

BETWEEN PHYSICS AND METAPHYSICS:  
MULLĀ ṢADRĀ ON NATURE AND MOTION

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Mullā Ṣadrā's concept of nature and substantial motion treats many aspects of traditional philosophy and cosmology in a new light. By allowing change in the category of substance (*jawhar*), Ṣadrā goes beyond the Aristotelian framework followed by the Peripatetics and Suhrawardi, turning substance into a 'structure of events' and motion into a 'process of change'. Ṣadrā's reworking of classical cosmology through his elaborate ontology and natural philosophy leads to a new vocabulary of 'relations' and fluid structures as opposed to 'things' and solidified entities. In his attempt to make change an intrinsic quality of the substantial transformation of things, Ṣadrā posits nature (*ṭabī'ah*) as the principle of both change and permanence, thus granting it relative autonomy as a self-subsisting reality. What underlies Ṣadrā's considerations of change and nature, however, is his concept of being (*al-wujūd*) and its modalities. Change as a mode of being and the de-solidification of the physical world goes beyond locomotive and positional movement, and underscores the dynamism of the world-picture envisaged by Ṣadrā's gradational ontology.

*Keywords:* Ṣadrā; nature; change; substance; ontology; being; actuality; potentiality; matter; permanence; form; motion/movement.

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Mulla Ṣadrā's concept of substantial motion (*al-ḥarakat al-jawhariyyah*) represents a major departure from the Peripatetic concept of change, and lends itself to a set of new possibilities in traditional Islamic philosophy and cosmology. By defining all change as substantial-existential alterity in the

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nature of things, Ṣadrā moves away from change as a doctrine of external relations, as Greek and Islamic atomism had proposed, to a process of existential transformation whereby things become ontologically ‘more’ or ‘less’ when undergoing change. In his considerations of quantitative and qualitative change, Ṣadrā takes a thoroughly ontological approach and places his world-picture within the larger context of his gradational ontology. Substantial motion and the dynamic view of the universe that it espouses can thus be seen as a logical extension of the primacy (*aṣālah*) and gradation of being (*tashkīk al-wujūd*)—two key terms of Sadrean ontology. Ṣadrā relegates all reality, physical or otherwise, to the infinitely variegated and all-encompassing reality of being, and this enables him to see all change in terms of being and its modalities (*anḥāʾ al-wujūd*). Although Ṣadrā accepts a good part of the Aristotelian view of motion and its types, it is this ontological framework that distinguishes his highly original theory of substantial motion from the traditional Peripatetic discussions of motion.

In what follows, I shall give a detailed analysis of substantial motion and the ways in which Ṣadrā incorporates and reformulates the traditional notions of qualitative and quantitative change in his natural philosophy. It should be emphasized at the outset that Ṣadrā’s views on nature and motion are not an isolated set of philosophical reflections but are rather closely related to his ontology and cosmology on the one hand, and psychology and epistemology, on the other. This is borne out by the fact that many of Ṣadrā’s novel contributions to Islamic philosophy are predicated upon substantial motion, among which we may mention his celebrated doctrine that the soul is “bodily in its origination, spiritual in its subsistence” (*jismāniyyat al-ḥudūth rūḥāniyyat al-baqāʾ*) and the unification of the intellect and the intelligible (*ittiḥād al-ʿāqil waʾl-maʿqūl*). In this essay, I shall limit my discussion to Ṣadrā’s attempt to move away from a framework of external relations and positional motion to a framework of existential transformation whereby the cosmos is projected as marching towards a universal *telos*.

### **The Aristotelian Framework: Motion as the Actualization of Potentiality**

Following the scheme of Aristotelian physics, Ṣadrā begins his discussion of motion by explaining the meaning of potentiality. The word potentiality

(*al-quwwah*)<sup>1</sup> is defined in several ways. The most common meaning is the ability to execute certain actions. In this sense, *al-quwwah* as potency is synonymous with power (*al-qudrah*), which renders the motion or action of physical bodies possible. Ibn Sina gives a similar definition when he says that “potentiality is the principle of changing into something else”.<sup>2</sup> All beings that undergo quantitative or positional change use this potential power. Such corporeal bodies, however, need an active agent to actualize their dormant potentiality. For Ṣadrā, this 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 ‘meaning’ (*maʿnā*) in an entity were to be the thing itself, this would amount to an unchanging nature in that thing. The real nature of possible beings, however, displays a different structure. With Aristotle<sup>3</sup> and Ibn Sīnā<sup>4</sup>, Ṣadrā takes this to mean that “a thing cannot have its principle of change in itself” and that “for every moving body, there is a mover outside itself”.<sup>5</sup>

The relationship between a mover and a moving object presents a causal hierarchy in that the mover that sets other things in motion is not only actual but also enjoys a higher ontological status.<sup>6</sup> In Ṣadrā’s terms, whatever has priority and more intensity in existential realization (*ashaddu taḥaṣṣulan*) is likely to be more a cause and less an effect. In this general sense, it is only God who is rightly called the ‘cause’ of everything. By the same token, *materia prima* (*al-māddat al-ūla/hayūlā*) has the least potentiality of being a cause because it is weakest in existential constitution with a strong propensity towards non-existence.<sup>7</sup>

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1. Depending on the context, the word *al-quwwah* can also be translated as ‘potency’, and I shall do so here when Ṣadrā uses the word in the sense of ‘faculty’ and ‘ability to do something’.
  2. Ibn Sīnā, *Kitāb al-Najāt* (ed. 1985), by Mājīd Fakhry, Manshūrāt Dār al-Āfāq al-Jadīdah, Beirut, p. 250.
  3. Aristotle, *Physics*, Book VII, 241b.
  4. Ibn Sīnā, *al-Najāt*, pp. 145-6.
  5. Ṣadr al-Dīn al-Shīrāzī (Mullā Ṣadrā), *al-Hikmat al-mutaʿāliyah fīl-asfār al-arbaʿat al-ʿaqliyyah* (ed. 1981), by M. Riḍā al-Muẓaffar, Dār al-Turāth al-ʿArabī, Beirut, vol. III, Part 1, pp. 3-5. (cited hereafter as *Asfār*)
  6. Ṣadrā cites six different types of ‘agency’ (*al-fāʿil*) in so far as the movement of things is concerned. These are “by intention” (*biʿl-qaṣd*), “by providence” (*biʿl-ʿimāyah*), “by consent” (*biʿl-irādah*), “by nature” (*biʿl-ṭabʿ*), “by coercion” (*biʿl-qaṣr*), and “by force” (*biʿl-taskhīr*). Cf. *Asfār*, III, 1, pp. 10-3.
  7. *Ibid.*, p. 6. Cf. also Ṣadrā (1377 A.H.), *Ḥudūth al-ʿālam*, 2nd edition

After stating that motion and rest (*al-sukūn*) resemble potentiality and actuality and belong to the potentiality-actuality framework, Ṣadrā defines them as accidents of being-qua-being because being-qua-being is not subject to motion and rest unless it becomes the subject of natural or mathematical order.<sup>8</sup> At this point, 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-hayūlā*). The state of a purely actual being, on the other hand, cannot apply to anything other than God who has no potentiality to be actualized. A being of such a nature should be a “simple being that contains in itself everything”. As the Peripatetics before Ṣadrā had argued, prime matter is ‘infinite’ because it is indefinite and ready to take on any form when realized by an actual form. As for contingent beings capable of motion, which refers to the world of corporeal bodies, they have the potentiality of gradual (*tadrījan*) transition from potentiality to actuality.

