

Ptolemy, *Tetrabiblos*, trans. Frank Egleston Robbins, *The Loeb Classical Library* (Harvard University Press, 1940).

1. Introduction.

Of the means of prediction through astronomy, O Syrus, two are the most important and valid. One, which is first both in order and in effectiveness, is that whereby we apprehend the aspects of the movements of sun, moon, and stars in relation to each other and to the earth, as they occur from time to time; the second is that in which by means of the natural character of these aspects themselves we investigate the changes which they bring about in that which they surround. The first of these, which has its own science, desirable in itself even though it does not attain the result given by its combination with the second, has been expounded to you as best we could in its own treatise [i.e. the *Almagest*] by the method of demonstration. We shall now give an account of the second and less self-sufficient method in a properly philosophical way, so that one whose aim is the truth might never compare its perceptions with the sureness of the first, unvarying science, for he ascribes to it the weakness and unpredictability of material qualities found in individual things, nor yet refrain from such investigation as is within the bounds of possibility, when it is so evident that most events of a general nature draw their causes from the enveloping heavens. But since everything that is hard to attain is easily assailed by the generality of men, and in the case of the two before-mentioned disciplines the allegations against the first could be made only by the blind, while there are specious grounds for those leveled at the second—for its difficulty in parts has made them think it completely incomprehensible, or the difficulty of escaping what is known has disparaged even its object as useless—we shall try to examine briefly the measure of both the possibility and the usefulness of such prognostication before offering detailed instruction on the subject. First as to its possibility.

2. That Knowledge by Astronomical Means is Attainable, and How Far.

A very few considerations would make it apparent to all that a certain power emanating from the eternal ethereal substance is dispersed through and permeates the whole region about the earth, which throughout is subject to change, since, of the primary sublunar elements, fire and air are encompassed and changed by the motions in the ether, and in turn encompass and change all else, earth and water and the plants and animals therein. For the sun, together with the ambient, is always in some way affecting everything on the earth, not only by the changes that accompany the seasons of the year to bring about the generation of animals, the productiveness of plants, the flowing of waters, and the changes of bodies, but also by its daily revolutions furnishing heat, moisture, dryness, and cold in regular order and in correspondence with its positions relative to the zenith. The moon, too,

as the heavenly body nearest the earth, bestows her effluence most abundantly upon mundane things, for most of them, animate or inanimate, are sympathetic to her and change in company with her; the rivers increase and diminish their streams with her light, the seas turn their own tides with her rising and setting, and plants and animals in whole or in some part wax and wane with her. Moreover, the passages of the fixed stars and the planets through the sky often signify hot, windy, and snowy conditions of the air, and mundane things are affected accordingly. Then, too, their aspects [i.e. relative positions in the zodiac] to one another, by the meeting and mingling of their dispensations, bring about many complicated changes. For though the sun's power prevails in the general ordering of quality, the other heavenly bodies aid or oppose it in particular details, the moon more obviously and continuously, as for example when it is new, at quarter, or full, and the stars at greater intervals and more obscurely, as in their appearances, occultations, and approaches. If these matters be so regarded, all would judge it to follow that not only must things already compounded be affected in some way by the motion of these heavenly bodies, but likewise the germination and fruition of the seed must be moulded and conformed to the quality proper to the heavens at the time. The more observant farmers and herdsmen, indeed, conjecture, from the winds prevailing at the time of impregnation and of the sowing of the seed, the quality of what will result; and in general we see that the more important consequences signified by the more obvious configurations of sun, moon, and stars are usually known beforehand, even by those who inquire, not by scientific means, but only by observation. Those which are consequent upon greater forces and simpler natural orders, such as the annual variations of the seasons and the winds, are comprehended by very ignorant men, nay even by some dumb animals; for the sun is in general responsible for these phenomena. Things that are not of so general a nature, however, are comprehended by those who have by necessity become used to making observations, as, for instance, sailors know the special signs of storms and winds that arise periodically by reason of the aspects of the moon and fixed stars to the sun. Yet because they cannot in their ignorance accurately know the times and places of these phenomena, nor the periodic movements of the planets, which contribute importantly to the effect, it happens that they often err. If, then, a man knows accurately the movements of all the stars, the sun, and the moon, so that neither the place nor the time of any of their configurations escapes his notice, and if he has distinguished in general their natures as the result of previous continued study, even though he may discern, not their essential, but only their potentially effective qualities, such as the sun's heating and the moon's moistening, and so on with the rest; and if he is capable of determining in view of all these data, both scientifically and by successful conjecture, the distinctive mark of quality resulting from the combination of all the factors, what is to prevent him from being able to tell on each given occasion the characteristics of the air from the relations of the phenomena at the time, for instance, that it will be warmer or wetter? Why can he not, too, with respect to an individual man, perceive the general quality of his temperament from the ambient at the time of his birth, as for instance that he is such and such in body and such and such

