Christian Kanzian, Muhammad Legenhausen (Eds.)
Substance and Attribute
Western and Islamic Traditions in Dialogue

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Christian Kanzian, Muhammad Legenhausen (Eds.)

Substance and Attribute

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Preface of the Editors

The aim of this volume is to investigate the topic of *Substance and Attribute*. The way leading to this aim is a dialogue between Islamic and Western Philosophy.

Most of the collected papers in our book are results of contributions to a workshop, organized by the editors of the volume, as an integrated part of the 29th International Ludwig Wittgenstein Symposium in Kirchberg, Lower Austria, taking place in August 2006. The general theme of this conference was *Cultures: Conflict – Analysis – Dialogue*. The organizational frame of the workshop and also of this edition is the partnership between the Imam Khomeini Education and Research Institute in Qom, Iran, and the University of Innsbruck in Austria—the first formal high-level academic partnership between an Iranian Institution and a European University.

Dialogue is our aim, but not speaking about dialogue. Our dialogue shall be a work in practice; and our practice is a philosophical one. Our project is motivated by the observation that the roots of Islamic and of Western Philosophy are very similar. There is a strong consensus among historians of philosophy that these roots are the same in substance, and the differences are only of accidental importance. Some of the articles in this volume are dedicated to the history of philosophy, in Islamic thinking as well as in Western traditions. Avicenna and Thomas Aquinas are authors to whom reference is made in most of the historical contributions. Through their elaborations, these contributions will make clear what is mentioned here roughly.

But the dialogue between Islamic and Western Philosophy is not only an historical issue, it also has systematic relevance for actual philosophical questions. In contrast to the historical dimension, this is not so well known and recognized, especially not in Western scientific communities. Here there is still much work to be done. Sadr al-Din Shirazi or Mulla Sadra, living in the 16th/ 17th century, and the contemporary philosopher ‘Allameh Tabatabai’i (just to mention two of the most prominent figures) deserve greater attention in Western philosophy. Perhaps one article or another in

our volume can make the reader curious to learn more about these outstanding Islamic philosophers.

Our leading idea is to focus on the common roots and to increase awareness of the chances of systematic philosophical dispute, with the aim to promote a substantial dialogue on an academic level. The topic we chose, *Substance and Attribute*, seems to be especially well suited for such a project: it has an important history in both traditions, and makes obvious the common roots; and it has systematic relevance for the actual ontological debate; but furthermore, it pertains also to special issues in the philosophy of mind and in the philosophy of religion, as the reader of our book will find out.

Our workshop in Kirchberg opened with a lecture by Michael J. Loux, "Substance, Nature, and Immanence: Form in Aristotle's Constituent Ontology," which offers insight into the compositional nature of individual substances in Aristotle's metaphysics. In Aristotle's hylomorphic theory of substance, individual substances exist when a form can be predicated of a parcel of matter. Nevertheless, the forms of particular substances are simple, in the sense that they are not themselves constituted from more fundamental components. Loux's work prepares the ground for the academic dialogue between European and Iranian philosophers because a proper exegesis of the Aristotelian theory of substance is essential for an understanding of the subsequent developments in both the Western and Islamic philosophical traditions.

The historical study of how philosophers have understood the notion of substance is continued in the paper by Muhammad Legenhausen, "Ibn Sina's Arguments against God's Being a Substance." Here we find a comparison of the arguments given by both Ibn Sina and Aquinas that God is not of the category of substance. Both philosophers rely on the Aristotelian definition of substance, and on the distinction between existence and quiddity as elaborated by Ibn Sina.

The argument of the paper by Daniel von Wachter, "God as Substance without Substance Ontology," provides an alternative to the view of Ibn Sina as described by Legenhausen. Von Wachter gives reasons for considering God to be a substance in an intuitive way, as an entity that persists through time with certain essential characteristics, while maintaining that this view of divinity is compatible with a metaphysics that has no place for

substance as defined in some metaphysical theories, such as the theory of Ibn Sina.

Tomasz Kakol finds fault with the arguments of Aquinas that God does not have accidents in his "A Formal Analysis of Selected Proofs by Aquinas for the Uniqueness of God." Kakol offers a carefully formulated analysis of some main arguments to be found in Aquinas for the view that God has no essence other than His existence. Since Kakol finds these arguments to be formally invalid, proofs for the uniqueness of God based on such arguments are also undermined.

The relation between the metaphysical systems of Aristotle and Ibn Sina is further explored in Shahram Pazouki's, "From Aristotle's *Ousia* to Ibn Sina's *Jawhar*." Pazouki argues that the reception of Ibn Sina in the West and East differ because Europeans often approached Ibn Sina through Ibn Rushd (Averroes), who considered existence to be an accident (in contrast to a substance), while in Islamic philosophy, following Ibn Sina, existence was held to be accidental in the sense of something that cannot be derived from a quiddity. Pazouki offers this difference as an explanatory hypothesis for the different paths Western and Islamic philosophy have taken, with Western philosophy tending to be *essentialist*, while Islamic philosophy emphasizes the fundamental nature of existence.

The changes that occurred in Aristotelian thought as treated by Muslim philosophers is also the topic of the contribution by Mohsen Javadi, "Aristotle and Farabi on the Definition and Priority of Substance." Farabi sought to reconcile Plato and Aristotle by taking Aristotle's side against the independent extra-mental existence of universals, but agreeing with Plato that human knowledge, even knowledge of primary substances, must always be through universal concepts.

In his "Substances, Attributes, and Modes: Substantial Structures in Descartes, Spinoza and Leibniz," Hans Burkhardt shows us how the concept of substance becomes blurred in the seventeenth century. Nevertheless, Burkhardt is optimistic about the chances for the survival of substance based ontologies through the twenty-first century.

Attention is given to Islamic philosophy by several of our European contributors. Boris Hennig directly engages Islamic philosophy in his "Ghazali on Immaterial Substances." Inspired by Ghazali's critique of the Islamic Peripatetics, Hennig suggests that there is at least a very radical

difference between the ways that material and immaterial entities can be considered to be substances.

Hans Kraml takes Ockham as pivotal in his, “Reshaping the Concept of Substance: The Renegade Ockham,” but this paper discusses many more figures than Ockham. Kraml guides us through both the Medieval Western and Islamic traditions until we are able to take a much more nuanced view of how Western and Islamic philosophy developed different vocabularies and sought to frame and answer philosophical questions differently. Despite the difficulties for dialogue that accumulate after prolonged mutual isolation, Kraml also suggests several leads for further comparative research.

Erwin Tegtmeier also engages Islamic philosophy in his “Ibn Sina on Substances and Accidents.” Tegtmeier’s treatment is that of a systematic metaphysician who grapples with the problems of diversity and individuation and finds dialogue partners in this effort in both Ibn Sina and one of the Iranian participants in our workshop, Mohammad Shomali.

In his “Psychic Substance: A Meeting Point between Metaphysics & Spirituality,” Mohammad Ali Shomali addresses the issue of the substantiality of the soul from both theoretical and practical perspectives. He argues that the metaphysics of the soul advanced in Islamic philosophy is closely related to Islamic moral concerns and spirituality.

Contemporary Iranian thought on topics related to substance and attribute are reviewed by Narjess Javandel Soumeahsaraie in her contribution, “A Report on Graduate Work in Qom on the Problems of Essence/Attribute and Substance/Accident.” She reminds us that in the tradition of Aristotelian philosophy as it continues in contemporary Islamic philosophy in Iran, *substance* is not contrasted with *attribute* but with *accident*, while *essence* is usually paired with *attribute*. Iranian graduate work on these topics tends to focus on the theological doctrine of the identity of the divine attributes with the divine essence and on the philosophical teaching of Mulla Sadra about substantial motion.

Substantial motion is the main topic of the papers by the Iranian contributors ‘Ali ‘Abidi Shahrudi and Mohammad Fanaei Eshkevari. Both point out the connection between the philosophical content of the doctrine as introduced by Mulla Sadra and certain ideas propounded by Muslim mystics. In “Mulla Sadra’s Theory of Substantial Motion,” Eshkevari in-

troduces the basic terms and outlines the main features of the discussion. Shahrudi elaborates them further in his “Substantial Motion and Perpetual Creation.” The picture that emerges is one in which existence has a dynamism that links philosophical theory with the dynamics of spiritual practice.

The connection between the practical and the theoretical is examined in the context of Western debates about action theory and the problem of free will by Pedro Schmechtig in his “Substance, Causality, and Freedom – An Ontological Revision of the Theory of Agent Causation.” Schmechtig suggests a revision of the standard view of agents as substances that endure through time is needed if we are to salvage a notion of agent causation that can avoid determinism and the unpalatable thesis that our acts are the result of mere chance. As in the Iranian discussions of substantial motion, Schmechtig proposes revisions to the standard notion of how substances are temporally located that suggest that systematic metaphysics still has much to gain from the dialogue between Western and Islamic philosophy.

We thank the authorities of the Imam Khomeini Education and Research Institute and the University of Innsbruck, the Austrian Ludwig Wittgenstein Society, and our publisher, the Ontos-Verlag represented by Dr. Rafael Hüntelmann.

May our common efforts help to build bridges between our cultures, and facilitate substantial dialogue via philosophical analysis with many useful attributes.

Christian Kanzian & Muhammad Legenhausen

Substances, Attributes, and Modes – Substantial Structures in Descartes, Spinoza and Leibniz

HANS BURKHARDT, MUNICH

1. Initial Remarks

Aristotle introduced the concept of substance in philosophy. Thus, we find reflections on substance in different works of Aristotle. In the *Categories*, he introduces the so-called ontological square, containing individual substances, universal or second substances, individual accidents and universal accidents. Individual substances are characterized by the fact that they are the final point (end-point) both of inherence and predication, i.e. they are neither contained (*in subiecto esse*) in another entity nor can they be said or predicated (*de subiecto dici*) of another entity.[1] Another well-known characterization of substance, also from Aristotle in the *Categories*, is the fact that substances are able to receive contrary accidents, i.e. a white substance can become red and *vice versa*.

Concerning the inherence of an individual accident in an individual substance the Scholastics formulated the so-called non-migration principle: an individual can inhere in only one individual substance, and it cannot migrate from one substance to another. Leibniz formulates this principle in different texts, and he uses it even in his *Monadology*, where he says in §7 that accidents can neither be detached from substances, nor wander around outside of substances. And so, neither substances nor accidents can enter a monad from without.[2]

Another fundamental ontological relation is the relation of instantiation that holds between kinds like human being, horse or stone and their corresponding individuals, but also between universal accidents like universal red and individual red, or as Aristotle says, this red. It is worthy of note that Aristotle and the following tradition evidently accepted static acci-

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[1] See Angelelli 1967, 12.
[2] Cf., Rescher 1991, 17; Burkhardt 1980, 406ff.

dents, too, in contradistinction to many contemporary philosophers who concentrate their analysis exclusively on dynamic accidents or events.

In other works such as *Metaphysics* and the *Physics* Aristotle has analyzed substance further and has differentiated between *materia prima*, *materia secunda* and *substratum (hypokeimenon).* All these items are important for philosophers of the seventeenth century, especially the Rationalists.

Another analysis of Aristotle stemming from *De Anima* is also important for our investigation. Aristotle discriminates in this work between three kinds of souls, i.e. between *anima vegetativa*, *anima sensitiva* and *anima rationalis*. The *anima vegetativa* or the plant soul is responsible for growing, flourishing, decreasing, reproduction and generally for metabolism, the *anima sensitiva* or animal soul is responsible for perception, instincts and a certain kind of rudimentary memory, i.e. a purely associative memory, and the *anima rationalis* or human soul is responsible for thinking or the operating with concepts and a kind of memory far beyond association. This enables us to have contact with the world of ideas. For Aristotle this kind of soul is also possibly independent from the body. The *anima vegetativa* and the *anima sensitiva* are able to become non-separable parts of higher souls. Thus the human soul contains both a vegetative and sensitive soul.

A third typical feature of the Aristotelian ontology is natural kinds. Already second substances like human beings, horses or oxen are kinds and are subordinated to kinds of higher order such as animals, bodies and substances. In contrast to philosophers of the twentieth century, for Aristotle these natural kinds are not concepts but entities, which have in his philosophy an important connecting function. They contain necessary relations, and thus, together with the *differentiae specificae* like corporeal, living and rational they constitute the essential properties of the substances, the properties without which the substance cannot exist. From this it becomes clear that natural kinds are identical with the so called substantial forms, which will play an important role in the philosophy of Leibniz, who tries to manage the rehabilitation of these entities. In the philosophy of Descartes and Spinoza we shall meet the *differentiae specificae* among the attributes.

In Aristotle there are accidental forms that have also been analysed by the Scholastics. In the philosophy of the Rationalists they do not play an important role. In the philosophy and especially in the metaphysics of the big wheels of seventeenth century rationalist philosophy, Descartes, Spinoza and Leibniz, the concept of substance plays a central role. All

these philosophers not only use the word *substance*, but also the concept of substance, and they think also that substances are important and maybe even the most important entities. Each of these philosophers uses another concept of substance, and the decomposition of the substance concept, initiated by Descartes, will be compensated at least in principal by his successors. The historically and systematically interesting aspect consists in the fact that other entities emerge, which should substitute for substances and to which the substance has to be reduced such as the attributes of Descartes and in a certain sense also in Spinoza. The individual concept of Leibniz in the *Discours de Métaphysique* of 1686, and perception and *appetitus* in the *Monadology* of 1714 are also points in case. Following Leibniz, substances are able to build aggregates of different kinds, forming new entities that contain simple substances such as monads or even whole individuals as their parts and constituents. As we have seen, Aristotle and the scholastic philosophers had characterized substances by different items, so for example:

1.1 Substances are the endpoint of both inherence (*in subiecto esse*, being in a subject) predication (*de subiecto dici*, said of a subject).
1.2 Substances have essential properties such as being corporeal, living and rational.
1.3 Substances are able to receive contrary accidents or contingent properties.
1.4 Substances persist over time, although they receive contrary accidents.
1.5 The substructure of substances consists of *materia prima*, *materia secunda* and *substratum*.
1.6 True substances are living entities or souls like animals and human beings and not stones.
1.7 There are three different kinds of souls: *anima vegetativa*, *anima sensitiva* and *anima rationalis.* They display a cumulative structure.

2. Descartes on substance

Descartes distinguishes in the category of substance between *res extensa* and *res cogitans*, i.e. between an extended and a thinking thing. Sometimes he calls them also substances. Each of the two substances is characterized by a special attribute, namely by extension and by thinking. These attributes are the essences or natures of the respective substances, and they are ontologically dominating; that means that the other properties, especially

perception and imagination in the case of thinking substance and figure and motion in the case of extended substance would be both ontologically and epistemically without any foundation. As a consequence, they could neither be nor be thought of.

If these attributes are the essences of their substances, and consequently are essential properties or predicates, then the learned Aristotelian asks: What is new about this? He knows very well, that the items of the *Arbor Porphyriana*, namely species and different levels of kinds, belong to the essence of a substance. For example in the case of Peter and Paula, if they are human beings, human being, animal, body and substance belong to them. To these kinds we have to add the *differentiae specificae* or the differences such as corporeal, living and rational. Now it is easy to see, that the differences are the sources of the Cartesian attributes, because *rationalis* is identical with thinking and extension comes from corporeal. In the first case the connection is clear, because *rationalis* and thinking are identical, in the second case we have to consult the negated concept, namely non-corporeal, which characterizes the bodiless minds, understanding that the decisive difference between bodily and bodiless entities consists in extension.[3] Thus we can see that Descartes in this sense is not a revolutionary but on the contrary a traditionalist.[4]

Besides these two things, entities or *substantiata*, as Leibniz would call *res cogitans* and *res extensa*, there is for Descartes a true substance, namely God. In contradistinction to the two things he is an *ens a se*, i.e. he is not caused, but he is his own cause, *causa sui*. For Descartes the rival concept for substance or *res* is nothing (*nihil*). Nothing is characterized as having no attributes.[5] Thus, if one finds an attribute or a mode, then one can be sure, that there exists a substance or a thing, too, consequently a *res cogitans* or a *res extensa*. If we apply the metaontological relation of dependence, introduced by Edmund Husserl, to the philosophy of Descartes, we will see that he uses different kinds of dependence: causal dependence, existential dependence and generic dependence.

2.1 Causal dependence between God and the created entities, like *res extensa* and *res* co*gitans*.
2.2 Existential dependence between God and these entities.

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[3] Cf. Petrus Hispanus Portugalensis 1972, 20.
[4] Cf. Gilson 1912, 1967.
[5] Cf. Leibniz: *non-Entis nulla esse attributa*. Cf. Burkhardt 1980, 103-04.

2.3 Mutual or symmetric existential dependence between *res extensa*, *res cogitans* and their essential attributes.
2.4 Existential dependence between the essential attributes and the other important properties. (Perception and imagination on the one hand and figure and motion on the other.)
2.5 Generic dependence between attributes and modes and entities like *res cogitans* and *res extensa.*

Short commentaries to 2.1-2.5 in 2.I-2.V

2.I This dependence relation is clear. God has created these entities.
2.II The entities are existentially dependent on God, because on the one hand he is their efficient cause, and on the other he guarantees their existence by his existence and his conservation or *creatio continua.*
2.III There is an identity between *res extensa* and extension and *res cogitans* and thinking, and therefore also a symmetric existential dependence, because there is no *res extensa* without extension and no *res cogitans* without thinking.
2.IV Following Descartes, perception and imagination without thinking cannot impossibly exist and are inconceivable, just as are figure (shape) and motion without extension.
2.V Substances are generically dependent on their properties and modes. Concerning modes or accidents Aristotle, the Scholastics, and also Descartes thought that substances are not dependent on certain modes but on modes in general.

Woolhouse knows about Descartes' use of the relation of dependence in his metaphysics as is seen in his book; but it seems that his concept of dependence is primitive or not analysed.[6] From the book of Anthony Kenny, Woolhouse learned that there are different kinds of dependence. Dependence seems to be a family of relations. Kenny has distinguished between logical and causal dependence.[7]

Another ontological aspect of the concept of substance is the relation of instantiation. Aristotle distinguished first from second substance, and he thought that individual or first substances are instantiations of second or universal substances. Peter and Paula are instantiations of the human spe-

[6] Cf. Woolhouse 1997, 16.
[7] Cf. Kenny 1968, 134.

cies. Descartes is convinced, too, that human individuals are instantiations of the *res cogitans*.

Is this also valid for the *res extensa*? Evidently not, because Descartes knows about the infinite divisibility of material entities and he draws ontological consequences from this fact. Thus, he classifies the *res extensa* e.g. in gold, lead and ore, and positions it in pieces and other parts. Descartes solves the problem of infinite divisibility mereologically. There is no such a thing like an individual in the realm of *res extensa* or in the realm of extension, corporeal entities and matter. There are only parts.

What is Descartes' attitude towards existence? For him there are different levels of existence. These levels are: the level of God, the level of substances and attributes, and the level of the modes. The intensity of existence diminishes with the degree of dependence, but on each level there is a kind of existence.[8]

As we have seen, the so-called substantial forms, the content of the *Arbor Porphyriana*, such as species, kinds and their differences are also part of Descartes' philosophy in a rudimentary form, namely as rationality in the one case and extension in the other. Descartes thought that there is no room for a corporeal substance together with its substantial forms in physics or the science of natural bodies as well as in its application to mechanics or the science of artificial bodies or machines. Already a hundred years before, mechanics had been a mere art, and Descartes was one of the first scientists and philosophers who regarded it as a science.

3. Spinoza on substance

Spinoza is looking for another solution to the problem of substance, and he finds it. There is only one substance and it is identical with God. God is an entity that is in itself and not in another entity. Besides this substance there are only attributes and modes. Spinoza defines substance as having an infinite number of attributes, but following Descartes, he knows and distinguishes only two attributes, thinking and extension. Whereas the conceptual difference between substance and attribute in Descartes' case is clear, it is not so in Spinoza's philosophy, because the characterization of God being known by himself also is valid for attributes. Thus, extension, contrary to motion, can be understood by itself, since it is not dependent on another property. The same is valid for thinking which is not dependent on

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[8] Cf. Woolhouse 1997, 16-17.

perception or imagination. Attributes are the essences of substances, and therefore they are identical with the substance: There are no pure substances or *substrata*, but only extended substances and thinking substances.

In contrast to Descartes, for Spinoza the *res cogitans* or thinking substance is not instantiated. If there are neither individuals in the case of *res cogitans* nor in the case of *res extensa*, then Spinoza's metaphysics rests on the level of second substances such as human being or stone. God is the exception. He is the only individual substance.

Spinoza, due to his conception of a unique substance avoids the problem of God as the cause of other substances. But he gets new ones. He has to replace the ontological wealth of the Aristotelian-scholastic distinction between universal and individual substances (together with the relation of instantiation between the two entities) by his attributes and modes. Thus, a step in this direction means a diminution of the difference among substances, attributes and modes.

From the fact that the distinction between substance and attribute is weakened in the philosophy of Descartes and that it has no place in the philosophy of Spinoza, in that substances are identified with their characteristic attributes, we can deduce and formulate the following three ontological statements.

3.1 Substance is reduced directly to its leading attributes and indirectly to its concomitant properties.

3.2 The natural kinds, in which the Aristotelian individual substances are imbedded, have to be content with a background existence in favour of the attributes.

3.3 For Descartes and Spinoza, change in the category of substance means a diminution of the role of individual substances in favour of the second or universal substances.

Important for the transition to Leibniz's metaphysics is Spinoza's thesis that a substance only can be a substance if it contains all the attributes. This foreshadows Leibniz's conception of individual substances containing all properties, and his thesis that all these accidents or properties have to be present, i.e. Leibniz's hyperessentialism.

4. Leibniz on substance

The young Leibniz studied the Aristotelian theory of substance with Erhard Weigel. But it was already before his studies in Leipzig and Jena that he read the books of the scholastic philosophers of the sixteenth century. Especially the ontology of Francisco Suàrez had great influence on him. Suàrez held a strict ontological individualism with individual substances and individual accidents inhering in these substances.

The first work in which Leibniz formulated his own theory of substance was the *Discours de Métaphysique* of 1686. In this work Leibniz starts his exposition with God and he continues it with living substances like human beings and animals, and finally he comes to bodies and matter. Some analyses and theories of Leibniz concerning substance are quite new and even revolutionary. He evidently is interested in the rehabilitation of individual substances together with their substantial forms. In contradistinction to his predecessors, for Leibniz God is not a substance, but a perfect entity (*entité parfaite*) with characteristic perfections such as omnipotence, omniscience and maximal goodness.[9] All living entities are substances, and Leibniz thinks that every individual substance corresponds to an individual concept, or a *conceptus completus*.[10] All the properties of an individual substance fall under subordinate concepts of its corresponding individual concept. These properties comprehend all activities and passivities of the substance, i.e. all that it does and all that comes from the outside or what happens to it. The person, who possesses this individual concept, is able to reconstruct the whole substance, because the individual concept contains past, present and future of the corresponding substance. Individual concepts can be seen as maximally-consistent concepts, since they contain all the mutual consistent subordinate concepts. Note that Leibniz rejects Aristotle's characterization of substance as the endpoint of predication and inherence as a nominal definition. [11]

This conception of substance leads to another Leibnizian thesis about a fundamental ontological problem: the problem of individuation. This problem had already been the subject of his doctoral thesis in Leipzig from

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[9] Cf. *Discours*, §§ 1-7.

[10] In his correspondence with Arnauld, Leibniz distinguishes between *conceptus completus* or complete concept and *conceptus plenus* or full concept. GP II 52, Cf. Burkhardt 1980, 166ff.

[11] Cf. *Discours*, §8.

1662 that had the title: *Dissertatio metaphysica de principuo individui.* In this dissertation Leibniz rejected all four traditional theories of individuation (matter, form, haecceity and number), and he already was sympathetic with the *entitas tota.* Later he held a hyperessentialism, i.e. every property of the substance is important and essential, no property should be absent, for if one property were absent, then the individual could be part of another possible world. Leibniz takes from the Scholastics of the sixteenth century the concept of possible worlds, and it becomes a *terminus technicus* in his philosophy.

When Leibniz in the *Discours* speaks about perceptions and substances, he goes beyond the Aristotelian-scholastic conception of substance. Due to its perceptions, every substance mirrors the whole world, and each substance does it in a different way, i.e. more or less clearly and distinctly. The qualitative degree of this mirroring determines the place of the corresponding substance within the hierarchy of substances.

Besides these perceptions, which are irreflexive, symmetric and transitive *qua* relations, there are also reflexive psychic acts, which Leibniz calls *apperceptions.* We find these reflexive psychic acts only in the mind of rational substances. By their reflexivity apperceptions constitute consciousness, and because these rational substances or souls have access to the world of ideas, they form a special kind of memory, i.e. a memory for necessary or even eternal truths or truths that cannot be otherwise. These truths are typical for certain sciences, such as mathematics, logic and metaphysics. They have to do with different kinds of laws and norms, with alethic, ontological and deontic norms. In this case we can speak of an ego, which has the capacity to unify the apperceptions and the other psychic acts that are part of human consciousness, and by this means the ego also guarantees the unity of the consciousness. This ego is the presupposition for an individual to become a person and therefore to be responsible for his actions. Besides individual substances Leibniz also accepts persons who are dependent on apperceptions and therefore are also defined *via* apperceptions.[12]

The *Discours* is a work of transition. On the one hand we find parts or themes of traditional substance ontology and philosophical grammar, for example substance, subject, accidents, quality, predicates, substantial forms, infima species, and examples such as “Caesar crossed the Rubicon,” or “Caesar won the battle of Pharsalus.” On the other hand we find his

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[12] Cf. *Discours*, §12.

conception of abstract perceptions that mirror the whole universe, a conception that already foreshadows the abstract metaphysics of the *Monadology*. Thus we see that the *Discours* expresses perfectly Leibniz's Janus-headed attitude. One face looks back in the past, i.e. toward philosophical tradition and the other to the future, and in this case to Leibniz's own philosophical future, and by this also to the future of Western philosophy in general.

In his *Monadology* of 1714 we find quite a new approach to the problem of substance. Leibniz begins this work with simple substances (*substantia simplex*), which he calls *monads.* In the first three paragraphs he declares that these monads do not have any parts, and he means substantial parts. Simple substances or monads are able to form connections with other monads. Leibniz calls these connections *aggregates*. From the correspondence with Bartholomaeus des Bosses we learn that there are two main kinds of connections between simple substances or monads. On the one hand, there are true aggregates, i.e. connections of monads in which each part or each monad is able to exist without the other parts.[13] These connections are not true wholes, since their unity is not internal, but external. Thus their unity has something accidental, because it can be caused either by sense perceptions or by apperceptions *qua* thinking by concepts or by a combination of the two. Therefore, Leibniz calls these aggregates *substantita* and characterizes their unity as *una per accidens*. There is a hierarchy of aggregates that depends on the intensity of the relations between their parts. Leibniz is the author of a rich philosophy of aggregates of different kinds.

On the other hand, there is another kind and result of connection, the composed substance (*substantia composita*), that is characteristic of living entities. In this case a set of monads is dominated by one monad. This monad consequently and rightly can be called the dominating or central monad (*Leitmonade*). The dominating monad is identical with the soul of a living entity. Leibniz calls it *entelechia prima* of the composed substance. Like simple substances, composed substances have an internal unity. Due to their dominating monads they are *una per se.* In the quoted text Leibniz consequently calls them not substances but *substantiata,* in contrast to pure aggregates, or *substantiata una per accidens, substantiata una per se*.

