

The Concept of Motion in Mulla Sadra's Natural Philosophy

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The concept of motion (*harakah*) lies at the heart of Mulla Sadra's natural philosophy. His theory of substantial motion (*al-harakat al-jawhariyyah*) exposes many issues of classical philosophy to a new examination in the light of this highly complex and original concept. By allowing change in the category of substance, Sadra goes beyond the Aristotelian framework followed by the Peripatetic and the school of Illumination (*ishraq*) in accounting for change in the order of nature. By arguing rigorously for existential change in the substantial structure of physical bodies, Sadra turns the classical concept of substance (*jawhar*) into a "structure of events" and a "process of change," and abandons the erstwhile idea that substance is the ultimate building block of things. As we shall see, substance, for Sadra, is not a "thing" or "entity" that exists in a state of constancy. It is neither a purely physical entity in the sense of being a gross, dark, material body nor a purely nonphysical and philosophical postulate. Hung between change and permanence, substance, like the rest of the world of nature, oscillates between existence and nonexistence, thus displaying the infinitely dynamic play of the cosmos. Seen as such, Sadra's cosmology contains no terms for dark and dead matter. On the contrary, in this perpetual play of the creative act of God, everything becomes a living witness to the Divine breath that has been blown into it.

In this regard, Sadra's cosmology, in which the concept of motion occupies a central place, is based on a qualitative understanding of the order of nature. For Sadra, nature cannot be reduced to pure quantity because every change in the world of nature, whether it is positional, spatial, or temporal, is the outcome of an "existential transformation" in the very substance of things.

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The constant and perpetual motion in the world of physical entities blurs the demarcation line between the physical and the non-physical, and Sadra gives particular attention to this point. Instead of seeing the physical world in terms of machines and quantitative equations, Sadra emphasizes the qualitative dimension. Nature displays an unmistakable vitality, for it is in the very constitution of the physical realm to be in an “existential journey” toward higher degrees of realization in the total hierarchy of being (*maratib al-wujûd*). In analyzing Sadra’s concept of nature and motion, it is thus important to keep in mind the teleological grounding of his natural philosophy. The following study will attempt to outline Sadra’s highly articulate notion of nature and motion on the one hand, and show the ways in which Sadra utilizes substantial motion to weave his natural philosophy and cosmology, on the other.

The Aristotelian Framework: Motion as the Actualization of Potentiality

Following the scheme of Aristotelian physics, Sadra begins his discussion of motion by explaining the meaning of potentiality. The word potentiality (*al-quwwah*)¹ is defined in several ways. The most common meaning is the power by which a living body carries out certain actions. In this sense, potency is tantamount to power (*al-qudrah*), which makes the motion or action of a physical body possible. A white dress, for example, could become a black dress because it has this potentiality in its physical constitution. However, it needs an active agent to realize this dormant potentiality. This, for Sadra, proves that a thing cannot be the source of change by itself, and there must be an outside factor to induce it to change. If the source of a quality or a nature (*ma`na*) in an entity were the thing itself, this would amount to an unchanging nature in that

¹Depending on the context, one could translate the word *al-quwwah* as potency also, and we will do so here especially when Sadra uses the word *quwwah* in the sense of “faculty” and “ability to do something” such as perception and motion.

The Concept of Motion in Mulla Sadra's Natural Philosophy entity. The real nature of possible beings, however, displays a different structure. Sadra takes this to mean that for every moving body, there is a mover outside the thing itself.²

The mover--moving relationship presents a hierarchical order as in the case of causality. The issue here, however, is not a mere causal relationship between two self-subsistent entities but rather a relationship of dependence. According to Sadra, whatever has priority and more intensity in existential realization (*ashaddu tahassulan*) is likely to be more a cause and less an effect. In this general sense, it is only God who is rightly entitled to be called the "cause" of everything. On the other hand, prime matter (*hayula*) has the least potentiality of being a cause because it is the weakest in existential constitution.³

After stating these preliminary points, Sadra begins his account of motion by saying that motion and rest (*al-sukun*) resemble potentiality and actuality. In the general sense, that is, according to the notion of passing from one place to another or from potentiality to actuality, they are both the accidents of being-qua-being. Accordingly, being-qua-being is not in need of motion and rest unless it becomes the subject of natural or mathematical order.⁴

An existing body capable of motion must bear some potentialities and some actualities. A purely potential being cannot have any concrete existence as in the case of the prime matter (*al-hayula*). The state of a purely actual being, on the other hand, cannot apply to other than God, Who has no potentiality to be

² Sadr al-Din Shirazi, *Al-Hikmat al-Muta`aliyah fi al-Asfar al-Arba`at al-Aqliyyah*, ed. M. Rida al-Muzaffar, vol 3 (Beirut: Dar Ihya al-Turath al-Arabi, 1981), vol. 3, part 1, pp.3-5. This reference is cited hereafter as *Asfar*.

³Ibid., p. 6.

⁴Ibid., p. 20.

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actualized. A being of such a nature should be a simple being which is self contained. According to Sadra's doctrine of being (*al-wujûd*), this refers ontologically to Being-qua-Being, and theologically to God. As for a contingent being capable of motion, it has the potentiality of gradual (*tadrijan*) transition from potentiality to actuality. Actuality in the case of physical bodies signifies their concrete establishment in the world of nature.

The temporal term "gradual" (*tadarruj*) in the definition of motion, however, has caused some problems for Muslim philosophers because the definition of movement as gradual transition from potentiality to actuality implies that this process occurs in time. Although this statement is acceptable in the ordinary use of language, the definition of time as the measure of motion leads to circularity. It was for this reason that some philosophers proposed a new definition, which contains no term of time. Relying on Ibn Sina, Al-Suhrawardi, and Al-Razi, Sadra rebuts this objection by saying that the meaning of "sudden", "gradual" and the like is obvious with the help of the five senses.⁵ Moreover, says Sadra, there are many clear and obvious things whose inner nature we can never fully know.⁶ Nevertheless, this explanation did not satisfy the theologians (*Mutakallimun*),⁷ and they offered the

⁵ Before Mulla Sadra, this idea has been stated also by Abu al-Barakat al-Baghdadi. Baghdadi states that since such terms as gradual, sudden, etc., which are inserted into the definition of motion, are more evident and comprehensible to our common sense, we can easily understand the meaning of motion by employing such time-related terms. Therefore, he concludes, there is no harm in using these terms in defining motion, notwithstanding the seeming circularity. Cf. his *Kitab al-Muṭabar*, vol. 2 (Hyderabad, India: Da'irat Ma'arif, 1357 F), vol. 2, pp. 29-30.

⁶*Ibid.*, p. 23.

