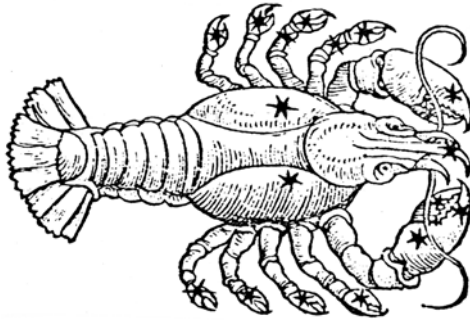


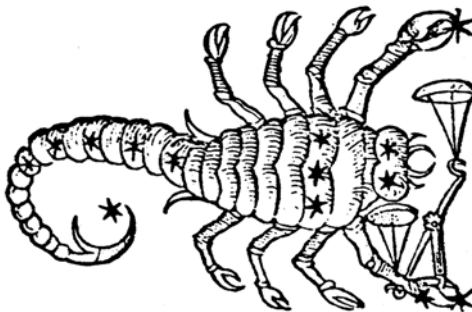
Likewise, Aquarius acts in the air element by bringing intemperate and harmful and impeding heat and moisture into it, making it extinguished and destroying the individuals of species, and often those harmful things which animals and seeds and other invigorating things receive from the air; and those situations and that impression come to be because of the impressions which Aquarius makes in the air, and the like.

On the watery signs, and first on Cancer



Indeed Cancer, Scorpio and Pisces, which are the watery signs, act in the water element, but in different ways—namely, because Cancer acts in water by imprinting temperate coldness and moisture into it, by which the movement of nature is for giving sweetness and nourishment by which animals are nourished and live, and all invigorating things together are nourished, and the like.

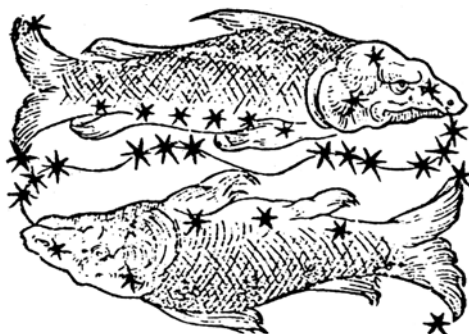
On Scorpio



Scorpio acts in the water element by bringing far-from-temperate coldness and moisture into it, by which the movement of nature comes to be more toward corruption than toward nourishment or preservation, on account of the

corruption and saltiness which the action of Scorpio brings into the water, barely adequate for providing nourishment, and to few things.¹⁵

On Pisces



Pisces acts in the water element by bringing intemperate and harmful coldness into it, by which the movement of nature comes to be for killing and destroying animals and seeds, and practically all animating things as a whole, on account of the corruption and irritation [or bitterness] and foulness which the action of Pisces brings into water.

[Summary]

This is the reason why the signs are exactly twelve (neither more, nor less). Because the elements are only four, and the signs act in the elements according to three modes: according to the first being, nourishing and increasing; indeed according to the second being, not totally nourishing, nor totally destroying; according to the third being, destroying.

And these three beings contain in themselves the beginning, middle, and end. And every three signs acts in one of the four elements, but the three fiery ones act in fire according to the said three modes; the three airy ones act in the air according to the said three modes; the three watery ones act in water according to the said three modes; the three earthy ones act in earth according to the said three modes.

And therefore Ptolemy, Aaydimon, Astaphan, Arastellus, Abū Ma'shar, and the rest of the philosophers are agreed that the triplicities of the signs are four, because every three signs of that same nature act in the element deputed to that

¹⁵ *Paucissimum et paucis rebus valens nutrimentum praestare.*

nature (namely the fiery ones in fire, the airy ones in air, the watery ones in water, the earthy ones in earth), and because of this, they could not be more nor less.

There is another reason why the signs are exactly twelve: namely because the zodiac consists of four quarters, of which two are northern, two southern; out of which one is given to the fiery signs, one to the airy ones, one to the watery ones, one to the earthy ones; of which each [quarter] contains three signs according to the aforesaid natures of the aforesaid four elements.

Chapter 3: Why the elements are so disposed and ordered

It was stated in the preceding chapter in what element each sign acts, and by what mode. Now however it must be stated in this chapter, why the four elements were so disposed or ordered: namely fire above, bordering immediately on the Moon in the concavity of the globe; then air, then water, then earth.¹⁶

Chapter 4: To show that the elements are only four, neither more nor less

It was stated in the preceding chapter how the elements are ordered or disposed. Now it must be stated in this chapter that the elements are only four, neither more nor less, even though many of those things which have been said about them, and which are [now] said about them, do not seem to be in the consideration of the astrologer. But it cannot be but that mention be made of them, wherefore it behooves us to make mention about all of these, [since] they fall very often into our work.