The temporal term ‘gradual’ in the definition of motion, however, had 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, definition of time as the measure of motion leads to *petitio principii* and regression. This led some philosophers to propose a new definition of motion that contains no terms of time. Relying on Ibn Sīnā, Suhrawardī and al-Rāzī, Ṣadrā rebuts this objection by saying that the meaning of such terms as ‘sudden’ and ‘gradual’ is obvious with the help of the five senses, i.e., through physical analysis.<sup>9</sup> There are many clear and obvious things, says Ṣadrā, whose inner nature we can never fully know.<sup>10</sup> Nevertheless, this explanation did not satisfy the theologians<sup>11</sup>, and,

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Intishārāt-i Mawlā, Tehran, pp. 195-9.

8. *Ibid.*, p. 20.

9. Before Ṣadrā, this idea was stated also by Abū'l-Barakāt al-Baghdādī. Baghdādī claims that since such terms as gradual and sudden are more evident and comprehensible to our common sense, we can easily understand the meaning of motion by employing such time-related terms. He thus sees no harm in using these terms in defining motion notwithstanding the seeming circularity. Cf. his *Kitāb al-Muṭabar*, (Hyderabad, 1357 AH), vol. II, pp. 29-30.

10. *Asfār*, III, 1, p. 23.

11. It is important to note, albeit briefly, that Ṣadrā developed his concept of substantial motion against the background of the traditional theories

following Aristotle<sup>12</sup>, they defined motion as the realization of what is possible (*mumkin al-ḥuṣūl*). Since this definition indicates a move from potentiality to actuality and since actuality always implies perfection as opposed to potentiality, motion also signifies an act of perfection. Hence

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of motion as expounded by Peripatetic philosophers, Kalām thinkers, and Illuminationists (*ishrāqīyyūn*). I shall discuss the views of the philosophers and the School of Illumination when analyzing Ṣadrā's criticisms. As for the Kalām views of motion, I can only refer the reader to some traditional sources for further discussion. The Kalām views of motion are anchored in the central doctrine of atomism shared by the majority of Ash'arites and 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 entails that change and motion come about only in the alteration of the accidental attributes of atoms, not in their essential constitution, thus reducing change to a system of external relations. To that effect, the Mu'tazilites developed the doctrine of 'kawn', i.e., 'to be present in a place' or 'to exist in a position *in concreto*'. According to this view, atoms always 'exist' (*kān*) in a particular location. Motion is therefore nothing but an atom's being (*kān*) in one position after having been in another. This makes motion an accidental property of atoms. Consequently, change and motion in the essential structure of atoms is rejected unanimously by Mu'tazilites and Ash'arites alike. In the same way, change or motion is allowed only in four categories: 'where' (*ayn*), 'position' (*wad'*), 'quantity' (*kam*), and 'quality' (*kayf*). Any change in the category of substance is denied on the ground that this would lead, as Ibn Sīnā and Suhrawardī had also argued, to the dissolution of the original substance. Cf. Khayyāṭ (1957), *Kitāb al-Intisār*, al-Matba'ah al-Kātūlikiyyah, Beirut, p. 32 ff.; al-Shahrastānī, M., *al-Milal wa al-niḥal* (ed., 1961), by M. S. Ghaylānī, Sharikat wa Maktabat Muṣṭafa al-Ḥalabī, Cairo, p. 50 ff.; al-Baghdādī, 'Abd al-Qāhir (1988), *al-Farq bayn al-firaq*, Maktabat Ibn Sīnā, Cairo, p. 101 ff.; al-Rāzī, Fakhr al-Dīn, *al-Mabāḥith al-mashrīqīyyah* (ed., 1990), by M. al-Baghdādī, Dār al-Kitāb al-ʿArabī, Beirut, vol. I, pp. 671-793; al-Taftazānī, *Sharḥ al-maqāṣid* (ed., 1989), by A. Umayra, ʿĀlam al-Kutub, Beirut, vol. II, pp. 409-59; al-Tahānawī, Muḥammad, *Kashshāf iṣṭilāḥāt al-funūn* (ed., 1998) by A. H. Basaj, Dār al-Kutub al-ʿIlmiyyah, Beirut, vol. I, pp. 462-73; Maḥmūd, Alī b. Aḥmad b., "Risālah fī baḥṭh al-ḥarakah" in *Collected Papers on Islamic Philosophy and Mysticism* (ed. 1971), by M. Mohagheghn and H. Landolt, Tehran University Press, Tehran, pp. 35-51; and Frank, Richard M. (1978), *Beings and Their Attributes: The Teaching of the Basrian School of the Mu'tazila in the Classical Period*, State University of New York Press, Albany, pp. 95-104.

12. Cf. Aristotle, *Physics*, Book III, 201, 10: "The fulfillment of what exists potentially, in so far as it exists potentially, is motion".

the conventional idea that motion is perfection for the moving body. But this perfection is necessarily different from other types of perfection because it has no real existence other than ‘passing to another place’. Understood as such, a moving body possesses two special characteristics. The first is inclination (*tawajjuh*) towards a particular point or aim (*maḥlūb*), which Ṣadrā associates with the inner nature of things. The second is that there should remain some potentialities in things that move even after they exhaust their potentiality to move towards a particular position. This implies that motion and rest resemble potentiality and actuality only in a limited sense.<sup>13</sup>