⁷ Sadra developed his concept of substantial motion against the background of the traditional theories of natural philosophy as expounded by the Peripatetic philosophers, the *kalam* thinkers, and the school of Illumination (*ishraq*). We will touch upon the philosophers and the school of Illumination by way of

The Concept of Motion in Mulla Sadra's Natural Philosophy definition that motion is the realization of what is possible (*mumkin al-husul*). Since we see here a step from potentiality to actuality, this realization points to an act of perfection. Thus, it is said that motion is perfection for the moving body. However, this perfection is necessarily different from other types of perfection because it has no real existence other than "passing to another place." Understood

analyzing Sadra's critique. As for the *kalam* views of motion and related concepts, about which Sadra makes occasional remarks, we can only refer the reader to some of the sources for further discussion. The *kalam* views of motion are anchored in the central doctrine of atomism shared by the majority of the Asha`rites and the Mu`tazilites. Since the theologians conceived atoms as essentially indivisible and immutable, they were bound to define both qualitative and quantitative change as different compositions and combinations of the essentially unchanging atoms. This means that change and motion can be effected only by the alteration of the accidental attributes of the atoms, not in their essential constitution. To account for this, the Mu`tazilites developed the doctrine of *kawn*, that is, "to be present in a place" or "to exist in a position *in concreto*". The atoms always "exist" (*ka' in*) in a particular location. Motion is therefore nothing other than an atom's being (*ka'in*) in one position after being in another. This makes motion an accidental property of the atoms, and change and motion in the essential structure of atoms, which would amount to generation and corruption rather than motion proper, is unanimously rejected by the Mu`tazilites and the Ash`arites alike. In the same way, change or motion is allowed in only four categories: "where" (*ayn*), "position" (*wad'*), "quantity" (*kam*), and "quality" (*kayf*). Any change in the category of substance is denied on the grounds that this would lead, as Ibn Sina and Suhrawardi had also insisted upon, to the dissolution of the enduring substance. For the *kalam* views of motion and change, see Khayyat, *Kitab al-Intisar* (Beirut: al-Matba`ah Alkatal, 1957), p. 32 ff.; M. al-Shahrastani, *Al-Milal wa al-Nihal*, ed. M. S. Ghaylani (Cairo: Matabah Mustafa al-Halabi, 1961), pp. 50 ff.; 'Abd al-Qahir al-Baghdadi, *Al-Farq Bayn al-Firaq* (Beirut: Maktaba Ibn Sina, 1985), pp. 101 ff.; Fakhr al-Din al-Razi, *Al-Mabahith al-Mashriqiyyah*, ed. M. al-Baghdadi, vol. 1 (Beirut: Dar al-Kitab al-Arabi, 1990), vol. 1, pp. 671-793; Al-Taftazani, *Sharh al-Maqasid*, ed. A. Umayra, vol. 2 (Beirut: Alam al-Kutub, 1989), vol. 2, pp. 409-459; Muhammad al-Tahanawi, *Kashshaf Istilahat al-Funun*, ed. A. H. Basaj, vol. 1 (Beirut: Dar al-Kutub al-Ilmiyyag, 1998), vol. 1, pp. 462-473; Ali ibn. Ahmad ibn Mahmud, "Risalah fi Bahth al-Haraka," in *Collected Papers on Islamic Philosophy and Mysticism*, ed. M. Mohaghegh and H. Landolt (Tehran: University of Tehran Press, 1971), pp. 35-51.

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as such, a moving body possesses two special characteristics. The first is the inclination (*tawajjuh*) toward the targeted place (*matlub*), and the second is that there should remain some potential in the moving body. Therefore, the nature of motion is closely connected with the fact that there should remain some potentialities in things.

The above discussion of motion leads to the following definition: motion is the first perfection for the potential being in so far as it is potential. This definition, says Sadra, goes back to Aristotle. Plato gives a similar definition: It is the coming out of the state of sameness, that is, something becomes different from its previous state. Pythagoras proposes a close definition: It consists of alterity. After mentioning these definitions and their partial criticism by Ibn Sina, Sadra states that all these different expressions refer to one and the same meaning, which is the change of the state of affairs in the moving body. In this respect, Sadra criticizes Ibn Sina's objection to Pythagoras on the basis of the assumption that motion is not change itself but that by which change takes place, and argues for just the opposite. For him, motion is not that by virtue of which change in things comes about but the change itself. To define motion as an agent by which things move is to posit it as an accidental property of physical bodies -- the very view against which Sadra proposes his substantial motion. Therefore, as we shall see below, Sadra pays particular attention to this point because it is closely connected with the renewal of substantial natures (*tajaddud al-akwan al-jawhariyyah*) and continual changing nature of things (*tahawwul al-tab'i'at al-sariyah*).⁸

⁸ Shirazi, *Al-Himat Al-Muta'aliyah*, p. 26.

The Concept of Motion in Mulla Sadra's Natural Philosophy Two Meanings of Motion

In *Al-Shifa'*, Ibn Sina gives his view of motion, according to which the moving body is taken as a present whole in its act of moving (*qat'*)⁹ when the mind comes to conceive the moving body with the points over which it passes and leaves behind, it pictures these discrete points and time-instants as *a present whole*. However, since this frozen picture proves nothing but a body extended in space and time as a continuous whole, this kind of motion exists only in the mind. The second kind is medial motion (*tawassut*), according to which the moving body is always found somewhere between the beginning and end of the distance passed. This view actually refers to a state of continuation, viz. the body's being at a point. As such, it does not allow any change and motion in the existential constitution of the thing but only a transposition

⁹ Sadra replies to Al-Razi's doubt about the actual existence of the passage-view of motion (*qat'*) by relying on his teacher, Mir Damad, who holds that if a thing's being a continuous process as a whole or a unity is impossible, it should be impossible in both the mind and the outside world. The possibility of the objective existence of the passage is "shown by a body extended in space where its parts are continuous and yet the whole also is given". See Fazlur Rahman, *The Philosophy of Mulla Sadra* (Albany, NY: State University of New York Press, 1975), p. 95. In the process of time, a particular time-instant is followed by another. In the same way, one part of a moving body is followed by another in space. Since "a thing's existence as a whole in a time-instant is different from its existence in time, this thing may exist (as a whole) in time but its existence or some part of it (as a whole) cannot exist in a time-instant (*an*)."⁹ A moving body's being a *present* whole in a time-instant results not in motion but immobility. It is for this reason that Sadra stresses the point that this moving body as a whole may exist in time but not in a particular time-instant. The idea of gradual passage does not contradict a thing's being a whole or unity "because motion, time and the like are of the things which have, weak existence (*da'if al-wujûd*), every part of which contains the other's non-existence." Likewise, the "gradual" passing is not negated by a thing's being a continuous single unity in time because this time itself is nothing but a continuous single unity (*amr muttasil wahid shakhsi*). Cf. Shirazi, *Asfar*, pp. 28ff.

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from one place to another. It is this kind of motion that exists objectively in the external world.

Having no quarrel with the medial view of motion, Sadra sets out to prove the objective existence of the passage motion in the extra-mental world. He criticizes Ibn Sina and draws attention to a self-contradiction in Ibn Sina's denial of the passage motion. Ibn Sina accepts time as something continuous in the external world because it can be divided into years, months, days, and hours. It is the very definition of time that corresponds to motion as passage. Upon this premise, Ibn Sina regards the passage motion as the locus and cause of time. Yet, if the passage motion does not exist objectively, how can it assume such a status? In other words, how can something non-existent be the locus of something existent?¹⁰

Ibn Sina's denial of the passage-view of motion results from his understanding of motion as an accidental property of physical bodies. A physical body is a stable substance that exists in every instant of time in so far as it exists. Nevertheless, motion has no existence in time-instants (*an*). If motion were one of the modalities of things, it would always have to be together with things. Motion exists in things only continuously (*istimraran*) which, in turn, refers to the second meaning. To this, Sadra replies that the locus of motion is not the thing as a stable substance but the thing as the locus and place upon which an action is exercised. In order for a thing to receive motion and change, it should undergo some kind of change in its essential structure (*darb min tabaddul al-ahwal al-haythiyyâh*). This is predicated upon the principle that the cause of that which changes also changes (*'illat al-mutaghayyir*

¹⁰Ibid., p. 33. It is interesting to see that in his note on the same page, Sabzawari rejects Sadra's criticism and insists on the subjectivity of the passage motion.

