

THE INTERPRETATION OF AVICENNA

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IT IS some nine hundred years since the Canon of Medicine of Avicenna first saw the light. For four hundred years it has been so little esteemed that no further editions have been issued. At the present day we have translations of Hippocrates into English, of Galen into French, but we have none of Avicenna excepting the Latin editions up to 1595, of which very few copies are to be found. Other works by Avicenna have been recently translated direct from the Arabic into French, and a masterly monograph on the man and his time was issued at Paris in 1900.

More important than translations is the matter of interpretation. Taken on their face value, many of the statements of ancient medicine appear useless, and the revival of Avicenna's writings would not reveal very much difference from that with which historians have become familiarised through Galen. It is not till Avicenna's works other than on medicine are gone into, that a new light begins to shine upon the ancient system. There is a small treatise, called "De viribus cordis," included in certain editions of the Canon (such as the edition preserved in the McGill University Library), which provides the key by which to interpret the greater book. And as Avicenna may be regarded as the fountain-head of Arabian medicine, it provides the key for the proper understanding of the whole of that period of history.

Some have been disposed to regard the Libellus as an interpolation. Even were it so, it was a wise act to introduce it into the volume. To print a cipher, and also to favour the reader with the key, in the same volume, is more than fortunate. Were it really the case that the author of the Libellus lived

some four hundred years later than the author of the Canon, he was doing for us what Fārābī, the Sufi interpreter of Aristotle, did for Avicenna at a time when the latter was so anxious to discover the true meaning of the "Metaphysics." In his youth, while searching through the contents of second-hand bookstalls, Avicenna found the copy of Fārābī's book, and welcomed it with delight, as proving ultimately of greater value to him than all the other books he had read, put together.

The "De viribus cordis" occupies some twenty pages of foolscap size, closely printed in double column. Space would not permit of a reproduction of the translation of the whole, but the few brief extracts here given will serve to show the kind of matter of which it is composed.

The first chapter of this Libellus deals with "The Source of the Breath," saying:

God caused the breath to be a vehicle for conveying the powers of the mind into the several members of the physical part of the human being. Accordingly, He brought it about that the breath should be the rallying-point of the forces of the mind, and at the same time become an emanation into the various tissues and organs of the body. Now He produced the breath from the finer parts of the body-fluids, and separated out the body itself from their coarser components (their earthiness) . . . In essence, the breath is really a divine emanation. It can neither be added to nor taken from. Once it has been fully built up, its nature may be said to depend upon the particular proportions of the various constituents and the disposition of these components in relation to one another; thus it depends also upon the member or organ in which it occurs. It is correct to say that the psychic, the vital and the natural breaths derive their substance from the fine parts of the body-fluids. Nevertheless,

their substance has a particular character, which depends on the relative proportions of the component fluids and on the particular form which they assume after being mingled. Although the body consists of several members, there is only one member underlying them. The opinions as to what this member exactly is are very diverse. Yet it is true that the first must come to light before the other members can arise out of it.

Exactly in the same way, though there are several breaths in us, there is only one single breath underlying them all—namely, that which arises in the heart. This breath passes from the heart to the other centres, lingering in them until they impart to it their particular character. From this moment the breath possesses the power of linking the Person to the powers which lie at his disposal. Lingering in the brain, the brain imparts its character, from which moment the breath acquires the power of sensation and motion. In the liver, this organ imparts its character to the breath and enables it for the first time to enter the cycle of metabolism and growth. In the testes, these organs impart their character to the breath, and, the two being in joint relation, the breath enters the generative cycle.

In the next chapter, it is written, "the breath is a luminous substance. It is a ray of light."

From these passages it is clear that this treatise on disorders of the heart approaches the matter from an entirely different standpoint to that to which we are accustomed. In no part of the treatise is there any mention of valvular disease, of pericarditis, hypertrophy or dilatation, and so forth; but there is a careful analysis of the relations between the emotions and the heart's action, a fact of interest to those who like to find analogies between modern researches and the knowledge of the ancients.

The whole doctrine centers on the doctrine of "the breath." The Latin equivalent is "*spiritus*," the Greek equivalent is "*pneuma*," and the mediaeval English is "*spirit*." With the steady and insidious

change of meaning assigned to this word, it conveys an entirely different idea today. This accounts for the fact that mediaeval medical literature seems impossible and even absurd to us today. The word "spirit" usually conveys the idea of personality with it; but the "breath" is impersonal. We shall find it used impersonally in books of Eastern Wisdom, now available in English translations.