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[13] GP II 459, Footnote: *Porro substantialia divido in substantias simplices, ut Deus, Angelus, anima, et substantiata: substantiatum in unum per se seu substantiam compositam, et unum per accidens seu aggregatum.*

From this it follows that living substances are not individual substances *tout court* as it is the case in the ontology of Aristotle and the Scholastics, but they are composed of an infinity of monads coordinated and dominated by their central monad. Due to the relation of domination there is both a supreme and a lowest barrier, i.e. rational monads are not dominated and simple monads do not dominate.[14]

Simple substances are partless, but they have certain determinations or qualities that are called *perceptions* and *appetitus* by Leibniz.[15] These perceptions are responsible for the fact that every simple substance or monad reflects all the other monads in the universe, and the appetite organizes the transition from one perception to the next perception, or at least to a part of it.[16] The action of the internal principle which brings about the change or the passage from one perception to another may be called *appetition*.[17] Therefore, the appetite is the dynamic principle of the monad. Because of these determinations or qualities, and due to the appetite, there is movement in the monads and consequently change. As already explained, higher or rational monads possess reflexive psychic acts or apperceptions and therefore also consciousness. Similar to the composed substances perceptions and appetites present a mereological structure. Leibniz thinks that they are composed of an infinite number of *petites perceptions* and *petites inclinations*.[18]

Monads mirror each other, but despite this mirroring they do not influence each other, i.e. in contrast to Aristotle's individual substances, there is no causal influence, conceived as *causa efficiens* among the monads. Instead of causal relations there exists a special kind of parallelism that is rooted in Leibniz's (or better God's) preestablished harmony. This harmony holds, for example, between body and soul. This is Leibniz's solution to the problem of causality, which the Rationalists inherited from the

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[14] Cf. Schneider 2001, 40-42, where we find the best analysis and presentation of the relation of domination. Cf. Schneider 2006, 134-35.

[15] *Monadology* §8, cf. GP II 270: *Imo rem accurate considerando dicendum est nihil in rebus esse nisi substantias simplices et in his perceptionem et appetitus.*

[16] Cf. *Monadology*, §15.

[17] Cf. Rescher 1991, 18.

[18] GP III 657: *Car nos grandes perceptions et nos appetits, dont nous nous apercevons, sont composés d´une infinité des petites perceptions et petites inclinations, dont on ne sauroit s´apercevoir.* (Letter to Remond from November 4, 1715); cf. Burkhardt and Degen 2005, 160-62.

scholastic philosophers of the sixteenth century, especially the Jesuits.[19] In the realm of phenomena, which is our world, there are causal relations, but not in the world of monads, which together with the world of ideas in God's mind are the fundament of the *phenomena bene fundata*. Although it is often stated in some translations and publications, in the realm of monads perceptions are not sense perceptions as they really are in the realm of phenomena, but are to be conceived as a very abstract mirroring of all other monads. After all, how could a monad reflect all the other monads together with their perceptions by its senses?

In his correspondence with Arnauld, Leibniz was looking for an entity that he called *corporeal substance*. But in 1690 he gave up this idea, and ended up with his theory of spiritual substances or monads. This was a new way, and he has not found many successors. Whitehead may be an exception. As a consequence of this move, his conception of matter is fundamentally different from that of the other important Rationalists. Consequently matter also has a different ontological status. Far from being a *res extensa* or even a substance, matter is a *phenomenon bene fundatum*, i.e. a well founded phenomenon. The ontological fundament of the purely phenomenal character of matter is either the pure aggregates or, in the case of living substances, the dominated monads, i.e. all the monads that are passive in the sense that they are dominated by a central monad or soul. These monads also present a hierarchic structure, dependent on the quality of their mirroring of the other monads, i.e. on how clear and distinct this mirroring is. Matter and body have only a weak ontological status in Leibniz's metaphysics. This is radically new in the history of philosophy, and not without philosophical consequences.

Concerning his conception of substance, Leibniz distances himself from Descartes and Spinoza, and although some of his theses surely are reactions to their conceptions, he seems to be much more influenced by the foregoing Aristotelian-scholastic tradition. The Leibnizian approach to the concept of substance is characterized by the following items.

4.1 There is no place for attributes.
4.2 We find a renaissance of the individual substance.
4.3 We find also a renaissance of the substantial forms.

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[19] In the sixteenth and seventeenth centuries the philosophers discussed three kinds of causality: (1) Creation, (2) Conservation (creatio continua), and (3) Concursus Dei. Cf. Ramelow 1997, passim.

4.4 Leibniz introduces the individual concept.
4.5 In 1690 he gives up his search for corporeal substances.
4.6 In 1690 he introduces a spiritual substance that he calls *monad.*
4.7 In the monads we find perceptions and appetites.
4.8 Matter and bodies are *phaenomena bene fundata*.
4.9 Simple substances or monads are able to build up aggregates of different kinds.

Some of these conceptions have already been discussed in the foregoing passages of the paper, but some short remarks on the different points will make Leibniz's theory of substances clearer.

4.I Leibniz had great problems with the Cartesian attribute of extension, because he thought that extension is not at all characteristic for matter.[20] As a physicist and philosopher, Leibniz thinks that force is more fundamental for matter than extension, and he introduces the concept of force into physics. Thus he rejects *res extensa*. On the other hand in contrast to Descartes he thinks that also animals have perceptions and memory. That means on the one hand that perceptions without thinking are possible, and on the other hand that animals, having perceptions, are not simply machines, and therefore Leibniz rejects also *res cogitans*.
4.II In the *Discours de Métaphysique* Leibniz holds the theory of individual substances, and he speaks of accidents inhering in these substances. His examples are traditional ones.
4.III Together with the individual substance, Leibniz in the *Discours* also introduces substantial forms, in which the individual substance is imbedded.
4.IV The introduction of the individual concept in metaphysics is revolutionary. It can be seen as a maximally-consistent concept, and with this concept Leibniz paves the way for later developments of his metaphysics.
4.V In his correspondence with Arnauld, Leibniz is convinced that there must exist an entity that could be called *corporeal substance*.
4.VI Finally, in 1690, Leibniz gives up his search for a corporeal substance, and he introduces a purely spiritual substance that he calls *monad.*

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[20] Cf. *Discours,* § 13. Extension (size), figure and motion cannot constitute a substance, because they are too dependent on sense perception. This argument foreshadows Leibniz's later theory of aggregates and *phenomena bene fundata.*

4.VII In monads we find nothing else than perceptions and appetites which show a mereological structure *qua petites perceptions* and *petites inclinations*.
4.VIII After giving up the concept of corporeal substance, Leibniz conceives matter as a *phenomenon bene fundatum*.
4.IX Leibniz distinguishes between two kinds of aggregates which he calls *substantiata per accidens* and *substantiata per se*. *Substantiata per accidens* are true aggregates, because each part is independent of the whole and can exist without the whole. Their unity is external and not internal. All living substances are *substantiata per se*. In this case the unity is internal, and the elements cannot exist without the corresponding whole. There are also aggregates composed not of monads but of whole living entities. Leibniz mentions as examples a flock of sheep or an army.

5. Final remarks

Whereas during the whole Aristotelian-scholastic tradition, including the sixteenth century, the theory of substance was one of the constants in ontology, metaphysics and theology, and substance was as such a reliable entity, the concept of substance in the seventeenth century became blurred and consequently also its ontological status and importance. This is valid for all forms of substances, for individual substances, universal or second substances, substantial forms, spiritual and corporeal substances. The philosophers of the seventeenth century had to look for compensation and substitutes, and with remarkable imagination and industry they found it in form of *res extensa* and *res cogitans*, attributes, individual concepts, *substantiata una per se et per accidens* or aggregates, monads, perceptions and appetitions. As a consequence also the ontological status of properties, attributes, modes and accidents became unclear and questionable, due to their connections with substance by relations such as inherence, predication, instantiation and exemplification.

Descartes, an excellent mathematician and a physicist, saw clearly and distinctly that the concept of substance has no future in physics and mechanics, the new and dominating sciences, and he replaces corporeal substances by *res extensa*, i.e. by an extended thing. In contrast to the *res extensa* the *res cogitans* is instantiated. There are thinking individuals or individual human beings, who by introspection know that they exist and that they have an ego. Thus they are able to become persons responsible for their actions.

Spinoza was not much influenced by scientific reflections, but he was impressed and influenced by the axiomatic-deductive structure of geometry, and as many other scientists and philosophers of this time, he applied this structure to philosophy in his main work the *Ethica*. His concept of substance fits very well in this methodological frame, because there is only one substance identical with God, and all the other entities are within this substance, and therefore can be deduced from it.

Leibniz, also a creative mathematician and physicist, goes in quite another direction. He wanted to construct a metaphysical system which would encompass all kinds of scientific knowledge of his time or epoch.[21] This system had to be very abstract and far from sense perception, imagination or *Anschauung*. Nicholas Rescher, an excellent Leibniz scholar and a Kantian, has expressed these connexions and facts perfectly:

> Leibniz was the first metaphysician of the Western tradition who sought to construct reality out of units possessing a property structure wholly beyond the reach of our everyday experiences. Anticipating twentieth-century physics in this respect, Leibniz dared for the first time to envision a reality that emerged from the operation of a reality that lies totally beyond the reach of human observation. His theory of substance is a leap into an order of reality which, for the sake of being intelligible, leaves the sensible domain almost totally behind, a position which the more conservative Kant was to regard as a decisive defect.[22]

While Descartes is a dualist, accepting two very weak forms of substances which he calls *res* or things, Spinoza and Leibniz are monists. Spinoza is a monist concerning the kind and number of substances; he thinks that there is only one substance identical with God. Leibniz is a monist concerning the kind of substances: he accepts only spiritual substances or monads and rejects corporeal substances.

What are the consequences for a philosopher of the twenty-first century who sympathizes with substance ontology? Is he condemned to work exclusively as a historian of philosophy in order to become an appreciated member of German philosophical society? I don’t think so, because in my opinion, the ontology of states of affairs is compatible with substance ontology, and the ontology of occurrents and continuants is nothing else than

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[21] Cf. Rescher 1991, 13.
[22] Cf. Rescher 1991, 12.

a variant of it.[23] Thus, as long as trope ontology, process ontology or cluster or bundle ontology are its true and most dangerous current rivals, substance ontology has a very good chance of surviving.

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[23] Already scholastic philosophers, for example Walter Burleigh, distinguished between *ens permanens* (continuant) and *ens successivum* (occurrent).

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In the Name of God, the Merciful, the Beneficent

Mulla Sadra's Theory of Substantial Motion

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1. Existence and Its Levels

The subject of metaphysics is existence (*wujud*), or being qua being. According to Mulla Sadra existence is 'fundamental' (*'asil*) while quiddity (*mahiyya*) is abstracted from existence and hence is *i'tibari*, lacking in its own concrete objective reality. All that really exists in the universe are different levels of existence. Also according to his philosophy, existence is a single gradational reality that includes different levels. Existence becomes manifest in different forms and at various levels. Absolute existence is necessary being while limited and qualified existence is that of contingent beings. The quiddity of necessary being is nothing but its existence. Contingent beings are those from which a quiddity (other than mere existence) can be abstracted. Quiddity indicates the limits and determinations of existence. The existence of contingent beings is among the manifestations of the perfection of necessary being. In themselves, they have no independent existence and are dependent on necessary being for their coming into existence as well as for their continuance.

Necessary being is the absolute perfect being who is needless and lacks nothing. He possesses all that is possible and imaginable for him; thus, change does not take place in him. Therefore he is absolute 'actuality' (*fi'liyyah*). Immaterial beings, like angels, are also all that they can be. Consequently, though they are void of motion, they are not absolutely perfect. Material beings are such that they can be subject to change. They possess a characteristic known as 'potential' (*bilquwwah*). The current state of any material being is never to be considered as the determined state of it, for it can accept change and can be transformed into different states. For this very reason its future is somehow indefinite. On this basis, existence is classified into that which is absolute actuality and that which is potential. Of course, every being, including material being, consists of actuality. Material being is a combination of actuality and potentiality, and it is because of its being potential that it can accept different kinds of actuality.

No doubt we witness numerous changes in the world. Actual change is irrefutable. We see life and death, increase and decrease, and rise and decline. The philosophical and scientific discussions are, in fact, related to the explanation of the nature of such changes, their dimensions, divisions and implications.

2. Change and Motion

Philosophers talk of two kinds of change: instantaneous and gradual change. Instantaneous change is one which takes place in an 'instant' or in no time. In such a kind of change, we witness the extinction of something and the coming into existence of another. For instance, as a result of burning a piece of wood turns into ashes. Following Aristotle, this process is termed 'generation and corruption' (*kawn wa fasad*). Something becomes extinct and is replaced by the existence of another. In other words, matter loses a certain form and accepts another form. The other kind of change is gradual. Something starts flowing from an origin to an end, gradually moving away from the origin and getting nearer to the end. This gradual change is called motion (*harakat*). Gradual change is a flowing and unstable extension, and not a series of generations and extinctions. Although in one's mind motion can be divided into parts, it does not contain actual parts. Rather, it is one continuous reality. Thus, motion is neither composed of, nor reduced to, instantaneous changes or successive rests; as time does not comprise successive instants. Continuity is among the basic elements of motion. A body in motion traverses, in a gradual and continuous manner, all the points between the origin and the end. We cannot think of any such point but that the body must be located in it at some time and pass through it.

3. Actuality and Potentiality

Whenever something accepts change, be it instantaneous or gradual, we may talk about actuality and potentiality. Potentiality is possibility and capability, whereas actuality is realization and factuality. Potentiality is related to that which the thing can become, while actuality is what the thing possesses at the moment. The change of *A* to *B* indicates that *A* has the potential of becoming *B*. It is through this change that the potential is realized. Wood essentially contains the potential of turning into ash, a seed can become a plant, and a sperm has the potential of becoming human being.

Therefore, any kind of change in a thing would imply a transition from potentiality to actuality; or the emergence from the state of potentiality to the state of actuality; or the attainment of a new actuality. Motion, as it is defined, is the gradual emergence of a thing from potentiality to actuality. This is also relative, it does not necessarily imply emergence from absolute potentiality to absolute actuality. Rather, in every given motion, one of the potentials of the given thing attains the actuality suitable to it. Therefore, the moving thing must contain the two aspects of potentiality and actuality, and that is corporeal body. The body with regard to its matter, from the respect that it is disposed to accept a form or a new accident, is regarded as potential; and with regard to the form it contains, is actual. The gradual actualization of a form or a new accident is motion. This is why motion has been defined from olden days as: "Motion is the first perfection of that which is in a state of potentiality qua something in potentiality". A thing which is potential must become actualized in order to attain perfection. To attain actuality is to reach an end. The first step towards the end is motion, or the actual emergence from the state of potentiality. Thus the first perfection acquired by the thing which is potential *qua* potential, is motion. It can be said, accordingly, that anything which is a compound of potentiality and actuality, or in other words contains the aspects of potentiality and actuality, is subject to motion.

4. Is Motion Possible?

As we said, change cannot be denied. But change is more general than motion. Does motion really exist? Some of the Greek philosophers denied motion and considered it impossible. Parmenides, Leucippus and Zeno are among these philosophers. Zeno's well-known paradoxes were expounded precisely in order to refute the possibility of motion. These paradoxes are based on the philosophical theory that a body is a compound of parts which are infinitely divisible, thus every given course consists of infinite disjoint points and moving from one point to another requires traversing infinite points. And since motion requires crossing infinite points, it is impossible. Muslim philosophers generally, like the philosophers of the ancient world who accepted the possibility of motion, have said in response that the divisibility of matter into infinite parts is merely potential, and these points are not actual. What exists in objective reality are not infinite parts, but one finite and continuous thing which is infinitely divisible. Infinite divisibility is something other than the possession of an actual infinity of parts. How-

ever, some Ash‘arite theologians have denied the existence of motion. They denied the existence of motion even in accidents, and considered change to be a sort of renewal of likes (*tajadud al-amthal*).[1]

There are also differences among those who assert the existence of motion concerning the aspects and precepts of motion. Some have held that there is a universal motion in all things. Heraclitus believes in inclusive motion. He traces the reality of the universe back to fire which is essentially moving.

More recently, some process philosophers, such as Charles Hartshorne, attribute motion even to God. But the concept of an imperfect and changing God is contrary to the God who the philosophers consider to be an absolute, perfect and necessary being. Some do not accept motion in the case of God, but they attribute motion to all contingent beings, be they material or immaterial. The dominant view among the Islamic philosophers is that motion is among the characteristics of body and is restricted to the material world. Motion takes place when something has two aspects of potentiality and actuality, so that its potentiality may turn to actuality. It is only the body which is a compound of form and matter and contains the two aspects of potentiality and actuality.

5. Motion and the Categories

Can a material being accept motion in any respect, or does motion occur only in some aspects of the beings in the material world? In order to specify the domain of motion in the material world, the philosophers have brought up the discussion of the categories. According to peripatetic philosophy, categories are seen as the highest genuses which extend over all contingent beings. These categories, based on the dominant view, are of ten kinds: one category of substance and nine categories of accident. Regarding motion in accidents, the accepted view up until the time of Mulla Sadra was that not in all material beings, nor in substances, not even in all

[1] According to this view, whenever it appears that motion has taken place, something passes away and is replaced by something else, not that one single thing continues to endure. Their argument is that subsistence is an accident and the occurrence of and accident for an accident is impossible. Thus, an accident cannot persist at two different times. In order to prove the continuous need of the universe for a creator, they made use of the renewal of likes in accidents, for they thought that the effect is in need of the cause only for its coming into being and not for its continuance. On this basis they said that since an accident is always in the state of renewal and a substance is never without accidents, all beings are, therefore, in need of a divine agent.

accidents, but in only some of the accidents does motion take place. They accepted motion in only four categories of accident: quantity (like the growth of a plant), quality (like the change of colour of an apple from green to red), place (such as the movement of a body from one place to another), and position (the change in relation of some parts of a body when compared to other parts, like the movement of a body round itself). Motion in the category of position was added by Ibn Sina. Ibn Sina proves that there is motion in these four categories and provides arguments against motion in substances.[2]

6. The Objection of Discontinuous Subject and Species

One of the problems perceived by Ibn Sina for motion in substance is that of the continuity of the subject. Motion is something which occurs to a subject. In other words, motion is the property of the moving. For motion to take place, it must have a fixed subject. The specific form of the subject of motion must endure from the beginning until the end, so that motion may take place in accidents. In case of motion in accidents, the substance is fixed while the accidents change. In the case of motion in substance, there is no fixed subject in which motion occurs or which can be characterized by motion. Motion in substance is equal to movement without a subject. According to this view, the change which occurs in substance must be kinds of generation and corruption in which a body loses a form instantly and accepts a new form thereafter.

Another objection of Ibn Sina to the theory of motion in substance is that if we regard substances as renewing and flowing from imperfection to perfection, then this would imply that in intensifying substantial movement the species should not be enduring. Gradation is not possible in quiddity and substance. The specific quiddities have fixed essences and limits which we demonstrate by logical definitions. The specificity of species is by virtue of its fixed bounds. Now if substance and specific essence becomes subject to gradual change, then that fixed and limited essence would no longer remain stable. But with every substantial change we will have a different species, and it is not that one single species is intensified. In brief, if there is intensification, then the species is no longer stable, and if the species remains stable, then intensification has not taken place.

Ibn Sina's point is that motion in substance is impossible. For if substance were to corrupt it corrupts instantly, and if it were to come into be-

[2] See: Shirazi Sadr Al-Din (Mulla Sadra) 1981, vol. 3.

ing this also takes place instantly. There is no intermediate stage of perfection between its potentiality and actuality. The reason for this is that substance does not accept intensity or weakness. For if it were so, then in case of intensification, either the species of substance would remain stable or not. If the species endures, then the substantial form has not changed, rather its accidents have changed. But if the substance discontinues, then a substance has gone and another one has come into existence. This implies that in case of intensifying changes, there should exist infinite potential substances between one substance and another. What really takes place in case of substantial form is that one substantial form corrupts and another substantial form comes into being, and there is no intermediate thing between its potentiality and actuality that could be called motion.[3]

Some other philosophers have argued that motion is not possible in substance because substance is an essential part of body, and motion in essentials is impossible. If that which is essential discontinues, the identity of the given thing no longer endures.

7. Substantial Motion and the Solution of the Problems

Substantial motion is other than motion in substance. When a person is walking his substance is also moving, but the movement of substance in this state is in the category of place, not in the substance itself. In accidental motions, it is the substance which moves in quantity, quality, place and position. What we mean by substantial motion is the movement of substance in itself.

On what basis can we speak of substantial motion? No doubt in every movement something is lost and something is gained. In accidental motions an accident perishes and another replaces it, but the essence of the given thing is continuous and fixed. But substantial motion requires gradual change in the essence of the moving. Thus substantial motion means a continuous change of a thing, and this necessitates loosing of self or continuous extinction of an essence and the coming into being of other essence. On the other hand, if the essence is not stable, then firstly what occurs is ‘generation and corruption’ and not motion. Secondly this is something contrary to our perception and inner sense. We believe in some kind of unity for a seed which turns into a young plant, and the young plant which turns into a grown tree. We evidently perceive that someone who was once a child and has now reached the old age, is one and the same per-

[3] Ibn Sina 1405 A.H., 98.

son. Every person feels the same by inner sense about himself. Therefore as motion requires change and multiplicity, it also requires some kind of stability and unity of identity.

According to Mulla Sadra substantial motion is not possible if quiddity is taken as fundamental. For quiddity is a unitary and fixed thing, motion in which necessitates change of essence and discontinuity in identity. But on the basis of the fundamentality of existence, motion is but the gradual renewal of existence. Although existence changes because of substantial movement, the essence remains fixed and unity of identity is preserved. For the moving existence preserves its unity and continuity because of the continuous oneness (*wahdat al-ittisaliyyah*). Continuous unity is identical with personal unity (*wahdat al-shakhsiyyah*).

Motion in substance, which is only possible on the basis of the fundamentality of existence and its gradation, occurs in the manner of intensity and weakness. The identity of a thing is preserved, but the limits and levels of existence of the thing are in a flow and transformation. With substantial motion, a thing, at every moment, attains a new identity. But because of continuity between the identities, the individual unity of identity is preserved despite the state of motion.

Regarding whether this motion is in need of a subject and if it is then what is it, Mulla Sadra says that since motion is an existent posterior to non-existence, it is in need of a subject. This subject is the matter which attains individuation by an indefinite substantial form, which successively occurs on the prime matter, and accidents. These forms and accidents always change, but the matter is constantly preserved by a form. With this indefinite form, the prime matter is conserved and constituted by an immaterial substance. Its unity is preserved by continuous existence. Be it in substantial or accidental motion, it is the gradation of existence which preserves the unity.

Sometimes it is said that contrary to accidents, which need a subject in which they occur, there is basically no need of a fixed subject in substantial motion other than the substance itself. It is also said sometimes that the subject of substantial motion is the motion itself. Motion is no more than a flow, and the substantial moving is also nothing but that which is essentially in motion. Of course, it is possible to consider some kind of stability for motion whose reality is but elapsing. The stability of motion is in instability and its steadiness in unsteadiness. Motion is instability and unsteadiness of existence, not a subject which is unstable and unsteady.

In this way the problems of discontinuous subject and species are resolved. The requirement of substantial motion is the necessity of gradation in essentials, and it is through the gradual motion of substance and its gradational identity that a being advances from imperfection to perfection. The objections to it are based on the fundamentality of quiddity. But based on the fundamentality of existence and its gradation, both the subject is preserved and also the enduring subject is something gradational, consisting of levels. Substance does not have a fixed level or grade such that loosing that level would mean loosing the essentials. In substantial motion, the substance is moving from one of its limits to another, and all the bounds which are traversed during the motion are different grades of one single substance.

Therefore a continuous essential substantial motion is proved for the body, which is in fact its very existence. Consequently, the whole corporeal world is in a continuous state of motion, in which stability and rest are not conceivable. Accidental motion is also not restricted to the four categories, rather subsequent to substance, all the categories are moving.

Substantial motion is certainly not perceivable; rather we identify it through rational analysis. The mystics claim to apprehend it by intuition. In order to understand the extension in the unstable dimension of the body, the example of the reflection of a picture on the surface of water is sometimes given. One may think only water is flowing while the picture is still, whereas, in fact, both the water and the picture are in a state of flowing. Sometimes they give the example of the flaming fire whose flames are, instant after instant, in a state of renewal, while the sense perception considers it to be static.

8. The Arguments for Substantial Motion

8.1 Argument through the Causality of Substance In Relation to Accidents

Motion in accidents cannot be denied. This movement needs a cause. The immediate cause of motion in every body is the nature (*tabi‘ah*) of that thing. Any movement (be it natural movement, voluntary or constrained) must come forth from a faculty located in the nature/essence of a thing, for the cause of something moving must be a moving thing, as the cause of something static must be static. The series of causes which produce change must end with a cause which is essentially moving, and that is the substance of the body. Thus, the body must be essentially moving.

To put differently, accidents are the effects of substance. A substance has some kind of causal relation to its accidents. Accidents are moving and the cause of the moving must also be moving, that is, the motion and change of accidents must be the effect of motion and change in substance. There must be, therefore, motion in the essence of the substance. In other words, there must be harmony between cause and effect; there is motion in effect (accident), thus there must also be motion in cause (substance).

8.2 Argument through the Subjection of Accidents to Substance

The existence of an accident is subject to the existence of that which it characterizes and in which it subsists. Just as the existence of an accident is subject to a substance, similarly the properties of the accident must also be subject to the substance, as what is 'by accident' must revert to that which is 'by essence'. There is motion in some accidents, thus there must also be motion in substance with greater reason. In other words, the existence-in-itself of an accident is exactly its existence for the substance. Therefore all its existential properties, including motion, must be for the substance.

In this argument it is said that motion in accidents is a proof for motion in substance, but that is not on the basis of the causality of substance in relation to the accident, rather it is based on another perspective of the relation between substance and accident. According to this view, what we attribute to nature are, in fact, not the effects of nature, instead they are among its requirements and subordinates. That is, there is no duality, separation or the relation of cause and effect between nature and accidents, rather there is some kind of unity between the two. Duality and priority and posteriority are necessary in case of cause and effect, but substance and accident do not have such a kind of relation. Accident is the requirement of substance, it is united with it and it is the maximum extent of its existence. Accidents are determinations of substance, and not existents beside it. Therefore the flow in an accident is exactly the same as the flow in substance. If motion is seen in the requirements of the body, then this motion cannot be without being present in the nature of the body. The properties present in accidents are initially present in substance. Thus by accepting motion in accidents, motion in substance cannot be denied.

8.3 Argument through Individuation and Unity of Substance and Accident

Existence is never without individuation (*tashakhkhus*). To be existent is identical with being individual. Every nature is in need of a factor for its individuation. Most of the philosophers believe that accidents are the cause of the individuation of nature/essence. Without accidents that cause individuation, nature remains something immaterial whose species is confined to a unique individual. And the pure or mere reality of a thing is never repetitive, "a thing in its pureness does not yield to duplication or repetition."

Following al-Farabi, Mulla Sadra is of the opinion that though the annexation of properties, accidents or concepts to a universal and indefinite thing makes it restricted, it does not make it cease to be a universal. The real individuating factor is existence; but at the same time accidents have a role in individuation. They are signs of individuation; marks which indicate the mode of existence of the thing individuated. Since accidents have such a role, their existence is not separate from the thing. The objective reality of a thing is the instance of all properties and characteristics attributed to it. But being an instance of different properties is not homogeneous. A human person is firstly an instance of human being and then an instance of white, black, learned and other accidental qualities. But there is no separation between these properties and the substance, instead the instance of the substance and the accidents is a single reality. As a result, motion in properties is motion in substance, for substance and accident are one thing. In fact, a being in external reality is not a collection of substance, quantity, quality and other accidents as such, rather it is a qualified and a quantified substance where accidents are abstracted from the instantiations of substance.