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The main reason, however, for the denial of the view of motion as passage is related to the peculiar characteristic of this motion, which Sadra describes as having "weak existence." As the following quotation shows, "weak existence" refers to existential dependence, namely, to the fact that things of this sort are not self-subsistent and always caused by an agent:

Motion, time and the like belong to the category of things that have weak existence (*da'if al-wujûd*). Accordingly, their existence resembles their nonexistence, their actuality is similar to their potentiality, and their origination (*huduthuha*) is nothing but their corruption (*zawaliha*). Each of these [qualities or attributes] requires the nonexistence of the other; in fact their existence is their nonexistence. Therefore, motion is the very destruction of a thing itself after it [is established in

¹¹ Ibid., pp. 33-34. In his criticisms of Ibn Sina, and some other figures such as al-Razi, Sadra's strategy is not to deny what Ibn Sina says as totally untenable and incoherent, but to interpret it in such a way as to imply that Ibn Sina has actually meant the opposite. On the other hand, the reason that has led some philosophers to the denial of the passage motion is that "motion, time and the like belong to the category of things that have *weak existence* in that their existence resembles their nonexistence, their actuality is very similar to their potentiality, and their origination is nothing but their corruption. Every one of them requires the nonexistence of the other. Thus, motion is the very destruction of a thing after a thing and its origination before another thing" (ibid., p.35). In the same way, although all *idafat* (relations or relational beings) have some sort of existence but this refers only to a relative existence. The meaning of having "weak existence" is that these entities are not self-subsistent and are ultimately caused by an agent. According to Sadra, it is this very nature of time and motion that causes some perplexities regarding their actual and objective existence.

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the physical world] and its origination before it [is actualized in the external world]. This mode [of being] is comparable to the absolute being in the sense that all relational beings (*al-idafat*) have some sort of existence. Likewise, the existence of motion displays ambiguity (*shukuk*) and similitude (*shabah*) [of being close to both being and nonbeing].¹²

Within the framework of the actuality-potentiality nexus, there are, Sadra states, two poles of existence. The first is the First Reality or the Absolute Being, and the second the first hyle. The former, which contains no potentiality in and of itself, is pure goodness *par excellence*, and the latter, which is pure potentiality with no actual existence, is evil, containing in itself no goodness save accidentally. Nevertheless, since the hyle is the potentiality of all beings, it has some share of goodness as opposed to non-existence (*adam*), which is pure evil. The hierarchy of existence stated in terms of pure actuality and pure potentiality provides a clue to the structure of motion in the world of nature. By the same token, this shows, for Sadra, that a simple body is always composed of hyle and form because it has the potentiality of motion on the one hand, and “the material form” (*al-surat al-jismaniyyâh*) or a single continuous substance (*al-ittisal al-jawhari*), which is something actual, on the other. According to Sadra, this aspect of physical substances proves, once more, the cardinal principle that “a simple reality (*basit al-haqiqah*) can only but be the totality of everything” (*jami` al-ashya`*).¹³

¹² Ibid., p. 37.

¹³ Ibid., p. 40.

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The Mover and the Moving Body

Aristotle had proposed his notion of the Prime Mover to terminate the infinite regression of causal chain in the world of nature. The most important consequence of this formulation is the stark distinction between the mover and the moving body--a complementary duality that was extended in posterity to positional motion. Now, seen from the perspective of vertical causality, every moving body needs a mover, and Sadra, following the Peripatetic, reformulates this relationship in terms of actuality and potentiality. Since the process of motion requires the two poles of actuality and potentiality, as we have discussed before, actuality refers to the mover (*al-muharrrik*), and potentiality to the moving body (*al-mutaharrrik*). In other words, the mover as the actual being provides the cause of motion, and the moving body as the potential being stands at the receiving end of the process of motion.

This polarity, for Sadra, shows the impossibility of a single body being both the active and passive agent of motion. In other words, this proves the necessity of the existence of a prime mover to which all motion can ultimately be traced back. Sadra's argument runs as follows: The moving body, in so far as it is a potential being, has to be a passive agent, that is, the receiver of the act of motion, and the active agent, namely, the cause of motion, in so far as it is an actual being. These two qualities or aspects cannot be found in the same thing simultaneously owing to the exclusive nature of each. In other words, a physical entity cannot be both the source and locus of motion at the same time. Here Sadra reaches the conclusion that all motion, in the light of this argument, should go back to an active agent, which is

different from motion as well as from the locus of motion, moving by itself, renewing itself by itself, and necessarily the source of all motion. And this [agent] has its own agent (that is, principle) of

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motion in the sense of being the source of its own continual renewal. By this, I do not mean the instaurer (*ja'il*) of its motion because instauration cannot exist between a thing and itself. This is so because the direct agent of motion has to be something in motion (*mutaharrikan*). Otherwise this would necessitate the difference of the cause (*al-'illah*) from its effect (*ma'luliha*). Thus, if this [chain of causation] does not end in an ontological agent (*amr wujûdi*) which renews itself by itself, this would lead to regression or circularity.¹⁴

Sadra then continues to adduce proof for the necessity of a prime mover for moving bodies. He rejects and replies to some objections as follows.

1. If a thing were moving by itself, it would never reach a resting-point because whatever endures by itself endures by its intrinsic qualities. Once these qualities or properties are disjoined from a thing, it no longer exists.
2. If a thing were moving by itself, the parts of motion, that is, the subject of motion as a whole, would be at rest, which means that the thing would not move.
3. If the principle of motion were in the moving body itself, it would have no “fitting” or natural place to which it could incline. According to the conventional definition of motion, however, if there were to be no natural place a thing to which a thing could incline, it could not move either.
4. If self-motion were a real property of the moving body, it would be a universal quality of “thingness” (*shay'iiyâh*) shared by all corporeal things. However, this is not true of the natural order. In reality, says Sadra, motion is a particular quality provided by the outside mover.

¹⁴ Ibid., pp. 39-40.

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5. Another proof that a physical body cannot have the principle of motion in itself is that such a supposition would amount to the idea that both potentiality and actuality can be found in the same locus simultaneously. If this were true, actuality would not be succeeded by potentiality, because, according to the definition given above, motion is the first perfection for what is potential. If a thing were able to move by itself, it would be actual in all respects without leaving any room for potentiality, which is obviously inconceivable for contingent beings.
6. The relation of the moving body to motion is established by contingency (*bi al-imkan*), and its relation to motion as an active agent is necessary (*bi al-wujûb*). If the moving body itself were the producer of motion, this relation would be necessary. However, since contingency and necessity cannot coincide, the moving body has to be different from the principle or source of motion.¹⁵

The Way Things are set in Motion

There are two possible ways for a mover to set things in motion: It moves things either 1) directly and by itself, or 2) indirectly and by means of something else. A carpenter with his adze is an example of the second type of motion. The immediate act of the mover gives the concept of motion as an accidental quality or property. On the other hand, the act of the mover by means of

¹⁵ Ibid., pp. 41-42. With regard to Sadra's above remarks about motion, we should remind ourselves that here, Sadra is dealing not with his concept of substantial motion but with the Peripatetic concept of motion, which is confined to positional motion. Sadra, calls this "motion in motion," i.e., transpositional motion within substantial motion. In a sense, he tries to show that the transpositional motion of physical entities can be explained within the framework of Peripatetic physics. Sadra turns to his own notion of substantial motion (*al-harakat al-jawhariyyah*) as an explanation of the world process after dealing with various aspects of motion in the conventional sense of the term.