in soul, and predict occasional events, by use of the fact that such and such an ambient is attuned to such and such a temperament and is favourable to prosperity, while another is not so attuned and conduces to injury? Enough, however; for the possibility of such knowledge can be understood from these and similar arguments.

The following considerations might lead us to observe that criticism of the science on the score of impossibility has been specious but undeserved. In the first place, the mistakes of those who are not accurately instructed in its practice, and they are many, as one would expect in an important and many-sided art, have brought about the belief that even its true predictions depend upon chance, which is incorrect. For a thing like this is an impotence, not of the science, but of those who practise it. Secondly, most, for the sake of gain, claim credence for another art in the name of this, and deceive the vulgar, because they are reputed to foretell many things, even those that cannot naturally be known beforehand, while to the more thoughtful they have thereby given occasion to pass equally unfavourable judgement upon the natural subjects of prophecy. Nor is this deservedly done; it is the same with philosophy—we need not abolish it because there are evident rascals among those that pretend to it. Nevertheless it is clear that even though one approach astrology in the most inquiring and legitimate spirit possible, he may frequently err, not for any of the reasons stated, but because of the very nature of the thing and his own weakness in comparison with the magnitude of his profession. For in general, besides the fact that every science that deals with the quality of its subject-matter is conjectural and not to be absolutely affirmed, particularly one which is composed of many unlike elements, it is furthermore true that the ancient configurations of the planets, upon the basis of which we attach to similar aspects of our own day the effects observed by the ancients in theirs, can be more or less similar to the modern aspects, and that, too, at long intervals, but not identical, since the exact return of all the heavenly bodies and the earth to the same positions, unless one holds vain opinions of his ability to comprehend and know the incomprehensible, either takes place not at all or at least not in the period of time that falls within the experience of man; so that for this reason predictions sometimes fail, because of the disparity of the examples on which they are based. As to the investigation of atmospheric phenomena, this would be the only difficulty, since no other cause besides the movement of the heavenly bodies is taken into consideration. But in an inquiry concerning nativities and individual temperaments in general, one can see that there are circumstances of no small importance and of no trifling character, which join to cause the special qualities of those who are born. For differences of seed exert a very great influence on the special traits of the genus, since, if the ambient and the horizon are the same, each seed prevails to express in general its own form, for example, man, horse, and so forth; and the places of birth bring about no small variation in what is produced. For if the seed is generically the same, human for example, and the condition of the ambient the same, those who are born differ much, both in body and soul, with the difference of countries. In addition to this, all the aforesaid conditions being equal, rearing and customs

contribute to influence the particular way in which a life is lived. Unless each one of these things is examined together with the causes that are derived from the ambient, although this latter be conceded to exercise the greatest influence (for the ambient is one of the causes for these things being what they are, while they in turn have no influence upon it), they can cause much difficulty for those who believe that in such cases everything can be understood, even things not wholly within its jurisdiction, from the motion of the heavenly bodies alone.

Since this is the case, it would not be fitting to dismiss all prognostication of this character because it can sometimes be mistaken, for we do not discredit the art of the pilot for its many errors; but as when the claims are great, so also when they are divine, we should welcome what is possible and think it enough. Nor, further, should we gropingly and in human fashion demand everything of the art, but rather join in the appreciation of its beauty, even in instances wherein it could not provide the full answer; and as we do not find fault with the physicians, when they examine a person, for speaking both about the sickness itself and about the patient's idiosyncrasy, so too in this case we should not object to astrologers using as a basis for calculation nationality, country, and rearing, or any other already existing accidental qualities.