The above definition of motion leads to the commonly held idea that motion is the first perfection for a potential being in so far as it is potential. This definition, says Ṣadrā, goes back to Aristotle. Plato provides a similar explanation: It is coming out of the state of sameness, i.e., a thing’s being different from its previous state. Pythagoras proposes a close definition: It consists of alterity. After mentioning these definitions and their partial criticism by Ibn Sīnā, Ṣadrā states that these different definitions refer to one and the same meaning, which is the essential change of state of affairs in the moving body. Ṣadrā then criticizes Ibn Sīnā’s objection to Pythagoras that motion is not change itself but rather ‘that by which change takes place’. Ṣadrā rejects Ibn Sīnā’s view by saying that motion is not a ‘thing’ or agent by which things change. To define motion, as the Mutazilites claimed<sup>14</sup>, as an agent through which things move is to posit it as an accidental property of things -- the very view against which Ṣadrā proposes his substantial motion. Instead, he insists on the definition of motion as change itself. As we shall see below, Ṣadrā pays a particular attention to this point because it is closely related to the renewal of substantial natures (*tajaddud al-akwān al-jawhariyyah*) on the one hand, and continuously changing nature of things (*taḥawwul al-ṭabī‘at al-sāriyah*), on the other.<sup>15</sup>

## Two Meanings of Motion

In the *Shifā’*, Ibn Sīnā gives two different meaning of motion: the first is the ‘passage’ (*qaṭ‘*)<sup>16</sup> view of motion according to which the moving body is

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13. *Asfār*, III, 1, p. 23.

14. Cf. Frank (1978), p. 100.

15. *Asfār*, III, 1, p. 26.

16. Ṣadrā replies to al-Rāzī’s doubt about the real existence of the passage-view of motion (*qaṭ‘*) by relying on his teacher Mīr Dāmād who holds

taken as a present whole during movement. When the mind considers the moving body with the points that it traverses, it pictures these discrete points and time-instants as a *present whole*. But since this frozen picture corresponds to a body extended in space and time as a continuous whole rather than to an actual change, this kind of motion exists only in the mind. The second kind is called ‘medial motion’ (*tawassuṭ*) because, according to this view, the moving body is always found somewhere between the beginning and end of the distance traversed. This view, however, refers to a state of continuation, viz. the body’s being at a point at every time instant. As such, it does not allow change in the existential constitution of moving bodies but simply states a transposition from one place to another. For Ibn Sīnā and Ṣadrā, it is this kind of motion that exists objectively in the external world.

Having no quarrel with the medial view of motion, Ṣadrā sets out to prove the objective existence of motion as passage. He first draws attention to a self-contradiction in Ibn Sīnā’s rejection of it. Ibn Sīnā 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 Sīnā regards passage motion as the locus and cause of time. But if passage motion does

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that if a thing’s being a continuous process as a whole or a unity is impossible, it should be impossible both in the mind and in 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.” Cf. Rahman, Fazlur (1975), *The Philosophy of Mulla Ṣadrā*, SUNY Press, Albany, 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 (*ān*)”. A moving body’s being a *present whole in a time-instant* results not in motion but immobility. Ṣadrā further stresses the point that this moving body as a whole may exist in time but not in a particular time-instance. 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 that have weak existence (*daʿīfat al-wujūd*), 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 time itself is nothing but a continuous single unity (*amr muttaṣil wāḥid shakhsī*). Cf. *Asfār*, III, 1, p. 28.

not exist objectively, how can it be the measure of time? In other words, how can something non-existent be the locus of something existent?<sup>17</sup>

Ibn Sīnā'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 insofar as it exists. But motion has no existence in time-instants (*ān*). If motion were one of the modalities of things, it would always have to be together with them. Motion exists in things only continuously (*istimrāran*) which, in turn, refers to the second meaning. To this, Ṣadrā replies by saying that the locus of motion is not the thing as a stable substance but 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 (*ḍarb min tabaddul al-aḥwāl al-ḥaythiyyah*). This is based on the idea that 'the cause of that which changes also changes' (*'illat al-mutaghayyir mutaghayyir*), and, likewise, 'the cause of that which is stable is stable' (*'illat al-thābit thābit*).<sup>18</sup>

The main reason for the denial of the passage view of motion is related to the peculiar characteristic of this type of motion, which Ṣadrā 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 (*ḍa'ifat al-wujūd*). Accordingly, their existence resembles their non-existence, their actuality is similar to their potentiality, and their origination (*ḥudūthiha*) is nothing but their corruption (*zawāliha*). Each of these (qualities or attributes) requires the non-existence of the other; in fact, their existence is their non-existence. Therefore, motion is the very destruction of a thing itself after it (is established in the physical world) and its origination before it (is actualized in the external world). And this mode (of being) is comparable to the absolute being in the sense that all relational beings (*al-idāfāt*) have some sort of existence. Likewise the existence of motion

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17. *Asfār*, III, 1, p. 33. Interestingly, in his note on the same page, Sabzawārī rejects Ṣadrā's criticism and insists on the subjectivity of the passage motion.

18. *Ibid.*, pp. 33-4.



displays ambiguity (*shukūk*) and similitude (*shabah*) (of being close to both being and non-being).<sup>19</sup>

Within the actuality-potentiality framework, there are, Şadrā 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, i.e., the indefinite substratum ready to take on any form in actuality, it has some share of goodness as opposed to non-existence (*‘adam*), which is pure evil. What Şadrā calls the “First Reality” (*al-ḥaqq al-awwal*) terminates the chain of active agents that bring potential beings into a state of actuality, and thus functions as a cosmic principle in the ‘great chain of being’. The ontological discrepancy between potentiality and actuality points to a hierarchy of beings in that things that are in actuality enjoy higher ontological status. At this juncture, Şadrā insists that a simple body is always composed of matter and form because it has the potentiality of motion on the one hand, and contains ‘the material form’ (*al-ṣūrat al-jismāniyyah*) or a single continuous substance (*al-ittiṣāl al-jawharī*), which is something actual, on the other. This aspect of physical substances proves one of the cardinal principles of Sadrean ontology and natural philosophy, i.e., that ‘a simple reality is ... all things’ (*basūṭ al-ḥaqīqah ... jamī‘ al-ashyā’*).<sup>20</sup>

### The Mover and the Moving Body

We may remember that Aristotle had proposed the concept of the Prime Mover to terminate the infinite regression of causal chain. Put simply, if everything is moved by something else, this must end in an agent that itself does not move. An important consequence of this idea is the stark distinction between the mover and the moving body -- a complementary duality that was extended in posterity to positional motion. Considered from the perspective of vertical causality, every moving body needs a mover, and Şadrā, following the Peripetatics, reformulates this relationship in terms of actuality and potentiality. Since the process of motion requires the two poles of actuality and potentiality, actuality refers to the mover (*al-*

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19. Ibid., p. 37.