For the elements could not be but four, neither more nor less, because each elemental body consists of four elements, and it has in itself four qualities (namely heat, dryness, coldness, and moisture); and these four things happen to it, namely generation, durability or conservation, corruption, and destruction—speaking thusly, it is generated most strongly by heat, it endures by dryness, it is corrupted by moisture, it is destroyed by coldness: understand these things soundly. These four beings abide in every, and about every, elemental thing. For it takes heat from fire, moisture from the air, coldness from the water, dryness

¹⁶ Note that Bonatti never says *why* this is so. Like many of Bonatti's "arguments," this passage consists of descriptive assertions.

from the earth: whence, since the accidents of the elements are not found nor exist except by being four, and they are drawn from the elements, it is necessary that the elements be exactly four, neither more nor less.

Insofar as the elements are simple or pure in their own spheres, they have simple qualities ruling in them: fire, heat; air, moisture; water, coldness; earth, dryness. But insofar as they are connected and entangled, they have composite qualities with respect to each other, namely: fire, heat and dryness; air, heat and moisture; water, coldness and moisture; earth, coldness and dryness.

Chapter 5: Why the signs are so ordered or disposed

It was stated in the preceding why the signs are exactly twelve (neither more nor less), and why the elements are only four. Now however it remains to say in this chapter why the signs are so ordered or disposed.

The ordering or disposition of the signs begins from the fiery ones, as Aaydimon and Abū Ma'shar said.¹⁷ And the fiery ones were put in the beginning, then the earthy ones, then the airy ones, then the watery ones. But you could ask, “why didn't the sages order the signs according to the order of the elements, by beginning from the fiery ones, then from the airy ones, then from the watery ones, then from the earthy ones, according to how the elements are successively posited in their own order?”¹⁸ Indeed, the reasons which moved the sages to ordering [them] thusly, were many. Of which one was because the elements (as was said) receive corruption and alteration from the motions, and by the continual and restless revolution of the signs and the heavens; and because of that corruption and alteration, the four qualities which happen to elemental bodies come to be—namely generation, conservation, corruption and destruction.¹⁹

And because generation is more noble than the other qualities of elemental things, they began from the signs through which generation (or the natural motion toward generation) comes to be—and those are the fiery ones.

¹⁷ *Gr. Intr.*, II.4.

¹⁸ I.e., from just below the sphere of the Moon, down to the center of the earth.

¹⁹ Whereas if the signs were ordered: fire, air, water, earth, the natural cycle of things would be said to end in preservation, which is contrary to fact.

And the quality which is noble next to generation, is durability or conservation; and it comes to be from the signs through which the motion of nature to conservation or durability comes to be (insofar as corruptible things receive durability)—and those are the earthy ones.

And the quality which is ignoble and after durability is corruption, and it comes to be from the signs through which nature is moved to corruption—and those are the airy ones.

And the more ignoble, or rather worse quality which is after corruption, is destruction; and it comes to be from the signs through which nature is moved to destruction—and those are the watery ones.

Another reason why it had to begin from the fiery signs and end with the watery signs is because heat and coldness are agents, but dryness and moisture are patients, and since heat is the stronger agent (which signifies generation), it deserved to be the preferred one of the agents. Likewise since dryness is a strong patient, it deserved to be put in the front of the patients. And because generation precedes durability, the signs signifying generation were put before the signs signifying durability. And because corruption precedes destruction, the signs signifying corruption were put before the signs signifying destruction. And thus, since generation is the beginning of every generable and end-able thing, the signs signifying destruction (namely the watery ones) were put last.²⁰

Moreover, the fiery signs were put at the beginning, because heat rules in fire, by which bringing-to-life (which is the most noble thing) comes to be.

And the earthy signs were put immediately after the fiery ones, on account of the affinity which they have with fire, because of the dryness ruling with them.

And the watery ones were put last, as they are directly opposite the fiery ones in position of place, just as they are opposite them directly in nature.

²⁰ The principles are: active before passive, strong before weak, beginning (generation) before durability, corruption before destruction.

And the airy ones were put before the watery ones (immediately before them) on account of the affinity which they have with them because of moisture.

And thus both agents were put at the ends, and the patients between each.

These are the reasons which moved the sages of this profession to make this ordering of the signs in this way, namely by putting first the fiery ones, then the earthy ones, then the airy ones, then the watery ones. And of the fiery ones, by putting Aries first, and of the earthy ones by putting Taurus first, and of the airy ones by putting Gemini first, and of the watery ones by putting Cancer first, on account of the reasons assigned above.