3. That it is also Beneficial.

In somewhat summary fashion it has been shown how prognostication by astronomical means is possible, and that it can go no further than what happens in the ambient and the consequences to man from such causes—that is, it concerns the original endowments of faculties and activities of soul and body, their occasional diseases, their endurance for along or a short time, and, besides, all external circumstances that have a directive and natural connection with the original gifts of nature, such as property and marriage in the case of the body and honour and dignities in that of the soul, and finally what befalls them from time to time. The remaining part of our project would be to inquire briefly as to its usefulness, first distinguishing how and with what end in view we shall take the meaning of the word usefulness. For if we look to the goods of the soul, what could be more conducive to wellbeing, pleasure, and in general satisfaction than this kind of forecast, by which we gain full view of things human and divine? And if we look to bodily goods, such knowledge, better than anything else, would perceive what is fitting and expedient for the capabilities of each temperament. But if it does not aid in the acquisition of riches, fame, and the like, we shall be able to say the same of all philosophy, for it does not provide any of these things as far as its own powers are concerned. We should not, however, for that reason be justified in condemning either philosophy or this art, disregarding its greater advantages.

To a general examination it would appear that those who find fault with the uselessness of prognostication have no regard for the most important matters, but only for this—that foreknowledge of events that will happen in any ease is superfluous; this, too, quite unreservedly and without due

discrimination. For, in the first place, we should consider that even with events that will necessarily take place their unexpectedness is very apt to cause excessive panic and delirious joy, while foreknowledge accustoms and calms the soul by experience of distant events as though they were present, and prepares it to greet with calm and steadiness whatever comes. A second reason is that we should not believe that separate events attend mankind as the result of the heavenly cause as if they had been originally ordained for each person by some irrevocable divine command and destined to take place by necessity without the possibility of any other cause whatever interfering. Rather is it true that the movement of the heavenly bodies, to be sure, is eternally performed in accordance with divine, unchangeable destiny, while the change of earthly things is subject to a natural and mutable fate, and in drawing its first causes from above it is governed by chance and natural sequence. Moreover, some things happen to mankind through more general circumstances and not as the result of an individual's own natural propensities: for example, when men perish in multitudes by conflagration or pestilence or cataclysms, through monstrous and inescapable changes in the ambient, for the lesser cause always yields to the greater and stronger; other occurrences, however, accord with the individual's own natural temperament through minor and fortuitous antipathies of the ambient. For if these distinctions are thus made, it is clear that both in general and in particular whatever events depend upon a first cause, which is irresistible and more powerful than anything that opposes it, must by all means take place; on the contrary, of events that are not of this character, those which are provided with resistant forces are easily averted, while those that are not follow the primary natural causes, to be sure, but this is due to ignorance and not to the necessity of almighty power. One might observe this same thing happening in all events whatsoever that have natural causes. For even of stones, plants, and animals, and also of wounds, mishaps, and sicknesses, some are of such a nature as to act of necessity, others only if no opposing thing interferes. One should therefore believe that physical philosophers predict what is to befall men with foreknowledge of this character and do not approach their task under false impressions; for certain things, because their effective causes are numerous and powerful, are inevitable, but others for the opposite reason may be averted. Similarly those physicians who can recognize ailments know beforehand those which are always fatal and those which admit of aid. In the case of events that may be modified we must give heed to the astrologer, when, for example, he says that to such and such a temperament, with such and such a character of the ambient, if the fundamental proportions increase or decrease, such and such an affection will result. Similarly we must believe the physician, when he says that this sore will spread or cause putrefaction, and the miner, for instance, that the lodestone attracts iron: just as each of these, if left to itself through ignorance of the opposing forces, will inevitably develop as its original nature compels, but neither will the sore cause spreading or putrefaction if it receives preventive treatment, nor will the lodestone attract the iron if it is rubbed with garlic; and these very deterrent measures also have their resisting power naturally and by fate; so also in the other cases, if future

