all these form a chaos in which the imagination loses itself, a potpourri in which an arbitrary syncretism seems to have attempted to create an inextricable confusion.

However, if we observe, more closely, how magic operates, we find that it starts out from the same principles and acts along the same line of reasoning as astrology. Born during the same period, in the primitive civilizations of the Orient, both were based on a number of common ideas. Magic, like astrology, proceeded from the principle of universal sympathy, yet it did not consider the relation existing between the stars, traversing the heavens, and physical or moral phenomena, but the relation between whatever bodies there are. It started out from the preconceived idea that an obscure but constant relation exists between certain things, certain words, certain persons. This connection was established without hesitation between dead material things and living beings, because the primitive races ascribed a soul and existence, similar to those of man, to everything surrounding them. The distinction between the three kingdoms of nature was unknown to them; they were "animists." The life of a person might, therefore, be linked to that of a thing, a tree, or an animal, in such a manner that one died if the other did, and that any damage suffered by one was also sustained by its inseparable associate. Sometimes the relation was founded on clearly intelligible grounds, like a resemblance between the thing and the being, as where, to kill an enemy, one pierced a waxen figure supposed to represent him. Or a contact, even merely passing by, was believed to have created indestructible affinities, for instance where the garments of an absent person were operated upon. Often, also, these imaginary relations were founded on reasons that escape us: like the

qualities attributed by astrology to the stars, they may have been derived from old beliefs the memory of which is lost.

Like astrology, then, magic was a science in some respects. First, like the predictions of its sister, it was partly based on observation—observation frequently rudimentary, superficial, hasty, and erroneous, but nevertheless important. It was an experimental discipline. Among the great number of facts noted by the curiosity of the magicians, there were many that received scientific indorsement later on. The attraction of the magnet for iron was utilized by the thaumaturgi before it was interpreted by the natural philosophers. In the vast compilations that circulated under the venerable names of Zoroaster or Hostanes, many fertile remarks were scattered among puerile ideas and absurd teachings, just as in the Greek treatises on alchemy that have come down to us. The idea that knowledge of the power of certain agents enables one to stimulate the hidden forces of the universe into action and to obtain extraordinary results, inspires the researches of physics to-day, just as it inspired the claims of magic. And if astrology was a perverted astronomy, magic was physics gone astray.

Moreover, and again like astrology, magic was a science, because it started from the fundamental conception that order and law exist in nature, and that the same cause always produces the same effect. An occult ceremony, performed with the same care as an experiment in the chemical laboratory, will always have the expected result. To know the mysterious affinities that connect all things is sufficient to set the mechanism of the universe into motion. But the error of the magicians consisted in establishing a connection between phenomena that do not depend on each other at all. The act of exposing to the light, for an instant, a sensitive plate in a camera, then immersing it, according to given recipes, in appropriate liquids, and of making the picture of a relative or friend appear thereon is a magical operation, but based on real actions and reactions, instead of on arbitrarily assumed sympathies and antipathies. Magic, therefore, was a science groping in the dark, and later became "a bastard sister of science," as Frazer puts it.

But, like astrology, magic was religious in origin, and always remained a bastard sister of religion. Both grew up together in the temples of the barbarian Orient. Their practices were, at first, part of the dubious knowledge of fetichists who claimed to have control over the spirits that peopled nature and animated everything, and who claimed that they communicated with these spirits by means of rites known to themselves alone. Magic has been cleverly defined

as "the strategy of animism." But, just as the growing power ascribed by the Chaldeans to the sidereal deities transformed the original astrology, so primitive sorcery assumed a different character when the world of the gods, conceived after the image of man, separated itself more and more from the realm of physical forces and became a realm of its own. This gave the mystic element which always entered the ceremonies, a new precision and development. By means of his charms, talismans, and exorcisms, the magician now communicated with the celestial or infernal "demons" and compelled them to obey him. But these spirits no longer opposed him with the blind resistance of matter animated with an uncertain kind of life; they were active and subtle beings having intelligence and will-power. Sometimes they took revenge for the slavery the magician attempted to impose on them and punished the audacious operator, who feared them, although invoking their aid. Thus the incantation often assumed the shape of a prayer addressed to a power stronger than man, and magic became a religion. Its rites developed side by side with the canonical liturgies, and frequently encroached on them. The only barrier between them was the vague and constantly shifting borderline that limits the neighboring domains of religion and superstition.