20. Ibid., p. 40.

*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 shows that a single body cannot be both the active and passive agent of motion. In other words, we have to assume the existence of a prime mover to which all motion can ultimately be traced back. Šadrā's argument runs as follows: The moving body, in so far as it is a potential being, has to be a passive agent, i.e., the receiver of the act of motion whereas the mover has to be an active agent, in so far as it is an actual being. These two qualities or 'aspects' (*jihāt*) cannot be found in the same thing simultaneously due to their exclusive nature. In other words, a physical entity cannot be both the source and locus of motion *at the same time*. At this point, all motion 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 (i.e., principle) of motion in the sense of being the source of its own continuous renewal. By this, I do not mean the 'instaurer' (*jā'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. Otherwise this would necessitate the difference of the cause (*al-'illah*) from its effect (*ma'lūliha*). Thus, if this (chain of causation) does not end in an ontological agent (*amr wujūdī*) that renews itself by itself, this would lead to regression or circularity.<sup>21</sup>

Šadrā goes on to adduce proofs for the necessity of a prime mover as an external agent to set things in motion. He rejects and responds to some objections as follows. 1) If a thing were to move by itself, it would never reach rest because whatever endures by itself does so by its intrinsic qualities. Once these qualities or properties are disjoined from a thing, it no longer exists. 2) If a thing were to move by itself, parts of motion i.e. the subject of motion as a whole would be in rest, which means that the thing would not move. 3) If the principle of motion were to be in the moving body itself, it would have no 'fitting' or natural place to which it could

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21. *Ibid.*, pp. 39-40.

incline. According to the conventional definition of motion, however, if there were to be no natural place for a thing to which it could incline, it could not move. 4) If self-motion were to be a real property of a moving body, it would be a universal quality of ‘thing-ness’ (*shay’iyyah*) shared by all corporeal things. But this is not the case in natural bodies. In reality, says Ṣadrā, motion is a particular quality provided by an outside mover. 5) Another proof for the fact that a physical body cannot have the principle of motion in itself is that this would mean that both potentiality and actuality can be found at the same locus simultaneously. If this were the case, 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 through contingency (*bi’l-inkān*), and its relation to motion as an active agent is necessary (*bi’l-wujūb*). If the moving body itself were to be the producer of motion, this relation would be necessary. But since contingency and necessity cannot coincide, the moving body has to be different from the principle or source of motion.<sup>22</sup>

### **How 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 adz is an example for the second type of motion. The immediate act of the mover gives the concept of motion as an accidental property. The act of the mover by means of something else yields the notion of the moving body itself. The mover sets an object in motion without being in need of an intermediary agent like the attraction of the lover by the beloved or the motion of the one who has zeal and desire to learn by the learned one. The first mover, which itself does not move, either grants the moving body the immediate cause by which it moves, or attracts it to itself as its final goal. Everything in the physical world brings about a certain effect not by accident or coincidence but through an extraneous power added to it from outside. And 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

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22. Ibid., pp. 41-2.

totally 'relationless' in respect to it. If this were a kind of motion brought about by the abstract or 'detached' agent (*al-mufāriq*) 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. This agent in all contingent beings is 'nature' (*ṭabīʿah*).<sup>23</sup>

The next problem Ṣadrā addresses is how the Prime Mover, which itself does not move, is related to contingent beings and material bodies. We may summarize Ṣadrā's argument as follows: A thing's being capable of receiving the effect of motion from the 'detached' agent (*al-mufāriq*) can be attributed 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 thing-ness. Ṣadrā briefly states that the second option i.e., motion through a property or ability in things is the right view. The third option has some points to consider. The actualization of motion through an aspect of the detached agent takes place when the detached agent originates an effect in the thing it sets in motion. This, in turn, may happen either through the will of the detached agent by manipulating something in the thing or through effecting it haphazardly according to its wish.

The last option is not tenable because it terminates the idea of order in nature. Chances or accidental coincidences (*al-ittifāqiyyāt*), says Ṣadrā, 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 a universal purpose (*aḡhrāḍ 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-khāṣṣiyah*) is the source of motion,

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23. Ibid., pp. 47-8. Even though Ibn Sīnā seems to approve this view in essence, he uses the word nature (*ṭabīʿah*) in the sense of 'natural inclination' and natural motion rather than as an essential quality of corporeal bodies that render all volitional and coerced movement possible. Cf. *al-Najāt*, p. 146.

and this is nothing but potency (*al-quwwah*) and nature, by virtue of which things yearn, through motion, for their second perfection.<sup>24</sup>

Thus, we are left with the option that this effect occurs by means of an essential quality in physical bodies, which causes them to move. This Ṣadrā calls ‘potency’ and ‘nature’.<sup>25</sup>

After positing ‘nature’ as the immediate cause of all motion<sup>26</sup>, Ṣadrā 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 continuous renewal of contingent beings is an essential quality that exists *in concreto* whenever possible beings are brought into actuality out of potentiality. Ṣadrā’s arguments also reveal some interesting aspects of his theory of matter. Every created being is preceded by being (*wujūd*) and ‘some matter’ (*māddah*) that bears it. This is a quality inherent in all contingent beings. Otherwise they would belong to the category of either necessary or impossible being. Matter with which contingent beings are united acts as one of the immediate principles or causes of bringing contingent beings out of non-existence and pure potentiality. It is to be remembered that matter and form, just like potentiality and actuality, are not ‘things’ but *principles* of existence. In this sense, the subject of contingency (*mawdū‘ al-inkān*) has to be an originated entity (*mubdī‘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 every contingency is preceded by another one until the chain of causation comes to an end in the Principle which has no contingency, i.e., potentiality.

Ṣadrā warns against the idea that potentiality is prior to actuality in an absolute sense. In fact, it is a common tendency to put potentiality before actuality like a seed’s relation to a tree or like Naẓẓām’s celebrated theory of ‘latency’ (*kumūn* and *burūz*).<sup>27</sup> Some have said that the universe was in

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24. *Ibid.*, p. 49.

25. *Ibid.*, pp. 48-9.

26. Cf. Aristotle, *Physics*, Book III, 200b.

27. The theory of latency was developed by the Mu‘tazilite theologian Naẓẓām to explain origination and corruption (*kaḥn wa fasād*). Naẓẓām who, unlike most of the Mu‘tazilites and the Ash‘arites, had rejected atomism, presupposes a potential nature that is ‘latent’ in things and

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 Sīnā mentions in the *Shifāʾ*, 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.

Ṣadrā’s overall reply to these claims is that in some cases, as in the relationship between sperm and man, potentiality precedes actuality *in time*. But, in the final analysis, potentiality cannot subsist by itself and needs a substratum to sustain it.