8.4 Argument through Actual Change

Change cannot be denied, be it in accidents or substances. The philosophers before Mulla Sadra considered change in substance to be a kind of 'generation and corruption'. According to this view, in every substantial change, matter looses a form and accepts another form. For instance, water changes to vapour. At times the new form is horizontal to the previous form, yet sometimes the forms are vertical and the latter form is a more perfect state of the former. In the first case, what occurs is an exchange of forms, while in the second case it is a transformation of forms. These philosophers consider 'generation and corruption' as the instantaneous emer-

gence of a thing from potentiality to actuality. Mulla Sadra is of the opinion that emergence from potentiality to actuality is possible only in a gradual manner, and thus in all cases we have transformation of forms. The water that changes to vapour undergoes a gradual flow and traverses an intermediate level or levels even though we do not perceive such a process. There is no vacuum between water and vapour. Otherwise this would imply that matter should exist, for an instant, without a form and independent of it, whereas such a thing is impossible. Therefore 'generation and corruption' are impossible. As a result, there is continuity between two forms; that is, a single thing is gradually changing. Thus, in every substantial change, there is motion.

To put differently, if we accept actual change in substances, then there is no way but to accept substantial motion. There is no doubt that substances do change, a seed turns into a plant, an embryo into a human being and wood into ash. These changes cannot be instantaneous, for instantaneous change means that matter looses its form in an instant and accepts in an instant another form, and this requires that matter should be for an instant without a form, and this is inadmissible. Matter has no actuality except that of being potential, and its separation from a form is not possible. Therefore, every gradual change is basically a kind of motion, and 'generation and corruption' is not possible. This argument is neither based on accepting the existence of accidents, nor on accepting a specific relation, causal or some other form of dependence, between substance and accident.

8.5 Argument through the Relation between Actuality and Potentiality

There exists a factual (*waqi'i*) relation between that which is potential and that which is actual. In other words, there is continuity between the past and the future of a thing. For example, a seed which becomes a plant has a specific relation to the plant, a relation which it does not have with a human being or a horse. This relation inheres in the two terms of the relation and both of its terms must exist. Two disjoint things have no relation, in the same way that an existent cannot have a real relation with a non-existent. Thus, this change cannot be a kind of 'generation and corruption'. If there is a relation between a currently present potentiality and a future actuality, then it is because that the future is somehow currently present. A degree of that which is going to be in the future is existing at present, and there is unity and continuity between the present and future existence of a thing. This unity is, of course, accompanied by multiplicity of levels and is

termed a ‘gradational unity’. Change in the substance of a thing or the emergence of a thing from potentiality to actuality together with preserving its unity, is exactly what is meant by substantial motion. This form of argument is from Allamah Tabataba’i.

8.6 Argument through Time

If a thing is characterized by a property, then it should not be essentially characterized by the privation of that particular property. Instead it should be, at least, ‘unconditioned’ (*la bi-shart*) in relation to it. But sometimes though a thing may be essentially unconditioned to a property, it cannot exist without that property. That is, that property is constantly with it. At times it is otherwise, like in the case of ‘heat’. The first kinds of properties always accompany the existence of a thing and are abstracted from its very existence, such as ‘space’ which is an inevitable requirement of body. Space is not among the constituents of the body’s essence, still a body cannot be without space. Time is also like that. A body which moves from one point to another in an hour’s time can perform this very motion in two hours or within half an hour; in this case the origin, end and the course of the moving thing are one and the same, but what is different is time. Time is something gradual and flowing. That which is characterized by time is essentially gradual and flowing, and from it, time is abstracted. Time is the amount/measure of the motion of body. Every ‘body’ has time and duration even if it seems to be static. Time is abstracted from the flowing and renewal of the nature of the body and it is a kind of real extension for things. Therefore a substance which has time must be moving.

8.7 Argument through Teleology of Nature

This argument rests on the purposefulness of things. All things are in search of reverting back to their origin and of the attainment of the all-Truth; all motions are directed towards that Being. Nature has a purpose and every potentiality is aiming for a goal. If the change from potentiality to actuality or the change of forms were to be of the kind of ‘generation and corruption’, such that matter were to loose a form and accept another form, then flowing towards a goal would not be possible; for the form would no longer exist to pursue the goal. Also there would be no continuity between the successive forms to provide unity to them. We can only talk of the purposefulness of a thing when, throughout this change, one single

form aims towards a goal. Otherwise nature cannot be said to have a purpose even if supernatural agents were after a purpose in nature. In fact, purpose is for the form and not matter; though it is possible to attribute purpose to the matter subsequent to that of the form. Thus, there must be a single flowing form so that purpose can be attributed to it. If every 'body' has a purpose, then it must be essentially flowing towards that purpose. In this explanation, the successive forms are a kind of attaining successive forms and not losing a form and gaining another form.[4]

9. The Consequences and Implications of Substantial Motion

Mulla Sadra does not only add a category out of the different categories to the moving things. Rather based on the most fundamental principle of his philosophy—that is, the fundamentality of existence, and subsequent to that, the gradation of existence—he is in fact presenting a new concept of cosmology in which he looks from a completely new perspective to such concepts as existence, quiddity, substance, accident, the relation between them, motion, generation and creation.

9.1 General Motion

The theory of substantial motion does not only prove that there is movement in one category, rather with the establishment of motion within bodily substance, it follows that the whole of the material world is in motion. If substance is flowing—and strictly speaking if its nature is nothing other than the actual flow—then all accidents also would be flowing. For accidents are the states of a substance and it is not possible that substance—which is the subject, source, origin, or cause of accidents—should be moving while accidents remain static. Matter is not something for which motion occurs, rather it is the moving. Motion is nothing but the flow and this is exactly the reality of bodily substance. Motion inheres with potentiality and actuality, and with an agent and a recipient. That which accepts motion must end up with sheer potentiality which is prime matter, while the agent of motion must revert back to absolute actuality, as its purpose is also to attain absolute actuality. Therefore, motion begins from matter and culminates in what is immaterial. Of course, the possibility of the existence of motion in objective reality is not based on the acceptance of prime matter.

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[4] See: Motahhari 2005, 502-554.

Even those who have rejected the existence of prime matter believe in motion, including substantial motion.

Since motion is gradual existence, and changing or becoming is essential to it, such an existence naturally embraces non-existence and contains within itself existence and non-existence, unity and multiplicity, potentiality and actuality, and perfection and imperfection. As a result, the necessary being who is absolute existence, unity, actuality and perfection, is beyond every change and motion.

9.2 The Unity of the Material World

According to Mulla Sadra prime matter is created *ex nihilo*, not through previous matter, while every other material being is preceded by matter. The immaterial agent is the creator of forms and the prime matter which accepts them. Prime matter does not exist without form as form also does not exist without prime matter. Matter is but potentiality and receptivity, while actuality is in need of a creative agent which is not matter. The existing world is one continuous unit which is moving towards a purpose.

The unity of beings and their coming into existence one from another is a demonstration of a flow of reality towards a purpose. Quiddities come and go, but material existence continues to subsist. It comes into existence as it passes away and it is renewed as it gets worn out, for it is flowing and extended. Every level is a product of the former level and, at the same time, a preparatory stage for the next level. Therefore, in the same manner that the material world contains multiplicity, it also procures a fundamental unity, a unity which brings together all multiplicity and assembles all the apparently scattered things as parts and grades of one single reality.

9.3 The Perfection of the Material World

Perfection has been said to be the attainment of new forms by matter, or wearing (a form) after wearing (*lubs ba‘d al-lubs*). Motion is in a state of acquiring perfection in so far as it is the emergence of potentiality to actuality. Material being attains, as result of motion, more intense and higher kinds of potentiality and actuality. The corporeal world is in constant motion and change. Minerals are the primary forms followed by inanimate forms, plants, animals and finally comes the human being. The human soul also comes into existence as result of change in matter and moves towards becoming immaterial. There is no end to the ascending movement of the

human soul, rather it attains elevation as result of human actions until it reaches the stage of 'meeting with Allah'. Thus matter moves in an ascending manner from the lowest of the grades of existence to its highest level. The human being is the most sublime product of substantial motion. The human soul after attaining immateriality enters the realm of eternal beings.

9.4 From Physics to Metaphysics

One of the constituents of motion is its agent. If motion dwells in the essence and core of things, then what is its agent? Motion, according to Mulla Sadra, does not happen to the body, rather it is identical with the body in existence and is considered as one of the necessary dimensions and an essential requirement of the nature of the body. Since motion has no independent existence from the body, its agent is exactly that of the body. That which brings a body into existence also brings motion into being; of course not with a separate creation, for creating the body is exactly creating the motion, as it is exactly creating the geometric dimensions of the body. According to this view, it is not that the body is independent in its essence of a divine cause and is only dependent on such a cause for its motion, but this need of it for a cause is much deeper; the body is in need of a divine cause for its actual existence. The divine cause, by bestowing existence on the body, also grants it motion. The making of the body is exactly the making of the motion. As we will mention later, in so far as substantial motion indicates the temporality (*huduth*) of this world, it is one way of proving the existence of a creator. Basically the Aristotelian argument of the first mover is inadequate and questionable without the acceptance of substantial motion. Some of the philosophers are of the opinion that the immaterial being, apart from being the creator of the moving material existent, it is also the preserver of the unity and continuity of such scattered and flowing being.

Contrary to the view of Suhrawardi, motion is not among the categories. Categories are the highest genus of quiddities, while motion is a form of existing: a weak and flowing existence which is apart from the categories, in the same manner that stability is another form of existing. Since motion is among the concomitants of existence and not among the accidents of body or the material world, the discussion about motion is transferred from the natural sciences to metaphysics.

9.5 The Relation of the Changeable to the Unchanging

The changing effect has a changing cause. How can the changing matter be the effect of that which is unchanging and beyond matter? The response of Mulla Sadra is that since substantial motion is exactly the existence of the moving thing, the making (*ja'l*) and creation of motion is not something apart from the creation of the moving thing. In other words, the creation of motion is not a composite creation (*ja'l ta'lifi*), rather it is a simple creation (*ja'l basit*). The very reality of the thing which is its existence is created, not its change. God does not give motion to the world, rather He gives existence to it. Thus, God is the cause of existence and not the cause of motion and renewal. The corporeal existent is flowing in its essence and renewal is essential to it, and that which is essential does not need a cause, just as stability is exactly the existence of the stable thing.

The immediate cause of accidental motions must be something changing; for the cause of that which is changing must also be changing, the giver of change must possess change. Such kinds of motions have no necessary and intrinsic relation with their subject, instead their relation is one which is possible and accidental. But in substantial motion, where movement is exactly the same as the moving thing and its relation to the moving thing is necessary and essential, the cause of the moving is not a moving thing; for the cause does not give motion, what it gives instead is existence. The maker of salt or honey does not necessarily have to be salty or sweet. Allah did not put together apricots, rather He gave apricots existence. Thus the material substance itself—which is no different than its motion—is intermediate between the changing and the unchanging.

9.6 The Interpretation of Time

According to Mulla Sadra's theory of substantial motion, time is not a thing; it is neither substance nor accident. Time is an analytic accident of motion while motion is an analytical accident of body. Time has no independent identity apart from existing things, in the same way that motion also has no such identity. In the manner that body has three static dimensions, it also has a fourth dimension which is instability, from which time is abstracted. The flowing and renewing state of a thing is what is called motion. Time is actually a description of this renewing and flowing dimension of the natural substance. The relation of time to the flowing dimension of the corporeal existent is like the relation of a three-dimensional geomet-

rical form to a physical mass in so far as it has the three dimensions. Time is the gradual and essential extent of a body in relation to its intrinsic priority and posteriority, while the three dimensions (length, width and depth) are the spatial and simultaneous extent of a body at an instant. Time is the extent of motion and we have time according to the number of motions. All existents have time whether they apparently seem to be in motion or otherwise. The time of each body is subordinate to the substantial motion of that body and it is abstracted from the mode of its existing. Thus, things are not in time; and we can say, however roughly, that time is within the existing things. The general time which is measured after the movement of the earth around its orbit or other planets is one among many 'times'. God and the immaterial beings are unchanging and without motion, and therefore they are without time. It is based on this that their eternity—which is another expression for their being beyond time—becomes understandable.

9.7 The Temporal Creation of the World

Is the material world temporal or eternal? Mulla Sadra proves the temporality of the world based on substantial motion and by the creation of the world in time together with its continuous renewal. The world is, at every instant, in a state of temporal renewal; the whole world is also temporal and in need of a creator. But, at the same time, we should not be after a temporal beginning point for the creation of the world. There exists no time before the creation of the world so that its creation may take place within it. Mulla Sadra brings together priority and posteriority and believes that essential temporal origination is compatible with temporal pre-eternity. The world has always been with the property of being temporally originated. Renewal and 'becoming' are among the essential requirements of the material world. Based on this Mulla Sadra is of the opinion that the whole of the corporeal world, including both substances and accidents, the simple and compound entities, whether celestial or earthly, are all in motion. They are all in a state of gradually coming into existence and are never the same at two different instants. The very foundation of this world is on motion while gradual change is right within the essence of the existing things. The matter of this world accepts a variety of forms and thus successively attains new actualities. The existence of bodies is a renewing existence while change is its form. Every form is posterior to its non-existence in time. Eternity necessitates immutability and is incompatible

with matter in whose essence lie renewal and flowing. The corporeal world is wholly in a state of continuous motion.

9.8 Body and Soul

According to Mulla Sadra soul does not exist prior to the body. Rather it comes into being with the intensifying (*takaamuli*) change of body, and attains perfection as a result of substantial change. It is separated from the body after it becomes immaterial and continues to subsist immaterially. The need of soul for body is not only because of its actions, rather it is dependent on body for its actual existence. Thus, the soul is material in origin and immaterial in continuity. As a result of the perception of intellects, the soul attains intensification; it moves towards perfection and it turns to become the intellect, the intelligent and the intelligible, all of which are but one reality. If we do not accept substantial motion, then we can no longer consider an intensifying soul as substance. According to this view, the differences between the souls of a child, a philosopher, an aged mystic and even that of a prophet are to be found only in accidents which are apart from the essence. But according to the doctrine of substantial motion, the differences between them lie at the core of their essences, and a single individual would attain, as a result of motion, one gradational form. The beliefs, intentions and actions of a person play an important role in the constitution of the soul and in its attainment of the stages of perfection. Our decisions, beliefs and actions are shaping our existence. Our existence is nothing but the objective embodiment of our achievements.

9.9 Divine Wisdom and Resurrection

As motion and change reveal that there is a beginning to the material world, they also signify that the world must come to an end. That which is eternal cannot be changing. That which changes has a beginning and an end. The movement of matter has an immaterial purpose which is entering into the next world and returning back to God. “To Allah is the return,” (*Qur’an* 42: 53). Based on a particular analysis, Mulla Sadra also argues for some kind of corporeal resurrection. The intensifying motion of the world and the movement of matter from primary elements to a perfect human being, signifies the purposefulness of the world and indicates the knowledge, wisdom and the will of the Creator. This in turn requires life

and subsistence after death as it also necessitates the resurrection and eternity.

In this manner, based on the fundamentality of existence, Mulla Sadra concludes that there is substantial motion; and this enables him to present a new interpretation of the world and to resolve such problems as that of the reality of existence, the unity and reality of the natural world, the changing and the unchanging and the relation between the two, temporality and eternity and their relation, the problem of time, the corporeal origin of soul and its intensifying movement, and the doctrine of the resurrection.

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In the Name of God, the Merciful, the Beneficent

A Report on Graduate Work in Qom on the Problems of Essence/Attribute and Substance/Accident

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1. Introduction

The title of our workshop, "Substance and Attribute", will sound discordant to anyone coming from an Islamic philosophical background. In Islamic philosophy there are discussions of essence and attribute and of substance and accident, but no substance and attribute. Until fairly recently, it seems that the same was true of Western philosophy, certainly so in its medieval period. Discussions of substance stem from Aristotle's *Categories*, in which substance is contrasted with nine other categories which together are called *accidents*. The Greek term for accident, *symbebekos*, was rendered into Arabic as *'arad*, indicating that which is passing. Discussions of essence and attribute entered into Islamic philosophy, however, not directly from the Greeks, but from early theological discussions among Muslim theologians, although as Muslim theology developed, Greek influence became increasingly prominent. The term translated as "attribute" is the Arabic *sifat*, which also means "adjective". The divine essence (*dhat*) or self, (*nafs*) was contrasted with the divine names and attributes (or nouns and adjectives). Indeed, Islamic theology or *kalam* is said to have begun with discussions about the attributes of God, particularly about divine speech.

One of the first questions disputed by the Muslim theologians was whether it was proper or not to use terms to describe God that are not mentioned in the Qur'an. In these discussions, the attributes of God are understood linguistically as the expressions used to describe divinity. From here, further questions were asked about the need to posit an eternal

* I would like to thank my husband, Hajj Dr. Muhammad Legenhausen, for his help with the preparation of this report.

attribute to justify the application of the divine names mentioned in the Qur'an. If God is correctly described as *the Living*, some argued, it must be because of His possession of the attribute of *life*. Here we find a shift from the linguistic to an ontological understanding of the attributes within the early *kalam* tradition; but a sustained effort was made by Mu'tazilite and Shi'ite theologians to deny that distinctions among the attributes imply any ontological distinctions within the divine essence, or that the attributes subsist alongside the divine essence as distinct realities. A further development of such disputes was that the terms "names" and "attributes" came to be used interchangeably.

One of the most influential of Shi'i theologians, Shaykh Mufid (d. 413/1022), says that an attribute is what informs a listener of an intended meaning and that as such, an attribute cannot exist without speech or writing to represent this meaning.[1] The Ash'arites, on the other hand, invested the attributes with ontological rather than merely linguistic status, and thus have been described as defending a form of attribute realism.[2] Needless to say, over the course of the centuries various Muslim thinkers have added considerable subtlety and nuance to their positions on the attributes; however, in contrast to philosophical discussions of the relationship between substance and accident, in which accidents were understood as "ways of being" since Aristotle, for the theologians, especially in the Shi'i tradition, there has been much more reticence about admitting any real ontological status for the attributes.

The main attributes discussed in the tradition of Islamic *kalam* are: power, life, knowledge, hearing, sight, speech, and will. The attributes are divided into those of essence and those of act. The attributes of essence are those that necessarily and always are properly attributed to God, such as power, life, and knowledge. The attributes of act are those which it is appropriate to attribute to God only because of some divine action and are not appropriately attributed prior to the existence of the act, such as hearing, sight, speech, and will.

In addition to Islamic philosophy and *kalam*, we also find discussions related to the substance/accident and essence/attribute distinctions in what is called "theoretical mysticism" (*'irfan nazari*). Like the Shi'ite and Mu'tazilites, the Sufis have also sought to guard the position of upholding the radical unity of God. Ibn 'Arabi (d. 1240) describes the relation between existence and entities in terms of the divine names. The names

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[1] Shaykh Mufid 1371 A.H.; McDermott 1978, 134.
[2] McDermott 1978, 135.

themselves are held to have no independent existence, but to be words that designate relations.[3]

Muslim philosophers, theologians and mystics have separated discussions of substance/accidents from discussions of (divine) essence/attributes to a large extent in order to place divinity beyond the categorial structure of ordinary concrete sensible objects described as substances in the Aristotelian tradition. Nevertheless, as we shall see below, there are important structural analogues between the discussions about the relationship between essence/attribute and substance/accident that can be found by reviewing the dissertations written on these topics.

2. Essence/Attribute

One of the areas that has attracted the attention of Muslim thinkers through the ages has been religious epistemology. The divine attributes have been studied from an epistemological point of view because it is through the attributes that God makes Himself known. This topic of the conditions under which attributions may correctly be made about God as reflections of human knowledge of Him has featured prominently in theological discussions of all the major sects of Islam.

In the Qur'an itself, there are numerous references to the divine names and attributes, and these have prompted some of the earliest theological discussions among Muslims. God shows man how He is to be known by introducing Himself through self-attribution. In many verses of the Qur'an, God describes Himself through particular attributes, and instructs believers to refer to Him by these attributes.

It is generally held that the essence of God is unknowable, and that because of this God can only be known through His attributes. The term for essence in the Qur'an and subsequently in Islamic theology is *dhat*. Literally, the word means *mistress*, in the sense of *possessor (feminine)*. This should not be confused with *essence* in the sense of the Latin *essentia/esse* distinction, for which the Arabic word *mahiyyah* is used. The *dhat* is the possessor of attributes, the self, identity, and in philosophical interpretations, *being*. After the Qur'an, the most important source for Islamic theology is *hadiths*, and in the sayings reported from the Prophet (*s*) and Imams (*'a*) there is ample discussion of the divine essence and attributes. Ash'arite, Mu'tazilite and Shi'ite theologians all took positions on the nature of the divine attributes and their relation to the divine

[3] See Chittick 1998, 39.

essence. In Shi‘ite theology, this issue has featured in the works of all the prominent theologians, from Shaykh Saduq and Shaykh Mufid in the 4th/10th century, through Majlisi and Lahiji of the Safavid period (11th/17th century), and it continues to be discussed as a central part of contemporary Shi‘ite theology, which over the course of time became interwoven with influences drawn from Islamic philosophy and mysticism.

In Shi‘ite thought, there has been a great emphasis on divine unity, and as a result, it is held that the divine attributes should not be considered as entities added to the divine essence. On the other hand, the attributes are held to be distinct from one another. God’s knowledge is not His power, although each is one with the essence. Much of Shi‘ite theology is devoted to discussions of how this paradox is to be resolved, generally by holding that the semantic diversity of the attributes is compatible with an ontological unity with essence.

The relation between the essence and attributes was viewed by the early Muslim philosophers in terms of Neo-Platonic emanation theory. The mystics also made use of such ideas, but emphasized the semantic relation between essence and attribute: differences in attribute are found in the different meanings through which divinity manifests Itself. The various strands of theological, philosophical and mystical speculation about the divine essence and attributes culminate with the work of Mulla Sadra, in the shadow of which all subsequent Islamic philosophy takes form.

Most of the dissertations about essence/attribute focus on how this topic is developed in one or more prominent Muslim thinkers or schools of thought. In some cases, there is a comparison with non-Muslim thinkers, such as Aristotle or Maimonides. Some attempt to understand the issue by going back to the sources in the Qur’an and *hadiths*, while others seek to defend the Shi‘ite position against other schools of thought. In virtually all the dissertations, an attempt is made to present the Shi‘ite theological position on this topic, particularly as elaborated in the school of Mulla Sadra, and to defend it against rivals or use it as a basis for the criticism of other positions.

Below is a list of twenty-one dissertations, arranged according to the type of approach taken to the issue of essence/attribute.

2.1 Essence/Attribute in Islamic Sources

2.11 The Divine Attributes from the Perspectives of the Qur’an and Mysticism

2.12 Philosophical and Mystical Analysis of the Names and Attributes of God in the Psalms of Islam[4]

2.13 Imam Sadiq and the Divine Philosophy of the Essence and Attributes of God

2.14 Research in Prayers with regard to the Divine Essence and Attributes

2.2 Essence/Attribute in Islamic Theology

2.21 Unity of Attributes, and Deviations of the Ash‘arites, Wahhabis and Other Groups

2.22 Divine Essence and Attributes in the View of Fakhr al-Din Razi

2.23 Review and Analysis of the Views of Ghazali about the Divine Essence and Attributes

2.24 Theological Views of Qadi Sa‘id Qummi

2.25 Semantics of the Divine Attributes

2.26 Semantics of Passive Attributes of God

2.27 A Comparison of the Views Allamah Hilli and Ardibilli about the Attributes of God and the Return

2.3 Essence/Attribute in Islamic Mysticism

2.31 Mutual Influences of the Ismailis and Sufis about Divine Unity

2.32 Immanence and Transcendence of God in the View of Ibn Arabi

2.4 Essence/Attribute in Islamic Philosophy and Comparative Philosophy

2.41 God in Aristotle and Ibn Sina

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[4] See Zayn al-‘Abidin 1987.

2.42 Theology and the Quiddity of the Divine Attributes in the View of Maimonides and Allamah Tabataba'I

2.43 Negative Theology in the Views of Maimonides and Qadi Sa'id Qummi

2.44 Divine Essence and Attributes in the View of the Peripatetics and Illuminationists

2.45 God in the View of Sohravardi

2.46 Dialogue about the Divine Essence in Islamic Philosophy

2.47 A Review of the Attributes of God in the Views of Ibn Sina, Mulla Sadra, and Abd al-Jabbar Mu'tazili

2.48 A Review of the Criteria for Distinguishing the Attributes of Essence and Action in the Views of the Exegetes and Philosophers

Needless to say, the dissertations do not all keep neatly to these categories. There are comparisons between philosophers and theologians, philosophers and interpreters of the Qur'an, and general discussions, as well.

Discussions of Qadi Sa'id Qummi are often featured, since he represents a kind of negative theology that is generally perceived as extremist for its denial of the reality of the positive attributes. Students are encouraged to study how the position taken by Mulla Sadra is able to overcome the difficulties faced by Qadi Sa'id's negative theology.

There are structural similarities between the discussions of essence/attribute and substance/accident, although the discussions are completely separate. There are no discussions of substance/attribute or essence/accident in Islamic philosophy and theology. However, in Mulla Sadra, the identity of attributes with essence is mirrored in his claim that accidents have no existence other than the existence of the substance in which they inhere. Indeed, Mulla Sadra's views about substantial motion may be seen as a solution to the problem that arises when the Shi'ite theological claim of the identity of attributes with the essence is used as a model for the relation between substance and accidents in changing entities.

3. Substance/Accident

All of the dissertations about substance/accident focus on the doctrine of substantial motion, which is one of the most outstanding features of Mulla Sadra's thought. Some of the dissertations are purely descriptive, and attempt to present a clear exposition of Mulla Sadra's views on the issue. Others seek to defend Mulla Sadra's views from objections, or compare his views with others.

3.1 General Explanations of Substantial Motion

3.11 Substantial Motion (1992)

The M.A. thesis of Husayn Ali Qasimzadeh is divided into five chapters. The first gives the background to the substance notion in ancient Greek philosophy. The second chapter deals with the problems of defining motion and substance, as well as the place of substance among the categories and the types of substance. The third chapter reviews the philosophical and theological reasons for substantial motion. The fourth chapter considers the most famous objections to this doctrine and the answers given to them. Finally, the fifth chapter summarizes Mulla Sadra's position and elaborates the implications of substantial motion for the relation between rest and motion, the temporal origination of the world, time as a fourth material dimension, the corporeal resurrection, the relation between mind and body, and the rejection of reincarnation.

3.12 Substance and Accident in the Views of Ibn Sina and Mulla Sadra (2000)

Muhammad Mahdi Mishkati compares the views of the Islamic peripatetic school led by Ibn Sina with the views of the school of Transcendent Wisdom led by Mulla Sadra on the topic of substance/accident. While Ibn Sina is committed to the existence of both material and immaterial substances, Mulla Sadra, following Sohravardi, accepts the existence of a third, intermediate kind of substance: *imaginal* substances. Imaginal substances are like immaterial substances in that they do not have a place or spatial direction in the external world; but they are like corporeal substances in that they have a shape and size. Ibn Sina held that accidents themselves possess higher order accidents. Mulla Sadra rejected the arguments for this position without offering any arguments for the contrary position. Most famously, Ibn Sina and Mulla Sadra differ on whether there

can be motion or change in accidents only, or in substance as well as accidents. Mulla Sadra argues that if Ibn Sina accepts that there is a persisting subject, primary matter, through generation and corruption, this can also serve as the subject of substantial motion, with the difference that in generation and corruption the change is discontinuous and sudden while in substantial motion the change is gradual. In addition to this argument, Mulla Sadra also maintains that the subject of motion is not a thing at rest that possesses motion, but that it is the moving existence of the subject itself, whose unity is preserved through continuity rather than through relation to a stationary subject or matter. The view of the relationship between substance and accident differs in Ibn Sina and Mulla Sadra in that Ibn Sina uses a causal model to explain the relationship. Substance is the agent cause of its accidents. In Mulla Sadra, however, the relation of substance to accident is much more intimate. Accidents are explained as relations of dependence to their substance that lack any existence of their own other than the existence of the substance.