Chapter 6: Why the denomination of the signs begins from Aries, and not from any other of the signs

It was stated in the preceding chapter why the signs were so ordered. Indeed in this one it must be stated why the denomination begins from Aries and not from any other of the signs, when the heaven is a spherical body, and everything spherical lacks a beginning (and what lacks a beginning lacks an end, and what lacks a beginning and end, lacks a middle center—this being excluded in bodily things).²¹

The reasons are many, of which one is that the denomination of the signs begins from Aries because the circle of the signs intersects the circle of the equator of the day in the beginning of Aries and in its opposite, not at a right angle but obliquely, so that six signs are northern and six southern, just as will be stated at length elsewhere. And the part which is northern is stronger than that which is southern, because when the Sun goes out of Pisces it enters Aries, and Aries is the first sign of the northern part; and the northern part is more noble and stronger than the southern part. And that this is true, is not in need of proof (even though this could be proven completely), because all proclaim it, and none says the contrary. And therefore the denomination of the signs begins

²¹ Bonatti's argument (placed in the mouth of an objector) is this. The heavens differ from regular bodies in that normal bodies (like our own) have clear boundaries that can serve as beginnings, endings, and middle points. But the surface of a sphere lacks any obvious point to act as a beginning, since every point on the sphere bears the same relation to all others. Therefore there is no *prima facie* reason to treat Aries as the beginning of a circle drawn on the sphere, since any point would serve equally well as a beginning.

from Aries, because the stronger part of the zodiac begins from the beginning of Aries.

*Another reason why the denomination of the signs begins from Aries*²²

Another reason is because, when the Sun enters Aries, the day then begins to be increased over the night. Whence, since increase is a noble thing, the sages of this Art were agreed that the denomination of the signs would have to begin from the sign in which the increase begins.

*Another reason why the denomination of the signs begins from Aries*²³

Another reason is because, since the four qualities (which are hotness, and coldness, dryness, and moisture) are simple, and since they are simple they do not increase, nor do they diminish, [but] when they are put together (namely hotness and moisture, coldness and dryness, hotness and dryness, coldness and moisture), certain ones of them signify an effect and increase, others of them signify corruption and decrease. Whence it ought to have begun from Aries more so than from any other of the signs: because when the Sun enters Aries, then things begin to be effected and increased; and since effect and increase are noble things and friends of nature, and defect and decrease are ignoble things and enemies of nature, the denomination ought to have begun more deservedly from Aries, because then things grow tender—the which quality is likened to youth (which is the most powerful part of life): and so it is the most powerful part of time, when the aforesaid come to be. Because then the Sun recedes from the equator of the day, and approaches the northern regions, and heat acts on the moisture which had existed from the preceding winter season; and nature is moved then to generation and the increase of things, and herbs grow, and trees bear foliage, and flower, and produce fruits, and many seeds germinate (while this does not happen in the other seasons of the year, unless perhaps sometimes fortuitously). Therefore the denomination of the signs had to begin more deservedly from Aries than from any of the other signs.

²² Not treated as its own heading in 1550.

²³ Not treated as its own heading in 1550.

Chapter 7: Why the signs were named by these names

It was stated above why the denomination of the signs has to begin from Aries. Now however it must be stated why the signs are denominated with these names.

The reasons are many, of which one is because in those places which are called signs, are stars so disposed and so organized, that if a line were drawn from one to another, such a figure would result from thence—just as is the sign denominated to them. And it is said that Ptolemy went toward the south so far, that he was below the equator, and stood there to a degree that he saw all of these things.

There is another reason why the signs are denominated by such names: namely, when the Sun enters Aries heat is increased, for the reason that the Sun begins to be elongated from the equinoctial line and approaches toward the zenith of the northern regions; and he is made strong in accordance with how the ram [Aries] is said to have powers with respect to the strong ones of the animals.

Then heat is increased and made stronger, more so than it was when the Sun was in Aries; and this is likened to the nature of the bull [Taurus], because the bull is an animal stronger than the ram, and the declination of the Sun from the equator (and his approach to the zenith of the northern regions) becomes greater than when he was in Aries.

Then the Sun enters Gemini, and this sign is called “the twins” because then heat is doubled and duplicated beyond what it had been at first. And this is the last point of his elongation from the equator of the day, and of his approach to the highest point over our heads.

Then the Sun begins to return toward the equator of the day, and then it is said that he enters the crab [Cancer], because the crab is a backwards-moving animal: whence, just as the crab is said to go sometimes forwards and after that to return backwards, so when the Sun is elongated from the equinoctial line to his last elongation, he is returned from [the last elongation] toward [the equinoctial line]—then he is said to go backwards like a crab goes.