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something else yields the notion of the moving body itself. The mover sets the subject of motion in motion without being in need of any intermediary agent, like the attraction of the lover toward the beloved or the motion of the one who has the zeal and desire to learn toward the teacher. The first mover, which itself does not move, either grants the moving body the immediate cause by which the thing moves, or it attracts the thing to itself as its final goal. Everything in the physical world brings about a certain effect not by accident or coincidence but by an extra power added to it from outside. This “added quality” is either the nature it has or the voluntary power it possesses. In both cases, this power should be related to the thing itself, viz., it cannot be totally “relationless” in respect to it. If this were a kind of motion brought about by the abstract or “remote” agent (*al-mufariq*) in a universal manner, this would amount to something other than what is meant by motion in the usual sense of the word. Therefore, the Prime Mover needs and, in fact, employs in things an “agent” by means of which it sets them in motion. As Sadra will explain later in detail, this agent in all contingent beings is “nature” (*tabi`ah*).¹⁶

The next problem that Sadra tries to solve in this context is how the Prime Mover, which itself does not move, is related to contingent beings and material bodies. Sadra’s argument runs as follows: A thing’s capability to receive the effect of motion from the “detached” agent (*al-mufariq*) may be due to three reasons: the thing itself, some special quality in that thing, or a quality in the detached agent. The first is impossible because, as shown previously, this would lead us to accepting motion-by-itself as a universal and intrinsic quality of thingness. According to Sadra, the second option that is, motion by means of a property or ability in the thing is the right view. The third option, has some points to consider. The actualization of motion by an aspect of the detached

¹⁶ Ibid., pp. 47-48.

The Concept of Motion in Mulla Sadra's Natural Philosophy agent takes place when the detached agent originates an effect in the thing that it sets in motion. This, in turn, may happen either by means of the will of the detached agent by manipulating something in the thing or effecting it haphazardly according to its wish.

The last option is not tenable because it destroys the idea of order in nature. Chances or accidental coincidences (*al-ittifaqiyyât*) are not constant and continuous in nature:

Chances, as you will learn, are neither constant nor dominant [in nature], whereas order in nature is both dominant and continuous. There is nothing in nature that happens by chance or haphazardly. As you will learn, everything in nature is directed towards some universal purpose (*aghrad kulliyah*). Thus, the effect of motion cannot be brought about by chance. What remains, therefore, [as a valid option] is a particular quality in the physical bodies [that move]. This essential quality (*al-khassiyah*) is the source of motion, and this is only potency (*al-quwwah*) and nature (*al-tabi'ah*), by virtue of which things yearn, by means of motion, for their second perfection.¹⁷

Thus, we are left with the option that this effect occurs by means of an essential quality in the physical bodies, which causes them to move. This is what Sadra calls "potency" and "nature" (*al-tabi'ah*).¹⁸

¹⁷ Ibid., p. 49.

¹⁸ Ibid., pp. 48-49.

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After positing “nature” as the immediate cause of all motion, Sadra opens a long parenthesis and delves into a discussion of how actuality precedes potentiality. This long discussion is meant to show that the very idea of contingency requires existential transformation and that the continual renewal of contingent beings is an essential quality, which exists *in concreto* whenever possible beings are brought into actuality out of potentiality. Sadra's arguments also reveal some interesting aspects of his theory of matter (*maddâh*). Sadra substantiates his assertion as follows: Every created being is preceded by existence (*al-wujûd*) and matter (*maddâh*) that bears it. This is a quality inherent in all contingent beings. Otherwise they would belong to the category of either necessary or impossible beings. Matter with which the contingent beings are united acts as one of the immediate principles or causes of bringing contingent beings out of non-existence into actualization in the external world. In this sense, the subject of possibility or contingency (*mawdu' al-imkan*) has to be an originated entity (*mubdi'an*); otherwise it would be preceded by another contingency *ad infinitum*. Every possibility vanishes when it becomes something actual in the external world. This means that another one precedes every contingency until the chain of causation comes to an end in the Principle, which has no contingency.

Here Sadra warns us by saying that the above considerations may have conjured up the wrong idea that potentiality is absolutely prior to actuality. In fact, it is a common tendency to think that potentiality is prior to actuality like a seed's relation to a tree or like the theory of latency (*kumun* and *buruz*).¹⁹

¹⁹ The theory of latency was developed by the Mu`tazilite theologian Nazzam to explain origination and corruption in the world of becoming. Nazzam presupposes a potential nature, which is “latent” in things and becomes “apparent” in time. Therefore, he regards any kind of change as the appearance (*zuhur*) of these dormant qualities. His ideas on the theory of latency have been narrated by Al-Khayyat in his *Kitab al-Intisar*, pp. 28ff.

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Some have said that the universe was in disorder and God bestowed upon it the best of all orders. In the same manner, matter has been regarded prior to form, and genus to differentia. According to another group of people whom Ibn Sina mentions in his *Shifa'*, the hyle had an "existence" before its form, and the active agent gave it the dress of the form. Some have held the view that all things in the universe were moving by their natural motion without any order. God arranged their motion and brought them out of disorder.

Sadra's overall reply to these views is that in some cases, such as the relationship between sperm and man, potentiality precedes actuality in time. Nevertheless, in the final analysis, potentiality cannot subsist by itself and needs a substratum to sustain it.

We say that, as far as the particular things in the world of corruption are concerned, the relation between [potentiality and actuality] is like the sperm and the human being. Here, the potentiality specific [to the sperm] has priority over actuality in time. However, potentiality, in the final analysis, is preceded by actuality for a number of reasons. Potentiality (that is, the potential being) cannot subsist by itself and needs a substance to sustain it. This substance has to be something actual (*bi al-fi'l*) because whatever is not actual cannot exercise [any power] over something else. By the same token, whatever is not existent in an absolute way cannot accept any [exercise of power]. Furthermore, there are certain actual beings in existence that have never been and are by no means potential in essence such as the Sublime First [Principle] and the Active Intellects (*al-'uqul al-fa`alah*). Then, potentiality needs the act (*fi'l*) [of realization] to bring it into

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actualization, whereas this is not true of what is actual. Potentiality needs another agent (*mukhrij*) to bring it [out of nonexistence], and this chain undoubtedly comes to an end in an actual being (*mawjud bi al-fi'l*), which is not created [by something else] as we have explained in the chapter on the termination of causes...

The goodness (*al-khayr*) in things comes from the fact that they are actual, whereas evil (*al-sharr*) stems from what is potential. A thing cannot be evil in every respect, otherwise it would be non-existent. No being, in so far as it is something existent, is evil. It becomes evil as a privation of perfection such as ignorance, or it necessitates its own nonexistence in other things such as injustice (*al-zulm*).

Since potentiality has some sort of actualization in the external world, its essence subsists by existence. Existence, as you have seen, is prior to essence in an absolute way. Therefore, potentiality as potentiality has external realization only in the mind. Thus, it is concluded that the actual is prior to the potential in terms of causation (*bi al-'illiyyah*), nature (*bi al-tab'*), perfection (*bi al-sharaf*), time and actual reality (*bi al-haqiqah*).²⁰

Nature as the Immediate Cause of Motion

As we have stated previously, motion is the act of moving itself (*mutaharrikiyyat al-shay'*) for it refers to the continual renewal and lapse of the physical body in motion. This point is of extreme importance for Sadra's purposes here, since he tries to establish motion as an essential property of physical beings. In the

²⁰ Ibid., pp. 57-58.

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light of this view, the immediate cause of motion should be something whose essence is not stable. Otherwise, "a stable or enduring entity will contain in itself the passing phases of motion as *a present fact*, and this togetherness of all passing phases would amount to stability, not motion."²¹ This leads Sadra to the following conclusion: The immediate cause of every motion should be something whose quiddity (*mahiyyâh*) is stable but whose being (*al-wujûd*) is ever-changing.