We say that, as far as particular entities 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. But potentiality, in the final analysis, is preceded by actuality for a number of reasons. Potentiality (i.e., the potential being) cannot subsist by itself and needs a substance to sustain it. And this substance has to be something actual (*biʾl-fiʿl*) because whatever is not actual cannot exercise (any power) on 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-ʿuqūl al-fāʿalah*). Then, potentiality needs the act (*fiʿl*) (of realization) to bring it into actualization whereas this is not the case with what is actual. Potentiality needs another agent (*mukhrij*) to bring it (out of non-existence), and this chain undoubtedly comes to an end in an actual being (*mawjūd biʾl-fiʿl*) which is not created (by something else) as we have explained in the chapter on the termination of causes.<sup>28</sup>

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that becomes ‘apparent’ in time. Therefore, he regards any kind of change as the appearance (*zuhūr*) of these dormant qualities. Cf. al-Khayyāt, *Kitāb al-Intiṣār*, p. 28ff.

28. *Asfār*, III, 1, pp. 57-8.

After these considerations, Ṣadrā introduces an axiological element into the discussion, which, in turn, confirms the ontological discrepancy that Ṣadrā establishes between potentiality and actuality on the one hand, and existence and non-existence, on the other.

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. And 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 non-existence in other things such as injustice (*al-zulm*).

Since potentiality has some sort of actualization in the external world, its essence subsists by existence. And 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 whatever is actual is prior to the potential in terms of causation (*bi'l-ʿilliyyah*), nature (*bi'l-ṭabʿ*), perfection (*bi'l-sharaf*), time, and actual reality (*bi'l-ḥaqīqah*).<sup>29</sup>

### Nature as the Immediate Cause of Motion

As we have stated previously, motion is the act of moving itself (*mutaḥarrikiyyat al-shayʿ*)<sup>30</sup> for it refers to the continuous renewal and lapse of the moving body in a particular time-space coordinate. This point is of extreme importance for Ṣadrā's purposes here for he tries to establish motion as an essential property of corporeal bodies, and this is a major step towards substantial motion (*al-ḥarakat al-jawhariyyah*) as opposed to positional or locomotive motion. In this sense, 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.'<sup>30</sup> This leads Ṣadrā to the following conclusion: The immediate cause of every motion should be something whose quiddity (*māhiyyah*) is stable but whose being (*wujūd*) is ever-changing.

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29. *Asfār*, III, 1, p. 58.

30. Rahman (1975), pp. 95-6.

The immediate cause of motion has to be something with a stable essence and continuously changing being (*thābitat al-māhiyyah mutajaddid al-wujūd*). As you will see, the immediate cause of all kinds of motion is no other than nature. This nature is the substance by which things subsist and become actualized as a species (i.e., as a particular entity)<sup>31</sup>. 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 (*sayyāl al-huwiyyah*)<sup>32</sup> despite the fact that its quiddity is impervious to change.

The statement that the subject of motion should be something with a stable essence is true only when we mean by 'stable' (*thābit*) the quiddity (*māhiyyah*), viz., the mental image of things. Or, we understand from 'stable' the subject of motion, which is not a concomitant (*lāzim*) for the actual existence of the thing in question. To emphasize this point, Ṣadrā introduces 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, and confirms substantial motion as a principle of 'substantiation'. The second kind of motion is that which takes place as an 'accident' as in the case of transposition (*naql*), transformation (*taghayyur*) or growth. Ṣadrā calls the latter 'motion in motion' (*ḥarakah fī ḥarakah*).<sup>33</sup>

In light of this view, we can say that every moving body possesses and preserves a 'nature' that acts as its immediate cause of motion. This nature, however, is not something superadded to things from outside, like an accident, but conjoined with their substances. Thus nature is not only the immediate cause of natural motion (*al-ḥarakah al-ṭabīʿiyyah*) but also that of forced or constrained (*al-ḥarakah al-qasriyyah*) motion. In the latter case, any mover that moves something else uses 'nature' as agent of motion. In other words, it is this nature that renders possible both primary, i.e., substantial,

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31. As I stated before, nature, like matter and form, is not a thing but a principle of existention and substantiation (*tajawhur*).

32. *Asfār*, III, 1, p. 62. See also *Kitāb al-Mashāʿir* trans. by Henry Corbin (1968) as *Le Livre des penetrations metaphysiques*, Institut Français d'Iranologie de Téhéran, Téhéran-Paris, pp. 64-5.

33. *Asfār*, III, 1, pp. 61-4.



and secondary, i.e., accidental movement. This is where Ṣadrā takes his departure from traditional accounts of motion.

And we are certain about the following conclusion on the basis of heart-knowledge (*al-wijdān*) rather than discursive proof (*al-burhān*): 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 cannot but be an actual power inherent in that thing. This is called nature. Thus, the immediate cause of material [i.e., physical] motion (*al-ḥarakat al-jismiyyah*) is the substantial power that subsists in things, and all the accidents are subservient to the sustaining form (*al-ṣūrah al-muqawwimah*), which is nature...

The philosophers have shown conclusively that every (physical body) which accepts the act of yielding (*al-mayl*) from outside has to have a natural inclination (*mayl ṭibāʿī*) in itself. It is thus proved that the direct source of motion is something flowing with a continuously changing identity (*mutajaddid al-huwiyyah*). 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.<sup>34</sup>

We may read this paragraph as an indirect response to Ibn Sīnā. Ṣadrā's claim is that Ibn Sīnā has in fact accepted the principle that a stable being cannot be the cause of instability and permanent change at the same time. In other words, Ibn Sīnā is to be corrected on the principle that any 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 that corporeal bodies possess.

### **Nature as the Principle of Change and Permanence**

After criticizing the philosophers' idea of 'two consecutive phases' in motion,<sup>35</sup> Ṣadrā discusses briefly the problem of how changing things

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34. Ibid., p. 65.

35. Ṣadrā's criticism can be summarized as follows: The first phase is motion itself and the second is a thing's transposition from one point to another. According to this account, which is reminiscent of the passage

(*mutaghayyir*) are related to an unchanging and permanent principle (*thābit*). 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 we have already ruled out as impossible. Ṣadrā eliminates this objection by saying that the continuous 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/change 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 things.

