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Sadr ud-Din Shirazi's Anti-materialist Hylomorphism: A Critical Analysis

Syed Amir Raza
Independent Researcher
8-Zafar Colony, Samanabad, Lahore, Pakistan
Email: *mehwar@yahoo.com*

Abstract
The Persian philosopher Sadr ud-Din Muhammad Shirazi, also known as Mulla Sadra, developed his hylomorphism on the basis of his interpretations of Aristotelian notions of form, matter, actuality, and potentiality. This paper presents Sadra's hylomorphism, focusing on the main principles that he used to identify the hierarchy of different layers of form and matter in a composed object. In this regard, the forms and matters identified by Mulla Sadra in his two examples of a chair and a human being are graphically presented in the form of hylomorphic models for easy understanding. The paper also explains how Mulla Sadra's hylomorphism may be applicable in particle physics by identifying form and matter in small-scale particles. Furthermore, the paper explains how forms in a human being gradually develop from the vegetative form of his body up to his rational soul and what kinds of forms continue to serve as their matters during this gradual development. Lastly, the paper shows how Sadra's hylomorphism is highly anti-materialist despite its compatibility with particle physics. The anti-materialism of his hylomorphism not only shows that the forms of different objects do not originate from their matters but also shows that different parts of an object existentially subsist through the last form considered as a whole object.

Keywords: Hylomorphism, Form, Matter, Actuality, Potentiality.

Introduction

Sadr ud-Din Muhammad Shirazi (1572-1641) was born into a rich and politically influential family in Shiraz, Iran. According to the traditions at the time, he received his early education at home in Shiraz from private teachers. He then moved to Qazvin in 1591 and finally to Isfahan in 1597 to pursue institutional education in philosophy and theology. After completing his education, he preferred to pass a solitary life in a small village named Kahak near Qum where he remained busy in mystic and spiritual activities until 1612 when the Governor of Shiraz invited him to teach philosophy at his newly established school in Shiraz.

At the time of Mulla Sadra, four intellectual trends were dominant in the scholarly environment of Persia. The first was Aristotle's peripatetic philosophy advocated by Avicenna, the second was Suhrawardi's illuminationist philosophy, the third was the Muslim scholastic philosophy and the fourth was Ibn-e-Arabi's gnostic ideas. Mulla Sadra benefited from all these four intellectual trends in order to develop his onto-cosmological philosophy. This is the reason Aristotle's metaphysics has some influence on Sadra's philosophy. Aristotle's metaphysics especially his hylomorphism had far-reaching influences on medieval philosophy (Simpson 2023) as well as on the philosophies of Muslim scholars like Farabi, Avicenna, Averroes etc. However, Aristotle's hylomorphism faced a decline in the wake of the Scientific Revolution (Simpson 2023, 1) and onwards. In recent years, however, philosophers' interest in hylomorphism has reawakened (Simpson 2023, 10) mainly due to a loss of confidence in microphysical reductionism (Simpson 2023, 12).

Aristotle's hylomorphism and associated notions are interpreted by different philosophers differently (Simpson 2023, 6). Mulla Sadra (1990, 2:32-37) also interpreted Aristotelian notions of form, matter, potentiality and actuality in his own way to work out his own hylomorphism within the framework of his philosophy of the "primacy of being". He (1990, 2:32) interpreted the notion of form by extracting what is common among different interpretations in vogue at his time. Similarly, his concept of matter is also quite different due to which his hylomorphism turns out to be extremely anti-materialist. In this paper, the term "matter" from now onwards will always be used in the sense defined by Mulla Sadra unless otherwise specified.

This paper's Section 2 presents Mulla Sadra's concepts of form and matter. Section 3 provides a brief discussion concerning criticisms on contemporary hylomorphism and how Mulla Sadra's ideas may defend hylomorphism from objections of such criticisms. Section 4 discusses how Sadrian concepts of form and matter may possibly be applied in particle-physics by finding out the form and matter of small-scale particles. Section 5 discusses how these concepts may possibly be applied in biology to identify different forms in human beings and their corresponding matters. Section 6 explains the anti-materialist approach of Mulla Sadra's hylomorphism and shows how he argues that the origin of all forms lies in their specific existences rather than in their matters.

Form and Matter by Mulla Sadra

According to Mulla Sadra (1990, 2:33), the form of a composed object is all that due to which that object is actualized as that object. But matter, according to him (1990, 2:33), is an object's that aspect which has the potentiality of receiving the actuality of that object. For instance, some wooden pieces may be considered to be the matter of a wooden chair due to having the potentiality to receive the actuality of the chair as well as of many other objects. These pieces begin to receive the actuality of the chair when the chair is made. The specific shape of the chair may be considered as its form in this example. This means Mulla Sadra defines form on the basis of the notion of actuality by maintaining that form in an object is that actuality due to which that object is considered as that object. On the other hand, Sadra defines matter on the basis of the notion of potentiality by maintaining that matter in an object is that which has the potentiality of that object as well as of any other possible object. From the term 'actuality', Sadra means the occurrence of reality. Hence, actuality represents reality. On the other hand, Sadra takes the term 'potentiality' as the possibility of some real occurrences. Hence, matter in his view represents only the possibilities of realities.