The words "heart," "liver," "brain," at once suggest that the writer means certain viscera. But the further one goes into the book under consideration, the clearer it is that to Avicenna they are not limited in this way. When he speaks of the heart, he means a certain physiological *tout ensemble*—the whole arterial system, whose focus is the literal heart. For him, the brain is something more than the mass of nervous substance in the skull. The word "liver" merely forms a convenient focus into which to gather the whole of the nutritional-complex of the body. Even had Avicenna known all we know about the microscopic physiology and pathology of the human body, it would not have altered his conception of the function as enacted in a mind-body first, and in the physical body secondarily. And the breath belongs to still another plane, to which both mind-body and physical-body are subservient.

A very simple diagram enables the reader of Avicenna to perceive clearly where he stands. Three horizontal lines, A, B, and C may be drawn, placing A farther from B than B is from C. C represents everything in the phenomenal world, B represents everything in the noumenal world, and A represents a world beyond each. C = materies; B = substantia; A = spiritus. Everything on C belongs to the concrete human body of the anatomist. And the breath (of plane A) is conceived of as continually circulating, operating at one time on the components of plane B, at

another on those of plane C. As we read Avicenna, we must follow his thought as he passes from plane to plane, and back again; and we must follow him with the same dexterity (which almost seems to be in-consequence) with which he himself passes from one to another during his expositions of abstruse processes.

It is easier to understand the process of "breath" passing from B to C, when this indefinable agent is understood as a form of vibration which changes in degree of coarseness. As the vibration becomes coarser, so the more nearly is it related to substances on plane C; as it becomes finer the more does it approach those on plane B. There is a continuous cycle, passing from fine vibrations to coarse and back again. To those who would be inclined to doubt whether such conclusions can be drawn from the material available, an enquiry into Eastern philosophy may furnish the critical evidence required. For, in many of the scholarly translations produced during recent years, we find considerations which indicate that the ancient teachings survive and are still extant among certain schools in the East. Carra de Vaux, in his study of Avicenna (Paris, 1900) shows the importance of entering into the Eastern atmosphere before the significance of Avicenna's philosophy can be correctly dealt with, and he also provides evidence which shows that Avicenna was a "Sufi," from which it becomes clear to the earnest enquirer that many of his terms are technical terms only to be rightly interpreted in terms of Sufi philosophy. Translations of many Sufi classics are now available, and from them we see why Avicenna should have been a recognised master not only of medicine, but of commerce, law, philosophy and mathematics.

Next to the doctrine of "the breath," that of the "elements" is a conspicuous feature not only of Arabian medicine but of all ancient medicine. The historian

regards this doctrine as fanciful, childish, and a cloak of ignorance. No doubt it has often been so, in practice. But it is possible to arrive at the rationale underlying it. The elements—earth, water, fire, air, ether—are forms of a vibration which is constantly changing in amplitude in an orderly cyclical fashion, just as the breath changes. The elements interact with the breath, the visible organs change according to the change in the elements, and, through the latter, become the *points d'appui* of the "breath." Both sides are necessary. To give an instance: a change in the rhythm of the breath may be the beginning of a loss of immunity to bacterial agents. Further, though the cycle of the breath is always in action, it is not always one and the same wave. Sometimes it is quick, sometimes slow; sometimes hourly, sometimes twice a day, sometimes once a day, once a week, once a month, seasonal. Every family, every race, has its type of breath. Hence by this philosophy we have the key to many anomalies of human life, as well as to pandemic diseases.

As long as it was supposed that the ancient elements were on a par with the modern chemical elements, there could only be confusion. The elements of ancient medicine were on plane B. The chemical elements are on plane C. "Water" is not H_2O . A substance may be "moist" although it contains only an infinitesimal amount of H_2O in it. If the word "water" were represented by a circle drawn on a piece of paper, the modern reader, from his education, believes he should write H_2O , or H, OH inside the circle to picture the meaning of the word; but in Sufic terms, H, OH should be written in a little circle inscribed excentrically within the first circle. "Air" ordinarily means "atmosphere;" but CO_2 is also "air;" even if CO_2 be solid, it is still "air." "Fire" is not merely flame, or heat. The chemical group CH_2 is also "fire," and so on. This might perhaps appear to be

very confusing, but closer scrutiny will show the value of the conception.

Glucose, for instance, which is so important a constituent of the human being, contains two molecules of H_2O , two of CO_2 , and four of CH_2 . In ancient nomenclature it could be described as made of two parts of "water," two of "air," and four of "fire" bound together by a cohesive force; this force may be neutralised by another of opposite magnetic sign. In this way the "air" may be liberated, and the other two remain coherent, as occurs when alcohol is formed from it, the once-named "fire-water." Although the internal molecular arrangements are more intricate, so that this comparison contains important inaccuracies, it is also true that the ancient "elements" are not ponderable. One cannot reduce them to chemical equations. But the illustration is applicable in a certain sense.