The gist of the foregoing arguments is that every natural body carries the principles of change and permanence in itself simultaneously. Nature, for example, remains an enduring property in physical bodies while its very reality is change. By the same token, 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

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view mentioned above, something always remains stable in the process of motion, and this is nature. A relationship of sorts is thus established between the stable which is nature and the changing which is a thing's passing through a certain distance. Ṣadrā rejects this argument by restating the relationship between substance and accident: since substance is the source as well as locus of accidents, all accidental properties and changes should issue forth from substances. If there were no being whose very essence would be renewal and lapse, there would be no stages of motion. For Ṣadrā, 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 motion itself. Therefore, both kinds of change are due to that 'reality whose essence is continuously changing in itself, and this is what we called "nature". But since the 'mental substances' are beyond the realm of existential transformation, they always remain stable and unchanged. This is also true, says Ṣadrā, for 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 continuously changing nature. Thus the gist of Ṣadrā's argument is that a continuously changing structure cannot depend on a stable cause. The renewal of all changing beings is due to a cause whose very reality is change and renewal at every moment. *Asfār*, III, 1, pp. 64-7.

material body with its components as a whole.<sup>36</sup> 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 a similar way, the hyle serves as the connection point between the potentiality and actuality of contingent beings. It is thus concluded that “these two substances (i.e., nature and hyle) are simply means of origination and corruption of material bodies, and through them a relation is established between the eternal (*al-qadīm*) and the created (*al-ḥādīth*)’.<sup>37</sup>

### Category of Motion

The question of which categories (*maqūlāt*) are capable of receiving change and motion is of particular significance for Ṣadrā because substantial motion is ultimately nothing but change in the category of motion itself. We may remember that Ibn Sīnā, following Aristotle, had accepted change in categories such as quality, quantity and position but denied it in the category of substance (*jawhar*). Since substance was regarded by *al-Shaykh al-Raʿīs* and his students as a stable substratum to which all accidental qualities are traceable, accepting change in the substance of a thing would amount to the dissolution of that particular thing, and, as a result, there would remain no subject or substratum for motion and change. For Ṣadrā, 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 destruction of corporeal bodies. This is predicated upon the principle that the subject of motion is ‘some subject’ (*maḥḍūʿ mā*) rather than a ‘particular subject’ (*maḥḍūʿ*). In other words, what is needed through the process of substantial change is not a particular locus or substratum, which would be destroyed by qualitative or quantitative change, but some subject that remains constant. We may summarize Ṣadrā’s analysis as

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36. Ibid., p. 68.

37. Ibid., pp. 68-9. Ṣadrā explains this complementary duality of things on the basis of the gradation (*tashkīk*) of being which is, for Ṣadrā, both the principle of unity and diversity in existence.

follows.

When we say that motion is ‘within a category’ (*maqūlah*), four possibilities arise 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, and finally 4) the substance itself is changing gradually from one species to another or from one class to another.

Şadrā emphatically rejects the first three possibilities by repeating his fundamental identification of the act of motion with the moving body. He repudiates the claim 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. It is obvious, however, that the realization of an infinite number of species in a finite being is impossible. In this respect, Şadrā invokes Ibn Sīnā in support of his argument by quoting from the *Ta’līqāt*. 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. In reality, the infinite number of species exists only potentially due to the very definition of motion, i.e., 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”.<sup>38</sup>

Such a body has an infinite number of ‘instantaneous individuals’ (*afrād āniyah*) at every second. But 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, which 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’ (i.e. the possible species abstracted by the mind) in that as an actual existent, it represents (*mişdāqan*) in itself many species. By the same token, an animal’s existence is stronger than a plant’s existence because, as a single unity, it contains and represents every shade of existence that the plant possesses. The same holds true for the intensification of blackness since it encapsulates whatever blackness exists

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38. Ibid., p. 72.

in ‘weak black entities’. Thus, motion or change does take place in categories, and Şadrā accepts this as the only possible view.<sup>39</sup>

As for the view that the category of substance is a species for motion, it is not tenable because, as Şadrā repeatedly states, “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 constantly renewing bodies is not like the occurrence of an accident to a ‘self-subsisting subject’ (*al-mawḍū‘ al-mutaqawwim bi-nafsihi*). The idea of such a stable subject is rather one of the ‘analytical [i.e., mental] accidents’ (*al-‘awāriḍ al-taḥlīliyyah*) i.e. mentally abstracted and posited accidents that the mind constructs. This, in turn, underscores the intrinsic relation between existential motion and actually existing entities, and affirms that the ‘separation’ of substantial motion from corporeal things is nothing but an outcome of our mental analysis. The ‘occurrence’ (*‘urūd*) 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. In a sense, this is comparable to the distinction between essence (*māhiyyah*) and existence (*wujūd*) – a distinction that exists only in the mind. Thus Sabzawārī states that the distinction is merely a matter of ‘naming’ (*bi-ḥasab al-‘unwān*).<sup>40</sup> At best, the attribution of mental accidents to subject can be compared only to the attribution of differentia (*faṣl*) to genus (*jins*).

Şadrā sums up his discussion by saying that “the meaning of motion being in a category is that the subject (i.e., the substance) is bound to change gradually, and not suddenly, from one species to another or from one class to another.”<sup>41</sup>

### Problem of Quantitative Change

Even though the Peripatetics had affirmed, with Aristotle, that all categories, with the exception of substance, undergo change, explaining the precise nature of quantitative change has posed some difficulties.<sup>42</sup> Şadrā

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39. Ibid., p. 73. Şadrā also states that if change in categories is not admitted, the opponent would be forced to adhere to the idea of ‘leap’ (*al-tafyah*) proposed by al-Nazzām. Şadrā insists that the theory of leap is easily rejected by common sense.

40. Ibid., p. 74.

41. Ibid., p. 75.

42. For Ibn Sīnā’s discussion of what he calls *al-takhalkhul* (diminution) and

even says that Suhrawardī and his followers had denied quantitative change.<sup>43</sup> 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, i.e., the physical body that undergoes quantitative change. In contrast to the idea of quantitative change as rupture and replacement, Ṣadrā sees change in quantity as a continuous and single process. His detailed discussion can be summed up as follows.

Since motion signifies the actualization of certain qualities and quantities that exist for physical bodies potentially, Ṣadrā reverses the picture and says that to become black means not the increase of blackness in the subject but rather the increase of the subject in blackness. In other words, it is not the case that during quantitative increase or decrease, 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. When conceived as such, it becomes impossible to explain quantitative change because such a process corresponds not to the gradual augmentation or diminution of something but rather to the juxtaposition of two independent quantities. In the order of existence, however, blackness has only “one single identity (*huwiyyah shahkṣiyyah wāḥidah*) evolving in perfection at every instant”.<sup>44</sup>

When we say that blackness has only ‘one single continuous identity’ (*huwiyyah wāḥidah ittiṣāliyyah*) in the process of quantitative augmentation or diminution, we admit some ‘degrees of intensification’ (*marātib al-ishṭidād*). In this case, says Ṣadrā, three points should be made clear. First of all, 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-muttaṣil al-wāḥid lahu wujūd wāḥid*).<sup>45</sup> Secondly, although blackness has one single continuous identity in its perfection or imperfection, ‘various species, essential properties and logical differentiae’ occur to it in regard to its existential renewal. For Ṣadrā, such a transformation in the substance of physical bodies is possible because it is being (*al-wujūd*) that is fundamentally real and principial,

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*al-takāthuf* (augmentation), see *al-Najāt*, pp. 186-8 and pp. 242-4.