3.13 Review and Criticism of the Objection to Substantial Motion from the Persistence of the Subject (1992)

Muhammad Baqiri Sabzavar devotes his M.A. thesis to Mulla Sadra's replies to the objection that if there were a change in substance, there would be no subject to undergo the change. These replies are based on the principle that existence has a fundamental priority with regard to quiddity, and the idea that in substantial motion the object that moves is identified with its motion. In short, the subject of substantial change is the changing substance extended through time.

3.2 Comparative Studies of Substantial Motion

3.21 Substantial Motion in Mulla Sadra Compared with Creative Evolution in Bergson (1996)

The author of this M.A. dissertation, Mehdi Ra'isi, finds a number of common themes in the works of Bergson and Mulla Sadra: the evolutionary progress of the material world, life (in Bergson) and existence (in Mulla Sadra) are in a constant state of flux, and are continuously being renewed, this progress is in the direction of perfection, both authors emphasize the continuous nature of time, and both hold that objects are extended through time. Both reacted against forms of atomism that were current in their respective intellectual environments, and both introduced

the idea of continual change in opposition to those who took a more static view of truth. These philosophers differ in that Bergson emphasizes intuition, while Mulla Sadra takes a more rationalist approach.

3.22 Substance in the View of the Empiricists and Islamic Philosophy (1995)

In this M.A. dissertation, Ibrahim Abarsaji reviews the definitions of substance offered by Hobbes, Berkeley and Locke, and compares them with those offered by Fakhr Razi, Sohravardi and Mulla Sadra. He also compares the views of these philosophers on the existence of material and immaterial substances and on the status of the soul.

3.23 Substantial Motion in the View of Mulla Sadra and Process Philosophy (1994)

A number of Iranian and Western thinkers have seen a similarity between Whitehead's process philosophy and Mulla Sadra's views of substantial motion. Husayn Valeh attempts to sort through the similarities and differences between these traditions of thought on such topics as object/activity duality, the material and the immaterial, the unity of God and His relation to existence and the world, the universality of motion in the material world, continuity and unity, and the nature of time.

3.3 Historical Studies of Substantial Motion

3.31 The Roots of Substantial Motion in Mysticism, Philosophy, and Theology Prior to Mulla Sadra (1992)

Ahmad Abedi (now a member of the philosophy faculty at the University of Qom) wrote his M.A. thesis on the precursors to Mulla Sadra's doctrine of substantial motion. Prof. Abedi traces the idea of substantial motion to the idea of constant creation, repeatedly mentioned in the Qur'an, as developed in the writings of the Sufis. Among Muslim philosophers and theologians, the idea of substantial motion was not accepted by most writers, although there were a few who alluded to the idea, including the Ikhwan al-Safa, Hamid al-Din Kermani and Sohravardi.

4. Summary

From this brief overview, one can get a rough picture of the sort of research that has been done over the last fifteen years in Qom about the divine essence and substantial motion. It is plain that Mulla Sadra's thought continues to dominate Islamic theology and philosophy as it is studied at the graduate level in Qom. On the other hand, the philosophical work done in this tradition is not merely apologetic in nature. Often details of Mulla Sadra's views are subject to criticism and emendations or improvements are suggested by those who teach Islamic philosophy. There is also a strong current of thought in Iran, the *Maktab-e Tafkik* (School of Separation), which is fundamentally opposed to basing a Shi'ite theology on a philosophical system such as Mulla Sadra's, although this sort of opposition is not reflected in any of the dissertations mentioned here. Likewise unrepresented here is the tendency found among some Iranian intellectuals today to reject the tradition of Islamic philosophy altogether. For example, some Iranian Marxists have suggested that the concept of substance should be completely abandoned, and the great Muslim philosopher, exegete and theologian, Allamah Tabataba'i roundly rejected such suggestions as absurd because of the independence criterion of substance: all existents exist dependently or independently; if there were no substances, everything would be an accident, and in that case the accidents would attain independent existence and so become substances.

We also find that while the discussions of these topics are mostly confined to the Islamic cultural orbit (which includes the work of Maimonides), an increasing amount of comparative work is being done, as reflected in our list in references to Bergson, process philosophy and empiricism. This trend is increasing, and I am sure that if another review of these topics is done after another fifteen years, the number of dissertations dedicated to comparative philosophy and theology will be found to have increased tremendously.

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Ghazali on Immaterial Substances

BORIS HENNIG, SAARBRÜCKEN

1. Preamble

In this paper I will attempt to extract a positive doctrine on the substantiality of the human soul from Ghazali's critique of the Aristotelian philosophical tradition. Rather than reflecting on the possibilities and limitations of intercultural dialogue, my aim is to directly engage in such dialogue. Accordingly, I will not suppose that we need to develop and apply external standards according to which one of the two philosophical traditions addressed here, Western and Islamic, may turn out to be superior. Up to a certain point, Western and Islamic philosophy are virtually indistinguishable regarding their style, the main topics, and the arguments discussed, which both take over from Aristotle and the Neoplatonists. Further, at least up to Ghazali, no Islamic philosopher actually employs standards of rationality that would differ from the standards also accepted in the West. Ghazali himself would certainly be at least as disturbed by a valid philosophical objection to his claims as any other serious philosopher. He does not pursue another kind of project, but submits to the same standards of truth and validity, as far as philosophical argument reaches. His point is, of course, that these standards do not reach as far as some philosophers suppose. But this, again, is not a particularly "Islamic" insight.

So, although I will discuss Ghazali against the background of a roughly outlined Western discourse about the mind as a substance, stretching from Augustine to Locke, this is not meant to be a confrontation between different styles of thinking or points of view. Insofar as Ghazali defends and refutes philosophical arguments, his style and point of view are thoroughly universal, as much as the style and point of view of Augustine, Descartes, and Locke. He could have directly contributed to their very project, and the following can be read as an attempt to reconstruct what his contribution might have been. I will start with a rough and superficial sketch of the Western philosophical tradition in question. Then I will turn to Ghazali by first outlining the general framework within which his talk about substances must be understood. I will further discuss two of the arguments for the eternity of material and immaterial substances that he

rejects. It will turn out that in order to understand how substances can come into being and cease to exist, we need to distinguish between two kinds of possibility, and accordingly between two ways in which possibilities may be said to inhere in an underlying substance. This will lead to an important and very general comment on immaterial substances: such substances are not related to forms and possibilities by possessing them as their own forms and potentials. It is precisely for this reason that it is misleading to think of the mind as an entity that has certain properties.

2. Immaterial Substances

In book VII of his *Confessions*, Augustine tells us that at some point in his life, he had an important insight when reading Neoplatonic philosophers. He does not name any specific Neoplatonic thinker or theorem, but his insight is clear and simple enough. He reports that he realized that there are entities that are not material: neither material substances nor properties of them, nor relations between such substances. Significantly, this insight helped him to solve the problem of evil, and the most important such thing he mentions is truth. In Augustine, the immaterial is the *normative*. Whereas there may perhaps be a way of identifying the established, finite set of all actually known facts with a set of relations between material objects, pieces of paper, human bodily organs, brains, their properties, and so on, there can be no such identification for truth. The truth always goes beyond the set of true assertions that we actually endorse. Since “truth” is also a name that Christian philosophers like Augustine habitually apply to God, Augustine does not hesitate to conclude that God is immaterial, and further, that the human soul, being made in his image, is an immaterial thing.

Descartes provides a rigorous argument in support of the Augustinian insight. He shows, in his first two *Meditations*, that our understanding of what it means to be a thinking subject need not involve any understanding of what it is to have a material body. Before we accept anything else as a fact, we already know that we think. Thinking, Descartes explains, is conscious activity. This however means that consciousness itself cannot be another kind of thinking. First, since all thinking is conscious activity, this would lead to a regress. Second, it does not seem true that we explicitly think of everything of which we are conscious. Anyway, Descartes nowhere claims that consciousness is anything like introspection, self-observation, or reflective thought. Consciousness goes beyond our actual

thinking in the same sense in which the truth goes beyond our actual asserting. This is so because similar to truth, consciousness is concerned with our thoughts and actions from a normative perspective. Consciousness is primarily concerned with the value of our own activity, and with our relation to this activity. Just as we need not state that what we say is true in a separate statement, we need not think that we think in a separate thought. Consciousness amounts to an implicit evaluation of a thought as our own. More specifically, it amounts to taking the stance that Descartes explicitly takes towards his own thoughts in his first two Meditations. He sets out to endorse only such thoughts that are most reliable that are immediately evident to his mind. He thus rejects all knowledge claims based on testimony, and all opinions that depend on possibly unreliable means, leaving only the thoughts that he can defend all by himself. The core subject of this and only this kind of activity is then called "*res cogitans*" – thinking subject. To be conscious of a thought or action is accordingly to regard oneself as immediately and fully responsible for defending this thought or action.

That the conscious subject that Descartes isolates in the beginning of his Meditations is in its essence a locus for responsibility and liability for thoughts and actions explains, first, why Descartes can infer the existence of God from the existence of the conscious subject. To act responsibly is to suppose that there is a correct evaluation of one's acting as good or bad, right or wrong, that need not coincide with any actual evaluation, not even one's own. The notion of a responsible agent therefore implies the notion of an ideal evaluation. From this Descartes infers the existence of God, an ideal evaluator. Again, the truth transcends the merely factual.

Second and more importantly, that the *res cogitans* is in its essence a responsible subject of thought and action justifies the title of a thinking *substance*; at least to a certain extent. The important point to note here is that an agent can only be liable and accountable for thoughts and actions insofar as she persists over time and is clearly distinct from other instances of her kind. In this sense, the subject of conscious activity can only be a persisting individual. Since the terms in which we trace such subjects over time are not the same as the means by which we identify material bodies or parcels of matter, it is further legitimate to speak of *immaterial* substances. The point is not that they are entirely unrelated to matter, but that there is something about them that cannot be captured by a purely materialistic description. In order to say what it means to be responsible for an action or a thought, we need to transcend the material and the factual, since to be

responsible is not the same as to be actually held responsible. This insight is again emphasized by Locke: persons are identified and individuated not merely in terms of their bodily features, but in terms of their life histories; more precisely, in terms of the actions and thoughts for which they are accountable. And Locke also makes clear that it does not matter whether persons are actually held responsible for what they do by other humans, or consider themselves responsible for what they did. What matters is the evaluation by God, the ideal evaluator, in the final judgment (*Essay* II,xxvii,26).

This is, then, the motivation for calling the mind an immaterial substance — and for Cartesian Dualism in general. Humans subject their conscious thoughts and actions to an evaluation according to standards such as truth, correctness, goodness. But no finite, actual set of evaluations and meta-evaluations guarantees the satisfactions of such standards. What humans say may be false and what they do may be wrong even if no human on earth ever notices. In this sense, the standards themselves are immaterial. Insofar as we act and think, we are subject to a standard that transcends the material world, and we bear our responsibility regardless of what happens to our material bodies.[1] Let me now turn to the ontological framework within which immaterial substances are traditionally located.

3. Aristotelian Top-Level Ontology

According to a metaphysical framework that Ghazali largely accepts, there are two kinds of entities: those that are in something else, such as accidents and forms, and those that are not in anything else (3,41,66).[2] Entities that do not exist in any receptacle (*mahal*) or substratum (*maudu'*) are called substances (*jawhar*, 5,24,90). There are three kinds of substances. Some substances are receptacles for accidents and forms; others are self-subsistent (3,41,66). The self-subsistent substances divide into two kinds. Some of them are attached to substances that are receptacles; others are not essentially related to any other thing at all.

Instances of the first kind of substance, which are receptacles for

[1] This paragraph is a rough summary of results I develop more thoroughly in Hennig 2006.

[2] All references are to Ghazalīi 2000, ed. Marmura. The numbers refer to the discussion, paragraph and page respectively, such that the above "3,41,66" refers to the Third Discussion (which is found in part I), §41, p. 66. I have occasionally modified the translation.

accidents and forms, are mere extension (*madda*) and bodies (*jism*). According to a view that Ghazali attributes to Avicenna, the human soul is a substance of the second kind: it is not itself a receptacle but individuated only by being attached to a body that is a receptacle of forms and accidents (19,9,202-3). The third kind of substance is exemplified by the divine intelligences, which are immaterial, unique in their kind, and not attached to any particular, material body.

4. The Extended Substance

Ghazali further endorses an Aristotelian principle according to which every change requires an underlying subject that remains, in some respect, the same (17,36,176). The "philosophers" (Farabi and Avicenna) argue that when a thing comes into being, it changes from non-existence to existence, and hence there must be a substratum that remains the same during the change from non-existence to existence. Before a thing comes into existence, it must have been possible for it to exist, and this possibility must have been present in a receptacle (*mahal*). Therefore it seems that if something A is possibly coming to be, something that is already actual must have the potential for becoming A. Hence, the universe in its entirety can have no beginning, since there would have to be a receptacle for its possibility of coming to be. This receptacle, however, will already have to be an extended thing (*madda*, 1,113,41).

In general, since a substance does not inhere in anything, there can be no substratum underlying the process by which a substance comes to be. It is easy to see how a property comes to be exemplified: something that may possibly have this property turns into something that actually has it. No such account, however, can be given for the way in which substances come into being. This appears to entail a Spinozistic ontology, according to which there is only one eternal substance, and everything that is subject to change inheres in this substance. Hence, the argument of the philosophers, as Ghazali states it, leads to undesirable conclusions.

5. The Thinking Substance

Ghazali picks up the same issue again in his discussion of the persistence of the soul (*nafs*). He begins by stating the following philosophical argument to the effect that the soul cannot cease to exist. A thing may cease to be for three reasons: by lack of support by an underlying

substratum, by encountering its opposite, or by something else's execution of a power. But the soul does not cease to exist in the first way, since it needs no support from an underlying substratum. Rather than being imprinted in the body as its receptacle, the philosophers argue, the soul uses the body as a tool, and the destruction of a tool does not entail the destruction of its user. Second, there are no negative substances, such that a substance could be destroyed by encountering its negative counterpart. Third, the non-existence of a substance is not a positive fact and can therefore not be specified as a condition of success for the execution of a power. Since a power must be defined in terms of its successful execution, this means that there can be no power for destroying a substance (19,2-5,201-2).

These arguments are of doubtful validity. In order to establish the first, the philosophers would have to show that the soul does not in any sense depend on the body for its existence. But even if the soul is not imprinted in matter as its receptacle, it may still cease to exist in the absence of the body to which it is attached, just as humans will cease to exist in the absence of air without being imprinted in it. The specific way in which the soul depends on its body may be that it has its identity only insofar as it is attached to this body rather to another (19,8-15,202-4). And as Ghazali argues elsewhere, we do in fact never refer to ourselves without in some way or other referring to our body (18,53,192-93). Therefore, it might well be that the soul depends on the body even if it uses it only as a tool. At any rate, Ghazali concludes, it is not logically impossible that God should be able to destroy the soul, and no one guarantees that the list of possible ways of ceasing to be that the philosophers offer is exhaustive (19,16-17,204-5).

In a second round, Ghazali has the philosophers elaborate on their first argument. Since a substance does not exist in a receptacle, they argue, it cannot cease to exist. For ceasing to exist is a change, and hence, there must be an underlying substratum that undergoes this change. This substratum, however, would have to underlie all stages of the change in question, such that first, the substance would be supported by this underlying substratum as long as it exists. But a substance needs no such support. Second, if the substratum underlies all the stages of the soul's ceasing to be, it would still have to be there in the absence of the soul—but there is nothing that belongs to a human being that would still be present when the soul has perished. This leads us back to the argument for the eternity of the extended substance. The substratum that remains when the

soul has ceased to be would have to be a receptacle for a potential of a soul to be, in the same way in which extension (*madda*) is the receptacle for a potential of a body (*jism*) to be. This however would turn the soul into a kind of form or accident, which would need something like extension as its receptacle (19,18-22,205-7).

6. Ghazali's Way Out

The main argument for the eternity of both extended and thinking substances is thus that the potential for a substance to exist would have to inhere in something else as long as this substance does not exist. But then, there would also be a receptacle on which the substance would depend for its existence when it exists.

Against this, Ghazali argues that possibilities do not require a real substratum and that we rather "call that possible which the intellect (*ᶜaql*) may suppose to be there without encountering a contradiction" (1,116,42). That is, the possibility that a substance exists is not a possibility *for it* to exist. There need only be an intellect that grasps this possibility and that is able to realize it. But this intellect is not the thing for which it is possible to exist. The intellect already exists, and the thing that possibly exists does not. Ghazali claims that this may be seen by considering the following arguments.

First, there would have to be a substratum not only for the possibility of things to come into existence, but also for their refusal to do so (1,117,42).[3] Although it might seem that a refusal to be must still be the refusal *of* some existing thing to be, this is not the case. There "are" things that may never actually be the case. Such things need no receptacle in order not to be, and hence their refusal to exist does not need any receptacle (1,122,43; 1,129,45).

Second, Ghazali argues, that which comes into being when an accident comes to be in a receptacle is not an abstract and universal form (*kulliya mujarrada*, 18,9,181), but only one of its particular instances. The universal itself does not come to be, but still, there is a sense in which a non-instantiated universal is only possible and not actual. That the universal is possible in the sense of being possibly instantiated does not

[3] Marmura translates *imtinaʿ* as "impossibility", such that the claim would be that there must be a substrate for the impossible. This does not follow and "refusal" is a more natural translation; at any rate *imtinaʿ* is not literally the opposite of possibility (*imkān*).

mean that it may itself come to be; it rather means that something else may come to be: one of its instances. By the same token, the soul may be said to be possible not because there actually is a receptacle in which it may come to be, but rather because something else may come to be: a bodily thing to which the soul may come to be attached (1,118,42).

Hence, although a universal form may only be *actual* by being realized in a particular instance, this does not mean that it needs this instance as a receptacle for its *existence*. The form does not come to *be* by being instantiated; it only comes to be *instantiated*. Likewise, the soul may be merely possible as opposed to actual as long as it is not attached to a body. But that does not mean that it comes to be in a body that would be its receptacle. It only means that it comes to be attached to a body.

7. Forms vs. Intentions: *Sura* vs. *Maʿnan*

The comparison between universals, souls, and possibilities is the most important step in the line that Ghazali takes against the philosophers. Both forms and possibilities may exist without inhering in a receptacle. They may be said to inhere in the intellect (*ʿaql*), but then the intellect will not be their receptacle—that they inhere in the intellect does not mean that the intellect exemplifies them.

We have already seen that the "philosophers" distinguish between two kinds of substance: substances that are receptacles of forms and accidents, and others that are self-subsistent. According to an account that a writer like Avicenna might put forward and with which Ghazali agrees, there are also two kinds of accidents or forms. There are, corresponding to the first kind of substance, forms and accidents that only exist in a receptacle (*sura* = Greek *morphe*). These are always forms *of* some particular thing: particular form-instances that come into existence when a thing actually has a property. Second, corresponding to the second and third kind of substance, there are forms that do not require a bodily receptacle in order to exist (*maʿnan* = Greek *ennoia*, translated into Latin as *intentio*). These are the universals that may be present in the mind without necessarily being instantiated by anything (18,3,179). In his 18th Discussion on the immateriality of the soul, Ghazali makes extensive use of the distinction between *sura* and *maʿnan*. Although universals are indivisible, he argues, they may still exist *in* a divisible substratum such as the brain, since they need not be *instantiated* by this substratum. The soul can accordingly be *in* a body without being its form; that is, it may depend on the body for its

existence without being imprinted in it.

8. Potentials Require a Receptacle, Possibilities Require a Substratum

Although Ghazali himself presents his argument against the eternity of extended and thinking substance only in order to "throw dust in the face" of the alleged proofs (1,134,46), we may extract from his criticism two distinctions that are still of crucial importance.

First, it has emerged that one should distinguish between the *substratum* (*mawduʿ*) of a universal or possibility and its *receptacle* (*mahal*). The receptacle of a possibility or universal is that in which it is present when it is actual. The receptacle of a color must be an extended thing. The substratum of a universal or possibility is that in which it may exist without necessarily being actual. The substratum of a color need not be an extended thing. According to Ghazali, the intellect may function as a substratum for universals and possibilities.

The receptacle of a possibility can only be an existing thing that may eventually actualize this possibility. For instance, it is possible that my son catches a cold since I have a son who does that quite often. In this case, my son is the receptacle of a potential for getting a cold. But this is not the only way in which possibilities may be there. For in a different sense, it is possible that my daughter catches a cold, although I do not yet have a daughter and may never have one: it is possible that I may have a daughter who has a cold. These two senses in which a state of affairs is possible have also been distinguished in terms of *de re* and *de dicto* modality: one may say that it is (*de re*) possible *for* my son to catch a cold, but not literally that it is possible *for* my daughter, since there is no daughter of mine for it to be possible for.

The second distinction that we may extract from Ghazali's discussion of the philosopher's "substance" is closely connected to this distinction between *de re* and *de dicto* modality. We may distinguish between possibilities that require a receptacle in order to become real and possibilities that do not require such a receptacle, but may exist in a substratum such as the intellect. The former may be called *potentials* of the receptacle in question. This distinction mirrors the division of forms into universals (*maʿnan*) and particular form-instances (*sura*). Potentials are particular possibility-instances, as it were, and they require a receptacle in order to exist. *De dicto* possibilities do not require a receptacle, but only a substratum such as an intellect in order to exist.

9. Substance Ontology Revised

Traditionally, a substance is said to be something that does not inhere in anything else, but in which other things such as forms and accidents inhere. This is, admittedly, a vague formulation, and much more would have to be said about what "inherence" means in this context. The question that Ghazali raises is whether a substance is supposed not to inhere in another thing (1) as its *receptacle* or (2) as its *substratum*. If a substance may not inhere in any substratum whatsoever, it will be difficult to explain how substances come and cease to be. On the other hand, if the relevant kind of inherence were restricted to inherence in a receptacle, it would seem that space and matter are the paradigm—if not the only—cases of substance.

If we admit that forms may also inhere in substrata without being forms *of* these substrata, we can explain how it can be possible that the universe exists before there is anything other than the divine mind. Hence, the best thing to do is to account for *both* kinds of inherence. It will then turn out that the mind or intellect is not a substance in the same sense in which a body is a substance, and that thoughts inhere in the mind not in the sense in which properties inhere in bodies. The mind is not a receptacle, but a substratum of thought and action, whereas bodies are only receptacles of their properties. Likewise, bodily substances can only host potentials, and *de dicto* possibilities can only inhere in the mind.

What matters here are not so much the possibly existing substances, but rather the further substances in which their possibilities subsist before they exist. These are the immaterial substances, mind and intellect, and according to Ghazali, they are related to that which subsists in them in a peculiar way. The distinction of substances and inherence relations into two types is not yet fully reflected in the top-level ontology presented earlier on in this paper. In addition to receptacles and things that inhere in them, we need to introduce entities that subsist in immaterial substances without inhering in them. This new class will include universals, *de dicto* possibilities, and probably also intentions and thoughts. All these "mental entities" do not inhere in the mind in the sense that they are forms of the mind or possibilities for the mind. Not even thoughts are forms of the mind, since we do not literally look inside our own minds when we contemplate them. Thoughts are possible facts. Likewise, intentions are not in the mind as in a receptacle, but are rather certain possibilities to act. These consequences are not elaborated by Ghazali, but they appear natural

and they are of utmost importance. The revision of the Aristotelian top-level ontology that Ghazali recommends leads to an insight into the nature of the mind. Although there are good reasons for calling the mind a "substance", since it is an individual and persistent locus of responsibility, there are also good reasons not to apply the schema of form and matter to this substance. Immaterial substances thus differ radically from material substances.

Ghazali thus offers an alternative ontological framework for drawing the distinction between material and immaterial substances with which Augustine, Descartes and Locke were concerned. I have argued that the mind is a subject of thoughts and actions in that it is responsible for them rather than exemplifying them as its properties. The way in which this relation of the mind to its activities differs from spatial relations or the relation between an extended thing and its properties motivates the Cartesian distinction between extended and thinking substances and explains why the soul is thought to be an immaterial substance. In Ghazali's terminology, the thinking substance differs in that it is not a receptacle of its thoughts and actions, but a substratum. He draws the same distinction, but not in terms of materiality.

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In the Name of God, the Merciful, the Beneficent

Aristotle and Farabi on the Definition and Priority of Substance

MOHSEN JAVADI, QOM

The Greek word for substance is *ousia*. It is a verbal noun from the verb *einai*, *to be*, and a more direct translation would be being or perhaps (more abstractly) *entity*.[1] Certainly Aristotle had this meaning of the word in his mind when he identifies the main question of the *Metaphysics*, i.e., the question of being, with the question of substance: Indeed, the question which, both now and of old, has always been raised, and always been the subject of doubt, viz., what being is, is just the question, what is *ousia*? For it is this that some assert to be one, others more than one, and that some assert to be limited in number, others unlimited. And so we also must consider chiefly and primarily and almost exclusively what that is which is in this sense.[2] In this paper I will use the word 'substance' as a standard equivalent for the Greek *ousia*.

1. Definition and priority of substance in Aristotle's view

In his '*Categories*' Aristotle says:

> It is a common characteristic of all substance that it is never present in a subject.[3] By being 'present in a subject' I do not mean present as parts are present in a whole, but being incapable of existence apart from the said subject.[4]

Although all substances have this property, i.e., they are not present in a subject, some of them, such as Socrates, cannot be said of or predicated of any thing else, since they are individuals; while others, such as man and animal, being universal, are said of and are predicated of other things (of

[1] See: Broackes 2006, 131.
[2] Aristotle, *Metaphysics*, 1028b 3-7.
[3] Aristotle, *Categories*, 3a 6-8.
[4] Aristotle, *Categories*, 1a 23-4.

Socrates, for example). Aristotle calls individual substances primary and universal substances secondary.

Substance—in the truest and primary and most definite sense of the word—is that which is neither predicable of a subject nor present in a subject, for instance, the individual man or the individual horse. But in a secondary sense, those things are called substances within which, as species, the primary substances are included, also those which, as genera, include the species. For instance, the individual man is included in the species 'man', and the genus to which the species belong is ' animal'; these, therefore—that is to say, the species 'man' and the genus 'animal'—are termed secondary substances.[5]

Aristotle here explains two different meanings of 'substance' rather than merely referring to two instances of the same meaning. In other words, the term 'substance' is ambiguous, i.e., there is no common essential element in the two cases. But substance in the first usage (individuals) univocally refers to different kinds of individuals such as matter, form and soul. Indeed, contrary to the term 'accident' it is a genus in relation to different kinds of primary substances.

Aristotle himself says that the species and genus of individual substances are substances because they reveal the primary substances; so they are called secondary substances. Sometimes Aristotle speaks in such a way that we can call all species and genus even those of accidents as substance. Many of his interpreters have been perplexed with regard this point.[6] To the contrary, Muslim philosophers, especially Farabi, have discussed different usages of substance very accurately and in detail. According to them *substance* has yet a third meaning that may lead to equivocation if we fail to discern it.

With regard to the secondary substances, there is some hierarchy among them according to the degree of their displaying the essence of individual substances.

Of secondary substances, the species is more truly substance than the genus, being more nearly related to primary substance.[7]

There are two questions about the definition or characteristics of substance (as mentioned above) that require an answer.

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[5] Aristotle, *Categories*, 2a 11-9.
[6] For example see: Ross 1995, 172.
[7] Aristotle, *Categories*, 2b 7.

A. It seems that secondary substances, in addition to having been said of the individuals (as a matter of linguistics or logic), are present in a subject (as a matter of ontology). This issue has two aspects: the first aspect is related to the external existence of universal substances outside the mind. Contrary to Plato and his followers, Aristotle denied the independent existence of universals, including species and genus. As David Ross says:

> Every substance in the universe is individual; the universal is always for Aristotle something which though perfectly real and objective has no separate existence. The pure substance as well as the substances concrete of matter and form are individual.[8]

On the other hand, Aristotle also denies the presence of universals in the individual as subject. For man is predicated of the individual man, but is not present in any subject: for manhood is not present in the individual man. In the same way, 'animal' is also predicated of the individual man, but is not present in him.[9]

So, the problem is that if they are supposed to exist outside the mind, by denying their independent being on the one hand and their presence in a subject on the other hand, they can only exist in the individual, but not as something dependent on another thing that is in turn independent of them. In other words, they can exist as a part of a whole whose parts are not independent of each other. The universals then will exist outside the mind, neither independently nor as present in a subject, but as dependent on a place which in turn is dependent on them. This solution, if accepted, works only in the case of genus, because genus can be taken as a part of an individual, but it does not work in the case of the other universal substance, i.e., species. In other words, genus can be taken as revealing only a common part of an individual so it can be regarded as a part of an individual, but since species displays the whole essence of an individual, it cannot been regarded as a part of its instances.