happenings to men are not known, or if they are known and the remedies are not applied, they will by all means follow the course of primary nature; but if they are recognized ahead of time and remedies are provided, again quite in accord with nature and fate, they either do not occur at all or are rendered less severe. And in general, since such power is the same whether applied to things regarded universally or particularly, one would wonder why all believe in the efficacy of prediction in universal matters, and in its usefulness for guarding one's interests (for most people admit that they have foreknowledge of the seasons, of the significance of the constellations, and of the phases of the moon, and take great forethought for safeguarding themselves, always contriving cooling agents against summer and the means of warmth against winter, and in general preparing their own natures with moderation as a goal; furthermore, to ensure the safety of the seasons and of their sailings they watch the significance of the fixed stars, and, for the beginning of breeding and sowing, the aspects of the moon 's light at its full, and no one ever condemns such practices either as impossible or useless); but, on the other hand, as regards particular matters and those depending upon the mixture of the other qualities—such as predictions of more or less, of cold or of heat, and of the individual temperament—some people believe neither that foreknowledge is still possible nor that precautions can be taken in most instances. And yet, since it is obvious that, if we happen to have cooled ourselves against heat in general, we shall suffer less from it., similar measures can prove effective against particular forces which increase this particular temperament to a disproportionate amount of heat. For the cause of this error is the difficulty and unfamiliarity of particular prognostication, a reason which in most other situations as well brings about disbelief. And since for the most part the resisting faculty is not coupled with the prognostic, because so perfect a disposition is rare, and since the force of nature takes its course without hindrance when the primary natures are concerned, an opinion has been produced that absolutely all future events are inevitable and unescapable.

But, I think, just as with prognostication, even if it be not entirely infallible, at least its possibilities have appeared worthy of the highest regard, so too in the case of defensive practice, even though it does not furnish a remedy for everything, its authority in some instances at least, however few or unimportant, should be welcomed and prized and regarded as profitable in no ordinary sense. Recognizing, apparently, that these things are so, those who have most advanced this faculty of the art, the Egyptians, have entirely united medicine with astronomical prediction. For they would never have devised certain means of averting or warding off or remedying the universal and particular conditions that come or are present by reason of the ambient, if they had had any idea that the future cannot be moved and changed. But as it is, they place the faculty of resisting by orderly natural means in second rank to the decrees of fate, and have yoked to the possibility of prognostication its useful and beneficial faculty, through what they call their iatromathematical systems (medical astrology), in order that by means of astronomy they may succeed in learning the qualities of the underlying temperatures, the

events that will occur in the future because of the ambient, and their special causes, on the ground that without this knowledge any measures of aid ought for the most part to fail, because the same ones are not fitted for all bodies or diseases; and, on the other hand, by means of medicine, through their knowledge of what is properly sympathetic or antipathetic in each case, they proceed, as far as possible, to take precautionary measures against impending illness and to prescribe infallible treatment for existing disease.

Let this be, to this point, our summarily stated preliminary sketch. We shall now conduct our discussion after the manner of an introduction, beginning with the character of each of the heavenly bodies with respect to its active power, in agreement with the physical observations attached to them by the ancients, and in the first place the powers of the planets, sun, and moon.

4. Of the Power of the Planets.

The active power of the sun's essential nature is found to be heating and, to a certain degree, drying. This is made more easily perceptible in the case of the sun than any other heavenly body by its size and by the obviousness of its seasonal changes, for the closer it approaches to the zenith the more it affects us in this way. Most of the moon's power consists of humidifying, dearly because it is close to the earth and because of the moist exhalations there from. Its action therefore is precisely this, to soften and cause putrefaction in bodies for the most part, but it shares moderately also in heating power because of the light which it receives from the sun.

It is Saturn's quality chiefly to cool and, moderately, to dry, probably because he is furthest removed both from the sun's heat and the moist exhalations about the earth. Both in Saturn's case and in that of the other planets there are powers, too, which arise through the observation of their aspects to the sun and the moon, for some of them appear to modify conditions in the ambient in one way, some in another, by increase or by decrease.

The nature of Mars is chiefly to dry and to burn, in conformity with his fiery colour and by reason of his nearness to the sun, for the sun's sphere lies just below him.

Jupiter has a temperate active force because his movement takes place between the cooling influence of Saturn and the burning power of Mars. He both heats and humidifies; and because his heating power is the greater by reason of the underlying spheres, he produces fertilizing winds.

Venus has the same powers and tempered nature as Jupiter, but acts in the opposite way; for she warms moderately because of her nearness to the sun, but chiefly humidifies, like the moon, because of the amount of

her own light and because she appropriates the exhalations from the moist atmosphere surrounding the earth.

Mercury in general is found at certain times alike to be drying and absorptive of moisture, because he never is far removed in longitude from the heat of the sun; and again humidifying, because he is next above the sphere of the moon, which is closest to the earth; and to change quickly from one to the other, inspired as it were by the speed of his motion in the neighbourhood of the sun itself.