After defining form and matter, Mulla Sadra (1990, 2:33) further states that something considered to be the matter of a form may have a form of its own too. For instance, every wooden piece, in its own capacity, has its own form and its own matter. Its form is the specific shape it has whereas its matter is the wood material because it is the wood which has the potentiality of receiving the form of every piece. Similarly, when the wood material is considered in itself, its form is the aggregate of its essential properties due to which it is recognized and actualized as wood. So it has a form of its own while basic constituents like water and soil are its matter. In this manner, he (1990, 2:33) maintains that these

constituents, acting as the matter of wood, have the potentiality of receiving the form of the wood. But they are not matter due to being water or soil because in this capacity they have their own forms.

In this way, there may be many layers of reality in a composed object according to Mulla Sadra such that each layer acts as matter for the next higher layer just because the lower one has the potentiality of receiving the higher one. But on its own level, every layer has its own actuality which is its form. Looking at the object in this way, it follows that matter (1990, 2:33) is not an attained reality whereas what is actually attained is the form. Matter is merely a description of the potentialities present in a form. For instance, wood in the above example has the potentiality of a chair. But it may have the potentialities of many other objects too such as a table, a door or a cabinet. So, wood as matter has only the potentialities of all these objects. In other words, wood may be considered as the matter of all these objects but in this perspective it is not an attained reality because no object is attained at the level of wood. This does not mean that wood is not an actualized reality. Of course, it is an actualized reality but only when it is considered as a form of wood. So it is the form of wood due to which it is an actualized reality. As far as it is the matter of some objects, it is not an actualized and attained reality. In short, Mulla Sadra considers matter as an unattained reality.

From here it also follows that wood in the above example may be considered in two ways. One is its role as matter when it is considered as having the potentialities of different objects and the other is its role of form when it is considered as having the actuality of its own form. Thus Mulla Sadra points out this double role of each form in his example of a chair. The only form that does not have this double role is the form of the chair itself which acts only as a form but does not act as matter of some other form as far as the chair itself is concerned. Mulla Sadra terms such a form as the last form and considers this highest form as the master of the lower ones (1990, 2:36). So, the reality and the actuality of an object are always due to its last form rather than due to its matter (1990, 2:34). Hence, a chair is a chair due to its own specific form rather than due to wood.

In short, a composed object may consist of several layers of forms lying over each other such that each lower form acts as matter for the higher one according to Mulla Sadra (Eshkevari 2007). Different layers, each having a dual role of form and matter as identified by Sadra (1990, 2:33), are shown in the following figure for further clarity:

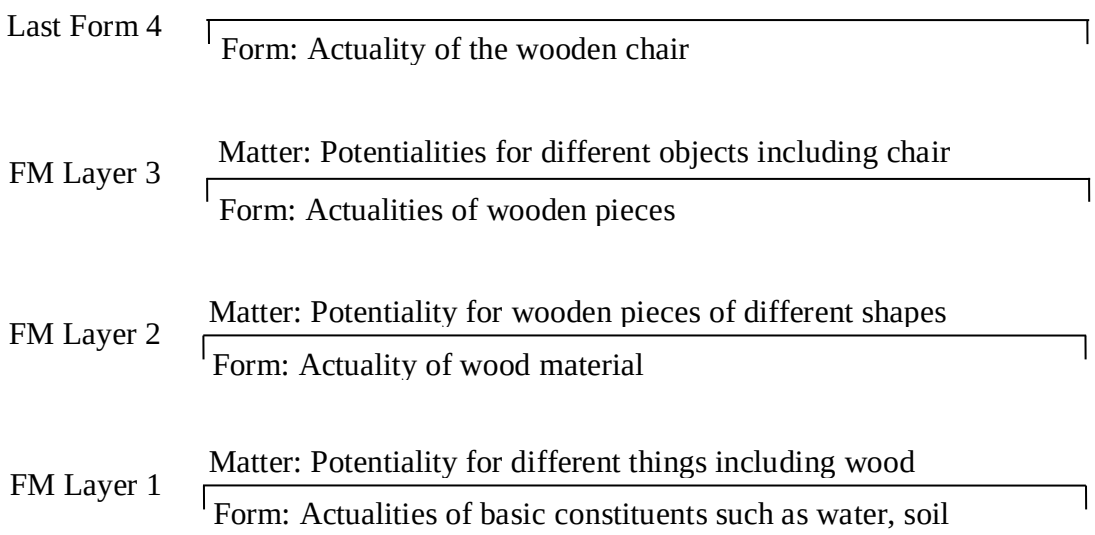

Figure 1: Form-matter FM layers identified in a wooden chair starting from basic constituents.

As this figure shows, an object may have many layers of forms but it is actualized and recognized by its last form (1990, 2:35). However, every form in an object has a separate actuality of its own and thus may have separate meanings specific to it.

