

PERSPECTIVE OF ‘UNŞUR-E-NĀR (FIRE AS AN ELEMENT) AND ENERGY IN UNANI MEDICINE

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ABSTRACT:

Purpose: The aim of this paper is to clear the concept of fire as an element (*Rukn*), so that it can be easily correlated with the present knowledge.

Background: Amongst the theories regarding the number of elements, the theory of *Arkān Arba'a* is most accepted. Fire is one of the four elements and is present in different proportions in everything. The form of classical literature of Unani medicine with respect to concept of Arkan is same as it was 1000 years ago. Change only happened in linguistic aspect i.e. from Arabic to Persian, then Urdu, and nowadays it is being translated in English.

Methodology: *Tibb* is the synonym of change as it is a branch of science, in the form of progress with respect to time. Text must be understood and interpreted with the current knowledge, instead of translation. Therefore ‘*Unşur-e-Nār* (fire) is being interpreted in the light of classical and modern knowledge. If we look at the genesis of human body, ‘*Unşur-e-Nār* (fire) is present in the form of energy (or we can say heat) and it is ‘*Unşur-e-Nār* (fire) that provides heat to maintain the essential level of *Harārat-e-Gharīziyya* (innate heat) which is inherited at the time of birth and is absolutely essential to sustain life and it also helps in determining the temperament of the individual.

Conclusion: ‘*Unşur-e-Nār* (fire) is basically energy by its quality i.e. hot and dry. Each and every form of life depends on it to maintain a basal level of innate heat (*Harārat-e-Gharīziyya*) which is necessary for every form of life and as in the context of energy, we know that it can neither be created nor destroyed.

Future prospects: The concept of *Arkān Arba'a* must be correlated with the progressive science so as to understand the genesis of life better keeping the basic principles of Unani medicine as its soul.

Index terms: *Unani*, ‘*Unşur-e-Nār*, *Harārat-e-Gharīziyya*, *Arkān Arba'a*, *Fire*, *Energy*.

INTRODUCTION TO ARKAN (ELEMENTS):

The essential constituents and the working principle of the body according to Unani medicine can be classified into seven main groups which are called as "*Umūr-e-Tabaiyah*" namely - **Arkān** (Elements); **Mizāj** (Temperament); **Akhlāt** (Humors); **A'dā** (Organs); **Arwāḥ** (Life spirit, pneuma); **Quwā** (Faculty) and **Af'āl** (Action). These components are responsible for the existence and for the maintenance of

physiological functions of the body. The loss of any one of these components may lead to disease, or even death of an individual, each component has a close relation to and direct bearing on the state of health of an individual.

The first keystone of *Umūr-e-Tabaiyah* is *Arkān* (singular, *rukṅ*), comprising earth, water, air, and fire which represent different states of matter and the building blocks of everything in the universe. *Arkān* (elements) are **simple bodies**. They are the primary components of the human being throughout all its parts, as well as of all other bodies in their varied and diverse forms. The various orders of beings depend for their existence on the intermixture of the elements. **Simple bodies** – that is simple in scholastic sense; indivisible. “Simplicity is that quality in virtue of which a substance has neither constitutive nor quantitative parts.”¹

A difference must be observed between elements and the literal earth, water, air and fire. Each of the latter, contains all four elements, imponderable elements, the correspondingly named element being merely preponderant.¹

Natural philosophy speaks of four elements and no more. Two are light, and two are heavy. The lighter elements are Fire and Air; the heavier are Earth and Water.¹

INTRODUCTION TO QUALITY (KAIFIYAT):

Every matter that comes into existence needs a wet component so that it can accept various shapes and forms (because any matter that is absolutely dry would not accept any form easily). But the wetness of the matter should not exceed normal and to accomplish this, a little dryness is required to normalise the wetness of matter so that the shapes and forms could be retained. Otherwise, the ease with which wetness accepts different shapes and forms, likewise it will lose those shapes and forms easily too. After that, heat is required to give *nudj* (concoction) to the matter but the heat should also be in moderate amount otherwise the matter will burn and hence coldness is required to normalise the heat of the matter.² Like as the Hippocrate said, Coldness is necessary for our body specially when we are affected from heat or temperature. Uneasiness from the moisture proves the existence of dryness in our body. The pain from the dryness make sure that there is presence of contra property of dryness in our body.

So, it proves that existence of any matter requires the presence of all the four qualities i.e. heat, coldness, moisture and dryness but one of these quality prevails the other qualities as in fire hotness and dryness prevails coldness and moisture.²

Therefore, quality is a primary thing which is present in every matter and there are two types of qualities: active i.e. *Harārat* (hotness) and *burūdat* (coldness); and passive i.e. *yubūsat* (dryness) and *ruṭūbat*

(wetness). To represent these qualities, matter is required as quality does not exist without matter and vice versa.