At any rate, this answer on the whole is not correct because as universals neither genus nor species can be parts of an individual, albeit we can say that genus concepts are derived from a common part of the individuals. In other words, the source of a genus concept is a part of an individual and not the genus itself. Then the difficulty will remain and still need to be discussed.

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[8] Ross 1995, 175.

[9] Aristotle, *Categories*, 3a 10-14.

The second aspect of the question is related to the existence of universals in our minds as present in a subject, i.e., the mind. All concepts, including universals, exist in the mind as mental qualities, but not instances of substance. In other words, the definition of substance as something never present in a subject implies that universals are not substances because they are always present in the mind as mental qualities, as is the case with other accidents. As far as I know, this problem was not discussed in the West, but we can find a rich and detailed discussion of it in Muslim philosophy, especially in the discussion of 'knowledge' or 'mental existence' (*al-wujud al-dhihni).*

B. The other problem is related to the application of the concept of substance to some thing which is not an instance of it. As Aristotle himself says, differentia is not a case of substance, but we see it to be included in the definition of substance.

> Yet this [definition of substance] is not peculiar to substance for it is also the case that differentia cannot be present in subjects.[10]

It seems that the differentia has the same status as genus or species in that it reveals the essence of individual substance even more than the genus; and furthermore it is not present in a subject. The question is what makes it different from species or genus?

This question is not answered in Aristotle's works, and also many of his commentators do not address it. In contrast, Muslim philosophers discussed the problem with much elaboration and detail. They devoted a chapter of their discussions about substance to the problem of including differentiae in the concept of secondary substances.[11]

At any rate, the final and most important point in Aristotle's *Categories* is:

> Thus, everything except primary substances is either predicable of a primary substance or present in them, and if these last did not exist, it would be impossible for anything else to exist.[12]

In sum we can conclude that the priority of individual substance over secondary substance and the rest of the categories is rooted in its independent

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[10] Aristotle, *Categories*, 3a 21-23.
[11] See as an example: Tabataba'i 1404, 82-5.
[12] Aristotle, *Categories*, 2b 4-6.

existence. This anti-Platonic conclusion which Aristotle achieved combined with his view about real knowledge, which is assumed to be of universals, makes for some perplexities about the nature of metaphysics. According to him, metaphysics is the study of real existents, i.e., individual substances; but the real and important knowledge is the knowledge of universals! How can we combine the study of real being (the subject matter of metaphysics) with real knowledge (as the aim of metaphysics)?

In his *Metaphysic*s, Aristotle discusses the different forms of priority of substance in more detail, especially in Book Zeta, where he says:

> Now there are several senses in which a thing is said to be first; yet substance is first in every sense—(1) in definition, (2) in order of knowledge (3) in time. For (3) of the other categories none can exist independently, but only substance. And (1) in definition also this is first; for in the definition of each term the definition of its substance must be present. And (2) we think we know each thing must fully, when we know what it is, e.g. what man is or what fire is, rather than when we know its quality, its quantity, or its place; since we know each of these things also, only when we know *what* the quantity or the quality *is*.[13]

In the *Categorie*s, as we mentioned, the contrast was between primary substances and all other things including secondary substances; but in the *Metaphysics* it is not apparent what sorts of substances are meant to be prior.

The question which may arise is what is meant by priority by definition and by the order of knowledge?

There are two possible interpretations; one is that accidents should be defined and known through substances, and the other is that substantial definition and knowledge but not the substance is prior to the accidental definition and knowledge. If the first interpretation is accepted the problem that may arise is how is it possible for substances, despite their being totally different from accidents, to act as an inseparable means of defining accidents. However, there is some evidence indicating that Aristotle himself holds this very view. Averroes understands Aristotle in this way, and accepting his view tries to solve the mentioned difficulty.

The way Averroes solves the problem of substances being constituents of the definition of accidents is that as accidents, in their own existence, they are ultimately dependent upon substances and definitions are derived

[13] Aristotle, *Metaphysics*, 1028a 33-1028b 4.

from ontological constituents. Consequently, substances are the necessary elements of the complete definition and the full knowledge of accidents.[14]

Here we do not intend to discuss Averroes's view in detail and can only say that it seems that he has failed to distinguish the essential elements of a thing at the level of definition from existential principles.

The second possible solution, as understood from the words of Farabi, is that what is meant by substance as a constituent of the definition and knowledge of accident is not substance in contrast to accident, but rather that which is meant to be an essential property in contrast to an accidental property. This will be the third meaning of substance, and by taking it into account we can solve some of the difficulties in understanding Aristotle. In order to understand Farabi's view clearly, further explanation will be given at this point.

The priority by way of definition and in the order of knowledge means that the real definition and full knowledge of everything can be acquired only via understanding its substance. In other words, definition and knowledge of substance is prior to definition and knowledge of accidents.
David Ross correctly says:

> In this argument substance is evidently being thought of not as the concrete thing but as the essential nature, and this double meaning pervades Aristotle's whole treatment of substance.[15]

2. Definition and priority of substance in Farabi's view

Farabi's discussion of substance can be found mainly in his commentary on Aristotle's *Categories*[16] and his famous book entitled '*Kitab Al-Huruf*' (Book of Letters), which is regarded as a commentary on Aristotle's '*Metaphysics*'.[17]

In his *Kitab Al-Huruf*, Farabi discusses different philosophical notions and his method is to lay down first the ordinary meaning or meanings of the term, i.e., to explain how and for what ordinary people use the term and then to explicate the philosophical notion.

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[14] Averroes 1990, v.2, 754.
[15] Ross 1995, 172.
[16] Many of Farabi's commentaries on Aristotle's logical treatises have been collected and published in a series of books with the name of *Al-Mantiq 'ind Farabi*, ed. Rafiq al-'Ajam and Majid Fakhry, 4 vols. 1986-7, Beirut.
[17] Muhsen Mahdi published the book with the English subtitle of *Commentary on Aristotle's Metaphysics*.

He starts his discussion of substance with a detailed lexicology of the word *jawhar* which is the Arabic standard translation of the Greek term *ousia*. According to him the word in common usage has two basic literal meanings; *jawhar* literally means "jewel," but when it is used in constructions literally meaning, "jewel of x", it refers to the matter or materials of which x is made. For instance the *jawhar* of this table refers to the wood that is used in it. Because of this, ordinary people usually take the matter or materials constitutive of a thing as its quiddity or essence; then they use the word in its relative sense to refer to the essence of the related thing. The word can thus be used in relation to an individual substance, e.g. the *jawhar* of Socrates, and also in relation to an accident, e.g. the *jawhar* of this color. Therese Druart in her excellent paper on the discussion of substance summarizes Farabi's lexicological discussion and concludes:

Farabi established two 'common' usages of the term jawhar: 1- the stones or gems commonly considered most precious; 2- the quiddity of a thing; that by means of which it has its quiddity and that which constitutes its essence, be it matter, form or both together.[18]

In philosophy, the word, correspondingly, has two uses; one is used in relation to something else, while the other one is used on its own. According to Farabi, *jawhar* originally refers to independent particular beings (primary substances), which are neither present in a subject nor can be said of anything else; but in a second way, and derivatively, it refers to all intelligible essential constituents of those individuals (secondary substances). Thus, Socrates, man and animal all in a way are substances.[19]

But the other meaning, i.e., the relative one, refers to the 'whatness' or quiddity of the related thing. All universal concepts which refer to the essence or part of essence (genus and differentia) of a thing, including an accident, can be a substance in this usage. This helps us to distinguish between two forms of definition; logical definition (*hadd*) and mere description (*rasm*).

In the light of the distinction between two usages of *jawhar*, we can see that two of the reasons given by Aristotle to prove the priority of substance over accidents only proves the priority of the substance in a relative usage, and does not concern the meaning of substance *per se* which is the main point of our discussion.

Consequently, what are proved to be prior are the essential definition and essential knowledge of a thing (even an accident) over their accidental

[18] Druart 1987, 90.
[19] Farabi 1969, 100.

definitions and knowledge. Using the logical terms, it only proves the priority of logical definition (*hadd*) over description (*rasm*).

It seems that the root cause of this ambiguity is that secondary substances, such as man or animal, are considered substance *per se* (because they are not present in a subject and being ultimately predicative of only individual substances, reveal primary substances) and also are considered to be substances in a relative usage of substance (because they indicate the quiddity of the individual substances, e.g. Socrates, and can be used in logical definitions of it).

In sum, according to Farabi, there are four concepts which are worthy of discussion.[20]

I. Individual or particular substance (s*hakhs al-jawhar)* such as Socrates and Plato whose essential elements are immutable but whose properties are changeable. These are neither present in a subject nor predicated of any thing else at all.

II. Universal substance *(al-jawhar al-kulli*) such as man and animal, which always are used to define essential constituents of the individual substances and cannot be said of anything else. These are not present in a subject at all, but can be predicated of a thing.

III. Individual or particular accidents (*shakhs al-a'rad*), such as the tallness of John which just can be present in an individual substance. These are in a subject but cannot be predicated of anything.

IV. Universal accidents (*al-a'rad al-kulli*) such as redness or fatness, which are predicated of both individual accident and substance. These are present in a thing and can be predicated of a thing.

When a universal accident is predicated of a substance, e.g. fever of Socrates, it indicates an accidental property of an individual; so it is not substance even in a relative usage of the term. However, when a universal accident is predicated of an individual accident it may indicate the essential property of that accident and be a substance in a relative meaning of the term such as temperature for a certain fever.

Among those things that have an extra-mental existence are the individual substance and accident, one of which is independent and the other dependent. With respect to universal substances and accidents as they function as universal predicates, they have only mental existence, and consequently can be regarded as a form of mental qualities. Farabi explains the

[20] Farabi 1986-7, 90.

reason for naming genus and species as secondary substances with the assertion:

> Aristotle named the individuals things which are not present in a subject 'first substances' and their universals 'the second substances' because those things exist out of our mind and these only can be grasped after those and can exist only in the mind.[21]

Farabi repeatedly asserts that universals, including species and genus, are in need of individuals for their external existence, and indeed exist in their instances, but as mentioned, neither separately nor as present in a subject.[22]

Fakhr al-Din al-Razi questions the applicability of the definition of substance to universal concepts such as species and genus. On his view, since substance by definition must not be present in a substratum, species and genera, such as man and animal, cannot be substances since they are universal concepts present in the substratum of the mind.

The typical answer is that we mean by substance what does not need any subject in its external existence. Everything that is conceived has mental existence and therefore has its mental existence in the substratum of the mind. Substances, according to this answer, are to be defined conditionally: something is a substance if and only if it is not present in a subject when it exists outside the mind. This will be vacuously true of things that cannot exist outside the mind, and so genus and species would be considered substances.[23]

But if this were the case, then all universal concepts, such as those of red and time, which are considered universal accidents, also would have to be included as substances according to the conditional definition. They also are universal and cannot exist outside the mind. Ibn Sina, referring to an important point, says that all universal concepts, including secondary substances, such as 'man' and 'animal', are accidents with respect to their mental existence, because they are present in a subject, i.e. a mind. But they can be regarded as substances with respect to their essences, since a universal may be considered a substance if it has the same essence that an individual substance has.[24] As mentioned above, the conditional definition of substance is inadequate. In this connection, Farabi denies the independ-

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[21] Farabi 1969, 102.
[22] Farabi 1986-7, 91.
[23] Razi 1990, v. 1, 242.
[24] Ibn Sina 1404/1983, 95.

ent existence of secondary substances such as the universal man. He takes them to exist in the totality of the individuals that instantiate these universals, not in any particular individual. Hence, the secondary substance man will continue to exist even after the death of any particular man.[25]

In his important book, *Kitab al-jam 'bayn ra'yay al-hakimayn,* (making the views of Plato and Aristotle coherent) Farabi rejects the apparent contradiction between the views of Plato and Aristotle with regard to the priority of universal or individual substances. He claims that Aristotle takes individuals to be prior for his purposes in logic and physics. Individuals are the basic subjects of logical propositions and also the individuals are near to our senses, and are thus more appropriate to the methods and purposes of the natural sciences. Plato, on the other hand, took universals to be prior because he had the paradigms of philosophy and theology in his mind that urges him to give priority to the abstract and universal things such as secondary substances.[26]

Farabi explicitly rejects the view that universals exist extra-mentally. According to him it is only primary substances that exist extra-mentally and, indeed, if genus and species are said to be substances, it is because they *signify* individual substances and are the intelligible concepts of them; they are substances in a derivative way.

So, if metaphysics is the knowledge of being as such, and the primary being is *ousia* or substance, and also the real substances are particular ones, then the primary task of metaphysics will be the study of individual substances.

But according to Farabi, individual substances with their individuality cannot be grasped by the mind and they need universal concepts to be intelligible.[27] The task of metaphysics is the understanding of real particular substances in the mirror of their intelligible universal forms such as differentia and genus. In other words, metaphysics is a human struggle to make the mind analogous to the order of real things in the external world but via universal concepts, as metaphysics demands.

In conclusion, although the subject matter of metaphysics is not universal in a logical sense, its concepts and terms are always universal, and this is why sometimes it is called universal knowledge.

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[25] Farabi 1371/1994, 89.
[26] Farabi 1960, 86.
[27] Farabi 1986-7, 91.

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A Formal Analysis of Selected Proofs by Aquinas for the Uniqueness of God

TOMASZ KAKOL, BYDGOSZCZ

1. Introduction

In this paper I analyze selected proofs for the uniqueness of God, reconstructed from the writings of St. Thomas Aquinas.[1] Contemporary philosophers are interested mainly in his proofs for the *existence* of God, but, interestingly, Aquinas himself attached no lesser importance to the proofs for the *uniqueness* of God: for example, in *Summa Contra Gentiles* he gives us seventeen arguments for this claim.

We shall not consider problems such as the Holy Trinity, though this topic is not without interest for philosophical explorations (which could amount in this case mainly to analyzing purported compatibility of the Trinitarian thesis with monotheism). We shall reconstruct the arguments using proofs for the uniqueness of God stated directly by Aquinas, but sometimes we will have to appeal to different texts he authored, mainly in order to justify certain premises.

Although Aquinas's proofs for the uniqueness of God are manifold, some of them are similar; so, we can distinguish the following types of arguments: (1) proofs in which Aquinas assumes the identity of essences of God-like beings (the first argument from *Summa Theologiae*, the third from *Scriptum Super Libros Sententiarum* and the ninth from *Summa Contra Gentiles*); next, (2) proofs in which he uses the principle of the identity of indiscernibles (whose formulation people usually ascribe to Leibniz—here the relevant arguments are: the second proof from *Summa Theologiae*, *Scriptum Super Libros Sententiarum* and *Summa Contra Gentiles*); (3) the proofs from *Summa Contra Gentiles* in which Aquinas uses the notion of specification (*specificare*) and designation (*designare*); (4) proofs in which he assumes that for every quality *P* there is something that for every object having *P* this thing is the unique cause of *P* in them; (5) proofs where

[1] This article is a revised fragment of my master dissertation entitled *Proofs for the uniqueness of God in the writings of St. Thomas Aquinas*, supervised by Prof. Jerzy Perzanowski and defended at Nicholas Copernicus University in Torun in 2001. Portion of this paper has been published in Polish as Kakol 2006.

Aquinas assumes some kind of teleological order in the world; and (6) proofs in which the central notion is *motion*, in an Aristotelian sense.
Not all the proofs are, of course, interesting from the logico-philosophical point of view. Hereafter I shall focus on the arguments of the first type.[2]

Now one should explain why we shall consider in the first case the proofs from *S.th.*, though—as we know—this is the earliest of Aquinas's works analyzed here. The rationale is that this is probably the most popular of Thomas's texts, yet, on the other hand, the Angelic Doctor conceived it only as a concise manual. That is why *S.th.* alone cannot, as we will be able to see later, give us the full picture of Aquinas's attacks on the problems we are interested in here. Other Aquinas's texts are considered here according to their chronological order.

2. Arguments of the first type

Summa theologica
I, q. 11, a. 3
The first argument

Manifestum est enim quod illud unde aliquid singulare est hoc aliquid, nullo modo est multis communicabile. Illud enim unde Socrates est homo, multis communicari potest; sed id unde	For it is evident, that something, in virtue of which a given individual is the very particular thing, cannot be shared by many things in any way. Something, in virtue of which Socrates is a man, can

[2] The description of editions of Thomas's writings is in the bibliography. Translation of Aquinas's texts is done by the author, if not otherwise indicated. The translation base for *Summa Theologiae* is Marietti's edition from 1894, hence, suitable texts are cited according to this edition. Thomas's works are cited in the following way: *Summa Theologiae* is denoted by *S.th.*; *Scriptum Super Libros Sententiarum* is denoted by *Scriptum*; *De Ente et Essentia* is denoted by *De ente*; *Summa Contra Gentiles* is denoted by *Scg.* "Dist." denotes distinction, "c."- chapter (*caput*), "q."- question, "a."- article. In the case of *S.th.* only the first part (*pars prima*) of this work is used, whereas in the case of *Scriptum* and *Scg* – only the first book; therefore, we shall omit this information in the subsequent quotes. Next, we shall give page number, column number and line number. Example: *S. th.* q.1, a.1, p.15, col.2, l. 1-10 denotes Marietti's edition of *Summa theologiae* from 1894, part one, question 1, article 1, page 15, column 2, lines 1-10.
As to the chronology of St. Thomas's works, see Weisheipl 1983.

est hic homo, non potest communicari nisi uni tantum. Si ergo Socrates per id esset homo, per quod est hic homo, sicut non possunt esse plures Socrates, ita non possent esse plures homines. Hoc autem convenit Deo. Nam ipse Deus est sua natura, ut supra ostensum est (q.3, a.3). Secundum igitur idem est Deus et hic Deus. Impossibile est igitur esse plures deos. (*S.th.* q.11, a.3, p.60, col.2, l.48-50 – s.61, col.1, l.1-12)	be shared by many, yet something, in virtue of which he is the very particular man, can pertain to but one thing. So if Socrates were a man in virtue of the same thing by which he is that very particular man, then, as it is not possible that many Socrateses exist, it would not be possible that many men could exist. Yet this pertains to God. For God is His own essence (q.3, a.3). So He is God in virtue of the same thing by which He is that particular God. Therefore, it is impossible that many Gods exist.

In q.3, a.3 Thomas argues that in God there is no difference between subject (individual, *suppositum*) and essence[3]. He justifies it claiming that in God there is no composition of matter and form (q.3, a.2). Essence contains only that which pertains to the definition of the species, yet in particulars composed of matter and form there is individual matter along with accidents, which does not enter into definition, and hence, is not contained in essence. But it seems that it does not follow that pure form is essence provided that there are certain accidents which are independent of matter. Thomas writes about accidents which individuate matter (*materia individualis cum accidentibus omnibus individuantibus ipsam*- q. 3, a. 3, p. 19, col. 2, l. 2-4). Yet are there any accidents independent of matter? The text we consider does not answer the question. Even if God is His essence, it does not suffice for proving His uniqueness, for we would have to assume

[3] In the explored texts Aquinas treats such terms as *essentia*, *quidditas* and *natura* as synonyms. In *De ente* c. 1, p.10, l.24-25 we read that essence is something "through which a thing pertains to its proper kind or species" (*per quod res constituitur in proprio genere vel specie*), and is this that is denoted by this thing's definition. The problem is that if essence is defined independently of division of the universe into kinds and species, then it is hardly distinguishable from the proper accidents (*accidentia propria*). On the other hand, if – in order to define essence – we must have this division first, we are not allowed to make such division by appealing to essential properties.

that God-like beings have the same essence. Let ‘ess’ be a functional term; ‘ess(x)’ should be read as ‘x’s essence’. Let ‘D(x)’ denote ‘x is a God-like being’. That every such an object is its essence is expressed by:

(1) $\forall x\,(D(x) \rightarrow ess(x) = x)$

So there is at most one such object, if there is only one essence of such objects, i.e.

(2) $\forall x \forall y\,(D(x) \wedge D(y) \rightarrow ess(x) = ess(y))$

A question arises: how to interpret formulae ‘ess(x) = x’ or ‘ess(x) = ess(y)’? The thinker familiar with the contemporary philosophy can easily be misled here. For example, Alvin Plantinga in his *Does God Have A Nature?* presents the following *reductio* of the thesis ‘God is His essence’: Essence is a set of certain properties, God is His essence, hence, God is a set of certain properties, which amounts to the claim that there is no God (Plantinga 1980, p. 47). But the proper conclusion is of course that Aquinas had something different in mind.

Substance is that which is not in something else as in a subject; its opposite is *accident*, which directly or indirectly is in substance. Another account is: P is x’s accident if and only if P is not included in x’s essence. x’s accidents can be either *necessary* for x (*accidentia propria*) or *contingent*; it is also said that the first ones “follow from essence” or that they have a “cause” in that essence.

From this description[4] Aquinas concludes that God is His essence provided that there is no accident in Him. Therefore, the expression ‘*Deus est sua essentia*’ means simply that there is no accident in God.

This last claim is investigated by Aquinas in q.3, a.6 (“Are there any accidents in God?”). In the first argument Thomas holds that the relationship between *suppositum* and accident is an exemplification of the relationship between potency and act, whereas God is a pure act. In the second one he says that nothing can be superadded to pure existence, whereas God is a pure existence. The third one is:

[4] Although it is problematic at least in that the term *causa* has a very broad meaning here. I translate it consequently as a “cause”, but in many cases it should be understood as a “reason”.

Omne quod est per se, prius est eo quod est per accidens. Unde cum Deus sit simpliciter primum ens, in eo nihil potest esse per accidens. Sed nec accidentia per se in eo esse possunt; sicut risibile est per se accidens hominis; quia huiusmodi accidentia causantur ex principiis subiecti. In Deo autem nihil potest esse causatum, cum sit causa prima. Unde relinquitur quod in Deo nullum sit accidens. (*S.th.* q.3, a.6, p.22, col.2, l.31-41)	Everything, which is by itself, is prior to what is by accident. Hence, since God is by His own nature the prime being, nothing can be in Him by accident. And also proper accidents cannot be in Him, as, for example, *being able to laugh* is man's proper accident; because an accident of that kind has its cause in the subject's principles. Yet nothing, which is in God, can have any cause, since God is the first cause. Hence, it follows that there is no accident in God.

The crucial premise of that reasoning was formulated by Aquinas in q.3, a.4:

Quia quidquid est in aliquo, quod est praeter essentiam eius, oportet esse causatum: vel a principiis essentiae, sicut accidentia propria consequentia speciem; ut risibile consequitur hominem, et causatur ex principiis essentialibus speciei: vel ab aliquo exteriori, sicut calor in aqua causatur ab igne. (*S.th.* q.3, a.4, p.20, col.1, l.42-49)	It is necessary that everything in something else, and outside of the essence of that in which it is, has a cause: either the principles of essence will be that cause, as proper accidents following from the species, as *being able to laugh* pertains to man, and the essential principles of the species are its cause, or something external to it will be that cause, as, e.g., fire is the cause of heat in water.

The principle stating that "what is outside of the essence, has a cause", is not explained in *S.th.*; furthermore, that God does not have any cause, need not entail that nothing *in* God has any cause. As we shall see, more information related to this problem is in *Scg*.

Scriptum super libros Sententiarum

I, dist. II, q.1, a.1
The third argument

Praeterea, eius in quo non differt suum esse[5] *et sua quidditas, non potest participari quidditas sua sive essentia, nisi et esse participetur. Sed quandocumque dividitur essentia alicuius per participationem, participatur essentia eadem secundum rationem et non secundum idem esse. Ergo impossibile est eius in quo non differt essentia et esse, essentialem participationem dividi vel multiplicari. Tale autem est Deus* (...). (*Scriptum* I, dist.II, q.1, a.1, p.60, l.27-36)	What is more, the essence of the thing, in which there is no difference between the very thing's essence and its existence, cannot be participated in, if the existence were not be participated in. Yet whenever one's essence is divided by participation, the same essence according to its concept is participated in, but not according to its existence. So, it is impossible for something in which there is no difference between essence and existence to be divided by essential participation or multiplied. Yet God is a thing of that kind (…).

This argument seems to be very unclear. Let me reformulate it in the following way: essence is "divided by participation" if there are at least two beings having that essence; yet these beings differ from one another in their existence, so they participate in that essence *as* having the same essence, yet not *as* existing. Hence, there cannot be more beings having the same essence, if this essence does not differ from their existence. More formally, using symbols 'ess' and 'D' introduced above, and introducing term 'ex(x)' ('x's existence'), one can prove that there is at most one God-like being. The theorem that is to be proved is that of the uniqueness of God:

(!) $\forall x \forall y\, (\mathrm{D}(x) \wedge \mathrm{D}(y) \rightarrow x = y)$

The sentence "*Sed quandocumque…*" can be expressed by:

(3) $\forall x \forall y\, (x \neq y \wedge \mathrm{ess}(x) = \mathrm{ess}(y) \rightarrow \mathrm{ex}(x) \neq \mathrm{ex}(y))$

[5] Following tradition (in particular, the tradition of existential thomism), I usually translate *esse* as 'existence'.

Different things, participating in the same essence, differ according to their existence.
Next, God is such that His essence is His existence, that is:

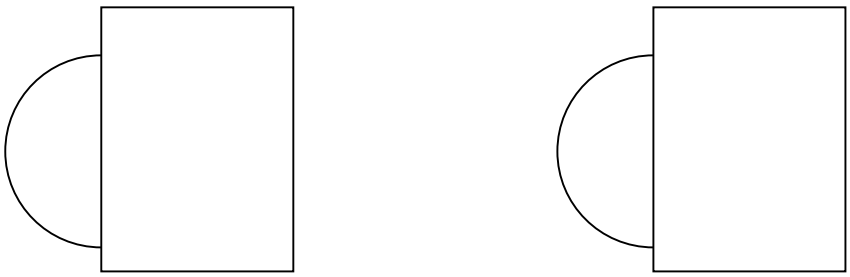
(4) $\forall x\,(\mathrm{D}(x) \rightarrow \mathrm{ess}(x) = \mathrm{ex}(x))$

One can prove that from (3) and (4), (!) does not follow. The proof will be valid if we add formula (2) to the premises, i.e.

$\forall x \forall y\,(\mathrm{D}(x) \wedge \mathrm{D}(y) \rightarrow \mathrm{ess}(x) = \mathrm{ess}(y))$

So we have the same assumption as we had in the first argument of *S.th.*, that is, that God-like objects have the same essence.[6]

It is worth noticing that our interpretation of the sentence "*Sed quandocumque…*" can be seen as not coinciding with Aquinas's intention. One could suggest the following, alternative account: if *x* and *y* participate in a certain essence, then they participate in the same essence according to its concept, but not in the same essence according to its existence, i.e. *x* and *y* have the same essence according to its concept, yet not according to its existence.
We can make use of the following analogy:



We can say that both circles have "the same color according to the uncovered color". Assume that, in addition to that, we know that they have "different color according to the covered color". It is easy to deduce from that that the following is true of at least one circle: the color covered is not identical to the color uncovered. Moreover, it is true of one circle that the

[6] Formal proofs can be found in Appendix.

color of full circle is not identical to the color covered. Similarly, Thomas is right in concluding that it is true of some being that its essence is not identical to its existence.