43. *Ibid.*, p. 89.

44. *Ibid.*, p. 82.

45. *Ibid.*, p. 83.

quiddity being thereby subject to it. The reason why Ṣadrā invokes the primacy of being here is that he considers the ever-expanding reality of being as the primary context of all substantial change. Thirdly, the frozen picture of an increasing entity presents to the mind some instant-points that have occurred actually and some instant-points that may occur potentially. As Ṣadrā repeatedly states, however, it is the mental representation of the order of being that yields the idea of quantitative change as a succession of two discrete species or entities. In contradistinction to the Peripatetics, a 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 in 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 (*ḥādīth kulla ḥīn*) this will be equally true.<sup>46</sup>

To further emphasize motion as a continuous process, Ṣadrā turns to Ibn Sīnā one more time and takes him to task on the question of motion in the category of substance. We may remember that Ibn Sīnā had conceived motion in substance not as a single continuum but rather as the sudden destruction of original substance and its replacement by another one. Ibn Sīnā'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, however, 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, Ṣadrā provides the following answer, which sums up his doctrine of the gradual 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,

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46. *Ibid.*, p. 84; Rahman's translation, *op. cit.*, p. 103.

and its intensification means its progressive perfection. But if the question is whether the same specific essence, which could be abstracted (by the mind) from it, still continues to exist — then we choose to say that it does not remain any longer. But from this, it does not follow that an entirely new substance, i.e., existence has arisen; it only means that a new essential characteristic (or specific form) has been acquired by it (i.e., by existence...). That is to say, this substance either has 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 as it did not mean in the case of black that an actual infinity of black colors had arisen); it only means 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 one of them is a gradual perfection, i.e., a motion towards the actuality of (a new) mode of existence.<sup>47</sup>

The gist of the foregoing argument is that being, as an unfolding single unity (*al-wujūd al-muttaṣil al-tadrījī*), travels through various essences, and assumes different forms and modalities. The gradual passing of a substance from one state of being to another means that it reaches a higher and more perfect mode of being at every successive point of movement. As we have stated before, however, this continuous process does not dissolve substances into different and discrete units.

### **Identity and Endurance of Physical Bodies**

A particular problem arises here as to how to account for the endurance of substantial forms when corporeal bodies undergo qualitative and quantitative change. To establish a substratum that endures throughout the process of change, Ṣadrā argues that 'some matter' (*māddatun mā*)

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47. *Ibid.*, p. 86; Rahman's translation *op. cit.*, p. 104.



particularized through a form, quality or quantity is enough for substantial change. In the course 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. According to Şadrā, the persistence of a certain amount of matter with its variegated modifications and particularizations is so subtle that the previous philosophers, including Ibn Sīnā, had acknowledged that the mind is incapable of perceiving it in its entirety. After stating this historical point, Şadrā turns to the peculiar relationship between form and matter as an essential property of physical bodies.<sup>48</sup>

In Şadrā's view, the riddle of quantitative change, which has led many philosophers, including Suhrawardī and Ibn Sīnā, to denying change in the category of substance, can be solved by having recourse to the following principle: what is required in the process of motion is not a definite quantity but 'some quantity' (*miqdārūn mā*) by which things become particularized. Suhrawardī's problem had arisen out of the assumption that

adding a certain amount of quantity to another (block of) quantity (i.e., the increase or decrease of 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).<sup>49</sup>

In this view, any quantitative change in terms of increase or decrease leads to the destruction of the original body/substance. Ibn Sīnā had faced a similar difficulty when explaining change in organic bodies. In fact, Ibn Sīnā "was not able to solve" the problem of identity in plants and animals because he had postulated that unlike man who has both soul and character, organic bodies, i.e., plants and animals, possess no enduring quality.<sup>50</sup>

In response to these difficulties, Şadrā asserts that

the subject of motion is a particular entity (*al-jism al-mutashakḥḥaṣ*), not a definite quantity (*al-miqdār al-mutashakḥḥaṣ*). And the particularization of a thing requires a definite quantity for the thing in its motion from one place to another as the physicians (*al-aṭibbāʿ*)

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48. Ibid., pp. 87-8.

49. Ibid., pp. 89-90.

50. Ibid., pp. 90-2.

have asserted with regard to personal character (*al-mizāj al-shakhsī*). 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-faṣl*) and conjunction (*al-waṣl*) (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, i.e., without being united with matter.<sup>51</sup>

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-ṭabi‘ī*), composed of thing-ness and form, also preserves its species through the definite form (*al-ṣūrah al-mu‘ayyanah*), which functions as the principle of its final differentia (*al-faṣl al-ākhir*).<sup>52</sup> Thus it is concluded that no kind of qualitative or quantitative change leads to the destruction of a physical body as long as the definite form endures.<sup>53</sup>

### **Change and Identity in Physical Bodies**

After securing the material existence of physical bodies when they undergo substantial change, Ṣadrā proceeds to the most important and intricate part of his theory of substantial motion, which is the preservation of the identity of changing bodies. Reference was already made to the fact that differentia (*al-faṣl*), by definition, ensures the preservation 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. Ṣadrā 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 Ṣadrā because he seeks to replace the framework of traditional genus-differentia account with his gradational ontology. The differentia is now transformed from being a mere principle of difference (*al-ikhtilāf*) among genres into a principle of existential individuation of particular entities. An important outcome of this reformulation is that differentia, viz. the principle of

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51. Ibid., pp. 92-3.

52. Ibid., p. 93.

53. Ibid., pp. 80-93.

diversity and unity, is equated with being (*al-wujūd*). Šadrā illustrates this point as follows:

Being capable of growth (*al-nāmī*) is the plant's differentia whereby its being is perfected, since its perfection is not due to its being a body alone. Rather, it (i.e., '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 (*'alā wajh al-'umūm wa'l-iṭlāq*), (i.e., as body-in-general), not in a specified and determined manner (*'ala wajh al-khuṣūṣiyyah wa'l-taqyīd*) (i.e., 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 existent 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 'thing-ness' (*jismiyyatahu*) as an individual entity also changes but its substantial structure as an individual entity remains the same. Thus it (i.e., the plant), insofar as it is a natural body-in-general, is destroyed as an individual entity, but, insofar as it is a natural body capable of growth, is not destroyed, neither itself nor even its part. 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-ittiṣāl al-wujūdī*). On the basis of this principle, the endurance of an animal together with its substance of perception can be explained. In the same manner, man in his old age loses most of his power of vegetation whereas his identity remains the same.<sup>54</sup>