QUALITY OF UNSUR E NAAR:

Each *rukna* (element) has certain inherent qualities, which give rise to its properties and actions. ‘Unsur-e-Nār (fire) represents the quality *Hār Yabis* (hot and dry). The four qualities i.e. Hotness, Coldness, Moisture and Dryness are found in every matter with different proportions. Likewise in ‘Unsur-e-Nār (fire), heat and dryness is prevalent on other qualities.

“The hotness of the fire is proved from the fact that the fire which we have, in spite of the fact that it is intermingled with other forms (through which its hotness is dissociated), still it is found hot. So why the fire would not be hot which is found at the position of skies. The dryness of fire is proved from the fact that, if the fire would have been wet, then wet wood would be attracted more towards fire than the dry wood.”² This saying from *Ibn-e-Nafees* justifies the hot and dry nature of fire. He argues that the fire intermingled with other forms is found hot, so the fire which is found at the position of skies has to be hot. He also argued that the dry wood is attracted more towards fire which proves the dry nature of fire.

FIRE AS THE ONLY ELEMENT:

Heraclitus (540-475 B.C) held that fire is the primordial element out of which everything else arises. Fire is the origin of all matter; through it things come into being and pass away. Fire itself is the symbol of perpetual change because it transforms a substance into another substance without being a substance itself.³ "This world, which is the same for all, no one of gods or men has made; but it was ever, is now, and ever shall be ever-living (eternal) fire." "It is continuously flaring up in parts and in parts dying down."⁴ "Fire lives the death of air, and air lives the death of fire; water lives the death of earth, earth that of water. Heraclitus became famous as the "*flux and fire*" philosopher for his proverbial utterance: "*All things are flowing.*" He also said "*All is all and all is not.*"³ This implies that Heraclitus thinks of fire as a non-destructive; but merely transforming power. The process of transformation does not happen by chance, but is, according to Heraclitus, the product of God's reason -logos-, which is identical to the cosmic principles. Heraclitus' main teachings can be called the "*unity of opposites*". The unity of opposites means that opposites cannot exist without each other - there is no day without night, no summer without winter, no warm without cold, no good without bad.⁵ Heraclitus *also* argued that the main principal element in nature was fire, and among water, air and fire; **fire is assigned as the central element** controlling and modifying the other two and these two are just changing forms of fire.³ Therefore, the universe was postulated to be in a state of **Flux** or in a permanent condition of change as a result of transformation of fire.

Heraclitus summarized his philosophy as: All things are an exchange for fire.

IBN E SINA'S PERSPECTIVE OF FIRE:

Fire is a simple substance, which occupies a position in nature higher than that of the other three elements (Earth, Water and Air) - namely the hollow of the sublunary world, for it reaches to the (world of the) heavens. All things return to it. This is because of its absolute lightness. In nature it is hot and dry. The part which it plays in the construction of things is that it matures, rarefies, refines and intermingles with all things. Its penetrative power enables it to traverse the substance of the air; by this power it also subdues the sheer coldness of the two heavy cold elements; by this power it brings the elementary properties into harmony.¹ Fire which burns is not the element of fire as we see it. The element of fire can be present in green wood no less than fire. Whatever grows is the element of fire, but in another shape. Growth belongs to the element of fire.¹

This theory is most criticized for its contents in present scenario. But critics hardly think of the spirit of theory. They simply criticized its wording without context and relation in which it was proposed. The very first word which drawn maximum attention was simplest in this theory and we always put it for matter while it is for status. This word is supplied for elementary participation of the *Arkān* (elements) in origin and continuation of life.⁶

FIRE IN CONTEXT WITH ENERGY AND ELEMENT:

Nār (fire) stands for the matter which has been transformed into heat energy, whose ultimate source is the sun, whose energy is transformed into all kinds of energy in the universe. Sun is a huge atomic reactor whose energy is converted into chemical energy (matter) which is again transformed into heat energy. Thus the quantity of energy in the universe remains constant. The fire which is an energy, why was included in the list of elements could well be understood from the fact that the ancient philosophers observed that without fire (heat) the very existence of life is impossible. Each and every chemical reaction whether inorganic or organic through which bigger compounds are formed i.e. *kaun* – anabolism or from bigger compounds, smaller ones are formed i.e. *fasād* – catabolism, requires presence of heat (certain degree of temperature). In the process of anabolism energy is taken in, and in the process of catabolism the energy is given out. Likewise, the human body is a bigger compound composed of a large number of smaller compounds whose formation with earthy, watery and gaseous elements is impossible unless the heat is present there. Therefore it is obvious that due to indispensability of heat, the ancient philosophers called it as element to give more emphasis upon it. Moreover, if we take into consideration the law of transformation of matter and energy, we would certainly come to the conclusion that the fire is another form of matter and hence, there is no difference between matter and energy.⁷

Thus a very comprehensive account with respect to fire has been given by *Ibn-e-Sina* as under in *Kulliyat-e-Qanoon*...