But it seems that these phrases expressing relative identity can be eliminated, for they suggest that existence is a part (or an aspect) of essence; whereas Thomas in *S.th.*, q.3,a.4 (*Utrum in Deo sit idem essentia et esse*) argues for theorem (4) in his first argument as follows: God's existence cannot be outside of His essence, for otherwise either (i) it has to be "caused" by His essence, or (ii) it has to be caused by something external to essence. Importantly, Aquinas does not take into account here that existence could be *part* of essence.

Summa Contra Gentiles
I, c. 42
The ninth argument

Adhuc, Si sunt duo dii, aut hoc nomen Deus de utroque praedicatur univoce aut aequivoce. Si aequivoce, hoc est praeter intentionem praesentem; nam nihil prohibet rem quamlibet quolibet nomine aequivoce nominari, si usus loquentium admittat. Si autem dicatur univoce, oportet quod de utroque praedicetur secundum unam rationem; et sic oportet quod in utroque sit una natura secundum rationem. Aut igitur haec natura est in utroque secundum unum esse, aut secundum aliud et aliud. Si secundum unum, ergo non erunt duo, sed unum tantum; duorum enim non est unum esse, si substantialiter distinguantur. Si autem est aliud et aliud esse in utroque, ergo neutrum erit sua quidditas vel suum esse; sed hoc	Next, if there are many gods, then either this name 'God' is predicated of these two univocally or equivocally. If equivocally, it is beyond our current intention: since nothing prevents any thing being named by any name, provided that this is allowed by the speaker's habit. But if it is predicated univocally, it is necessary that it is predicated of these two according to the same concept, and thus, one nature according to the concept must be in them. So either this nature is in these two according to one existence, or not. If the former is the case, then there are no two gods but only one: the existence of two ones is not one, if they would differ according to substance. Yet if the existence in them is different in each case, neither of them would

oportet in Deo ponere, ut probatum est; ergo neutrum illorum duorum est hoc, quod intelligimus nomine Dei. Sic igitur impossibile est ponere duos deos. (*Scg* c.42, p.39, col.1, l.40-57; col.2, l.1-5)	be His own essence or His existence; yet this should be assumed about God, as it has been demonstrated. Hence, neither of them is something we mean by God. Thus, it is impossible to assume two gods.

The premises of Thomas's reasoning are: *"Aut igitur haec natura est in utroque secundum unum esse, aut..."*, i.e.

(5) $\forall x \forall y\ (\mathrm{D}(x) \wedge \mathrm{D}(y) \rightarrow ((\mathrm{ess}(x) = \mathrm{ess}(y) \wedge \mathrm{ex}(x) = \mathrm{ex}(y)) \vee (\mathrm{ess}(x) = \mathrm{ess}(y) \wedge \mathrm{ex}(x) \neq \mathrm{ex}(y)))$

"*Si secundum unum…*", i.e.,

(6) $\forall x \forall y\ (\mathrm{ess}(x) = \mathrm{ess}(y) \wedge \mathrm{ex}(x) = \mathrm{ex}(y) \rightarrow x = y)$

"*duorum enim…*" is a version of the principle of the one-to-one correlation between *being* and its *existence*, i.e.

(7) $\forall x \forall y\ (x \neq y \rightarrow \mathrm{ex}(x) \neq \mathrm{ex}(y))$

Our interpretation of (7) may raise certain doubts. Should not identity of two objects mean that they differ according to substance? The answer depends of course on what is the meaning of the term '*substantialiter*' here. It

seems that Thomas means here that we have two substances (i.e. two individuals). If we read the sentence as *duorum enim non est unum esse, si essentialiter distinguantur*, then proofs for the uniqueness of God would be simply unintelligible. Secondly, Aquinas assumes (7) in *Scg*: the evidence is in such text as *habet enim res unaquaeque in seipsa esse proprium ab omnibus aliis distinctum* (*Scg*, c.14, p.15, col.1, l.20-22 – "For every thing has in itself its own existence, different from any other [existences]") or *Esse proprium cuiuslibet rei est tantum unum* (*Scg* c.42, p.40, col.1, l.1-2 – "Existence proper to every thing is only one").

"*Si autem…*" is not clear: the consequent of this sentence can mean "*ergo neutrum erit sua quidditas, aut neutrum erit suum esse*", i.e.

$$\forall x \forall y\ (\mathrm{ess}(x) = \mathrm{ess}(y) \wedge \mathrm{ex}(x) \neq \mathrm{ex}(y) \rightarrow$$
$$(x \neq \mathrm{ess}(x) \wedge y \neq \mathrm{ess}(y)) \vee (x \neq \mathrm{ex}(x) \wedge y \neq \mathrm{ex}(y)))$$

It seems that Thomas treats this formula as a logical theorem[7], in this case—speaking in a modern manner—the conclusion follows from the elementary theory of identity. But in fact it is not a logical theorem. Thus, the consequent could be then read as "*ergo neutrum erit aut sua quidditas, aut suum esse*", i.e.,

$$\forall x \forall y\ (\mathrm{ess}(x) = \mathrm{ess}(y) \wedge \mathrm{ex}(x) \neq \mathrm{ex}(y) \rightarrow$$
$$(x \neq \mathrm{ess}(x) \vee x \neq \mathrm{ex}(x)) \wedge (y \neq \mathrm{ess}(y) \vee y \neq \mathrm{ex}(y)))$$

Unfortunately, this also is not a logical theorem. So let us try this way: the consequent will be "*ergo neutrum sua quidditas erit suum esse*", i.e.

$$\forall x \forall y\ (\mathrm{ess}(x) = \mathrm{ess}(y) \wedge \mathrm{ex}(x) \neq \mathrm{ex}(y) \rightarrow (\mathrm{ess}(x) \neq \mathrm{ex}(x) \wedge \mathrm{ess}(y) \neq \mathrm{ex}(y)))$$

But this is not a logical theorem, either. We can read the consequent as speaking of *some* of them: so "*neutrum*" is wrong here.

(8) $\forall x \forall y\ (\mathrm{ess}(x) = \mathrm{ess}(y) \wedge \mathrm{ex}(x) \neq \mathrm{ex}(y) \rightarrow (\mathrm{ess}(x) \neq \mathrm{ex}(x) \vee \mathrm{ess}(y) \neq \mathrm{ex}(y)))$

[7] Strictly speaking, a theorem of logic enriched by constants 'ess' and 'ex'.

It is easy to demonstrate that that this is a theorem of the elementary theory of identity (enriched by constants ‘ess’ and ‘ex’). It can also be demonstrated that from (5), (7) and (8), (!) does not follow, unless we add premise (4). So Thomas himself adds this in the argument we are considering.

3. Comparison and further analysis

From what we have said so far, it follows that we have the following proofs of the first type:

S.th.: (1), (2) ├ (!)
Scriptum: (2), (3), (4) ├ (!)
Scg: (4), (5), (7), (8) ├ (!)

We can ask which argument is based on the weakest premises. Now, one can demonstrate that (5) is equivalent to (2) and that (7) implies (3). So (2) is a premise of all three proofs, and the argument from *Scriptum* is better than the argument from *Scg*.

Recall that in the comments on the first proof from *S.th.* we have said that lack of accidents in a being entails, according to Aquinas, that this being is its essence. It is worth considering this issue for the following reason: since all three proofs are based on the theorem stating that essences of God-like beings are identical, one should prefer the proof containing the smallest number of premises, i.e. the first proof from *S.th.* In other words, assuming that essences of God-like beings are identical, it suffices to prove that every such object is its own essence.

Deus est sua essentia

Hereafter, we shall try to analyze certain arguments form chapter 23 of *Scg* (“That in God there are no accidents”).
One could ask why we focus on chapter 23 and not on chapter 21 (“That God is His essence”). Now, in the latter Thomas gives us five arguments for the theorem that God is his essence. Yet the fifth is very unclear; in the fourth Aquinas allows himself to refer at most to chapter 13, but it is insufficient since chapter 13 is devoted only to the causes of motion in the Aristotelian sense; the third is the counterpart of the one from *S.th.* q.3, a.3 we have already quoted; the second refers to chapter 23 (which we will com-

ment on below); so there remains the first which refers to chapter 18 ("That in God there is no composition").

Quod in Deo nulla sit compositio (*Scg*, c.18).

This chapter consists of seven arguments. The third and the fourth are unclear:

Omne compositum est potentia dissolubile, quantum est ex ratione compositionis, licet in quibusdam sit aliquid aliud dissolutioni repugnans. Quod autem est dissolubile est in potentia ad non-esse; quod Deo non competit, cum sit per se necesse esse. Non est ergo in eo aliqua compositio.	[The third argument] Every composition is potentially decomposable, if it exists in virtue of being composed, although in certain things there is something else, which resists decomposition in them. What is decomposable, is potentially not existent, which does not pertain to God, since He is by himself necessary being [or: it is necessary by itself that He exists]. Hence, there is no composition in Him.
Amplius, omnis compositio indiget aliquo componente; si enim compositio est, ex pluribus est. Quae autem secundum se sunt plura, in unum non conveniunt, nisi ab aliquo componente uniantur. Si igitur compositus esset Deus, haberet componentem; non enim ipse seipsum componere posset, quia nihil est causa suiipsius; esset enim prius seipso, quod est impossibile. Componens autem est causa efficiens compositi. Ergo Deus haberet causam efficientem; et sic non esset causa prima, quod supra habitum est. (*Scg* c.18, p.17, col.2, l.7-28)	[The fourth argument] Similarly, every composition requires something composing it, for if there is composition, it is such in virtue of the many. Now, things that are by themselves numerous, would not have been unified if they had not been unified by something unifying them. So, if God were composed, He would have something composing Him, for He could not compose Himself, as nothing is the cause of itself: otherwise He would exist before Himself, which is impossible. And a thing composing is the efficient cause of a thing composed. Hence, God would have an efficient cause, as

	a result of which he would not be the first cause, for which we have agreed above.

The first argument is also unclear.
The fifth is may be summarized as follows. The more simple a thing is, the more perfect it is. Cause is more perfect then its effect. God does not have any cause; hence, He is the most perfect being. *Ergo*, God is the simplest being. This argument fails for Thomas proved neither that God is the cause of everything nor that he is unique. Assuming that proofs for the existence of God in chapter 13 are sound, he at best demonstrated that He has no cause. For example, let domain D = {*a*, *b*, *c*} be given; and let *a* be a cause of *c* and *b* be a cause of *c* as well. We have here two God-like beings, but from the principle "cause is more perfect then its effect" alone we cannot conclude which God-like being is more perfect.

The sixth argument has, in turn, unclear premises: God is the most perfect being. In composites, parts are imperfect as compared to the whole, therefore, such things cannot be the most perfect beings. *Ergo*, God is not a composite. So, let us take a look at the second and the seventh argument:

Item, omne compositum posterius est suis componentibus. Primum ergo ens, quod Deus est, ex nullis compositum est. (*Scg* c.18, p.17, col.2, l.4-6)	[c. 18, The second argument] Also, every composite is posterior to its components. So the first being, which is God, is not composed from anything.

Words '*primum*', '*posterius*' suggest some kind of order (not necessarily a linear one, though the text suggests so). Is this a causal order ("the first" would mean here "without any cause")? It seems not: otherwise we would liken it to the fourth argument from chapter 18, which we have already quoted.

Item, ante multitudinem oportet invenire unitatem. In omni autem composito est multitudo. Igitur oportet id, quod est ante omnia, scilicet Deum, omni compositione carere. (*Scg* c.18, p.17, col.2,	[The seventh argument] Moreover, before each multiplicity one should find unity. But in every composite is multiplicity. So it is necessary that this, which is before everything, namely God, is

l.57; p.18, col.1, l.1-4)	deprived of every composite.

The expression '*ante omnia*' entails uniqueness. Yet, interestingly, the parallel text from *S.th* . q.3, a.7, p.23, col.1, l.44-45 throws some light on the second argument: "*omne compositum est posterius suis componentibus, et dependens ex eis*". What is dependence (*dependentia*)? Recall the last argument from chapter 23. "Substance does not depend on accidents, though accidents depend on substance. But a thing that does not depend on something else, sometimes can be discovered as being without that other thing"—*substantia non dependet ab accidente, quamvis accidens dependeat a substantia. Quod autem non dependet ab aliquo potest aliquando inveniri sine illo*—*Scg* c.23, p.25, col.1, l.39-43. It follows that if x does not depend on y, than x can exist without y; and, probably, if x depends on y, than x cannot exist without y. From this provisional explication of the notion of dependence we can conclude that Thomas holds:

(9) $\forall x$ (x is composed $\rightarrow \forall y$ (y is a component of $x \rightarrow x$ cannot exist without y)

and

(10) $\forall x\,(\mathrm{D}(x) \rightarrow \neg\, \exists\, y\,(y \neq x \wedge x$ cannot exist without $y))$

i.e.

$$\forall x\,(\mathrm{D}(x) \rightarrow \forall y\,(x \text{ cannot exist without } y \rightarrow x = y))$$

where 'D(x)' denotes 'x is a God-like being'.
The problem lies in that if Aquinas substitutes accidents for y, then in the case of improper accidents, theorem (9) is false: if I have a beard, then—since this is for me a contingent accident—I can exist without my beard.
Now we have to turn to the chapter directly devoted to the question concerning accidents.

Quod in Deo non sit accidens

Not all the proofs from this chapter deserve our attention. Certain versions of the first and the third have already been presented (*S.th.* q.3, a.6; see the section devoted to *S. th*.). The sixth appeals to simplicity. The fifth assumes, *inter alia*, that God is the cause of everything. God has no accidents; hence, He is his essence, since being such is more perfect than if He were not His essence. Cause is more perfect than its effect. God is the cause of everything. Ergo, God has no accidents. So let us analyze the fourth and the second argument.

The fourth argument from c.23

Cuicumque inest aliquid accidentaliter, est aliquo modo, secundum suam naturam, mutabile; accidens enim de se natum est inesse et non inesse. Si igitur Deus habet aliquid accidentaliter sibi conveniens, sequetur quod ipse sit mutabilis; cuius contrarium supra demonstratum est. (*Scg* c.23, p.25, col.1, l.14-21)	Everything in which there is something accidentally, is somehow by its nature changeable; for accident is by its nature being in and not being in [i.e. by its nature it has potentiality for being in something, and also for not being in something]. Hence, if God has something accidentally, it follows that He is changeable; whose opposition has been demonstrated above.

The sentence "*accidens enim*" can be interpreted as follows:

(P) $\forall y \forall x$ (y is an accident of $x \leftrightarrow x$ can be $y \wedge x$ may not be y)

Keeping in mind the characterization of accidents from the section devoted to *S. th.*, it is obvious that (P) is about improper accidents only. The "changeability" of x consists in that x can be yet may not be y—we can call it "modal changeability". I think it is worth referring here to Knuuttila's observation that in medieval philosophy (Aquinas included) the so called statistical interpretation of modality was favored, and, in particular, the famous "Principle of Plenitude".[8] This explains Thomas's reasoning, particularly that of his "Third Way". The principle of plenitude can be formulated thus:

[8] Knuuttila 1982, 342-357.

$\forall x \forall y$ (x can be y/ x may not be $y \rightarrow \exists t$ (x is y at t /$\exists$ t' x is not y at t'))

Our interpretation needs some comment. The expression '*x* can be *y*' is connected with the non-modal expression '*x* is *y*' (or '*x* is *y* at *t*'). This formula can be interpreted, of course, in many ways.[9] Since the chapter under consideration has to do with accidents, assume that 'is' expresses here a certain relation holding between a substance and accidents. In order to avoid introducing variables of different kinds, we will interpret '*x* is *y*' as 'accident *y* pertains to *x*'. In addition, we will assume that this relation is asymmetric. Recall also that (P) is the definition of improper accident. Let me add that alternative formulations of the principle of plenitude are also allowed.

In chapter 13 Thomas tries to demonstrate that God, i.e., *primus motor separatus, omnino immobilis*, exists. Of course, one should ask what kind of *motus* is taken into account here. The answer is: at least each kind of physical motion in the Aristotelian sense, hence, e.g., if this accident is a quality *y*, then change from not-*y* to *y* is a kind of motion (…*ut probat, inducendo in singulis speciebus motus.(...) si autem secundum aliam speciem motus moveatur… etc.* [*Scg* c.13, p.12, col.1, l.33-34; p.13, col.1, l.7-9; emphasis – TK]).
Now we can prove that there are no improper accidents in God.

Let '*x*ME*y*' denote '*x* can be *y*'
'*x*M-E*y*' denotes '*x* may not be *y*'
'*x*E*y*' denotes '*x* is *y*'
'*x*-E*y*' denotes '*x* is not *y*'
'*x*E*yt*' denotes '*x* is *y* at *t*'
'*x*-E*yt*' denotes '*x* is not *y* at *t*'
'*y*P*x*' denotes '*y* is *x*'s improper accident'
'D(*x*)' denotes '*x* is a God-like being'.

One must add that the proof of the theorem that improper accidents do not pertain to God should be based on the basic modal logic of the expressions '*x* can be *y*/ *x* may not be *y*'. We will not, however, search for such a logic in Aquinas's writings: instead, we will simply treat ME, M-E, E, -E as primitive predicates.

[9] See, for example, Perzanowski 1993, 10-16.

Apart from the definition of P

(def. of P) $\forall x \forall y\ (y\mathrm{P}x \leftrightarrow x\mathrm{ME}y \wedge x\mathrm{M\text{-}E}y)$

we assume that

(God's *immobilitas*) $\forall x \forall y\ (\mathrm{D}(x) \rightarrow \neg(\exists t\ x\mathrm{E}yt \wedge \exists t'\ x\text{-}\mathrm{E}yt'))$

Our formalization assumes that the principle of plenitude consists of two propositions:

(Positive principle of plenitude) $\forall x \forall y\ (x\mathrm{ME}y \rightarrow \exists t\ x\mathrm{E}yt)$

(Negative principle of plenitude) $\forall x \forall y\ (x\mathrm{M\text{-}E}y \rightarrow \exists t'\ x\text{-}\mathrm{E}yt')$

They entail:

(11) $\forall x \forall y\ (x\mathrm{ME}y \wedge x\mathrm{M\text{-}E}y \rightarrow \exists t\ x\mathrm{E}yt \wedge \exists t'\ x\text{-}\mathrm{E}yt')$

From (def. of P), (God's *immobilitas*) and (11) it follows that

(12) $\forall x\ (\mathrm{D}(x) \rightarrow \neg \exists y\ y\mathrm{P}x)$

Now we turn to the second argument that there are no accidents in God.

The second argument from c.23

Amplius, Omne quod inest alicui accidentaliter, habet causam quare insit, cum sit praeter essentiam eius cui inest. Si igitur aliquid accidentaliter sit in Deo, oportet quod hoc sit per aliquam causam. Aut ergo causa accidentis est ipsa divina substantia, aut aliquid aliud. — Si	Similarly, everything being in something accidentally has a cause in virtue of which it is in that thing, since it is outside of that thing's essence. So if there were something in God accidentally, it would have to be so in virtue of some cause. And either the divine substance itself is such

aliquid aliud, oportet quod illud agat in divinam substantiam. Nihil enim inducit aliquam formam vel substantialem vel accidentalem, in aliquo recipiente, nisi aliquo modo agendo in ipsum, eo quod agere nihil aliud est quam facere aliquid actu: quod quidem est per formam. Ergo Deus patietur et movebitur ab aliquo agente; quod est contra praedeterminata (c. 13). (*Scg* c.23, p.24, col.2, l.32-48)	a cause or something else. If something else is such a cause, it is necessary that something else acts upon the divine substance. For nothing can introduce any form—either substantial form or accidental—into some being receiving that form, if not acting upon that thing in some way, for *to act* is nothing else than to make something actual, and this process is done through some form. Therefore, God will be acted upon and moved by some agent, contrary to what has been established (in chapter 13).

In the comments on the first argument from *S.th.* we said that the principle 'what is outside of essence, has a cause' was not explained. Yet, if we refer to chapter 15 we can agree that Thomas assumes—regarding improper accidents—the theorem analogous to a certain proposition from chapter 15. Which proposition? First let us look at the following text from this chapter (this is a fragment of the fourth argument for the eternity of God):

(1) Videmus in mundo quaedam quae sunt possibilia esse et non esse, scilicet generabilia et corruptibilia. *(2) Omne autem quod est possibile esse, causam habet;* *(3) quia, cum de se aequaliter se habeat ad duo, scilicet esse et non esse, oportet, si ei approprietur esse, quod hoc sit ex aliqua causa.* (*Scg.* c.15, p.15, col.2, l.42-49)	(1) We can see in this world certain things that can be and may not be, i.e., coming into existence and passing away. (2) Yet everything that is a possible being [*vel*: for which it is possible that it exists], has a cause. (3) Therefore, since it in itself refers equally to existence and to non-existence, it is necessary that if it gains existence, then it does so in virtue of some cause.

Sentence (1) is not unproblematic: we cannot exclude that—similarly as it is e.g. in sentence (2)—it says about *de re* logical modality (as opposed to ontological modality). Let ‘E(x)’ denote ‘x exists’, ‘ME(x)’ denote ‘x is a possible being’, ‘yCAUx’ denote ‘y is a cause of x’, ‘◊’ denote ‘it is possible that’. Sentence (2) can be formalized as:

$\forall x\ (\Diamond E(x) \rightarrow \exists y\ y\ CAU x)$

or as:

$\forall x\ (ME(x) \rightarrow \exists y\ y\ CAU x)$

But this does not seem to be true. Thomas in sentence (3) adds that having a cause holds in case of existing things. What is something which ‘in itself refers equally to existence and to non-existence’? It seems that this expression should be understood as follows: this thing can exist and may not exist (or: it is possible that it exists, and it is possible that it does not exist). This characterization is just the characterization of *contingent* being, and such modality occurs in sentence (2) under somewhat misleading name “*possibile esse*”. Let ‘ME(x)’ not denote ‘x is a possible being’, and ‘x can exist’; let ‘M-E(x)’ denote ‘x may not exist’; ‘P(x)’ denote ‘x is contingent’. The definition of contingency will be:

$P(x) := ME(x) \wedge M\text{-}E(x)$

or:

$P(x) := \Diamond E(x) \wedge \Diamond\neg E(x)$

Sentence (3) says that what is contingent and exists, has a cause:

(i) $\forall x\ (P(x) \wedge E(x) \rightarrow \exists y\ y\ CAU x)$

This proposition gives us clue: As far as improper accidents are concerned, assume that

$\forall x \forall y$ (x can be $y \wedge x$ may not be $y \wedge x$ is $y \rightarrow \exists\ z\ z$ is a cause of y in x)

Formally,

(13) $\forall x \forall y\ (x\mathrm{ME}y \wedge x\mathrm{M\text{-}E}y \wedge x\mathrm{E}y \rightarrow \exists\, z\ z\mathrm{CAU}yx)$

The problem of transition from the sentence ‘God has no cause’ to the one ‘nothing in God has any cause’ remains. It is worth noticing that in the argument we analyze, Aquinas makes use of a completely different premise, namely, that occurrence of the relation of causality entails occurrence of change in the object upon which this cause acts. In order to make this proposition more similar to (13), we formalize it as:

(14) $\forall x \forall y \forall z\ (z\mathrm{CAU}yx \rightarrow\ \exists\, t\ (x\mathrm{E}yt\ \wedge \exists\, t'(t \neq t' \wedge\ x\text{-}\mathrm{E}yt')))$

Moreover, as we can see, from (13) and (14) we have that something, which can be *y* and may not be *y*, and is *y*, sometimes is not *y*! Namely,

(15) $\forall x \forall y\ (x\mathrm{ME}y \wedge x\mathrm{M\text{-}E}y \wedge x\mathrm{E}y \rightarrow \exists\, t\ \ x\text{-}\mathrm{E}yt)$

Although theorem (15) is not identical with the negative principle of plenitude (more precisely, it follows *from* this principle), it seems that it expresses a similar conception of modality to the one expressed in the fourth argument of chapter 23. Therefore, we do not have a proof for the lack of improper accidents in God, the proof of which can be independent of such a nonstandard interpretation of modality.

Another proof for the lack of improper accidents in God can be made using (13), (14), (def. of P) and (God’s *immobilitas*). It should be pointed out here that the proposition that is to be proved will differ from the one that has been given above (see the section devoted to the fourth argument from c. 23), namely (12):

$\forall x \forall y\ (\mathrm{D}(x) \rightarrow \neg\, y\mathrm{P}x\ )$

The theorem that is to be proved will be:

(16) $\forall x \forall y\ (\mathrm{D}(x) \rightarrow \neg(\ y\mathrm{P}x\ \wedge\ x\mathrm{E}y))$

These two formulae have very similar senses: the latter says that an allegedly God-like being’s accidents are not improper ones, whereas the former says that nothing is a God-like being’s accident.

So far we have taken into account improper accidents. What about the proper ones? The second part of the second argument from chapter 23 is:

Si autem ipsa divina substantia est causa accidentis quod sibi inest; impossibile autem est quod sit causa illius, secundum quod est recipiens ipsum; quia sic idem secundum idem, faceret seipsum in actu; ergo oportet, si in Deo est aliquod accidens, quod secundum aliud et aliud recipiat et causet accidens illud; sicut corporalia recipiunt propria accidentia per naturam materiae, et causant per formam. Sic igitur Deus erit compositus; cuius contrarium superius probatum est. (*Scg* c.23, p.24, col.2, l.48-55; p.25, col.1, l.1-5)	If the divine substance itself is the cause of accidents which are in this substance; it is impossible for this substance to be the cause of this accident since it itself receives this accident, and then the same and under the same aspect would make itself actual. Hence, it is necessary—if there is any accident in God—that this substance under one aspect receives this accident, and under another causes this accident, as, for example, corporeal beings receive proper accidents through the nature of matter, and cause them through form. Thus, God will be composite; whose opposition has been demonstrated above.

The problem is that Aquinas seems to assume that there are proper accidents of certain immaterial substances, i.e. angels. In *De ente* c. 6 he writes:

…et quia in istis substantiis quidditas non est idem quod esse, ideo sunt ordinabiles in praedicamento; et propter hoc invenitur in eis genus, species et differentia, quamvis earum differentiae propriae nobis occultae sint (…). Accidentia autem propria substantiarum immaterialium nobis ignota sunt	…and since in these substances [i.e. immaterial ones] their essence is not the same as their existence, we can place them in the order of categories, and in virtue of this we discover in them *kind*, *species* and *difference*, though we do not know what their proper differences look like (…). We do not know the proper acci-

immaterialium nobis ignota sunt, unde differentiae earum nec per se nec per accidentales differentias nobis significari possunt. (*De ente* c.6, p.28, l.31-35; p.29, l.3-6)	not know the proper accidents of immaterial substances; hence, their differences can be signified neither in themselves, nor through accidental differences.

That their proper accidents are not known by us does not mean that they do not exist. According to Thomas, angels are not composed of matter and form. But the solution is simple: proper accidents "follow" from nature, hence, they cannot individuate angels within one species – in other words, if they were different proper accidents, we would have different natures.

4. Summary

We have not gained a sound argument that there are no accidents in God, i.e., that God is His essence. Worse, Aquinas seems to take it for certain that God-like beings have the same essence. Therefore, the arguments we have called *the arguments of the first type*, seem very problematic.

5. Appendix

Formal proofs

The proofs will be presented according to the following scheme. First, (i) *via dictum de omni*, we omit (all or some) general prefix quantifiers, then (ii) using metatheorem (M) we deduce from such open formulas the theorem which is to be proved, and which will be also an open formula, and finally (iii) we use the rule of generalization. Since the relation of deducibility is transitive, from premises in a closed form, we obtain the theorem that is to be proved.
Now the aforementioned metatheorem (M) is:

If $z_1,...,z_n$ are all the free variables (different from each other) in the formula A, and $b_1,...,b_n$ are different individual terms which do not occur in

formulas from set $X \cup \{A, B\}$, *and* $B(z_1/b_1,...,z_n/b_n) \in Cn_{CPC-I}(X \cup \{A(z_1/b_1,...,z_n/b_n)\})$,
then
`$A \rightarrow B$` $\in Cn_{CPC-I}(X)$[10]

Where Cn_{CPC-I} is the consequence operator of (classic) first-order predicate calculus.
For brevity's sake, we omit in proofs part (i) and (iii), and we will write simply about substitutions (of individual terms), but such substitutions are indeed made on open counterparts of premises.