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This half scientific, half religious magic, with its books and its professional adepts, is of Oriental origin. The old Grecian and Italian sorcery appears to have been rather mild. Conjurations to avert hail-storms, or formulas to draw rain, evil charms to render fields barren or to kill cattle, love philters and rejuvenating salves, old women's remedies, talismans against the evil eye,—all are based on popular superstition and kept in existence by folk-lore and charlatanism. Even the witches of Thessaly, whom people credited with the power of making the moon descend from the sky, were botanists more than anything else, acquainted with the marvelous virtues of medicinal plants. The terror that the necromancers inspired was due, to a considerable extent, to the use they made of the old belief in ghosts. They exploited the superstitious belief in ghost-power and slipped metal tablets covered with execrations into graves, to bring misfortune or death to some enemy. But neither in Greece nor in Italy is there any trace of a coherent system of doctrines, of an occult and learned discipline, nor of any sacerdotal instruction.

Originally the adepts in this dubious art were despised. As late as the period of Augustus they were generally equivocal beggar-

women who plied their miserable trade in the lowest quarters of the slums. But with the invasion of the Oriental religions the magician began to receive more consideration, and his condition improved. He was honored, and feared even more. During the second century scarcely anybody would have doubted his power to call up divine apparitions, converse with the superior spirits and even translate himself bodily into the heavens.

Here the victorious progress of the Oriental religions shows itself. The Egyptian ritual originally was nothing but a collection of magical practices, properly speaking. The religious community imposed its will upon the gods by means of prayers or even threats. The gods were compelled to obey the officiating priest, if the liturgy was correctly performed, and if the incantations and the magic words were pronounced with the right intonation. The well-informed priest had an almost unlimited power over all supernatural beings on land, in the water, in the air, in heaven and in hell. Nowhere was the gulf between things human and things divine smaller, nowhere was the increasing differentiation that separated magic from religion less advanced. Until the end of paganism they remained so closely associated that it is sometimes difficult to distinguish the texts of one from those of the other.

The Chaldeans also were past masters of sorcery, well versed in the knowledge of presages and experts in conjuring the evils which the presages foretold. In Mesopotamia, where they were confidential advisers of the kings, the magicians belonged to the official clergy; they invoked the aid of the state gods in their incantations, and their sacred science was as highly esteemed as haruspicy in Etruria. The immense prestige that continued to surround it, assured its persistence after the fall of Nineveh and Babylon. Its tradition was still alive under the Cæsars. and a number of enchanters rightly or wrongly claimed to possess the ancient wisdom of Chaldea.

And the thaumaturgus, who was supposed to be the heir of the archaic priests, assumed a wholly sacerdotal appearance at Rome. Being an inspired sage who received confidential communications from heavenly spirits, he gave to his life and to his appearance a dignity almost equal to that of the philosopher. The common people soon confused the two, and the Orientalizing philosophy of the last period of paganism actually accepted and justified all the superstitions of magic. Neo-Platonism, which concerned itself to a large extent with demonology, leaned more and more towards theurgy, and was finally completely absorbed by it.

But the ancients expressly distinguished "magic," which was always under suspicion and disapproved of, from the legitimate and honorable art for which the name "theurgy" was invented. The term "magician" (μάγος), which applied to all performers of miracles, properly means the priests of Mazdaism, and a well attested tradition makes the Persians the authors of the real magic, that called "black magic" by the Middle Ages. If they did not invent it—because it is as old as humanity—they were at least the first to place it upon a doctrinal foundation and to assign to it a place in a clearly formulated theological system. The Mazdian dualism gave a new power to this pernicious knowledge by conferring upon it the character that will distinguish it henceforth.