After identifying these form-matter layers, Mulla Sadra (1990, 2:33) further claims that the continuity of these layers ends at prime matter which is at the base of all the layers. But the prime matter must not have any tangible form of its own and must be merely a pure potentiality (1990, 2:33). It is because if prime matter were with a form, the potentiality of its form would be held by some other prime matter ad infinitum (1990, 2:33) whereas indefinite continuity of matters in an object is not possible (1990, 2:170-171). Thus, prime matter cannot have any actuality except the actuality of pure potentiality which means it is merely a set of possibilities. In all this scenario, Sadra claims (1990, 2:33) that matter is an indeterminate and obscure aspect of a thing. Only some form determinates it (1990, 2:33). Since, prime matter is without any form, it is considered by Mulla Sadra (1990, 2:241) at the extreme level of indetermination and obscurity because it is a set of pure potentialities that may possibly actualize.

In short, the way parts are organized and arranged into a whole and the way such an arrangement may provide different meanings may be a basis to identify its last form. However, such a description is true only for objects like a chair, a cube or a sphere which are actualized due to

their shapes or structures because a chair is a chair due to its specific shape. But in materials like water, wood, sugar, oxygen etc., shapes are not considered as their last form because their shapes have extremely weak stability. Due to this lack of stability, they may have continually changing shapes. As a result, it is not pragmatic for humans to name all of them separately on the basis of their shapes. This is the reason water, for instance, is not considered as water due to any of its adopted shapes. Rather, the last forms of these materials are the aggregate of their physical properties through which they are recognized and due to which these materials are actualized. However, Sadra's concept of form is not restricted only to shaped objects and non-shaped materials. He (1990, 2:33) also speaks about vegetation, animals and humans as having their own last forms, with the last form in the case of humans being a rational soul in his opinion (1927, 132). Hence, Sadra's conception of form is extremely universal and generalized. It can be any kind of actualized reality recognized by human minds through sensory images, intellective meanings and other understandings (1990, 2:36).

As far as matter is concerned, matter of all such forms is always those lower forms which have the potentiality of receiving these higher forms. In this way, matter is not a reality just because it is merely a potentiality of a reality and potentiality of a reality, considered as potentiality of a reality, is not a reality in Sadra's opinion (1990, 2:34). On the other hand, he (1990, 2:34) clearly states that all the composed realities are due to some form because it is the form which is the actual aspect of every object. From all the above discussion, it follows that this world is a world of different forms only whereas matter is simply a relative term used to address a composed object's lower form which has the potentiality of receiving a higher form.

Contemporary Hylomorphism and Mulla Sadra

With the rise in interest in Aristotelian metaphysics in contemporary times, the interest in hylomorphism has also increased. Many contemporary philosophers have made different attempts to provide hylomorphic information, such as Fine (1992, 2003, 2008), Johnston (2006), Koons (2014), Koslicki (2018), and many others. However, contemporary hylomorphism has faced criticism from some philosophers. One such critique is that contemporary hylomorphisms lack clarity in their basic notions such as matter, form, potentiality and actuality (Fiocco, 2019). Due to this lack of clarity, hylomorphism is considered an extremely complex issue by some philosophers (Austin, 2020). This lack of clarity and resulting complexity is due to the

appearance of many different interpretations of the Aristotelian notions. Moreover, contemporary hylomorphists are unable to establish a clear-cut relation between form and actuality on the one hand and between matter and potentiality on the other. This lack of clarity is also due to the limited applicability of these interpretations. For instance, a mereological definition of form restricts it merely to the concept of a structure and to consider the form merely as a structure is not correct even according to Aristotle (Marmodoro, 2013). Such a concept of form is difficult to apply in the case of organisms where the applicability of forms goes beyond the realms of a physical structure.

As far as Mulla Sadra's hylomorphism is concerned, he defines the concepts of form and matter in a universal manner by linking form to the broad concept of actuality and matter to the broad concept of potentiality. The ideas of actuality and potentiality are so all-encompassing that they can be applied to various realities whether physical, metaphysical or even quantum. This is the reason that his definition of form and matter are so universal that every kind of physical object/entity can be covered by his hylomorphism. He acknowledges the universal nature of his definition of form by stating that he based his definition of form on that aspect which is commonly inherent in all conceptions of form in vogue at his times (1990, 2:32).

Another objection against contemporary hylomorphism is regarding the composition of non-living objects. This objection is based on van Inwagen's (1990) conclusion that material objects are either mereological atoms or living objects (Sider 1993). Therefore, according to van Inwagen, there are no whole non-living objects like chairs, tables, stones etc.. Such an objection does not arise if Mulla Sadra's conception of form is understood as a set of essential meanings appearing in the mind (Rahman 1975, 45). According to Mulla Sadra, meanings, understandings or sensory images etc. are first perceived and conceived in the human mind (1990, 2:36). Then, after realizing all such mental entities, the human mind conceives what actually exists in the outer world and what does not. What exists in the outer world in its conception is termed as actualities. Among these actualities some are essential to an object and some are non-essential or accidental. Due to the essential actualities of an object, an object is considered as that object and a set of such essential actualities are termed as the last form by Mulla Sadra while that object may also have some lower forms which act as matter.

In short, every form is actually a set of mental perceptions and conceptions that are conceived by human minds as existing in the outside world. The same would be true for any mereological atom as such an atom may also have some meanings such as being the smallest and not having any components. Hence, in this respect all forms are on an equal standing whether that of a mereological atom or of any other bigger object. So when Mulla Sadra considers a form separate and additional to its lower forms, this separation and addition is a conceptual one. Such a separation is very evident because it is clear that the meanings associated with the whole are not present in the form of any of its parts. Since the whole has an additional layer of conceptual meanings over the meanings associated with the parts, it is evident that the actuality corresponding to these additional meanings would also be additional to the actualities of the parts. Hence, every higher form is additional to the lower one. This conceptual addition makes a computer a computer and makes a table a table even if they both, having the same mass, would have the same number of mereological atoms inside them.