Ad Scriptum:

We prove that if (2), (3) and (4) are the case, so is (!).

1. $D(a) \wedge D(b)$ (assumption, substitution)
2. $a \neq b \wedge ess(a) = ess(b) \rightarrow ex(a) \neq ex(b)$ ((3), substitution)
3. $ess(a) = ess(b) \wedge ex(a) = ex(b) \rightarrow a = b$ (2, classic propositional calculus [= CPC])
4. $D(a) \rightarrow ess(a) = ex(a)$ ((4), substitution)
5. $D(b) \rightarrow ess(b) = ex(b)$ (as above)
6. $ess(a) = ex(a) \wedge ess(b) = ex(b)$ (1, 4, 5, CPC)
7. $ess(a) = ess(b) \rightarrow a = b$ (3, 6, the rule of replacement of identicals, CPC)
8. $D(a) \wedge D(b) \rightarrow ess(a) = ess(b)$ ((2), substitution)
9. $a = b$ (1, 8, 9, CPC)

Ad Summa contra gentiles I, c. 42, the ninth argument:

First we prove by *reductio* that (8) is the case:

1. $ess(a) = ess(b) \wedge ex(a) \neq ex(b)$ (assumption, substitution)
2. $\neg(ess(a) \neq ex(a) \vee ess(b) \neq ex(b))$ (assumption, substitution)
3. $ess(a) = ex(a) \wedge ess(b) = ex(b)$ (2, CPC)

[10] See Batog, 1994, 164.

4. $\mathrm{ess}(a) = \mathrm{ess}(b) \wedge \mathrm{ess}(a) \neq \mathrm{ess}(b)$ (1, 3, the rule of replacement of identicals)

We obtain a contradiction, hence—since (apart from CPC) we use only the rule of replacement of identicals—(8) is a theorem of the elementary theory of identity.
Now we prove (!) on the basis of (4), (5), (7) and (8):

Proof:
1. $\mathrm{D}(a) \wedge \mathrm{D}(b) \rightarrow ((\mathrm{ess}(a) = \mathrm{ess}(b) \wedge \mathrm{ex}(a) = \mathrm{ex}(b)) \vee (\mathrm{ess}(a) = \mathrm{ess}(b) \wedge \mathrm{ex}(a) \neq \mathrm{ex}(b))$ ((5), substitution)
2. $\mathrm{D}(a) \rightarrow \mathrm{ess}(a) = \mathrm{ex}(a)$ ((4), substitution)
3. $\mathrm{D}(b) \rightarrow \mathrm{ess}(b) = \mathrm{ex}(b)$ (as above)
4. $a \neq b \rightarrow \mathrm{ex}(a) \neq \mathrm{ex}(b)$ ((7), substitution)
5. $\mathrm{D}(a) \wedge \mathrm{D}(b)$ (assumption)
6. $\mathrm{ex}(a) = \mathrm{ex}(b) \rightarrow a = b$ (4, CPC)
7. $(\mathrm{ess}(a) = \mathrm{ess}(b) \wedge \mathrm{ex}(a) = \mathrm{ex}(b)) \vee (\mathrm{ess}(a) = \mathrm{ess}(b) \wedge \mathrm{ex}(a) \neq \mathrm{ex}(b))$
(1, 5, *modus ponens*)
8. $\mathrm{ess}(a) = \mathrm{ess}(b) \wedge \mathrm{ex}(a) \neq \mathrm{ex}(b) \rightarrow$
$(\mathrm{ess}(a) \neq \mathrm{ex}(a) \vee \mathrm{ess}(b) \neq \mathrm{ex}(b))$ ((8), substitution)
9. $\mathrm{ess}(a) = \mathrm{ex}(a) \wedge \mathrm{ess}(b) = \mathrm{ex}(b) \rightarrow$
$\neg (\mathrm{ess}(a) = \mathrm{ess}(b) \wedge \mathrm{ex}(a) \neq \mathrm{ex}(b))$ (8, CPC)
10. $\mathrm{ess}(a) = \mathrm{ex}(a) \wedge \mathrm{ess}(b) = \mathrm{ex}(b)$ (5, 2, 3, CPC)
11. $\neg (\mathrm{ess}(a) = \mathrm{ess}(b) \wedge \mathrm{ex}(a) \neq \mathrm{ex}(b))$ (9,10, *modus ponens*)
12. $\mathrm{ess}(a) = \mathrm{ess}(b) \wedge \mathrm{ex}(a) = \mathrm{ex}(b)$ (7,11, CPC)
13. $\mathrm{ex}(a) = \mathrm{ex}(b)$ (12, CPC)
14. $a = b$ (13, 6, *modus ponens*)

Notice here that (8) is in fact redundant, since one can make a much simpler proof of (!) in virtue of (5)'s being equivalent to (2)—we shall omit the simple proof for such equivalence.

Ad The fourth argument from c. 23:

From (def. of P), (God's *immobilitas*) and (11) it follows that

$\forall x\, (\mathrm{D}(x) \rightarrow \neg \exists y\, y\mathrm{P}x)$

From classic predicate calculus, this formula is equivalent to:

$\forall x \forall y\ (\mathrm{D}(x) \rightarrow \neg y\mathrm{P}x)$

Thus, the proof will be as follows:

1. $b\mathrm{P}a \leftrightarrow a\mathrm{ME}b \wedge a\mathrm{M\text{-}E}b$ (def. of P)
2. $a\mathrm{ME}b \wedge a\mathrm{M\text{-}E}b \rightarrow \exists t\ a\mathrm{E}bt \wedge \exists t'\ a\text{-}\mathrm{E}bt'$ ((11), substitution)
3. $\mathrm{D}(a) \rightarrow \neg(\exists t\ a\mathrm{E}bt \wedge \exists t'\ a\text{-}\mathrm{E}bt')$ (God's *immobilitas*, substitution)
4. $\mathrm{D}(a)$ (assumption)
5. $\neg(\exists t\ a\mathrm{E}bt \wedge \exists t'\ a\text{-}\mathrm{E}bt')$ (3, 4, *modus ponens*)
6. $b\mathrm{P}a \rightarrow \exists t\ a\mathrm{E}bt \wedge \exists t'\ a\text{-}\mathrm{E}bt'$ (1, 2, CPC)
7. $\neg\, b\mathrm{P}a$ (5, 6, CPC)

Ad The second argument from c. 23:

We prove that (15) follows from (13) and (14):

1. $\forall z\ (z\mathrm{CAU}ba \rightarrow \exists t\ (a\mathrm{E}bt \wedge \exists t'(t \neq t' \wedge a\text{-}\mathrm{E}bt')))$ ((14), substitution)
2. $a\mathrm{ME}b \wedge a\mathrm{M\text{-}E}b \wedge a\mathrm{E}b \rightarrow \exists z\ z\mathrm{CAU}ba$ ((13), substitution)
3. $a\mathrm{ME}b \wedge a\mathrm{M\text{-}E}b \wedge a\mathrm{E}b$ (assumption)
4. $\exists z\ z\mathrm{CAU}ba$ (2, 3, *modus ponens*)
5. $\forall z\ (z\mathrm{CAU}ba \rightarrow \exists t\ (a\mathrm{E}bt \wedge \exists t'(t \neq t' \wedge a\text{-}\mathrm{E}bt'))) \rightarrow$
   $(\exists z\ z\mathrm{CAU}ba \rightarrow \exists t\ (a\mathrm{E}bt \wedge \exists t'(t \neq t' \wedge a\text{-}\mathrm{E}bt')))$ (CPC-I)
6. $\exists t\ (a\mathrm{E}bt \wedge \exists t'(t \neq t' \wedge a\text{-}\mathrm{E}bt'))$ (1, 4, 5, *modus ponens*)
7. $\exists t\ (a\mathrm{E}bt \wedge \exists t'(t \neq t' \wedge a\text{-}\mathrm{E}bt')) \rightarrow$
   $\exists t\ a\mathrm{E}bt \wedge \exists t, t'(t \neq t') \wedge \exists t'\ a\text{-}\mathrm{E}bt'$ (CPC-I)
8. $\exists t\ a\mathrm{E}bt \wedge \exists t, t'(t \neq t') \wedge \exists t'\ a\text{-}\mathrm{E}bt' \rightarrow \exists t'\ a\text{-}\mathrm{E}bt'$ (CPC)
9. $\exists t'\ a\text{-}\mathrm{E}bt'$ (6, 7, 8, CPC, *modus ponens*)

Finally, we prove (16) on the basis of (13), (14), (def. of P) and (God's *immobilitas*):

1. $\forall z\ (z\mathrm{CAU}ba \rightarrow \exists t\ (a\mathrm{E}bt \wedge \exists t'(t \neq t' \wedge a\text{-}\mathrm{E}bt')))$ ((14), substitution)

2. $a\mathrm{ME}b \wedge a\mathrm{M\text{-}E}b \wedge a\mathrm{E}b \rightarrow \exists z\, z\mathrm{CAU}ba$ ((13), substitution)
3. $b\mathrm{P}a \leftrightarrow a\mathrm{ME}b \wedge a\mathrm{M\text{-}E}b$ (def. of P, substitution)
4. $\mathrm{D}(a) \rightarrow \neg(\exists t\ a\mathrm{E}bt \wedge \exists t'\ a\text{-}\mathrm{E}bt')$ (God's *immobilitas*, substitution)
5. $\mathrm{D}(a)$ (assumption)
6. $\neg(\exists t\ a\mathrm{E}bt \wedge \exists t'\ a\text{-}\mathrm{E}bt')$ (4, 5, *modus ponens*)
7. $b\mathrm{P}a \wedge a\mathrm{E}b \rightarrow \exists z\, z\mathrm{CAU}ba$ (2, 3, CPC)
8. $\forall z\,(z\mathrm{CAU}ba \rightarrow \exists t\,(a\mathrm{E}bt \wedge \exists t'(t \neq t' \wedge a\text{-}\mathrm{E}bt'))) \rightarrow$
$(\exists z\, z\mathrm{CAU}ba \rightarrow \exists t\,(a\mathrm{E}bt \wedge \exists t'(t \neq t' \wedge a\text{-}\mathrm{E}bt')))$ (CPC-I)
9. $\exists t\,(a\mathrm{E}bt \wedge \exists t'(t \neq t' \wedge a\text{-}\mathrm{E}bt')) \rightarrow$
$\exists t\ a\mathrm{E}bt \wedge \exists t, t'(t \neq t') \wedge \exists t'\ a\text{-}\mathrm{E}bt'$ (CPC-I)
10. $\exists t\ a\mathrm{E}bt \wedge \exists t, t'(t \neq t') \wedge \exists t'\ a\text{-}\mathrm{E}bt' \rightarrow$
$\exists t\ a\mathrm{E}bt \wedge \exists t'\ a\text{-}\mathrm{E}bt'$ (CPC)
11. $\exists z\, z\mathrm{CAU}ba \rightarrow \exists t\,(a\mathrm{E}bt \wedge \exists t'(t \neq t' \wedge a\text{-}\mathrm{E}bt'))$ (1, 8, *modus ponens*)
12. $b\mathrm{P}a \wedge a\mathrm{E}b \rightarrow \exists t\ a\mathrm{E}bt \wedge \exists t'\ a\text{-}\mathrm{E}bt'$ (7, 9, 10, 11, *modus ponens*)
13. $\neg(b\mathrm{P}a \wedge a\mathrm{E}b)$ (6, 12, CPC)

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Reshaping the Concept of Substance: The Renegade Ockham

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The importance attributed to the concept of substance in the philosophy of the Latin Middle Ages may sometimes be exaggerated in retrospect. Substance is of crucial importance in the philosophies of Spinoza and John Locke, for instance, much later in history. Nevertheless, the importance given to substance in some philosophical movements is part of the medieval heritage up to our days. This, on the other hand, is a reaction to the neglect of the concept of substance in the Aristotelian sense within the tradition of modern natural sciences. The modern sciences as we know them developed out of the medieval learning. But the novelty of this type of science consisted in the definite refusal to answer questions about the essence of anything. The propagators of the new science tried to answer questions like how things influence one another and act upon another. Nobody knows, for instance, what gravity is, but it is well known and generally accepted that two bodies attract or, to say it less metaphorically, move towards one another directly proportionally to the product of their masses and indirectly proportionally to the square of their distance.

Evidently in a formula of this kind there is nothing said about what gravity is, there is only talk about how it works. The word "gravity" itself does not mean anything beyond the equation given. Gravity is just the acceleration in the movement of two bodies towards one another, if no additional force is present, nothing else. The word does not designate something in the bodies or in addition to the bodies and their movement. The word "gravity" is used for convenience, just because it has been used ever since Aristotle who took gravity to be an essential, substantial property of corporeal things.

The conceptual basis for the new outlook is a result of medieval discussions. These discussions had started at the beginning of the 13th century with some important steps, one of which was the adoption of the explora-

tions into Aristotle's concept of intellect by Muslim philosophers, especially Kindi and Farabi. Their respective treatises on the intellect had been translated soon into Latin. Albert, called the Great (1200-1280), was one of the first persons to present the new ideas on this theme in the Occident to the papal court at Viterbo in his solemn question "*De intellectu et intelligibili*". This is an obvious allusion to the title of Farabi's treatise, although I do not know yet, to which extent Albert was acquainted with Farabi's text. It is clear that he used Kindi's work. How ever this may be, it surely is the Arabic interpretation of Aristotle that made the ideas of this "first master" accessible and intelligible to Western philosophers.

A version of Farabi's general theory became the basic epistemological conception in the thirteenth century. Farabi's great achievement was an interpretation of the difficult passages in Aristotle's *De Anima*. This interpretation became the canonical point of reference in the following discussions from Ibn Sina via Ibn Rushd to Thomas Aquinas, the whole Medieval Latin tradition through Duns Scotus and William of Ockham and some other important, though less known thinkers like Theoderic of Freiberg down to the Renaissance and into the modern history of Western philosophy. The general structures of this theory still haunt even recent philosophers of mind.

Farabi held that for every intellectual being there is something called 'intellect' which is an ability to acquire knowledge or cognition of other things. This intellect is an intellect in potency (*'aql b'il-quwa*) because it is able to acquire knowledge without having it actually. But it is something existing in and possessed by intelligent beings. By contact with other things this potency is actualized; the intellect actually grasps something of a thing outside itself and thus becomes actual intellect (*'aql b'il-fi'l*). This actualization is due to something that in itself is actualizing other things, namely the form of a thing. Forms generally actualize their own specific matter, but also the intellect in potency, whereby they act as forms in the way in which the intellect can accept forms. This sort of action is similar to that in which the form actualizes its own matter, but in this case the potential intellect serves as a kind of matter to produce pure forms in the mind. In this way the forms, otherwise constituting real things, act as intelligible forms. The forms actualizing the intellect in potency are stored in the intellect as pure forms acquired by that intellect, thus creating the acquired in-

tellect. The forms stored in this way can consequently become active and thus produce knowledge of the things appearing in the surroundings of an intelligent being. In this way the intelligent being can recognize things it meets as things of a certain kind. At this stage the intellect has developed into the active intellect (*intellectus agens*, *al-ʻaql al-faʻʻāl*). In case of the presence of something this active intellect can move the intellect, which in this respect is now passive, to realize the presence of something of a certain form, making a judgement about a singular case. This is the proper function of this passive (or possible) intellect. This is the manner in which an intelligent being acquires knowledge of the world it lives in.

An intelligent being, like a human person, has her proper, specific and perfective form actualizing herself as a person in this active intellect, which is part of the general, cosmic active intellect, the tenth emanation of the One, that actualizes matter outside the individual intellect and gives the same forms that are accepted by the intellect, to their proper matter.

This is obviously meant to be an interpretation of Aristotle's remarks in *De Anima*. And as far as I can see, and as far as the medieval commentators could see, it seems to me, this is the only interpretation that can make sense of Aristotle's cryptic remarks, and deliver a veritable theory of knowledge that can show how reality can be known as it really is. As the forms constituting the things are given to the things by the agent intellect and recognized by the intellect by the part through which it takes part in the cosmic agent intellect, it is granted that the intellect recognizes the things as they are. The forms constituting the things and the forms acquired by the intellect are, as forms, identical, although they produce in one case the real things, in the other case the recognition of these things as cases or exemplars of their very form. This guarantees that knowledge is exactly knowledge of the things as they are.

The theme of the intellect in Farabi's treatise is interwoven with questions of cosmology and ontology. This seems to be necessary in order to guarantee the equivalence or adequation between the world in its own matter and the world as it is intellectually grasped.

This may be the basis for the famous "definition" of truth as adequation of thing and intellect (*adaequatio rei et intellectus*), ascribed to Isaak Is-

raeli[1], but more closely fitting words found in Ibn Sina,[2] who admits that he is indebted to Farabi.

In the course of the development of the Latin philosophy, Farabi's theory was remodelled by the theory of the multiplication of species, according to which the form of something is transmitted to the intellect. In the version of Roger Bacon these species are effects of the form of a thing by which the thing acts upon its surrounding medium. These effects are multiplied in the medium and thus transported to the senses and finally processed into intelligible species which constitute the forms as they are accessible to the intellect. The process of the multiplication of species in the medium is a strictly geometrical one. This is the basis of the perspectivist movement at the end of the thirteenth century. The cultural and scientific importance of this movement is considerable. Again it rests ultimately on Arabic influences, because it was the book on optics (*Perspectiva - kitāb al-manāẓir*) of Abu Ali Muhammad ibn al Hasan ibn al Haitham (Alhacen in the Latin world) that was the basis for Bacon's theoretical achievements.

After Bacon, the theory of species was soon criticized by several thinkers, among them Peter John Olivi, Henry of Gent and others.[3] The strongest criticism comes from William of Ockham (1285-1347) who entirely rejected the idea of species.[4] In connection with this rejection Ockham developed his own epistemology that departed completely from the line of thought founded by Farabi. Together with this departure Ockham favoured a different interpretation of Aristotle's theory of substance and substantial form that gave up its cosmological foundation and led him to a different theory of truth. This theory says that a proposition is true if and only if the cases for which the subject term is introduced are identical with those cases for which the predicate term of the sentence is introduced according to the construction of the proposition. A negative proposition is true if the exemplars of the relevant terms are not identical. Everything depends on the introduction or imposition of the terms, either singular or universal. A positive proposition is true if the case or the cases brought into play by the sub-

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[1] Isaac Israeli 1938, 322-323.
[2] Ibn Sina 1977, 55.
[3] Tachau 1988.
[4] Ockham 1981, 268.

ject term could be used to introduce the predicative term into the language in use.

If in our practical daily life we have to do with things, we gain intuitive knowledge of them. Partly we remember something of these things which enables us to repeat successfully certain actions concerning the thing in a different situation. Sometimes we may remember those actions successfully concerning other things that allow for the repetition of these actions and are in this sense similar to the other things. In order to cooperate with other beings we introduce signs to direct attention to things of importance in a certain context and to evoke the repetition of actions that were successful earlier. This part has to do with abstractive knowledge in Ockham's sense. It is by abstractive knowledge that we can remind ourselves and other people of things and that we can make plans about them even in their absence. The problem of reasoning about things in their absence was the main reason for John Duns Scotus to uphold the idea of intelligible species. For Ockham this is not necessary, because our ability to repeat operations and to learn routine activity in outer practice and in the realm of communication suffices to grant us the possibility of reasoning and planning.

According to Ockham what we grasp of the things with which we have to do in our life are not likenesses or representations or the forms of things in the way in which they can be grasped by the intellect, but just signs of the things. To speak of likenesses has only meaning where different things are compared, but not when a thing is taken notice of. In the intellect (or in the soul, as Ockham usually says) a natural sign is built for the thing that has come into the realm of intellectual activity. For purposes of human communication, a corporeal external item or event is used in order to signify to other participants what is at stake. The external—let's say *linguistic*—sign signifies to other persons the thing in question, not the *natural* sign held by the speaker or the impression or conception the speaker has. So, if we use our words in accordance with their proper function, we speak about the things outside of our mind, not about the signs we have in mind of those things. In order to be able to make other people understand what we are speaking about, we have to use those signs that are accessible to everybody, because they are external events, and are conventionally set for the things to which we want to direct the attention of our hearers.

This imposition is possible at first only for things that are publicly accessible to virtually everybody. Generally, one can assume that this imposition is primarily possible for things that are easily picked out of their surroundings and that can be unambiguously identified by everybody who takes part in the situation. We may admit that these are the things usually taken to be first substances in the Aristotelian sense. This is at any rate widely assumed in the Middle Ages, and although I do not think that the acquisition of language starts with predication, I think that the introduction of predication necessarily makes use of the occurrence of these Aristotelian substances. As a matter of fact, it is much more difficult to learn the predication for qualities and other properties of things. The development of further devices for communication among people depends to some extent on elaborated parts of language. I don't want to go into more details here, although in the Middle Ages a great amount of the details were explored by the logicians at work then.

What now happens with Ockham is the following. According to him we acquire knowledge of the things in intuitive cognition by handling the things in our surroundings. Together with this we learn a language in order to coordinate our actions with those of others. Thus acquiring a language we learn to distinguish between cases that repeatedly occur and that have to be taken into account in every case of appearance, and other cases that may be less crucial. We may find ourselves with devices that are made to trace one and the same case at every moment of its appearance, and with devices that allow us to collect a greater number of exemplars that may appear on the scene together and at the same time. We thus have devices that refer to one and only one thing, and other devices that distinguish a number of things from other things that are in a given situation not traced individually. We thus have singular terms and general terms. But we always have to do with particular cases which we at one time can refer to by picking out just one singular case, at other times in a more general way, because we might be interested in something that has nothing to do with the individuality of the cases. So, if we need bricks to build a wall, for example, we surely need singular bricks because there are no universal bricks of which a wall could consist, but we are not interested in the individuality of the bricks, because within a certain range every brick can do the same job. Surely bricks are not good examples of Aristotelian substances, but we

could tell a similar story about chickens, which in fact are Aristotelian substances.

What distinguishes Ockham from Farabi and his followers is that there is no talk of adequation or equivalence between the thing and the notion of it any more. The main interest of Farabi was, as I see it, to give an account of the possibility to grasp intellectually exactly what it is that makes the thing in question the thing it in fact is. It was the task of the intellect to grasp what is essential for the thing in independence of the intellect. This is by no means what Ockham is interested in, he does not even believe that such a task could be meaningful at all. We can say according to him that the species of the things, discussed widely in his time and rigorously rejected by him, are nothing but the forms of the things as they are considered in the intellect. In the course of the discussions at the beginning of the 14th century, mainly at Oxford, it seems to me, sceptical positions had been taken into account because of the many awkward complications in the theory of species.

I think that Ockham somehow had the impression that the insertion of intermediaries, like species, in the process of cognition would ultimately lead to an unsolvable problem of scepticism. The actual reality of this problem can be seen in the position of Nicolaus of Autrecourt. It is less clear that Ockham suspected that a theory like Autrecourt's might take hold, but I think that his arguments show that he was aware of the possibility of such ideas and wanted to prevent their appearance. Ockham utterly rejected the theory of knowledge that was the result of the perspectivist account of perception. On its basis Nicolaus of Autrecourt could claim that not even Aristotle had ever had any real knowledge of a substance, because there is no possibility of deducing something like substances and the knowledge of that which is essential to a certain thing from sensual intuition and logic alone.[5] .

Nicolaus would have claimed that in seeing something in front of you, you can never be sure that it is a substance you see, because the colours you perceive and logical considerations alone do not give you any certainty of something beyond sense-data and logic. Ockham's claim would have been that in seeing something at all you necessarily see that which causes

[5] Lappe 1908, 12*.

your seeing of the object. So if you see some colours in front of you, you necessarily see something like, for instance, a horse in a meadow. Properly speaking you don't see the colours but that which is so coloured. You just have the impression of colours by which you see that which is so coloured. This is a remark on the grammar of "seeing". And if you see a horse, you see a substance, by definition. There is no problem of having sense impressions and the usual tools of logic in order to arrive at substances. You may have sense impressions, but some of them are of necessity impressions of something. The other possibility is that something like after images is at stake. These are just causal results of something involved in the process of perception, but they do not have anything to do with cognition and knowledge. Knowledge and causal influences on the sense-organs have to be distinguished at any rate. Ockham's arguments here may have to do with those of Peter Aureol.[6] To me it seems that Ockham tried to rule out a special type of theory of cognition in order to avoid sceptical consequences. Nicolaus of Autrecourt is right if he claims that nobody, including Aristotle, could have derived with certainty the existence of a substance on the basis of bare sense data and formal logic alone.[7] But it is far from obvious that one ought to operate with sense-data, and Ockham's intuitive knowledge is knowledge of the things, substances and qualities, in question, not knowledge of their species or of data of them. The things outside the mind or the soul are not represented to the soul by an intermediary, whatever it may be, but they are taken into account by human (or other intellectual) beings immediately by acquaintance, and what can be known about them is not more than what has to be taken into account by intelligently acting beings. In several branches of modern epistemology we find the idea of mental representation. Ockham's arguments are worth taking notice of, because they may at least help to clarify the status of such representations. The creation of intermediaries like species or data and so on would be the creation of parasitic entities, and such entities are ruled out by Ockham's razor, which thus is not so much a principle of parsimony than a parasiticide.

Ockham's position is directed against something that one could call *essentialism*. He insists on the existential priority of individuals of all kinds.

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[6] Petrus Aureoli 1956, 698-690.
[7] Lappe 1908, 9*.

Generalities and abstract entities for which individuality may be inapplicable, are products of the intellect or of the language. In this I see a development in the Occident that has a later—perhaps for several reasons later—parallel in Islamic philosophy. This parallel I see in some aspects of Mulla Sadra's philosophy. Nevertheless there are differences, and it may be of interest to find out the reasons for these differences in order to understand differences in philosophical attitude. These differences have to do with cultural differences. To trace them might mean to learn to understand them. Yet this makes it necessary to start discussions and confrontations of the different conceptions in the background of the philosophical developments in East and West. Despite the fact that Muslim and Western philosophies grew out of the same roots and were closely related at some stage in history, it is now difficult to bring the different ideas into contact. Lack of contact and even mutual isolation led to different vocabularies in addition to the problem that certain aspects of the different languages involved give rise to problems of interpretation from the beginning. To give an example: Is the concept of *wahdat al-wujud* comparable to the Scotist-Ockhamist concept of the univocity of being? One could maintain this, but the difficulty is that there is a difference between being and existence in Greek, Latin and some of the Western languages, like German, that is not easily expressed in Arabic, because the Arabic lacks a special word as sign for the simple act of predication, which is an important aspect of the concept of being in Western philosophy. *Wujud*, it seems to me, is closer to existence. Does this express a major difference? Has this an impact on philosophical considerations? This is only one of the themes for which a new dialogue between different developments in various cultures could prove very stimulating.

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In the Name of God, the Merciful, the Beneficent

Ibn Sina's Arguments Against God's Being a Substance

MUHAMMAD LEGENHAUSEN, QOM

It is reported that Imam Reza (peace be with him) said:

> "…by His giving consciousness to the conscious, it is known that He is not conscious, and by His giving substance to the substances, it is known that He is not a substance…."[1]

1. The Subject of Metaphysics

Aristotle taught that the subject of metaphysics is being, that beings are said in many ways to be, and that the primary sense in which a thing may be said to be is as a substance, that which is neither in nor predicable of a subject. Hence, for Aristotle, metaphysics is primarily concerned with substance, and secondarily with the other nine categories. However, Aristotle also described the topic of his *Metaphysics* as primary philosophy or wisdom concerned with the discovery of causes. He also states that the primary philosophy has the task of studying the essence and existence of what is separable from matter.