Under what influences did the Persian magic come into existence? When and how did it spread? These are questions that are not well elucidated yet. The intimate fusion of the religious doctrines of the Iranian conquerors with those of the native clergy, which took place at Babylon, occurred in this era of belief, and the magicians that were established in Mesopotamia combined their secret traditions with the rites and formulas codified by the Chaldean sorcerers. The universal curiosity of the Greeks soon took note of this marvelous science. Naturalist philosophers like Democritus, the great traveler, seem to have helped themselves more than once from the treasure of observations collected by the Oriental priests. Without a doubt they drew from these incongruous compilations, in which truth was mingled with the absurd and reality with the fantastical, the knowledge of some properties of plants and minerals, or of some experiments of physics. However, the limpid Hellenic genius always turned away from the misty speculations of magic, giving them but slight consideration. But towards the end of the Alexandrine period the books ascribed to the half-mythical masters of the Persian science, Zoroaster, Hostanes and Hystaspes, were translated into Greek, and until the end of paganism those names enjoyed a prodigious authority. At the same time the Jews, who were acquainted with the arcana of the Irano-Chaldean doctrines and proceedings, made some of the recipes known wherever the dispersion brought them. Later, a more immediate influence was exercised upon the Roman world by the Persian colonies of Asia Minor, who retained an obstinate faith in their ancient national beliefs.

The particular importance attributed to magic by the Mazdians is a necessary consequence of their dualist system, which has been treated by us before. Ormuzd, residing in the heavens of light, is

opposed by his irreconcilable adversary, Ahriman, ruler of the underworld. The one stands for light, truth, and goodness, the other for darkness, falsehood, and perversity. The one commands the kind spirits which protect the pious believer, the other is master over demons whose malice causes all the evils that afflict humanity. These opposite principles fight for the domination of the earth, and each creates favorable or noxious animals and plants. Everything on earth is either heavenly or infernal. Ahriman and his demons, who surround man to tempt or hurt him, are evil gods and entirely different from those of which Ormuzd's host consists. The magician sacrifices to them, either to avert evils they threaten, or to direct their ire against enemies of true belief, and the impure spirits rejoice in bloody immolations and delight in the fumes of flesh burning on the altar. Terrible acts and words attended all immolations. Plutarch mentions an example of the dark sacrifices of the Mazdians. "In a mortar," he says, "they pound a certain herb called wild garlic, at the same time invoking Hades (Ahriman), and the powers of darkness, then stirring this herb in the blood of a slaughtered wolf, they take it away and drop it on a spot never reached by the rays of the sun." A necromantic performance indeed.

We can imagine the new strength which such a conception of the universe must have given to magic. It was no longer an incongruous collection of popular superstitions and scientific observations. It became a reversed religion: its nocturnal rites were the dreadful liturgy of the infernal powers. There was no miracle the experienced magician might not expect to perform with the aid of the demons, providing he knew how to master them; he would invent any atrocity in his desire to gain the favor of the evil divinities whom crime gratified and suffering pleased. Hence the number of impious practices performed in the dark, practices the horror of which is equaled only by their absurdity: preparing beverages that disturbed the senses and impaired the intellect; mixing subtle poisons extracted from demoniac plants and corpses already in a state of putridity; immolating children in order to read the future in their quivering entrails or to conjure up ghosts. All the satanic refinement that a perverted imagination in a state of insanity could conceive pleased the malicious evil spirits; the more odious the monstrosity, the more assured was its efficacy. These abominable practices were sternly suppressed by the Roman government. Whereas, in the case of an astrologer who had committed an open transgression, the law was satisfied with expelling him from Rome—whither he generally soon returned,—the magician was put in the

same class with murderers and poisoners, and was subjected to the very severest punishment. He was nailed to the cross or thrown to the wild beasts. Not only the practice of the profession, but even the simple fact of possesing works of sorcery made any one subject to prosecution.