The immediate cause of motion has to be something with a stable essence and continually changing being (*thabitat al-mahiyyâh mutajaddid al-wujûd*). As you will see, the immediate cause of all kinds of motion is no other than nature (*al-tabî'ah*). This nature is the substance by which things subsist and become actualized as a species (that is, as a particular entity). This refers to the first perfection of natural things in so far as they are actual beings [in the external world]. Therefore, it is concluded and established from this [consideration] that every physical being is a continuously changing entity with a flowing identity (*sayyâl al-huwiyyah*) despite the fact that its quiddity is impervious to change.²²

The statement that the subject of motion should be something with a stable essence is true only when we mean by "stable" (*thabit*) the quiddity (*mahiyyah*), viz., and the mental image of things. Or, we understand from "stable" the subject of motion, which is not a concomitant (*lazim*) for the actual existence

²¹ Rahman, *The Philosophy of Mulla Sadra*, pp. 95-96.

²² Asfar, p. 62. See also *Kitab al-Masha'ir (Le Livre des penetrations metaphysiques)*, ed. Henri Corbin (Teheran and Paris: Institute Francais D'Iranologie de Teran, 1968), pp. 64-65.

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of the thing in question. Thus, Sadra introduces here two kinds of motion. The first is the kind of motion, which every material substance possesses as a concomitant of its existential constitution. In other words, this kind of motion exists as an essential property of corporeal things. The second kind of motion, on the other hand, is that motion which happens to things as an “accident” as in the case of transposition, transformation, or growth. Sadra calls the latter “motion in motion” (*harakah fi harakah*).²³

Seen in this light, every moving body, in its fundamental constitution, possesses a “nature” that acts as the immediate cause of motion. This nature, however, is not something superadded to things from outside, like an accident, but conjoined inherently with substances. In this sense, nature is not only the immediate cause of natural motion (*al- harakah al-tabi`iyyah*) but also that of forced or constrained (*al- harakah al-qasriyyah*) motion. The immediate agent that causes motion employs “nature” to set things in motion.

And we are certain about the following conclusion on the basis of heart-knowledge (*al-wijdan*) rather than discursive proof (*al-burhan*): the cause that makes a thing yield and induces it to move from one place to another or from one state [of being] to another can only be an actual power inherent in that thing. This is called nature. Thus, the immediate cause of material motion (*al-harakat al-jismiyyâh*) is the substantial power, which subsists in things, and all the accidents are subservient to the sustaining form (*al-surah al-muqawwimâh*), which is nature...

The philosophers have shown conclusively that every [physical body] which accepts the act of

²³Ibid., pp. 61-64.

The Concept of Motion in Mulla Sadra's Natural Philosophy yielding (*al-mayl*) from outside has to have a natural inclination (*mayl tibai*) in itself. It is thus proved that the direct source of motion is something flowing with a continual changing identity (*mutajaddid al-huwiyyâh*). If this [substratum] were not to be something flowing and ever-changing, it would be impossible for these natural motions to emanate from it on the basis of the principle that the ever-changing cannot emanate from the stable.²⁴

In this paragraph, Sadra refers to Ibn Sina to support his thesis, and says that Ibn Sina has, in fact, accepted the principle that a stable being cannot be the cause of instability and permanent change. Ibn Sina is thus to be corrected by saying that any kind of change and transformation that we observe in things externally goes back to the constantly changing structure of their substance. Every direct or indirect motion is ultimately connected to and an outcome of nature, namely, the inner structure of things.

Nature as the Principle of Change and Permanence

After criticizing the philosophers' idea of "two consecutive phases" in motion,²⁵ Sadra discusses briefly the problem of the

²⁴ Ibid., p. 65.

²⁵ Sadrâ's criticism can be summarized as follows: The first phase is motion itself and the second phase is the thing's transposition from one point to another. According to this account, which is reminiscent of the passage view mentioned above, something always remains stable in the process of motion, and this is nature. Thus, a relationship is established between the stable, which is nature, and the changing, which is a thing's passing through a certain distance. Sadrâ rejects this argument on the basis of the relation of ultimate dependence between substance and accident: since substance is the source as well as the locus of accidents, all accidental properties and changes observed in physical bodies should issue forth from themselves. If there were not a being

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connection of the changing to the unchanging and permanent principle. If every changing body is preceded by another changing body, this leads either to an endless chain or to a change in the First Principle, which is immune from change. Sadra eliminates this objection by saying that the continual renewal of material bodies is their essential attribute, not a quality added to them from outside. When a corporeal thing moves towards its “existential realization,” viz., actualizes its potentialities by going through various forms and states of being, such as emerging from potentiality to actuality or moving from one location to another, it possesses its immediate cause of motion in itself, and does not need an extra “cause.” Even when an extraneous stimulator is required for a thing to move externally, this is made possible only by having recourse to the nature inherent in that thing.

Every natural body carries the principles of change and permanence in itself simultaneously. Nature, for example, remains as an enduring property in physical bodies while its very reality is change. In the same way, there are certain things whose actuality is their potentiality such as the hyle, or whose plurality is their unity such as the numbers, or whose unity is their plurality such as the

whose very essence is renewal and lapse, there would be no stages of motion. According to Sadrâ, the weakness of this argument lies in the fact that a thing’s changing its place from one point to another, which is regarded by the philosophers as the second stage in the process of motion, is not essentially different from the motion itself. Therefore, both kinds of change displayed by physical entities are due to that “reality whose essence is continual changing in itself,” and this, we have stated before, is nothing but nature. However, since the “mental substances” are beyond the realm of existential transformation, they always remain stable and unchanged. This is also true, says Sadra, of the human soul, which, from the point of view of its “mental essence or reality,” is changeless, but from the point of view of its connection with the body, it is identical with continual changing nature. Thus the gist of Sadrâ’s argument is that a continual changing structure cannot depend on a stable cause. The renewal of all changing beings is due to a cause whose very reality is to change and renew at every moment, and this is nature. *Ibid.*, pp. 64-67.

The Concept of Motion in Mulla Sadra's Natural Philosophy material body with its components as a whole.²⁶ Thus, everything has a dual structure in its essential constitution. In this respect, nature and hyle appear to be the two basic points of connection between the changing and the unchanging.

Considered in its aspect of permanence, nature is directly connected to the permanent principle. When considered in regard to its aspect of change and renewal, however, it is connected to the renewal of material bodies and the origination of created beings. In the same manner, the hyle serves as the connection point between the potentiality and actuality of contingent beings. Taken in this sense, "these two substances (that is, the nature and the hyle) are simply means of origination and corruption of material bodies, and from them a relation is established between the eternal (*al-qadim*) and the created (*al-hadith*)."²⁷

The Category of Motion

The question of which categories of physical existence are capable of receiving change and motion is an essential one for Sadra because this is one of the points of divergence that distinguishes Sadra from the Peripatetic and *ishraqi* philosophies of nature. Following Aristotle, Ibn Sina had accepted change in categories such as quality, quantity, and position, but denied it the category of substance (*jawhar*). Since substance was regarded by *al-Shaykh al-Rais* and his students as a stable substratum to which all accidental qualities are ultimately traceable, the acceptance of change in the substance of a thing would amount to the dissolution of that particular thing and there would be no subject for motion

²⁶ Ibid., p. 68.

²⁷ Ibid., pp. 68-69. Sadra explains this complementary duality of things on the basis of the gradation (*tashkik*) of being which is, for Sadra, both the principle of unity and diversity in existence.