Thus, whenever different particles and parts combine together to make a new whole, a new set of meanings is added. All these layers of meanings are conceived to be present in the outside world in the same way as the mereological atoms' meanings are conceived to be present. So, the last form of a chair, for instance, is conceived to be existing in the external world on the same basis on which the form of mereological atoms present in the chair is conceived to be existing.

Another objection against contemporary hylomorphism, related to the one above, is regarding the lack of clarity about the nature of cohesion or bonding among different parts of a whole (Robinson 2014). The extreme standpoint of mereological nihilists does not admit the significance of any bond among the parts. Opposed to this, the extreme standpoint of mereological universalism says that any two objects no matter how far apart they are, make an object. Both these extreme standpoints ignore the true role of form in making an object. From Sadra's standpoint it is not the physical bonding or its intensity which makes an object that object. Rather, it is the form which makes an object that object. Two remotely located objects may make a separate object too if there is a form conceptually separate and additional to their individual forms. Such a form may keep both of them together in an actual and essential relationship. Therefore, it is not the cohesion or physical bonding of different wooden pieces caused by nails and glue that make a chair a chair. Instead, it is the essential structural

relationship among the wooden pieces which make a chair a chair and which is the form of the chair.

Form and Matter in Particle Physics

The hylomorphic model of a wooden chair proposed by Sadra starts from the lowest form of wood's basic constituents which were water and soil according to the science of Sadra's time. To make this model compatible with today's microphysical science, the lowest layer in a chair should be related to the small-scale particles discovered by particle physics. Therefore, Sadra's notions of actuality and potentiality may be applied initially to a molecule of one of wood's constituents say a water molecule in order to determine whether form and matter can be identified in such small particles or not.

A water molecule is a water molecule due to its actuality as a chemical unit which is the source of all of its specific chemical properties. Hence, its this actuality is its form. On the other hand, its constituents i.e. the electrons, H-nuclei and O-nucleus provided by hydrogen and oxygen gases make up its matter because they collectively have the potentiality of receiving its form. But each of these constituents has its own form in its own capacity. Therefore, there are two layers of forms in a water molecule: the upper one being that of a water molecule and the lower one being those of the constituent particles such as electrons and nuclei.

Different meanings present in a water molecule may be said to originate from these two layers. For instance, the atomic weight of a water molecule may be considered to be due to the lower layer. However, the typical chemical properties of a water molecule originate only from the upper layer which is its last form.

Similar is the case with atoms. For instance, consider a typical Oxygen atom which has eight neutrons and eight protons in its nucleus with eight electrons around it. These constituents merely have the potentiality of the form of an Oxygen atom and thus may be termed as the matter of an Oxygen atom. However, the form of Oxygen atom is a separate chemical entity having a set of its own specific chemical properties and this form is conceptually an additional layer to the layer of the forms specific to its constituent particles.

In the same way, the form of a composed bigger sub-atomic particle like a proton would consist of those distinctive features due to which it is a proton such as having positive charge and other properties specific to it.

Hence, it has an additional layer of actualities which are conceptually distinct from the actualities of its constituents. Since a proton is said to be composed of one down quark, two up quarks and gluon fields (Cottingham and Greenwood 2001, 21-22), these particles and fields may be considered as its matter because they all collectively have the potentiality of receiving its form. However, this does not imply that they do not have their own forms at their own level.

Although quarks are never found in isolation (Griffiths 1987), but even then every quark and every gluon field has its own actuality and thus its own form. For instance, a down quark has its own actuality and thus its own form and so does up quark. On the other hand, a gluon field has its own actuality and its own form. Same is the case with other elementary particles/fields like leptons, anti-matter particles, bosons etc. in the Standard Model (Griffiths, 1987) because each of these particles/fields has its own actuality and thus its own form.

From a general hylomorphic standpoint, there are, however, some difficulties in determining form at this sub-micro level of elementary particles. For instance, some quantum systems like electrons and light waves have a dual character of wave and particle. Due to this particle-wave duality, it appears difficult to determine a form for such an entity. Similarly, it appears difficult to assign a form to a quantum field. Moreover, there are a lot of under-determinations and uncertainty in measurements, especially when the particles are considered beyond a certain set of extremely minute length scales and at very high energies (Williams 2023).

In the wake of these difficulties, it appears that the conceptions of form and matter cannot be applied to these entities of particle physics. However, this is not the case with Sadra's hylomorphism because his definition of form and matter as well as his notions of actuality and potentiality are so universal that they can be applied to all such entities despite the involved difficulties. Therefore, forms of micro particles/fields may be identified through all those actualities due to which these entities are considered as those entities.

Since, particle-wave duality is an actuality of circumstantial changeability, the form of an electron may be identified by including this changeability into the set of its properties such as having a negative charge etc. Hence, it can be said that the form of an electron includes the actuality of circumstantial changeability such that it exhibits the

properties of a particle in such and such circumstances whereas it exhibits the properties of a wave in such and such other circumstances.