However, there are ways of reaching an agreement with the police, and in this case custom was stronger than law. The intermittent rigor of imperial edicts had no more power to destroy an inveterate superstition than the Christian polemics had to cure it. It was a recognition of its strength when State and Church united to fight it. Neither reached the root of the evil, for they did not deny the reality of the power wielded by the sorcerers. As long as it was admitted that malicious spirits constantly interfered in human affairs, and that there were secret means enabling the operator to dominate those spirits or to share in their power, magic was indestructible. It appealed to too many human passions to remain unheard. If, on the one hand, the desire of penetrating the mysteries of the future, the fear of unknown misfortunes, and hope, always reviving, led the anxious masses to seek a chimerical certainty in astrology, on the other hand, in the case of magic, the blinding charm of the marvelous, the entreaties of love and ambition, the bitter desire for revenge, the fascination of crime, and the intoxication of bloodshed,—all the instincts that are not avowable and that are satisfied in the dark, took turns in practicing their seductions. During the entire life of the Roman empire its existence continued, and the very mystery that it was compelled to hide in increased its prestige and almost gave it the authority of a revelation.

A curious occurrence that took place towards the end of the fifth century at Beirut, in Syria, shows how deeply even the strongest intellects of that period believed in the most atrocious practices of magic. One night some students of the famous law-school of that city attempted to kill a slave in the circus, to aid the master in obtaining the favor of a woman who scorned him. Being reported they had to deliver up their hidden volumes, of which those of Zoroaster and of Hostanes were found, together with those written by the astrologer Manetho. The whole city was agitated, and searches proved that many young men preferred the study of the illicit science to that of Roman law. By order of the bishop a solemn auto-da-fé was made of all this literature, in the presence of the city officials and the clergy, and the most revolting passages were read in public, "in order to acquaint everybody with the con-

ceited and vain promises of the demons," as the pious writer of the story says.

Thus the ancient traditions of magic continued to live in the Christian Orient after the fall of paganism. They even outlived the domination of the Church. The rigorous principles of its monotheism notwithstanding, Islam became infected with those Persian superstitions. In the Occident the evil art resisted persecution and anathemas with the same obstinacy as in the Orient. It remained alive in Rome all through the fifth century, and when scientific astrology in Europe went down with science itself, the old Mazdian dualism continued to manifest itself, during the entire Middle Ages in the ceremonies of the black mass and the worshiping of Satan, until the dawn of the modern era.

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Twin sisters, born of the superstitions of the learned Orient, magic and astrology always remained the hybrid daughters of sacerdotal culture. Their existence was governed by two contrary principles, reason and faith, and they never ceased to fluctuate between these two poles of thought. Both were inspired by a belief in universal sympathy, according to which occult and powerful relations exist between human beings and dead objects, all of which possess a mysterious life. The doctrine of sidereal influences, combined with a knowledge of the immutability of the celestial revolutions, caused astrology to formulate the first theory of absolute fatalism, whose decrees might be known beforehand. But, besides this rigorous determinism, it retained its childhood faith in the divine stars, whose favor could be secured and malignity avoided through worship. In astrology the experimental method was reduced to the completing of prognostics based on the supposed character of the stellar gods.

Magic also remained half empirical and half religious. Like our physics, it was based on observation, it proclaimed the constancy of the laws of nature, and sought to conquer the latent energies of the material world in order to bring them under the dominion of man's will. But at the same time it recognized, in the powers that it claimed to conquer, spirits or demons whose protection might be obtained, whose ill-will might be appeased, or whose savage hostility might be unchained by means of immolations and incantations.

All their aberrations notwithstanding, astrology and magic were not entirely fruitless. Their counterfeit learning has been a genuine help to the progress of human knowledge. Because they awakened

chimerical hopes and fallacious ambitions in the minds of their adepts, researches were undertaken which undoubtedly would never have been started or persisted in for the sake of a disinterested love of truth. The observations, collected with untiring patience by the Oriental priests, caused the first physical and astronomical discoveries, and, as in the time of the scholastics, the occult sciences led to the exact ones. But when these understood the vanity of the astounding illusions on which astrology and magic had subsisted, they broke up the foundations of the arts to which they owed their birth.