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and change. For Sadra, however, since a stable substratum is not needed to support the “general existence” of a physical body, change in the category of substance does not lead to the destruction of things. This is so because the subject of motion is “some subject” (*mawdu` ma*) rather than a “particular subject” (*mawdu`*). Sadra’s analysis runs as follows:

When we say that motion is “within a category” (*maqulah*), there are four possibilities to consider: 1) The category is the subject of motion. 2) Substance through a category is the subject of motion. 3) The category is a genus for motion. 4) The substance itself is changing gradually from one species to another or from one class to another.

Sadra emphatically rejects the first three possibilities by relying on his fundamental identification of the act of motion with the moving body. He repudiates the assertion of the earlier philosophers that if we admit change in one of the four categories, then we would have to accept an infinite number of species being actualized in one single entity. The realization of an infinite number of species in a finite being is obviously impossible. In this respect, Sadra invokes Ibn Sina in support of his argument by quoting from the *Ta'liqat*. What happens during the essential change of categories is not that at every successive moment, a new amount of quantity is added up to the thing, which maintains its previous existence in terms of quantity. Far from being added up to the thing in a cumulative manner, the infinite number of species exists only potentially owing to the very definition of motion, namely, that it is an intermediary stage between pure potentiality and pure actuality. During the process of motion, a physical body which goes through various degrees of existence “has a temporal particular quanta-entity which is continuous, gradual and in perfect proportion with the time instants of motion.”²⁸ Such a body does certainly have an

²⁸ Ibid., p. 72.

The Concept of Motion in Mulla Sadra's Natural Philosophy infinite number of "instantaneous individuals" (*afrad aniyah*) at every second. Nevertheless, these infinite instantaneous individuals exist only potentially and do not point to a real actualization in the extra-mental world. Blackness, for instance, has an existence in actuality and this existence is of such a nature that the mind can abstract from it a series of new species at every instance. This particular existence of blackness is "stronger" than "instantaneous existences" (that is, the possible species abstracted by the mind) in that as an actual existent, it represents (*misdaqan*) in itself many species. By the same token, an animal's being is stronger than that of a plant simply because, as a single unity, it contains and represents every shade of being that the plant possesses. The same holds true for the intensification of blackness since it encapsulates whatever blackness exists in the "weak black entities." Thus, motion in categories, which brings them at every successive instant from one species to another or from one class to another, is conceived as a plausible and, in fact, the only possible process.²⁹

As for the view that the category of substance is a species of motion, this is not tenable because, as Sadra has repeatedly stated, "motion is not the changed and renewed thing but the change and renewal itself just like immobility is not the immobile thing but the immobility of a thing." In this regard, it should be emphasized that the establishment of motion for the constantly renewing body is not like the occurrence of an accident to a "self-subsisting subject" (*al-mawdu' al-mutaqawwim bi-nafsihi*). The idea of such a stable subject is rather one of the "mental accidents" (*al-`awarid al-tahliliyyah*) that is, mentally abstracted and posited accidents that the mind constructs. This, in turn, underscores the intrinsic relation

²⁹ Ibid., p. 73. Sadra also states that if change in categories is not admitted, the opponent would find it difficult to account for spatial and positional motion and be bound to adhere to the idea of "leap" (*al-tafrah*) proposed by the Mu`tazilite theologian Al-Nazzam. According to Sadra, the idea of leap is easily rejected by common sense.

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between existential motion and actually existing entities, and indicates that the “separation” of substantial motion from corporeal things is nothing but an outcome of the mind’s analytical activity. The “occurrence” (*‘urud*) of motion to things is an event that takes place only at the level of conceptual analysis viz., when the mind analyzes an actually existing entity into its constituent parts. As Sabzawari states in his note, the distinction is merely a matter of “naming” (*bihاسب al-`unwan*).³⁰ At best, the attribution of mental accidents to subject can be compared only to the attribution of differentia to genus.

Sadra sums up his discussion by saying that “the meaning of motion being in a category is that the subject [that is, the substance] is bound to change gradually, and not suddenly, from one species to another or from one class [of being] to another.”³¹

The Question of Quantitative Change

Although the Peripatetic philosophers had affirmed, with Aristotle, that all categories, with the exception of the category of substance, undergo change, the explanation of quantitative change has posed some difficulties for many of them. As Sadra notes, Suhrawardi and his followers had even denied quantitative change completely.³² The main difficulty seems to result from the assumption that increase and decrease in quantity necessitates the replacement of the original quantity as well as that which is quantified, that is, the physical body that undergoes quantitative change. In contrast to the idea of quantitative change as rupture and replacement, Sadra sees change in quantity as a continuous and single process. Sadra’s detailed discussion can be summed up as follows:

³⁰Ibid., p. 74.

³¹Ibid., p. 75.

³²Ibid., p. 89.

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Since motion signifies the actualization of certain qualities and quantities that exist for physical bodies potentially, to become black, says Sadra, is not the increase of blackness in the subject but rather the increase of the subject in blackness. It is not the case that in the process of increasing, there exist two blacknesses, the original blackness and the newly emergent one. The mind conceives this process as the conjoining of two separate and discrete quantities of blackness. In the order of existence, however, blackness has only "one single identity (*huwiyyat shakhsiyyah wahidah*) evolving in perfection at every instant".³³

When we say that blackness, in its upward motion towards higher degrees of perfection, has only "one single continuous identity" (*huwiyyah wahidah ittisaliyyah*), we admit some kind of "hierarchy of intensification" (*maratib al-ishtidad*). In this case, says Sadra, three points should be made clear. Firstly, as we have stated before, there is an infinite number of species in one single entity only *in potentia*. In the order of existence, this fact is complemented by the principle that "one single continuum has only one single being" (*al-muttasil al-wahid lahu wujûd wahid*).³⁴ Secondly, although blackness has one single continuous identity in its perfection or imperfection, "arious species, essential properties, and logical differentiae" occur in it in regard to its existential renewal. According to Sadra, such a transformation in the substance of physical bodies is quite possible because it is being (*al-wujûd*) that is fundamentally real and principal, quiddity being thereby subject to it. Thirdly, the frozen picture of the increasing entity presents to the mind some instant-points that have occurred actually and some instant-points that may occur potentially. As Sadra repeatedly states, however, it is the mental representation of

³³ Ibid., p. 82.

³⁴ Ibid., p. 83.

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the order of being that yields the idea of quantitative change as a succession and conjoining of two discrete species or entities. In contrast to the atomistic picture of the physical world, the corporeal body that undergoes quantitative change always maintains its identity as a single and unbroken unity. Thus, an entity of this nature is

a new emergent every moment with a continuous body, respect of which, if we say it is one, we would be right or if we say it is many,... enduring or changing, all these would be right. If we say that it persists identically from the very beginning of change to the end, we shall be speaking the truth; if we say every moment it is a new emergent (*hadith kulla hin*) this will be equally true.³⁵

In order to further emphasize motion as a continuous process, Sadra turns to Ibn Sina one more time and takes him to task on the question of motion in the category of substance. Ibn Sina had conceived motion in substance not as a single continuum but rather as the destruction of the original substance and its replacement with another one. In other words, Ibn Sina's criticism was based on the assumption that if substance were capable of intensification and diminution, the species that determines and particularizes it would either remain the same or change into another species. In either case, we would have to accept that there has been no change in the substance, or that the original substance has been destroyed.

Against this criticism, Sadra comes up with the following answer, which summarizes also his doctrine of the gradual

³⁵Ibid., p. 84; cf. Rahman, *The Philosophy of Mulla Sadra*, p. 103.

