

THE HYPOTHESIS OF ELEMENTS

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Thinkers and scholar ponder over the phenomena of nature and according to the knowledge available, examine them critically, Answers to criticism are sought, and in the light of the questions and answers, certain inductive principles are laid down, and these principles, in turn serve as the template for discussion. Certain principles, are the derived, but no one can claim them but for a few laws, e.g, the laws of thermodynamics, or the Newtonian laws of gravitation, the laws of physics and chemistry are such that no one can go beyond them or that no one has the right to question them. It is only in such civilization and societies, where man's mental activity has been apotheosized, that freedom of thoughts has been suppressed. Such as tendency acts as a constraint in man's intellectual journey, and its results are hardly wholesome. Man's history stands as a ready testimony to their harmful effects.

Be that as it may, although the topic which constitutes the gist of my introductory remarks is rather interesting. I am relinquishing it in favour of a theme which has been earmarked for discussion by this august gathering.

It is not my wish here to describe the various phases on to the Arabs nor to dilate upon the remarkable work of the Arabs in scientific and intellectual fields which cannot go unacknowledged by any of us.

The theme which constitutes the linchpin of discussion at this academic and scholarly gathering is that of elements and the theories which have been put forward about it in the philosophy of medicine. The gist of my study of the problem is that, of the different theories put forward by the Greeks, the concept of the elements is one that was adopted by the Arabs in totally from the Greeks. It is my intention to present at first a gist of Arabs thinkers' view of elements so that we

may be able to find for ourselves how the Arabs scholars and physicians exercised their thoughts and ideas upon this problem and how they represented them. For the scholars and scientists the concept of elements (arqaan) is one of the concept of physics. The chief question here is: what was it that made the cosmos (comprising plants, animals and minerals), what were the ingredients that went into its creation, formation and growth and where does our analysis of these end? Medicine and therapy have no direct concern with this question; but perhaps there may be an indirect relationship. The subject of medicine is the human body, its health and disease. But, if the aim of medicine is cure and the continuance of health, then before we undertake the preservation of health and remove the cause or causes of the ailment, it might be worth knowing what primary ingredients have gone to make the body, and how these ingredients that are incapable of further decomposition. The human body is a species of the physical, and therefore in this sense it makes for a discipline of physics. Ibn e Sina has said: "The physician should acknowledge as a matter of belief that the number of elements is four, neither less nor more".

It is largely because of this fact that Ibn e Sina in his Al-Qanun fi al-Tibb which he has written as a physician and whose subject is mainly physique has abstained from a discussion of the properties and characteristics of elements and their number, and has, in fact, instructed the physician to avoid any speculation upon them. But in the Kitab al-Shifa' which is a comprehensive work on philosophy he has brought the concept of elements under a detailed discussion and has argued why the number of elements should be four. (Cf. Al-Qanoun fi al Tibb and the Kitab al-Shifa).

The peripatetic Muslims philosophers also followed suit,

and Farabi and Ibn e Sina strengthened this concepts through their philosophical arguments to such an extent that no one could dare to differ from their hypothesis. The group which dominated Muslims philosophy from the very beginning was the followers of Aristotle and peripatetics. From Farabi and Ibn e Sina down to Fadl al- HaqKhairabadi, belief in four elements persisted. The viws of this school were taught in the syllabi prescribed for philosophy. But at the same time we come across the names of Muslims philosophers who differs from the views of this majority. One class which differed from the majority's view held, for instance that one of the four elements, e.g. fire, was not a regular element but hot air. It, in other words, subscribed to the three-element theory. Another category of philosophers subscribed to the view that the number of elements could not be circumscribed and that the limited vision of man was not capable of circumscribing their number. We have so far restricted ourselves to philosophers. Insofar as physicians are concerned, RabbanTabari (the author of the firdaws al- Hikmah) and his disciple, al Razi(the author of Al- Hawi), have also adhered to the fact that Elements are four in number. But Ibn e Sina, who was a great philosopher, strengthened this concept through ratiocination, and so strongly entrenched did it become that not only physicians but philosophers too tended to conceive the four elements theory as an appropriately acceptable credo.

In the West the spell of Ibn e Sina's ideas persisted for seven to eight centuries, and began to break up in the seventeenth century, but it was legal tender till three centuries afterwards in the East, and we don't find any clue for any prominent disagreement from this view. In 1926 a great political and medical figure of the subcontinent, the late Hakim Ajmal Khan, finally took a revolutionary step and through the help of a committee for the revival of Tibb acknowledge without any demur whatsoever that the number of elements is hundred and not four. (Transuranic elements had not been discovered till then). He also further acknowledge that what the ancient and medieval philosophers and physicians regarded as elements proved to be compounds.

Our survey must have shown in ample measures that

in as much as the definition of elements and details regarding it are concerned, the Arab physicians were not one in sharing this concept. Many have voiced their disagreement with the concept of elements and even their number. But it is interest to note that the original behind this concept is the Greek theory of four elements. This amounts to the fact that the differences of opinion which we find among the Arab physicians and philosophers are also to be found in the Greek thinkers and physicians. I am reproducing some of the views and opinions of Greek thinkers together with references upon the concept of elements. The common strand which runs through the views of the Greek and Arab thinkers and makes for an interesting study.

Thales, who belongs to the Ionian phase of the history of Greek Sciences (6th century B.C) is regarded the first of the traditional philosophes of Greece. He propounded the theory that everything was originally water from which earth, air and living things eventually separated. Two later philosophers Anaximander and Anaximenes invoked the idea that earth, mist and fire are elements.

Then there is Heraclitus with his theory of fire as the prime elements.

Aristotle (385-322 B.C.) canonized the system of four elements fire, air, water and earth. Gomperz, in his work 'Greek Thinkers' says that Aristotelian doctrine of elements follows WEmpendocles except that, like Philolaus and Plato, in his old age he added the fifth elements ether as the heavenly element. But in one of his expositions he refers only to ether, fire and earth. It, therefore, stands established that there is much in common to be found in the basic ideology of different schools of thought.

Hakim Kabiruddin in his exegesis of the *Mujiz al-Qanun*(Acompendium of the Canon) has discussed the number of elements and has stated that there was not one but fourteen classes of physicians who recorded their disagreement with the four elements concept. In the parlance of the history of medicine those who believed in the number of elements exceeding the number of four are known as asha- i-khalit (mixed crowd). Muslim philosophers who have differed from the four elements concept have also disagreed from

the concept of vicissitude and change. Worthy of mention among them are ‘AllamahS’ad al-Din Tafta-

zani refused to accept fire as an element, and Abu al-Barkat who refuted the concept of change and vicissitude.