Similarly, assigning a form to a quantum field in terms of Sadra's hylomorphism is also not very difficult. From Sadra's standpoint both particles and fields come under the term of actuality and thus both have their own forms determined according to the properties and features actualized in them. For instance, the form of the Higgs field may be said to consist of its different features such as being a scalar field and having a non-zero average value in vacuum. Therefore, all such features and meanings constitute its form because everything due to which an entity is actualized is a form according to Mulla Sadra.

In the same way, quantum particles/fields, no matter how under-determined they are, cannot be considered as not having any actuality because they would otherwise be considered as non-actualized. Since they are after all some kind of actualities, they have a form of their own. Their form is the aggregate of all those features due to which they are considered as actualized. Even if a quantum particle is described by a wave function that maps positions to probability amplitudes, that description may be counted as a part of the form of that particle. Hence, the basic point is that the actuality of the quantum systems is required to be understood in terms of Quantum Field Theory rather than in terms of classical mechanics at the time of determining their forms. By doing so, Mulla Sadra's conception of form can easily be associated with the quantum entities of particle physics too.

In short, all these elementary particles and fields have their own forms. But what would be their matter if these elementary particles are analyzed from Sadra's hylomorphic standpoint? Their matter may be identified by identifying the entities which have the potentialities of receiving their forms. But the very definition of these elementary particles posits that they do not have any constituents which may possibly receive their forms. As far as this is true, they would have only a single layer of form which would also be their last form and thus there would not be any lower form which may act as matter for their form. In the absence of such a lower layer of form, how can their matter be identified? Since all these single-layer forms are incipient and every incipient must have its potentiality in some matter, there must be a matter of these forms too.

In the absence of any other matter, their proximate matter must be something that does not have any form of its own in order to close the continuation of this hierarchy of form-matter layers at some point. Such a formless matter is what Mulla Sadra terms as the prime matter which is pure potentiality (1990, 2:33) having an extreme degree of indetermination (1990, 2:241). Here it may be posited that the under-determination (Williams 2023) found at the level of elementary particles and quantum fields may be due to the effect of the indetermination of their proximate matter, i.e. prime matter.

This claim regarding prime matter, as mere potentiality at the base of all objects, is different from a somewhat similar claim made by Heisenberg (1958, 160) when he compared the situation of the elementary particles with Aristotelian concepts of form and matter. He claimed that Aristotle's matter, which is mere potentiality, is the energy that gets actuality when the elementary particles are created. Sadra's position is somewhat different from this because Sadra (1990, 2:33) considers prime matter as pure potentiality that does not have any form. But contrary to this requirement, energy also has a form of its own because it has an actuality of its own. Being so, it cannot be the formless prime matter of Mulla Sadra.

From the above discussion, it may be concluded that the most initial forms present within an object like a chair are those of elementary particles/fields such as electrons, quarks, gluon fields etc. Hence, by applying Sadra's hylomorphism to the small-scale particles, the form-matter layers identified by Sadra (1990, 2:33) in a wooden chair may be extended down to the level of elementary particles as shown in Figure 2 below:

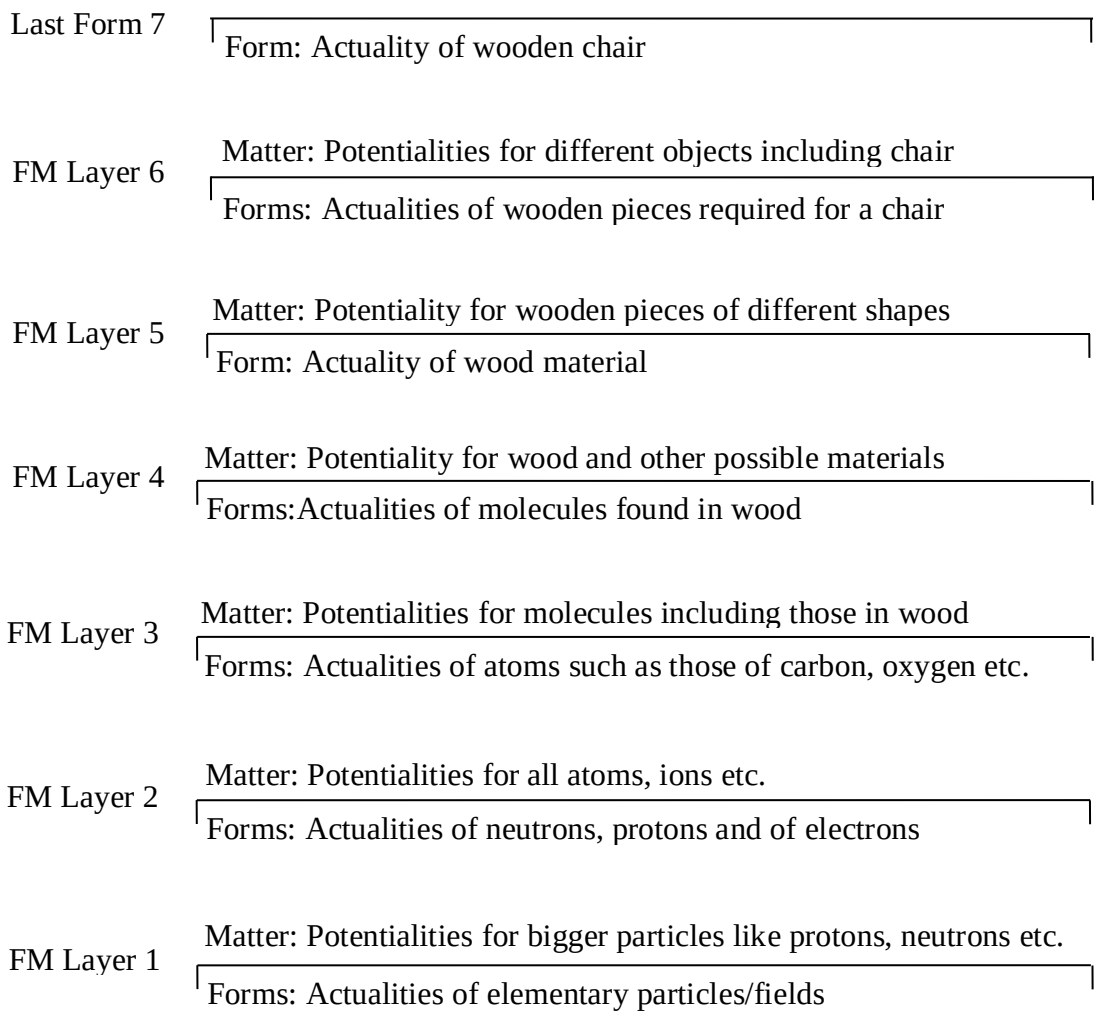

Figure 2: Form-matter FM layers identified in a wooden chair starting from elementary particles.

The above-mentioned applicability of Sadra's form down to the level of small-scale particles shows that the form of a small scale particle may be differentiated from its matter. Such clear differentiation had been missing not only in the atomic and molecular theories of modern science but also in the latest theories of particle physics. After applying this hylomorphism to these small-scale particles, it also becomes clear that these particles, having a form like those of bigger objects, do not have any special status that reality could be reduced to them. Their only specialty is that they are the most initial forms and thus may be termed as the matter of all the upper forms because they have the potentiality of

receiving the forms of the bigger particles, and these bigger particles, in turn, have the potentialities of receiving further bigger particles until the forms of the sensible objects appear to humans. So every form, whether big or small, has its own individual status and its own individual reality which cannot be reduced to nothing as is done by the physical reductionists.

Form and Matter in Biology

In addition to the form-matter layers in a chair, Mulla Sadra (1990, 2:36) also identifies four forms for a human being. The first is the extended form of mere body, the second is the vegetative body having the capabilities of digestion, growth and reproduction. The third is the form of being an animal as a source of senses and intentional movements and the fourth is a human form as a source of rationality. These four forms may be used as a guide to apply Mulla Sadra's hylomorphism in biology.

The mere extended body may have the potentiality of receiving the form of a system of its vegetative capabilities such as growth and reproduction. Without such a body, such a vegetative system cannot be actualized. This is why the mere body can be considered as the matter of such a system. Similarly, a vegetative body due to having a vegetative system, has the potentiality for the growth of motor and cognitive organs in order to get actualization of the animal soul. Therefore, a vegetative body with motor and cognitive systems can be considered as the matter of an animal soul. In the same way, only an animal soul with sensory intuitions has the potentiality to receive the form of a rational soul because instances of sensory intuitions are necessary to get rationality. Thus, an animal soul can be considered as the matter of a rational soul, such as that of a human being.

Taking into account their matters in this way, the four forms identified in a human being by Sadra (1990, 2:36) may be incorporated into a hylomorphic model, similar to that of a chair as shown in Figure 3 below:

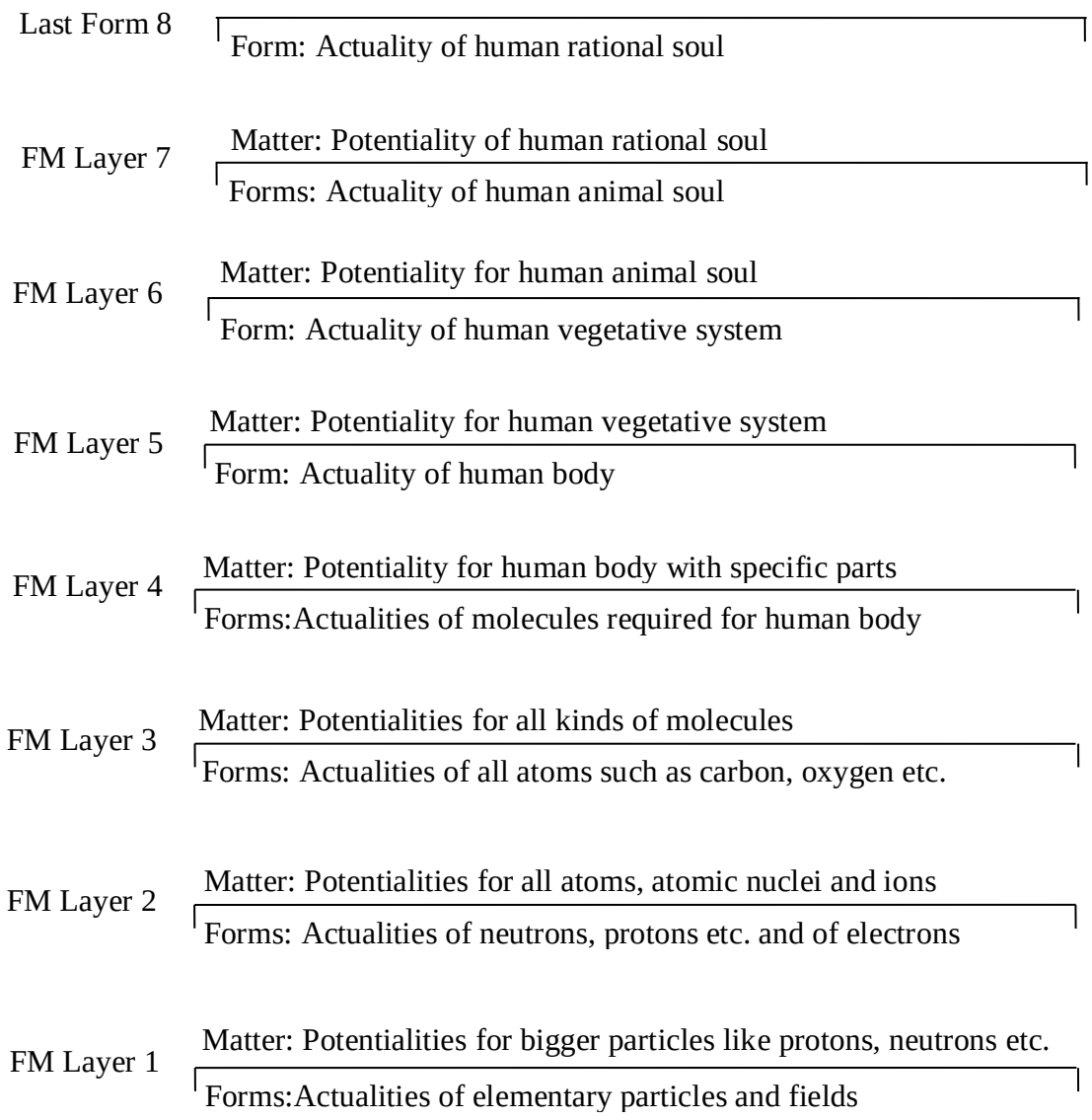

Figure 3: Form-matter FM layers identified in a human being starting from elementary particles.

In the perspective of the gradual physiological development of a human body, it can be claimed that the last form of a human being develops gradually from one stage to another starting from a vegetative form in the mother's womb where this form remains the last human form until physical birth. After birth, the last human form actualizes initially as an animal soul. Subsequently, the last human form actualizes as a human rational soul when the individual begins to think rationally. However, all

the lower forms continue to perform their functions even after the actualization of a higher form.

The above-mentioned applicability of Sadra's form ranges from the sub-micro level particles/fields up to the level of vegetative systems and up to the mental and soul levels showing the extensively universal applicability of Sadra's hylomorphism not only in physics and biology but also in psychology.

Anti-materialism in Sadra's Hylomorphism

The above account of Mulla Sadra's hylomorphism shows that what actually exists in the outer world appears to human minds as different forms ranging from the forms of elementary particles/fields up to those of bigger objects like a chair, a table, a horse, the Moon, the Sun and the galaxies. All these forms constitute reality and no form among them has a special status in terms of the origination of this reality because every lower form acting as matter in an object only has the potentiality of receiving forms. They are not the origin of the higher forms. This is the reason Mulla Sadra (1990, 2:129) clearly states that matter, due to having merely the potentiality or just the possibility of an actuality, cannot be the origin of that actuality. Matter is not even an attained reality in his opinion as it is merely a potentiality or a possibility of a reality, and the possibility of a reality cannot be a reality.

Moreover, all forms ranging from elementary particles up to bigger objects consist of meanings. In having these meanings, all these forms are on equal status. In this way, the forms of elementary particles or mass they provide to composed objects have no special significance in terms of the origin of the forms because all elementary particles' meanings including mass are mere meanings like those present in other forms. All these meanings, as meanings, have equal status and significance in terms of the origin of the reality.

But all this does not mean that the forms are not dependent on their matters for getting actualization as is also obvious. Mulla Sadra (1990, 2:34) clearly admits that a form depends on its lower form for getting actualization. However, this dependence is only due to the fact that every such dependent form needs something as its material cause that may receive it in order to be actualized (1990, 2:34). Hence, a chair needs some material such as steel, plastic or wood in order to get actualized. But this dependence of reception is not the same as the dependence in terms of the origin of the form.

Hence, the form of the chair does not originate from the wooden pieces because meanings associated with the form of the chair are not found in any of the wooden pieces. These pieces merely have the potentiality of receiving this form and they receive this form when the chair is made. Similarly, the form of wood, i.e. the aggregate of its essential properties, being additional to its matter, i.e. the hydrocarbon and water molecules, does not originate from these molecules.