The quality of fire is hot and dry. The aim of existence of fire in this universe is to give *nudj* (concoction) to the *mawālīd* and to produce lightness, to get mixed with elements and help the gaseous component get infused in the compounds so that the coldness of cold elements could be dissociated so that these two elements can exhibit temperament instead of quality,⁸ i.e. the fire is hot and dry. The aim of existence of fire in the universe is to give *nudj* (concoction) to the matter, to produce lightness in the matter, to combine with elements so as to make the gaseous component infused in the compounds and to normalise the coldness of cold elements so that the elements may come together to form compounds and hence attain a temperament from their quality.

SUN AS THE ULTIMATE SOURCE OF ENERGY:

Sun brings heat and light energy to the earth. Without it, we wouldn't exist. Deep in the core of the sun, hydrogen atoms react by nuclear fusion, and produces a massive amount of energy that streams in all directions at the speed of light (i.e. 186,000 miles per second). Energy travels 93 million miles to earth in just eight minutes. We consume energy in dozens of forms. Yet virtually all of the energy we use originates in the power of the atom. Nuclear reactions energize stars, including our Sun. The energy we capture for use on Earth comes largely from the Sun or from nuclear forces local to our own planet. We use many different forms of energy here on earth, but there's one thing: almost all of them originate with the sun, not only light and heat (thermal) energy. According to the law of conservation of energy, energy can't be created or destroyed, but can change its form. And that is what happens with energy from the sun - it changes into various different forms: Plants convert light energy from the sun into *chemical energy* (food) by the process of photosynthesis. Likewise, animals eat plants and use that chemical energy for all their activities; similarly, heat energy from the sun causes change in weather patterns that leads to the production of wind. Wind turbines then convert wind power into *electrical energy*; Hydroelectrical energy is the electrical energy that is produced from moving water, and water flows by heat energy from the sun that causes evaporation and keeps the water moving through the water cycle. Right now, much human activity uses energy from fossil fuels such as coal, oil, and natural gas. These energy sources are created over very long periods of time from decayed and fossilized living matter (animals and plants), but the energy in that living matter initially came from the sun through photosynthesis.⁹

DISCUSSION:

The above mentioned knowledge regarding 'Unşur-e-Nār with respect to Arkān Arba'a, quality of 'Unşur-e-Nār, its source and its action has been introduced in the light of classical Unani literature. Now it will be discussed in the context of human body in the light of today's scientific knowledge about the energy.

THERMAL ENERGY AND HUMAN BODY:

Innate heat (*Harārat-e-Gharīziyya*) and innate fluid (*rutūbat-e-gharīziyya*) both are transferred to offsprings from parents and remain till death. The energy i.e. ATP which we get from the food (through electron transport chain) is basically the converted form of thermal energy that plants absorb and store as chemical energy and we eat those plants and this chemical energy (which releases ATP through glycolysis, glycogenesis etc.) Helps in maintaining the level of this inherited *Harārat-e-Gharīziyya*, which is necessary to maintain life.

Continuous never ceasing activity is one of the laws of life, to be alive means to be active. Since it is physical law, that work requires the expenditure of energy, and since living organisms, cannot create energy, the body must have access to some outside source of energy. All animals including man get their energy from chemical energy present in foods. Food derive its potential energy from the radiant energy of the Sun through the photosynthesis so that the potential energy stored in food molecules can be used for performing the work of the body. Potential energy is inactive energy in the sense that no activity, no movement is responsible for it.

To get transformed, energy must be released i.e. from potential to kinetic energy. Kinetic energy, in contrast, is active energy that exists because of movement of particles, and not because of attraction between them. Living things accomplish this by a process called catabolism. Catabolism consists of a series of chemical reactions made possible by number of organic catalysts called enzymes. And these are oxidation reactions, compounds with molecules containing many carbon atoms are split into the smaller molecular compounds with fewer carbon atoms, and eventually carbon dioxide is formed. In most of the reactions involved, energy is released. Some of it is dissipated as heat, some as mechanical energy, used for performing physiological work.

So, fire in life forms is a hot, gaseous element which does not have intensity, nor the ability to burn, does not produce infection and nor gets metabolised, which is attributed to the body at the time at which life comes into existence and it separates from the body when life ceases.²

CONCLUSION:

‘Unşur-e-Nār (fire) basically represents energy and energy can neither be created nor destroyed. It just keeps changing its form i.e. the *quality* (hot and dry) remains same but the form in which it is stored changes continuously. Everything that exist has energy stored in one form or the other such as in coal, in petrol, in LPG and even water which are all different states of matter but all of them have energy stored.

The energy, in whichever form it is stored (i.e. potential or kinetic) in the human body which is released in the form of ATP through electron transport chain represents fire which may be dissipated as heat or utilised

for physiological or mechanical work. The source of all the energy originating in this universe is Sun which provides heat and light energy to the earth which is then transformed into other forms of energy.

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