Then when the Sun goes out of Cancer, he enters Leo. And it is said that he is in the lion [Leo] because heat is increased and becomes stronger and sharper and harder on account of the depurified air, and he does not then take part in any moisture. Whence, because the lion is a hard [or inflexible] animal, strong and very rough, this sign was denominated from that animal.

Then heat is relaxed, nor does the increase of things happen, nor a generation which is ordained (apart from the generation of certain seeds). And this sign is called “virgin” [Virgo], because a virgin is a humble and sterile animal, wherefore all things tend toward decrease and virtual sterility.

Then the Sun enters the scales [Libra], because then the day is equated with the night, and heat is relaxed, and effected in equality between coldness and heat: because then cold begins somewhat to take on power, and all things are then in equality.

Then the Sun enters the scorpion [Scorpio], and cold is increased above heat, and now cold comes to be, now hot, and the air is made distemperate,²⁴ and rains come to be, and vicious illnesses are generated, and pestilential ones, and ones bringing death in the manner of poison, and the like. And therefore this sign is denominated from that poisonous animal, the scorpion.

Then cold is clearly increased over heat, and then the Sun is said to enter the archer [Sagittarius]: because then mutations of the air take place, and the air comes down on the side of coldness, and strong hoar-frosts come upon [things], and snows, and ice emitted from the air, like arrows wounding ensouled and invigorating things.

Then the cold is increased above heat, and the hot is practically put to rest, and the air comes down to a distemperate and melancholic coldness, and then many snows come to be, and the ultimate cold, and ice, and the

²⁴ I.e., its mixture is bad, as is hinted by its being inconsistently hot or cold.

like—whence since the goat [Capricorn]²⁵ is a cold and dry animal, and melancholic, this sign was denominated from that animal, and the Sun is then in his final declination from the equator toward the south.

Then the Sun begins to turn back toward the equator, and then the cold begins to be diminished somewhat, and sometimes rains take place instead of snows, and the air is made more moist: whence that sign is denominated [Aquarius, the water-bearer] from such a disposition of the air then thriving.

Then the Sun enters Pisces. And that sign is denominated from the fish, (which is a watery animal), because then rains abound more so than in the other seasons of the year, unless perhaps by accident; and if there were snows or hoar-frosts or ice, they are converted more quickly into water than in the other winter times.

²⁵ Technically the *Capricornus* is not a standard goat, but a mythical goat-animal having some sea-creature features (which would not make it as dry). A goat in the normal sense is *capra*.

PART 2: On the Nature of the Essential Circle

Chapter 1: On the division of the orb of signs into twelve signs, and of every sign into thirty degrees, and of every degree into sixty minutes, and of every minute into sixty seconds

In those things which were stated before in this Treatise, many things were shown which seem to be (and are) useful for this work, and particularly on the number of the signs and their organization, and on their division.

In this chapter we must speak about the division of the orb of the signs, following the footsteps of our most reverend predecessor Ptolemy, and of those who must be honored, namely: Hermes, Abū Ma'shar, al-Andarzaggar, ad-Dawla, [Abu 'Ali] al-Khayyat, Thābit [ibn Qurra], Astaphan, Arastellus, and other prudent men who studied in this science—and by adding those things which will seem to be useful, according to how God shows me the grace of organization, and restores to me my memory.

Indeed you ought to know that the circle of the signs (which is called the zodiac or zodial), is divided into twelve equal divisions, of which each one is called a “sign.” And the signs (as was said above) are said to be in the likeness of certain animals which are formed according to their shapes, just as I told you. Therefore the first sign is called a Ram, the second a Bull, the third Twins, the fourth a Crab, the fifth a Lion, the sixth a Virgin, the seventh a Balance, the eighth a Scorpion, the ninth an Archer, the tenth a Capricornus, the eleventh a Water-Bearer, the twelfth Fishes.

And every one of these signs is divided into thirty equal parts, of which each one is called a “degree.”²⁶ And every degree is divided into sixty equal parts, of which each one is called a “minute.”²⁷ And every minute is divided into sixty equal parts, of which each one is called a “second.”²⁸ And every second is divided into sixty equal parts, of which each one is called a “third.”²⁹ And every third is divided into sixty equal parts, of which each one is called a “fourth,”³⁰ and so on up to the end of the numbers—but these will be dispensed with by you in your work, and especially in the equations of some number beyond these,

²⁶ *Gradus*, lit. “a step.”

²⁷ *Minutum*, lit. “a little piece.”

²⁸ *Secundum*, lit. “a second” division of a degree.

²⁹ *Tertium*, lit. “a third” division of a degree.

³⁰ *Quartum*, lit. “a fourth” division of a degree.