In the same way, the constituents of a water molecule, having only the potentiality of receiving its form, are collectively its matter. However, from Sadra's standpoint, they cannot be the origin of its form because neither of them has the chemical properties that a water molecule, as a separate unit, possesses. The same is the case with the constituents of a proton i.e. elementary particles/fields. As its matter, they cannot be the origin of proton's form. Finally, the prime matter that is at the base of all the forms of the world is not a reality in Sadra's opinion because it is pure potentiality. Being a potentiality and a possibility, it cannot be a reality. Hence, matter, as matter, is not a reality and thus cannot be the origin of any other reality.

Like the forms of non-living objects, the forms of organisms also do not originate from their matter, according to Mulla Sadra. Hence, the human soul, consisting of mental phenomena, does not originate from the human vegetative body. For instance, sensory intuitions actualized in a man do not originate from his body or from his brain. Rather, his vegetative body including his nervous system, acting as matter, only has the potentiality to receive sensory intuitions and receives one when required conditions such as stimulation of the senses, are fulfilled (1990, 8:69).

In short, matter only receives the form. It cannot be the origin of any form. The origin of every form must, therefore, be *something* else and this something is nothing other than the "real being" or "real existence" of that form according to Mulla Sadra (1990, 2:36) if the words "being" and "existence" are taken as synonymous. Mulla Sadra's real being or real existence is something like the thing-in-itself or noumena of Kant (1929) with the difference that Kant (1929, 294-295) says that it cannot be reckoned among possibilities nor as impossible whereas Mulla Sadra (1990, 1:60) considers it as existing in reality in the external world such that its reality is a self-evident fact which does not require any proof. Both agree that it is essentially unknowable through the senses. But

according to Sadra knowledge about the issues accidental to an existent, as an existent, may be obtained (1990, 1:24) making further knowledge about the real existence possible. While real existence is unknowable through the senses, the form is among the meanings which come into human minds through the senses according to Mulla Sadra (1990, 2:36).

Due to the origination of all forms from real existence, all cause-effect processes occur at the level of real existence according to Mulla Sadra (1990, 2:287-298). This is the reason he (1990, 2:213-214) considers some real existence as the real actualizing cause of the real existence of every form. This is true whether such actualization takes place through the synthesis of smaller forms into a bigger one or through the disintegration of a bigger form into smaller ones. The causes considered by modern science and philosophy are not the real actualizing causes according to Mulla Sadra (1990, 2:213). Such causes are considered by Sadra (1990, 2:213) merely as factors that bring the potentiality in the matter closer and closer to the actualization of a form. Hence, such causes are merely potentiality-intensifying causes rather than actualizing causes from Sadra's standpoint (1990, 2:213). So, the activities of a carpenter to make a chair only intensify the potentiality of the chair in the wooden pieces until the real existence of the chair is actualized by its actualizing cause. Actualizing causes of Mulla Sadra belong to the metaphysical world of Platonic Forms (1990, 2:63). Therefore, understanding forms and their specific hidden existences may possibly open the way to knowledge about the metaphysical world which is creating this physical world according to Mulla Sadra (1990, 2:63-64). Syed (2008, 144-166) further explained these actualizing causes under the term of 'existential causes' while explaining the potentiality-intensifying causes under the term of 'preparatory causes'.

Since, every form originates from its own existence and there may be many forms in an object, an object's existence is a composite of existences of all the forms including the last form. But this composite existence is considered as the existence of that object with reference to its last form. In this way, this existence is the source of unity of that object because existence and unity are essentially one according to Mulla Sadra (1990, 2:89). So, a chair is a unit due to its existence, but it also has an aspect of multiplicity because it is also an aggregate of different forms. Sadra's these ideas may provide a lead for dissolving the challenge that modern-day hylomorphism is facing in explaining the unity of a material substance as pointed out by Simpson (2023, 13).

After showing that forms do not originate from their matters, Mulla Sadra does not stop in his anti-materialist approach. While admitting that the lower forms act as material causes and provide the required conditions for the existence of an upper form, he (1990, 2:36) further claims that once the upper form gains existence, the lower layers existentially subsist through the upper one. The existential subsistence means that the lower forms existentially depend on the upper form because the existence of the upper form as a whole object includes them. So they keep getting the existence if the object continues to exist. Sadra's this claim appears to be correct in both the examples of the chair and human being.

In the case of the chair, it is quite evident that the wood and wooden pieces existentially subsist through the chair because they are parts of the chair. As long as the chair exists as a whole object, they also continue to exist. When the chair is broken into pieces, every wooden piece would existentially subsist through its own last form. Therefore, an object always subsists through the existence of its last form no matter how small it may be.

In the case of a human being, all lower forms, such as the body, vegetative system and animal soul existentially subsist through the existence of the rational soul, though, the rational soul is abstracted from the body. Therefore, all body parts remain alive as long as they receive existence through the human vegetative system, which in turn is alive as long as it receives existence through the human animal soul. Similarly, the human animal soul is alive as long as it receives existence through the human rational soul. At the time of death, when all of these three higher forms are no longer present, the form of a mere physical body would be the last form of the human body exposing it to all kinds of deterioration, decay, and rotting. So it is always a form through which matter gets determination and through which it gets existence according to Mulla Sadra.

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