The subject of "constitution" also forms a conspicuous feature of the ancient medicine. This word is also liable to misinterpretation through believing all physiological questions belong to plane C of the diagram given. There is a constitution on plane C, and there is a constitution on plane B. The latter is the outcome of the arrangement of the "elements." There is also a constitution on plane A, since the breath has a constitution. As Avicenna says: "Although it is true that the same person can be sad and glad, yet one person has a cheerful disposition, another is a pessimist. It is altogether a different thing to pass one's life in a body whose breath has a glad tendency, to passing one's life in a body with a depressed or morbid disposition." A "moody" person is one whose breath changes more rapidly, and also causes a greater change in the constituents belonging to plane B. Saintliness of disposition is therefore the attribute of a certain formula of breath. For instance, representing the component elements by the initial letters, and representing the relative proportions in terms of grades 1-5,

1 being minimal, five maximal, one person's constitution may be $E^1W^4F^1A^3Ae^5$, and another's $E^2W^2F^3A^2Ae^2$. If these formulae describe their constitution on plane B, the former would be saintly, the latter would be pugnacious. The "fire"—element may be gentle in the former, explosive in the latter. Therefore this element reaches its climax in a moment in the latter, and may take weeks to do so in the former; by that time all need for action may have dissipated, and the equable temperament of the saintly person prove a source of admiration to one who is irascible.

The application of the doctrine of temperament, of constitution, to the science of pharmacology appears in the ninth chapter of the "De viribus," where the properties of medicines are discussed. The plants are regarded as sharing in the general law of temperament, and the relations between their active principles and the successive planes of the human organism are viewed on the same lines. The interaction between drugs and emotions can hardly be gainsaid, and is certainly entirely out of the range of physiological recording-apparatus, except perhaps the electrocardiogram. Avicenna sees everything on plane B, and thus comes to be reasonable instead of, as hitherto, an expositor of things obviously at variance with "facts" known to us. The "facts" are the tangible things belonging to plane C.

It would lead too far to take up many of the conceptions which we find in the pages of the Canon, and show how they can be translated into modern language. Nothing short of a voluminous exposition would suffice to demonstrate the fundamental accuracy of this ancient Master of Medicine. Although there is one master-key, that of "the breath," which is necessary to unlock the treasuries of the past, there are several other keys which are necessary to open the doors beyond the central hall of the treasure-house, as it were. All these keys can be

found once it is believed possible that the great minds of the past were perfectly sound, but they are elusive to those who believe that every mind of the past was unintelligent, and not as evolved as the minds of today. While modern science brings to light more and more details about entities in their concrete phase, Avicenna was quite familiar with them in their abstract phase. Even granting that the number of those who really understood his Canon may have been small, so that, in a sense, Arabian Medicine was not continuously as enlightened as its founder, it becomes clear that it was part of a great treasury of knowledge which opens out more and more to the enquirer who is willing to adopt the Sufi mode of viewing the world of Nature.

After this, we can look down the vista of medical history, and perceive that for certain periods of time, minds were directed first at one aspect of the human being, then at another. As one generation passed away the next lost touch with the dominant conception held by its parents. The doctrine of the "pneuma" held the minds of those who sought to explain all processes in terms of the "breath," and neglected the other aspects of the complete entity, man. The period of the "humoral theory" was one where attention was concentrated on the humours, trying to find out more and more about them, trying to make them more and more concrete. In doing this they abandoned the truth of the Pneuma and in fact believed it to be a false doctrine. Then the period of "cellular pathology," of today, concentrates all attention on the workings of tissue-units; some admitting the part played by the sera, and therefore allowing the "humours" to a certain extent, others placing this aspect as much in the background as possible; all ignore the "breath." The vitalist of an earlier age falls into discredit, in consequence.

However, all periods of the history of medicine hang together. Rather may one see them all as successive chapters of one single book, in which no one chapter is better or wiser than another, than regard them as discrete periods, or as struggles of a groping humanity towards light. The spirit of the human race has always known the truth, but at each epoch it has developed first one aspect, then another. When all parts of the one truth have been duly surveyed, then we, who stand at that point of vantage, can piece it all together, and approach the masters of the past in order to gather together all the seemingly isolated fragments into one true and complete picture of the nature of health and disease.

In doing so, the searcher after truth perceives the wisdom of the words of the Sufi Persian poet, when he speaks of the "hair dividing the false from the true." It is not that one thing is false in itself, and another true in itself. As soon as one stands between the two, one is enabled to observe that there are things on one plane, or on another, and that it is only a matter of viewpoint, or even of description, that enables one to regard one as definitely false, and the other as equally definitely true. People who are confined by habit of thought to one plane will believe the others false, and conversely. There is a proper place for each, and the best place is to be between the two. The study of Avicenna as a great Sufi work brings a glimpse of this position.

Hence, however false the great system of ancient Eastern Medicine may seem to us, the science of the West can receive nothing but gain from ripening an acquaintance with her, and even if the two finally celebrated their nuptials, no doubt it would only bring to light that one harmonious whole, the complete story of the nature of the human body, which all desire to realise.