The foregoing description of qualitative and quantitative change holds true for all natural bodies that have a constantly changing being with an enduring identity. In every change and motion, there remains an original principle that is perfected by the final differentia. For example, the final differentia in composite beings comprises every successive phase of increasing perfection, which intensifying or moving bodies undergo. Therefore, the succession of various degrees of being, which leads physical

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54. Ibid., p. 94.

bodies to a higher state of being, is not something added to the final differentia of corporeal bodies from outside. As we have stated before, a simple being (*basīl al-ḥaqīqah*) contains in itself all lower levels of being, and this principle is employed here by Ṣadrā with full force to explain the peculiar relationship among species, genres, and differentia. Within this framework, every species comprises in its state of being whatever is possessed and shared by lower species. Equally important is the fact that species is perfected into a genus by differentia. The main point, however, is that Ṣadrā takes differentia not simply as a mental notion abstracted from physical entities as the principle of differentiation but equates it with being (*wujūd*), which functions, as we have seen, as the principle of unity as well as diversity in Ṣadrā's ontology.<sup>55</sup>

The existential relationship between a physical body and its essential properties, or what Ṣadrā calls 'concomitants' (*lawāzīm*), can also be explained by having recourse to the description 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. Ṣadrā calls such properties 'a mode of being' (*naḥw al-wujūd*). In every mode of being, a particular piece of concrete reality appropriates and displays certain qualities that yield its 'derived differentia' (*al-faṣl al-ishtiqāqī*). These distinctive qualities are generally called the 'individual properties of a thing' (*al-mushakkhāṣāt*). They constitute what Ṣadrā calls the 'signs of particularization' (*al-āmāt li'l-tashakkhūṣ*). Here is how Ṣadrā summarizes his view:

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-faṣl al-ḥaqīqī al-ishtiqāqī*) is described as logical differentia (*al-faṣl al-manṭiqī*) in the case of 'being capable of growth' (*al-nāmī*) for plants, sense perception for animals, and intellection for human beings. The first of these (descriptions) is a name for the vegetative soul, second for animal soul, and third for rational soul. These are all derived differentia. The same holds true for all other differentia with regard to composite substances (*al-murakkabāt al-jawhariyyah*). Each of these (bodies) is a simple substance designated by a universal logical differentia (*faṣl manṭiqī kullī*) as a matter of naming

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55. *Ibid.*, pp. 93-100.

things (*tasmiyat al-shay'*). These substances are, in fact, simple and specific (i.e., particularized) beings with no quiddity.

In the same manner, the concomitants of individual entities are assigned to their individual possessors through 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.<sup>56</sup>

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

Several conclusions can be drawn from Ṣadrā's arguments. 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. A material substance is thus 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.<sup>57</sup>

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56. Ibid., pp. 103-4.

57. Ibid., p. 104.

Thus, we arrive at a twofold picture of the natural world in which '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 relationship between the two aspects is similar to the relationship between body and 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 (*wurūd al-amthāl 'alā'l-ittiṣāl*).<sup>58</sup>

#### **Natural forms of material substances share similar characteristics:**

They are renewed at 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.<sup>59</sup>

As this paragraph makes it clear, Ṣadrā locates the enduring and disembodied forms of natural substances within the eternal realm of Divine knowledge.<sup>60</sup> At this point, Ṣadrā's notion of the great chain of being

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58. *Ibid.*, pp. 104-5.

59. *Ibid.*

60. After providing a thorough analysis of substantial motion as an intrinsic quality of things, Ṣadrā gives an interesting example of self-defense by emphatically rejecting the charge that his theory is an 'innovation'. It is God, the Sage of all sages, says Ṣadrā, who has laid down substantial motion as the very essence of the world-order. To this effect, Ṣadrā quotes a number of verses from the Qur'ān, all of which allude to the difference between appearance to be reality and the real state of affairs in the world-order that can be grasped only at a higher level of consciousness. These verses also attest to Ṣadrā's attempt to align his cosmology with that of the Qur'ān: *And thou seest the hills thou deemest solid flying with the flight of clouds: the doing of Allah Who perfecteth all things* (Q. 27: 88). *On the day when the earth will be changed to other than the earth, and the heavens (also will be changed)* (Q. 14: 48). *That we may transfigure you and make you what ye know not* (Q. 56: 61). In addition to the Qur'ānic verses, Ṣadrā also quotes from 'Alī ibn Abī Ṭālib's *Nahj al-*

(*dā'irat al-wujūd*) comes full circle, and the main dialectical assertion of Sadrean natural philosophy that the order of nature is both self-subsistent and dependent upon the First Cause is stated one more time.

### Concluding Remarks

Şadrā's highly complex and original theory of substantial motion yields a number of important results. First of all, Şadrā does away with the Aristotelian notion of a solid substratum as the basis of change and renewal in the world of corporeal bodies. Instead, he resolves the realm of physical bodies into a 'process of change' by introducing the notion of change-in-substance. The world of nature thus becomes a scene for the interplay of contingencies while preserving its 'substantial' unity and integrity. At this juncture, Şadrā's concept of change as an existential property of things not only disregards Kalām atomism but also challenges the opaque world-picture of the Peripatetics. It must now be clear that substantial motion as articulated by Şadrā is essentially different from the Peripatetic formulations of generation and corruption. Whereas the latter conceives change as an *event* of destruction and/or 'coming into being', the former defines change as a *process* of gradual intensification or diminution in modalities of being. It is also clear that Sadra posits substantial motion as an intrinsic property of things, material and immaterial alike, and envisages a world-picture that is in constant flux on the one hand, and directed towards a universal *telos*, on the other.

As we would expect, Şadrā 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-thābit*), i.e., God and the world, origination of the soul from the body, i.e., the Sadrean doctrine that the 'soul is bodily in its origination and spiritual in its survival' (*jismāniyyat al-ḥudūth rūḥāniyyat al-baqā'*), and the rejection of the transmigration of souls (*tanāsukh*) are only a few among the philosophical problems that Şadrā reformulates in light of his concept of nature and motion-in-substance. In this regard, the implications of Şadrā's natural philosophy go far beyond the confines of our present study. It is, however, clear that Şadrā conceives change and permanence, the two

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*Balāghah*, which points, once again, to Şadrā's desire to construe the intrinsic-existential transformation of things as a religio-cosmological doctrine. Cf. *Kitāb al-mashā'ir*, pp. 66-7.

interdependent aspects of the order of nature, as modes of being (*anḥā' al-wujūd*). It is the all-encompassing reality of being (*wujūd*) that connects together the cosmos from celestial spheres to animals and minerals. It is also the same reality that establishes an inexorable relationship between Sadrean physics and metaphysics.