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perfection of being in terms of plurality-in-unity and unity-in-
process.

If in the statement: "either its species persists during intensification" by "persistence of species" is meant its existence, then we choose that it does persist because existence as a gradually unfolding process has a unity, and its intensification means its progressive perfection. However, if the question is whether the same specific essence which could be abstracted [by the mind] from it previously still continues to exist -- then we choose to say that it does not remain any longer. Nevertheless, it does not follow from this that an entirely new substance, that is, existence, has arisen; it means only that a new essential characteristic (or specific form) has been acquired by it [that is, by existence...]. That is to say, this substance has either been perfected or has retrogressed (the latter, however, does not actually happen) in the two modes of existence and hence its essential characteristics have been transmuted. This does not mean that an actual infinity of species has arisen (just it did not mean in the case of black that an actual infinity of black colors had arisen); it means only that there is a single continuous individual existence characterized by a potential infinity of middle points in accordance with the supposed time-instants in the duration of its [moving] existence... There is no difference between the qualitative intensification called "change" and the quantitative intensification called "growth" (on the one hand), and the substantive intensification called "emergence (*takawwun*)" [on the other] in that each

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one of them is a gradual perfection, that is, a motion
toward the actuality of [a new] mode of existence.³⁶

The gist of the above argument is that being, as an unfolding single unity (*al-wujûd al-muttasil al-tadriji*), travels through various essences, and assumes different forms and modifications at every moment. The gradual passing of the substance from one state of being to another means that the substance reaches a higher and more perfect mode of being. This continuous process, however, does not split it into different and discrete units.

The Identity and Endurance of Physical Bodies

In order to account for the substratum that endures throughout the entire process of change, Sadra states that “some matter” (*maddatun ma*) particularized in a form, quality, or quantity is enough for the substantial change. Put differently, during the process of the gradual perfection of a substance, a certain amount of matter (existence) remains as the persisting principle while taking on various forms, qualities, quantities, and positions. This is obvious enough, says Sadra, in the attribution of form to one single material body. However, this point, that is, the persistence of a certain amount of matter with its variegated modifications and particularizations, is so subtle that the previous philosophers, including Ibn Sina, have acknowledged that the mind is hardly capable of perceiving it in its entirety. After this historical note, Sadra turns to the peculiar relationship between form and matter as an essential property of physical bodies.³⁷

³⁶Ibid., p. 86; Rahman, *The Philosophy of Mulla Sadra*, p. 104.

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According to Sadra, the problem of quantitative change that has led many, including Suhrawardi and Ibn Sina, to the denial of change in the category of substance can be resolved by having recourse to the following precept: What is required in the process of motion is not a definite quantity but "some quantity" (*miqdarun ma*) by which a thing or matter becomes particularized. Suhrawardi's problem had arisen out of the assumption that

the addition of a certain amount of quantity to another [block of] quantity (that is, the increase or decrease in a certain quantity) necessitates the destruction of the original quantity, and when a part of this quantity is taken away from the whole, this also necessitates the destruction [of that which is quantified].³⁸

According to this point of view, any quantitative change in the direction of increase or decrease leads to the destruction of the body itself. Ibn Sina had faced a similar difficulty in explaining change in organic bodies. In fact, Ibn Sina "was not able to solve" the problem of identity in plants and animals because he had postulated that organic bodies, namely plants and animals, unlike the human being, who has both the soul and the character, possesses no enduring quality.³⁹

In response to these difficulties, Sadra asserts that

the subject of motion is a particular entity (*al-jism al-mutashakhkhas*), not a definite quantity (*al-miqdar al-mutashakhkhas*). The particularization of

³⁷ Ibid., pp. 87-88.

³⁸ Ibid., pp. 89-90.

³⁹ Ibid., pp. 90-92.

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a thing requires a definite quantity for the thing in its motion from one place to another as the physicians (*al-atibba'*) have asserted in regard to personal character (*al-mizaj al-shakhsi*). The motion takes place in the particularizations and [various] stages of quantities. Therefore, what is enduring from the beginning to the end of motion is different from what is changing. The disjunction (*al-fasl*) and conjunction (*al-wasl*) [of a definite quantity with matter] do not cancel each other out except in the case of conjoined quantity taken, as a mental abstraction, in its natural state, that is, without being united with matter.⁴⁰

Thus the substratum of quantitative change is not a definite quantity but matter with some quantity. Therefore, the destruction of definite quantity does not necessitate the destruction of the thing itself. "The natural body (*al-jism al-tabii*), which is composed of thingness and form, also preserves its species by dint of the definite form (*al-surah al-mu'ayyanah*) which is the principle of its final differentia (*al-fasl al-akhir*)."⁴¹ Thus it is concluded that no qualitative or quantitative change of any kind leads to the destruction of a physical body as long as the definite form endures.⁴²

Change and Identity in Physical Bodies

After securing the material existence of physical bodies when they undergo substantial change, Sadra proceeds to the most important and intricate part of his theory of substantial motion, namely the preservation of the identity of a changing body.

⁴⁰Ibid., pp 92-93.

⁴¹Ibid., p. 93.

⁴²Ibid., pp. 80-93.

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 Reference was already made to the idea that differentia (*al-fasl*), by its very definition, ensures the endurance of some quality or quantity-in-general despite the fact that the definite quality in the changing body is destroyed at every successive phase of its motion. Sadra states that whatever has the final differentia as its principle of perfection has some sort of preservation-in-general. The redefinition of differentia as a thing's principle of perfection becomes a forceful argument for Sadra, because he casts the whole story not within the framework of traditional genus-differentia account but of his ontology. At this point, the differentia is transformed from being a mere principle of difference (*al-ikhtilaf*) among genres into the principle of existential individuation of particular entities. As a novel contribution, Sadra equates differentia, viz. the principle of diversity and unity with being (*al-wujûd*). Sadra illustrates this point as follows:

Being capable of growth (*al-nami*) is the plant's differentia whereby its being is perfected, since its perfection is not due to its being a body alone. Rather, it [that is, "being capable of growth"] is its principle of potency and carrier of its potentiality. Hence, there is no doubt that the change of bodily entities does not necessitate change in the substantial being of the plant itself, since body is regarded here only in a general manner (*'ala wajh al-`umum wa al-itlaq*) [that is, as body-in-general], not in a specified and determined manner (*'ala wajh al-khususiyah wa al-taqayud*) [that is, not as body-in-particular]. The same holds true for the animal, which is constituted by being capable of growth and perception, and for every being whose existence is constituted by matter and form such as man in relation to his soul and body. Hence when "being capable of growth" changes in quantity, its "thingness" (*jismiyyatahu*) as an individual entity

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also changes, its substantial structure as an individual entity remains the same. Thus it (that is, the plant), in so far as it is a natural body-in-general, is destroyed as an individual entity, but, in so far as it is a natural body capable of growth, is not destroyed, neither itself nor even its part. That is because every being, part of which is nothing but body-in-general in an individual [entity], is established [in the external world] in a manner of continuous existence (*al-ittisal al-wujûdi*). On the basis of this principle, the endurance of an animal together with its substance of perception can be explained. In the same way, humans in their old age lose most of their power of vegetation although their identity remains the same.⁴³

According to Sadra, the above description of qualitative and quantitative change is true of all the natural bodies that have a constantly changing being with a enduring identity. In every change and motion, there remains an original principle, which is perpetuated and perfected by the final differentia. For example, the final differentia in composite beings comprises every successive phase of increasing perfection, through which the intensifying or moving body passes. Therefore, the succession of various degrees of being that lead physical bodies to a higher state of being is not something added to the final differentia of bodies from outside. As we have stated before, a simple being (*basit al-haqiqah*) contains in itself lower levels of being, and this principle is employed here by Sadra with full force to explain the peculiar relationship among species, genuses, and differentia. Within this framework, every species comprises in its very structure whatever is possessed and shared by lower species. Also important is the fact that the species

⁴³Ibid., p. 94.

The Concept of Motion in Mulla Sadra's Natural Philosophy is perfected into a genus, by differentia. The most crucial point, however, is that Sadra takes differentia not simply as a mental notion abstracted from physical entities as the principle of diversity but equates it with being, which functions, as we have seen, as the principle of both unity and diversity.⁴⁴

The existential relationship between a physical body and its essential properties, namely what Sadra calls "concomitants" (*lawazim*), can also be explained by having recourse to the depiction of things in our ordinary language. When we want to define or describe something, we naturally refer to its essence as well as its essential properties that are included in its definition. Sadra calls such properties "a mode of being" (*nahw al-wujûd*). Thus, in every mode of being, a particular piece of concrete reality appropriates and displays certain qualities that yield its "derived differentia" (*al-fasl al-ishtiqaqi*). These distinctive qualities are generally called the "essential properties of a thing" (*al-mushakhkhasat*). They constitute what Sadra calls the "signs of particularization" (*'alamat li al-tashakhkhus*).

The [word] sign here refers to the name of a thing by which its concept is expressed. In the same manner, the derived real differentia (*al-fasl al-haqiqi al-ishtiqaqi*) is described as logical differentia (*al-fasl al-mantiqi*) in the case of "being capable of growth" for plants, the sense perception for animals, and reasoning for human beings. The first of these [descriptions] is a name for the vegetative soul, the second one for the animal soul, and the third one for rational soul. These are all derived differentia. The same holds true for all the other differentia with regard to the composite substances (*al-murakkabat*

⁴⁴Ibid., pp. 93-100.

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al-jawhariyyah). Each of these [bodies] is a simple substance designated by a universal logical differentia (*fasl mantiqi kulli*) as a matter of naming things (*tasmiyat al-shay'*). However, these substances are, in fact, simple and specific [that is, particularized] beings with no quiddity.

In the same manner, the concomitants of individual entities are assigned to their individual possessors by naming. Thus, particularization is a mode of being. A particular entity becomes particularized by itself, and these concomitant [properties] issue forth from it just like the emanation of a ray of light from its source and of heat from fire.⁴⁵

The logical differentia as a universal refers to the place of entities in the conceptual order, whereas the real or existential differentia refers to their individuation and particularization (*al-tashakhkhus*) in the existential order. At the conceptual level, we distinguish between a thing and its existential properties and thus obtain the essence-existence bifurcation. We apply this conceptual process only “to name a thing.” In reality, however, there are only individuated concrete existents, simple and unique, without requiring any “quiddity.” Thus, the particularization of a thing comes about by its assuming a mode of being with certain essential properties (*al-mushahkhkasat*). In other words, the relation between a body and its existential properties is reversed: a physical body does not become particularized because of having such essential properties. On the contrary, these properties come into being as a result of a thing’s particularization in the existential order just like the expansion of a beam of light from its original source of light.

⁴⁵ Ibid., pp. 103-104.

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The following conclusions can be derived from Sadra's argument. First of all, substance (*jawhar*) changes in accordance with the change of its essential properties. With this, the dividing line between substance and accident becomes rather provisional. Therefore, a material substance is essentially

a substance that is by itself continuous, quantified, positional, temporal, and inhering in a definite place. The change of quantities, colors, and positions of the substance necessitates the renewal of the definite quantity of the individuated material substance.⁴⁶

Thus, we arrive at a twofold picture of the natural world in which the "material substances" or "bodily natures" are aptly regarded as the proper locus of two interrelated dimensions of physical entities: transience and perpetuity.

There is no doubt that every material substance has a continuously changing nature on the one hand, and an enduring and unchanging structure on the other. The relation between the two aspects is similar to the relation between the body and the soul. While the body is in constant change and flow, the human soul endures because it preserves its identity by the passing of essential forms in an uninterrupted continuous process (*wurûd al-amthal `ala al-ittisal*).⁴⁷

The natural forms of material substances share the same characteristics.

⁴⁶ Ibid., p. 104.

⁴⁷ Ibid., pp. 104-105.

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They are renewed every instant as far as their material, positional, and temporal existence is concerned, and there is a gradual and steady origination for them. As far as their mental existence and detached Platonic forms are concerned, however, they are eternal and perpetual in the knowledge of God.⁴⁸

Thus, Sadra locates the enduring mental forms of the natural substances within the unchanging realm of Divine knowledge.⁴⁹ With this, in a sense, the “great chain of being” that Sadra has been expounding according to his theory of substantial motion comes to a full circle.

Concluding Remarks

Sadra’s highly complex and original theory of nature yields a number of important results. First of all, Sadra discards the Aristotelian notion of a solid substratum as the basis of change and renewal in the world of nature. Instead, he resolves the realm of

⁴⁸ Ibid.

⁴⁹ After explicating these points, Sadra gives an interesting example of self-defense by emphatically rejecting the charge that no one has spelled out this theory before. It is God, the ultimate Sage of all sages, says Sadrâ, who has laid down the substantial motion as the very essence of the ephemeral world. In this respect, it is surely useful to include here the Qur’anic verses quoted by Sadrâ in support of his view so that we can clearly see how Sadra places his theory within the framework of Qur’anic cosmology. In conjunction with Sadra’s purpose, the verses allude to the deep difference between the seeming and the real state of affairs in the existential order that can be grasped fully only at a higher level of consciousness: “And you see the hills that you thought were solid flying like clouds: [that is,] the doing of God, Who perfects all things” (27:88). “On the day when the earth will be transformed into something else, and the heavens will also be transformed” (14:48). “That We may transfigure you and make you what you do not know” (56:61).

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physical bodies into a "process of change" by introducing the notion of change-in-substance. Construed as such, the world of nature becomes a play of contingencies while preserving its "substantial" unity and integrity. Anticipating the quantum view of the physical world, Sadra offers a new interpretation of the world of nature without necessarily upholding any solid or gross material substratum as the basis of physical entities.

Being aware of its central place in his thought, Sadra makes a profuse use of the concept of substantial motion, and applies it to a number of philosophical problems. The relation between the changing (*al-mutaghayyir*) and the permanent (*al-thabit*), that is, God and the world of creation; origination of the soul from the body, that is, the Sadrian doctrine that the "soul is bodily in its origination and spiritual in its survival" (*jismaniyyat al-huduth ruhaniyyat al-baqa'*), and the rejection of the transmigration of souls (*tanasukh*) are only a few among the philosophical problems that Sadra addresses on the basis of his concept of nature and motion-in-substance. In this regard, the implications of Sadra's natural philosophy go far beyond the confines of our present study. The central theme of Sadra's natural philosophy, and for that matter the entire Sadrian system of thought, however, is clear enough, and that is the centrality of being (*al-wujûd*) to any discussion of physics and/or metaphysics. As the preceding analysis has tried to show, Sadra conceives change and permanence, the two interdependent faces of the natural phenomena, as the result of the infinite modes of particularization and differentiation of being (*al-wujûd*), which is the only principal reality, quiddity (*mahiyyah*) being only a mental image of it. It is the all-encompassing reality of *al-wujûd* that connects together the entire cosmos from celestial spheres to minerals and animals. It is also the same reality that establishes an ineluctable relation between the Sadrian physics and metaphysics.

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