Ibn Sina rewrites metaphysics with a number of important departures from Aristotle: the inclusion in metaphysics of discussions about the intellect; the introduction of what were later called transcendentals; and the recognition that the discussions of the categories belong to metaphysics rather than logic. More important than these points, however, was the clear distinction between existence and whatness, already to be found in seminal form in the *Posterior Analytics*,[2] and further developed over the course of

[1] Al-Saduq, *Tawhid*, *Bab* 2, hadith 2. There is a rather philosophical commentary on this hadith by Qadi Sa'id Qummi.

[2] *Posterior Analytics*, Bk. II, Ch. 7, 92b 8-12. Note that Aristotle argues here that since being is not a genus, it cannot be the essence of anything. We can get from this to an argument that God is not a substance by restricting the consequent to "it cannot be the essence of a substance," and the premise that the essence of God is being.

centuries of philosophical work in both the Christian and Islamic worlds. In medieval Europe, the idea was elaborated by Aquinas, who wrote a treatise on the topic. In Islamic philosophy, the distinction led to the principle of the fundamental priority of existence over whatness in the work of Mulla Sadra.

Following Kindi, Ibn Sina expected Aristotle's *Metaphysics* to be more theological, and in his autobiography he claimed that it was only after reading Farabi that the purpose of the subject became clear to him. Accordingly, he took metaphysics to include theology only as a special part, and thereafter Muslim philosophers distinguished theology in a general sense from theology in a specific sense. (In the West the distinction was made between general and specific *metaphysics*). At different phases in his life, Ibn Sina divided the sciences in somewhat different ways, but he consistently considered metaphysics to be a theoretical science either including theology along with three other sections, or separating theology from general metaphysics as a distinct theoretical science. He divided theology proper into what we might call natural theology and metaphysics of the rational soul, while general metaphysics included discussions of the principles of the sciences and discussions of *being qua being*. The introduction of the metaphysics of the rational soul was innovative.[3]

He also transformed metaphysics by emphasizing attributes that transcend the categories. This gave rise to a long tradition in medieval Western philosophy of discussion of the *transcendentals.* He still held that the primary *essential beings* (*mawjudat bi al-dhat*) are the substances, but only in the sense that substance is prior to accident. He explains the priority of substance to accident in terms of the Aristotelian definition of substance according to which a substance is not in a subject. An accident *is in* a subject. Ibn Sina defines what it means for something to be in a subject with three clauses:

> (1) the subject has existence and is of a specific species regardless of its possession of what is said to be in it;
> (2) what is in the subject is not in it as a part of the subject; and
> (3) what is in a subject cannot exist apart from the subject; so that accidents are not separable from their subjects.

Notice that according to the first clause, a substantial form in matter is not an instance of something being in a subject. The subject in which an

[3] See Gutas 1988, 238-261.

accident resides will itself either exist in yet another subject or not. If not, the subject is a substance. If so, there is a regress argument to the effect that after a finite number of steps we have to arrive at subjects that are substances to ground all higher order accidents.[4] At times, Ibn Sina says that everything is either a substance or accident, but yet in other places he introduces God as being neither. It seems, then, that we should understand the first claim as implicitly qualified by contingent being. This is how the later Islamic peripatetic tradition understood him, and the qualification is made explicit in Ibn Sina's theological writings.

Two further points of difference should be noticed between the ways Ibn Sina and Aristotle looked at metaphysics. For Aristotle, the discussion of causality was largely imported to the metaphysics from the physics. For Ibn Sina, on the other hand, causality takes on a special role in metaphysics as that which brings something into existence—ontological as distinct from physical causation. Second, the distinction between contingency and necessity in Aristotle was primarily seen as a logical distinction, while in Ibn Sina it becomes the focus of metaphysical discussion. Aristotle interprets the necessary as that for which there is no change, no motion, while for Ibn Sina the necessary is that which needs no cause for its existence. In Aristotle the necessary and contingent are understood in terms of time and change, while in Ibn Sina they are interpreted independently of temporality. Metaphysics in the hands of Ibn Sina becomes at once richer and more abstract.

With regard to the substantiality of the rational soul and God, Aristotle and Ibn Sina take opposite positions: Aristotle holds that *theos* is a substance, while Ibn Sina denies that God is a substance; Aristotle holds that the soul is not a substance, while Ibn Sina claims that it is.[5] In both of these regards we observe the movement toward greater abstraction in Ibn Sina. The concept of God is more abstract when considered outside the categories, and the soul is understood more abstractly, not merely as the form of an organism, but as independent of any materiality. God is freed from the constraints of substantiality while the soul is freed from the constraints of corporeality.

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[4] For a discussion of some of these points see Abe Stone, "Readings from medieval Aristotelians on substance and accident," URL = http://home.uchicago.edu/~abestone/readings4.pdf.

[5] See Morewedge 1973, 194-195.

Metaphysics as a universal science is concerned with beings, first divided into the necessary and contingent, and the latter into substance and accident. It is here that we find the most important reason why God is not to be considered a substance according to Ibn Sina: the division of beings into substances and accidents only applies to contingent beings. The reason for this is that only a contingent being can have a quiddity or essence, what Aristotle called *ti esti* (literally, *what it is*), translated into Arabic as *mahiyya* (also, literally, *what it is*), and which, following the lead of William Chittick,[6] I will call a *whatness*. The reasoning is given in Ibn Sina's *Remarks and Admonitions* (believed to have been written c. 1030-1034):

> *Wajib al-wujud* (*WW*),[7] does not share with things in whatness, for all whatnesses have in common that they imply contingency of existence. However, existence is not by the whatness of a thing, and it is not a part of the whatness of a thing. What I mean is that existence does not enter the concept of things for which there is a whatness; rather this is a state they can have. *WW* does not share with things in the meaning of a genus, or of a species, for *WW* is not in need of any allowance to separate from them in the sense of having a *difference* or accident [to differentiate *WW* from them]; rather *WW* is essentially different.
>
> So, there is no definition (*hadd*) for *WW's* essence, since there is no genus and species for *WW*.[8]

Here we find a view of existence as completely distinct from whatness. Whatness pertains to the concept of things, and describes the form that a thing can have. Existence pertains to causality and the generation of entities that animate the forms of whatness.

However, the first thing to which existence belongs other than itself is substance, which is identified with a sort of whatness in the *Shifa'* (believed to have been composed *c*. 1020-1027):

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[6] Chittick 1998, xx; 389-90, n. 9. Morewedge uses "essence" and Marmura uses "quiddity". "Essence" will be used to translate "*dhat*," meaning that which possesses attributes.

[7] This is usually translated as *the Necessary Existent* or *Necessary Existence*, but existence is the possessive modifier of *the Necessary*, so a more precise translation would be: *the Necessary of Existence*, in the sense of that which is necessary with regard to its existence, that which is ontologically or existentially necessary, as opposed to that which is existentially contingent. I will abbreviate the phrase as *WW*.

[8] *Isharat*, Vol. 3., *Namt* 4, Ch. 24. Remark, 49.

> Although the existent, as you have known, is not a genus and is not predicated equally of what is beneath it, yet it has a meaning agreed on with respect to priority and posteriority. The first thing to which it belongs is the whatness that is substance, and then to what comes after it. Since it [has] one meaning, in the manner to which we have alluded, accidental matters adhere to it that are proper to it, as we have shown earlier. For this reason, it is taken care of by one science in the same way that anything pertaining to health has one science.[9]

The idea presented by Ibn Sina here will remind students of Kant of his famous argument that existence is not a predicate in his refutation of the ontological argument.[10] One also may compare the statement quoted above from Ibn Sina: "What I mean is that existence does not enter the concept of things for which there is a whatness; rather this is a state they can have." with the following statement from Kant:

> In the mere concept of a thing no characteristic of its existence can be encountered at all. For even if this concept is so complete that it lacks nothing required for thinking of a thing with all of its inner determinations, still existence has nothing in the least to do with all of this...[11]

This has, of course, as Kant saw, profound implications for the understanding of God and for the ontological argument. The ontological argument of Anselm or Descartes is invalid, as Kant shows, because it begins with characteristics internal to the concept, and existence does not, contrary to Anselm and Descartes, enter here. Ibn Sina has his own ontological argument which is designed specifically to avoid such problems. There is no whatness for God, and so He is not a substance, according to Ibn Sina. Hence, we cannot argue from the divine whatness to the divine existence. However, if we consider an existing thing itself, not its concept and not its whatness, we will find that it must be necessary in its existence or contingent, and if contingent, something necessarily existing is needed to avoid a

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[9] Marmura 2005, 27. I have replaced Marmura's "quiddity" by "whatness," and have removed a comma to make clear that the relative pronoun is restrictive: "the whatness that is substance" rather than "the whatness, which is substance".

[10] *Kritik der reinen Vernunft*, A598/B626 f.

[11] Immanuel Kant, *Critique of Pure Reason*, tr. and ed. by Paul Guyer and Allen W. Wood, (Cambridge: Cambridge University Press, 1997), A225/B272: "*In dem bloßen Begriffe eines Dinges kann gar kein Charakter seines Daseins angetroffen werden. Denn ob derselbe gleich noch so vollständig sei, daß nicht das mindeste ermangele, um ein Ding mit allen seinen innern Bestimmungen zu denken, so hat das Dasein mit allem diesem doch gar nichts zu tun...*"

regress, and the necessary of existence is God. Ibn Sina dubs this the "proof of the sincere," (*burhan al-sidiqin*), and it has dominated the proofs for God in Muslim philosophy ever since with many variations.[12] What is important for us here is not to review the versions or to evaluate the validity of the argument, but to note that one avoids the sorts of worries expressed by Kant precisely when one considers God to be beyond the categories that classify whatnesses. Instead of considering the whatness of God and then proving that such a thing must exist, which Kant argued was futile, the Muslim philosophers following Ibn Sina started with the existing thing, and later with existence itself, regardless of considerations of whatness in which existence can play no part, and sought to prove that there is something whose existence is necessary.

A final point about metaphysics as understood in the tradition led by Ibn Sina should be emphasized: this tradition is called *peripatetic* (in Arabic *masha'in*) with attention to Aristotle, and metaphysics in the Aristotelian sense of the discipline differs in important ways from metaphysics as it is understood by many contemporary Western philosophers. After the *linguistic turn*, predicates have come to be used by some philosophers as suitable replacements for accidents, and substances are seen as the individuals to which predicates are applied and whose identity and persistence conditions are determined by sortal predicates.[13] When Muslim philosophers deny that God is a substance, however, this is understood in a more hylomorphic sense. The argument is not that God cannot serve as the subject of suitable predication so as to be designated a substance, but that God is beyond considerations of matter or form necessary for substances and accidents. The attributes of God are not like the accidents of a substance because they do not describe the form of God but rather are attempts to describe what is beyond form.

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[12] See Legenhausen 2003.

[13] See Wiggins 1980. Of course, there are a variety of tendencies to be found in analytic metaphysics, and Wiggins should not be taken as representative for the entire field. Nevertheless, he does represent a widespread tendency. For a good overview of the field see Runggaldier and Kanzian 1998.

2. A Curious Argument

The main argument that Ibn Sina gives to show that *WW*, i.e., God, is not a substance is found later in the *Remarks and Admonitions*. Ibn Sina considers how someone might erroneously think that God is a substance because it would appear that God is not in a subject and is not predicable of a subject. Hence, it would seem that God fits the definition of primary substance. Ibn Sina responds that this way of reasoning depends on a failure to appreciate the significance of not being in a subject. When we say that a thing is not in a subject, this should not imply that the thing exists, for otherwise, we could infer the existence of a thing merely on the basis of its being a substance. God, however, necessarily exists, as Ibn Sina sought to demonstrate in his proof of the existence of God, the *proof of the sincere* (*burhan al-sidiqin*). Hence, we should not say that God, or *WW*, is not in a subject.

> Perhaps it is supposed that the meaning of "an existent that is not in a subject (*mawdu'*)" includes the First and others by inclusion in a genus, that *WW* falls under the genus *substance* (*jawhar*).
>
> This is an error. That an existent is not in a subject, according to the definition (*rasm*)[14] of substance, does not mean the existent as actually existing is not in a subject, for otherwise one would know that since Zayd in himself is a substance, that he actually exists! Not so, let alone the quality of that existence.[15]

Of course, Ibn Sina does not mean to suggest that since it is false that God is *not* in a subject, consequently God *is* in a subject. So, it would appear that bivalence is threatened. It is neither the case that *WW* is in a subject nor that *WW* is not in a subject. Ibn Sina does not propose a three-valued logic, however. Instead it is suggested in his logic that some predicates cannot be meaningfully applied to some subjects. The predicate "is in a subject" does not apply to "*WW*" in such a way as to produce a proposition that could be true, false, or have a third value. The example usually given is that it is mistaken to affirm or deny that a wall is blind, because a wall is not the sort of thing that can be seeing or blind. Both predicates "seeing" and "blind" imply the faculty of vision, in a healthy or impaired state. Of

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[14] The common definition (*rasm*) is distinguished from a complete definition (*hadd*) because the former is not given by providing the genus and difference. Substance cannot be defined by genus and difference, for the genus would have to be *existence*; and existence cannot be a genus for much the same reasons that it cannot be a substance.

[15] *Isharat*, Vol. 3., *Namt* 4, Ch. 25. Admonition, 51.

course, we could artificially coin a broader sense for the predicate "seeing", equivalent to "not having impaired vision", and in this sense we could affirm that the wall is "seeing". However, this would be not only contrived but misleading because of the ambiguity in the ordinary meaning of "seeing" and the artificially coined meaning. Likewise, we could interpret "not being in a subject" in such a way as to include all things of which it cannot be truly said that they are in a subject; and in this sense we could say that God is a substance. Here too, the introduction of a broader sense of substance that would include God would be misleading, for substance is a category and the categories classify whatnesses. To say that God is a substance would hence imply that God has a whatness of the substance category, unless we call to mind that "substance" might be used in a way to apply both to whatnesses and to entities that fall outside the framework of the categories.

One might think that this latter sense is more natural, and that the contorted argument Ibn Sina gives for the more specific sense is highly artificial, for we find that "being in a subject" is defined by Ibn Sina in a seemingly *ad hoc* manner designed to exclude existence and *WW*. As such, it cannot be expected to convince anyone who thinks otherwise. Ibn Sina himself at one point admits that we could understand *WW* to be a substance in the negative sense of a denial of accidentality (understanding a substance to be whatever is not an accident), but he insists that this is not the sense of substance that would allow it to be considered a genus under which to include *WW* along with other substances.[16]

Furthermore, one could respond to Ibn Sina's point about how not being in a subject should not imply existence by holding that it is not *this* fact about *WW* that implies its existence. Even what necessarily exists can be considered as a thing—without regard to its existence—as not in a subject. We cannot infer that Zayd or *WW* or anything else actually exists merely *because* it is a substance, even if we allow that some substance necessarily exists. In view of this, we could reject Ibn Sina's argument, and allow that "is not in a subject" can apply to anything that fulfils the three clauses mentioned above, and if it also is not a predicable, it will be a substance. *WW* would clearly seem to violate the three part definition of being in a subject, and since it is not a predicable, it would be a substance. Indeed, some Muslim philosophers have taken the position that the dispute over whether God is a substance or not is largely verbal. If we take substance in a wide sense to apply not only to contingent beings, and if we understand

[16] Marmura 2005, 277.

the definition of substance as suggested here, we can say that God is a substance, and, indeed, that everything is either a substance or an accident. If we take substance more narrowly, as Ibn Sina did, then we will consider substance as restricted to contingent beings.

However, I think that what is at stake here is more than just an arbitrary choice of definitions. At issue is how to understand the categories, and how this understanding must take into account the fundamental difference posited by Ibn Sina between existence and whatness. This is why, in the place where Ibn Sina is ready to grant that in some sense one may say that God is a substance, he cautions that this is not a sense in which substance could be considered a common genus for all substances.

> Someone may say, "Although you have avoided assigning the name 'substance' to the First, you do not avoid assigning Him its meaning. This is because He exists in no subject; and this is the meaning of substance, which you have rendered a genus."
>
> We answer: This is not the meaning of the substance we have made a genus. Rather, the meaning of [the latter] is that it is the thing having an established whatness whose existence is not in a subject—for example, a body and a soul.[17]

In order for substance to be used in a generic sense that would apply to both *WW* and individual persons, horses, etc., *WW* would have to have a whatness the features of which would distinguish it from other substances, as man and horse are differentiated, for example. In order for substance to be considered a common genus, it must be defined in such a way that its instances each possess a whatness by means of which they can be classified.

What Ibn Sina is suggesting is that the categories are fundamental divisions, not of being, as Aristotle sometimes suggests, but of whatness. If this is so, then *WW* should not be considered as a substance, because substance describes that which possesses a *whatness* having the conditions of not being present in or predicable of a subject. The categories classify different formats in which being can be found or be absent. These formats impose conceptual limitations on being from which we suppose God to be free.

> Indeed, the meaning of "what is not predicated of a substance," as in the definition (rasm), and what is common to substances, that they are of a species due to

[17] Marmura 2005, 277.

> potential, like what is common in a genus, is a whatness and a truth (haqiqah); although their existence is not in a subject.
>
> This is the predication applied to Zayd and ‘Amr, etc., by their two essences (dhat), not by their cause.
>
> However, being actually existent, which is a part of their being existent in actuality as not in a subject, this is something that can only take place by a cause; for how could the compound be of it, and in the sense of something added?
>
> As for that which it is possible to apply to Zayd, such as the genus, it is not at all correct to apply it to WW, for WW does not possess a whatness to imply this judgment. Rather, existence is necessary for it, like whatness is for others.[18]

Here Ibn Sina is saying that Zayd and ‘Amr are to be considered substances because of their whatness, regardless of whether or not they exist. This example shows that Ibn Sina’s emphasis on *whatness* for substances is not due to the fact that he is speaking of secondary substances here (as some of the secondary literature would suggest). Zayd and ‘Amr are primary substances that are to be included in the category of substance because of the nature of their whatness, not because of their existence. The actual existence of an entity cannot be included in the whatness as something additional. What determines whether or not something exists in actuality is the cause of the thing, not its whatness. It is the whatness that determines whether something is a substance or not, and because *WW* has no whatness, it cannot be considered that Zayd and God are two instances of the more general concept of substance. Existence is to God as the whatness *humanity* is to Zayd only in the sense that existence is necessary for God as humanity is necessary for Zayd, not in the sense that existence is the form of God as humanity is the form of Zayd, for existence is not a form at all.

In the middle books of the *Metaphysics*, Aristotle considers the problem of whether substance is to be considered as matter, form or a combination of the two. He raises problems that go unsolved for each of the solutions, but seems to favor the view of substance as form (although this much disputed by his interpreters). Existence, however, is not form or matter or any combination thereof. Hence, existence is not a substance. However, that whose existence is necessary, *WW*, is existence itself, and hence, according to Ibn Sina, existence itself is God. Therefore, God is not a substance.

Ibn Sina gives another argument for the idea that substance pertains to whatness rather than to existence or even any *type* of existence at the end of the section from which the above passage was cited. The argument is

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[18] *Isharat*, Vol. 3., *Namt* 4, Ch. 25. Admonition, 51-52.

that even if we don't know whether Zayd exists or not, we still say that he is a man, and that he is a substance. If substance were a way of being, however, we would not be able to say the Zayd is a substance unless we knew that he actually has being or exists. Since we call Zayd a substance regardless of whether he exists or not, substance must pertain to whatness instead of pertaining to being or existence.

A revealing version of the same sort of argument can be found in the *Danish Nama-i 'Ala'i*, section 25, entitled "Finding that *WW* is neither a substance nor an accident." Here the phrase "not-in-a-subject" is hyphenated as a reminder that Ibn Sina is discussing the condition of the Aristotelian definition of a substance as that which is *not in a subject* and is not predicated of a subject. The basic idea is that *being not-in-a-subject* should not be read as implying existence, even if the word "being" is used in describing the condition.

There are a number of technical terms that occur in this text that require some explication. First, there is *haqiqah*, literally *truth*, used in Arabic translations for the Greek *aletheia*. Often times this is translated as *reality*, but this is misleading since something may have a *haqiqah* even if it does not actually exist in the external world. It is often used synonymously with *dhat*, the inner essence of a thing, and is contrasted with what is merely apparent. (Recall that essence in the sense of *dhat* must not be confused with *mahiyyah*, *whatness*.) A related term is *anniyyah*, about which there has been much scholarly debate. In Ibn Sina's writings it usually is used for the *individual existence* of a thing. Chittick suggests it originally meant something like "that-it-is-ness".[19] With these points in mind, we can turn to the text:

> A substance is that whose truth (*haqiqah*) has existence that is not-in-a-subject when it exists. It is not that which has existence that occurs not-in-a-subject. You do not doubt [propositions] of the sort as that a body is a substance, but you can be in doubt about whether this body which is a substance exists or not, and only then [after determining that it has existence] whether its existence is in a subject or not. So, a substance is that for which there is a whatness, such as a body, a soul, a human being, or a horse; and this whatness is the state of that which—until its *individual existence (anniyyah)* is not-in-a-subject—you do not know whether it has an *individual existence* or not. Whatever is like this has a whatness other than its

[19] Chittick 2001, 317. Marmura also uses "thatness" to translate this; see Marmura 2005, 383.

> *individual existence*. Hence, that which has no whatness other than its *individual existence* is not a substance.[20]

Here Ibn Sina first makes the point about the definition of substance that it should not be read as implying that all substances exist, despite the wording of the definition as that which *exists* not-in-a-subject. To prove the point, he argues that you can know that something is a substance even while doubting whether it exists, such as a particular body. The question of whether the actual existence of such a thing is in a subject or is not-in-a-subject only comes up after one discovers whether it has any existence at all, but its being a substance is never doubted. Hence the condition of being not-in-a-subject for being a substance should be understood conditionally, so that for any substance *x*,

(x exists → the existence of x is not-in-a-subject).

(Obviously, the conditional here is not truth functional.[21]) If you know that an imagined body is a substance, then when you discover that it really exists in the external world, you know that its existence is not-in-a-subject, and conversely, if you do not know if it actually exists, you cannot very well know that its *existence* is not-in-a-subject, (although you can know that if it were to exist, its existence would be not-in-a-subject). This means that for substances, existence and whatness are distinct. For *WW*, however, there is no whatness at all, unless its existence is taken to be its whatness, and hence, *WW* is not a substance. The section from the *Danish Nama-i 'Ala'i* continues as follows:

> With regard to accident, it is evident that *WW* is not in something, and since the existence of *WW* is neither in the manner being univocal (*tawati*)[22] with other things nor of being a genus for the existence of other things, its existence not-in-a-

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[20] *Danish Nama-i 'Ala'i*, translated in Morewedge 1973, 56. My translation differs substantially from that of Prof. Morewedge in several places.

[21] For a discussion of Ibn Sina's logic of conditionals, see Goodman 1992, ch. 4., 188-211.

[22] Predicates may be applied to a thing univocally or derivatively. We do not apply "rationality" univocally to a person, for this would mean that the person *is* rationality. Rather we apply it derivatively, so that it is said that the person is rational. Likewise, existence is not applied univocally to God and other things, for this would imply that they, as well as God, are existence. However, both may be derivatively called "existent" or "existing". See the discussion in the *Shifa*, Marmura 2005, 175-180.

> subject along with the existence not-in-a-subject of people and other things does not fall under the meaning of *genus*, because for the likes of existence, all fall under posteriority and priority,[23] neither as equivalent nor as a genus. But what is not in a subject is not always posterior or prior. Therefore, existence not-in-a-subject is not a genus for things, except in the sense we mentioned; and substance is a genus for those things that are substances. Therefore, *WW* is not a substance, and in sum is not in any category, because for all the categories existence is accidental and additional to whatness and outside of whatness, while existence is the whatness of *WW*. Therefore, from this much that has been said, it has been found that *WW* does not have a genus, so it does not have a differentia, and so it does not have a definition (*hadd*); and it has been found that it has no locus and no subject, so it does not have a contrary; and it has been found that it has no species, and so it has no helper or partner; and it has been found that it has no cause, so it is not receptive to change or division.

It is clear that *WW* is not to be considered an accident, because *WW* is not in a subject in the way that accidents are said to be in a subject. However, consider the following argument. Ibn Sina says that existence is accidental to whatness. Doesn't that mean that existence is an accident? But *WW* (i.e., God) is pure existence. So, doesn't that mean that Ibn Sina should consider God to be an accident? No. The fact that existence is accidental to whatness just means that for any given whatness its existence will be contingent, not that existence is an attribute or trope that is found in a subject, like the accident of whiteness is found in a table.

When a thing is considered as existing, we are not asking what it is and we are not asking which one it is; rather, we are considering it as causing or having been caused. As such, whatever exists can be placed in a ranking of causes. This is not the case for what is not-in-a-subject, because substances that do not exist are outside the causal chain altogether. Existence not-in-a-subject can be predicated both of God and substances, but the relation among the things to which this predicate is applied is not that of things that share a common genus or of different instances at the same level with relation to this existence. Rather, the relation is one of causal ordering. It is only in an artificial way of shared true predication that "being not-in-a-subject" can be seen as a genus. Genus is properly understood as indicating a common form shared by the things that fall under it and answering the question of "What is it?" In this sense, existence not-in-a-subject is not a genus. Substance, however, can be considered a genus for those things that are substances because what makes something a substance is that it has a

[23] See Morewedge 1973, 44-45.

whatness of a certain sort, regardless of whether it exists. Since *WW* does not have any such whatness, it cannot be considered a substance.

3. Aquinas on God and Substance

A similar form of reasoning is, not surprisingly, found Aquinas' discussion of the question of whether God is contained in a genus in the *Summa Theologica*. The first objection is like that to which Ibn Sina addresses himself, except that Ibn Sina is concerned with the condition of being not-in-a-subject, while Aquinas considers substance as that which subsists of itself.

> Objection 1: It seems that God is contained in a genus. For a substance is a being that subsists of itself. But this is especially true of God. Therefore God is in a genus of substance.[24]

Like Ibn Sina, Aquinas comes to the conclusion that God is not in the genus of substance. His argument is rather complicated, however, and I do not intend to review it in detail here. The main idea is that there are two ways in which a thing can be in a genus, and in neither of these ways is it appropriate to consider God as in a genus. He offers three ways of showing that God is not in a genus as a species is in a genus. The first is that there is no potentiality in God, but this would be necessary if God were of a species with a differentia from the genus. The second argument comes closer to Ibn Sina: God's essence is nothing but His existence, so if He had a genus, it would have to be existence, which is not suitable for being a genus, because there could be nothing to determine the individual from the general essence. Likewise, Ibn Sina argues that if God were in the genus of substance, there would have to be something in His whatness to distinguish His substance from other substances, but His whatness is nothing but His existence. The difference between Ibn Sina and Aquinas here is that Aquinas does not bring in the concept of substance at this point, and takes it that if God were to belong to a genus it would have to be existence rather than substance; but the rest of the reasoning is pretty much the same.[25] Aquinas'

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[24] See Aquinas, *Summa Theologica*: "*Videtur quod Deus sit in genere aliquo. Substantia enim est ens per se subsistens. Hoc autem maxime convenit Deo. Ergo Deus est in genere substantiae*." Iª q. 3 a. 5 arg. 1.

[25] *Ibid.*: "*Secundo, quia, cum esse Dei sit eius essentia, ut ostensum est, si Deus esset in aliquo genere, oporteret quod genus eius esset ens, nam genus significat essentiam rei, cum praedicetur in eo quod quid est. Ostendit autem philosophus in III Metaphys., quod ens non potest esse genus alicuius, omne enim genus habet differentias quae sunt*

third argument is that different things that fall under the same genus must differ in existence, and so, for each thing that falls under a genus there must be a difference between its quiddity and its existence, and this is not the case for God. After this, Aquinas argues, somewhat obscurely, that God cannot be in a genus in the manner in which something can be said to belong to a genus if it is a principle that reduces to the genus, as unity is the principle that reduces to the genus of quantity. Following this, is the reply to the objection quoted above:

> Reply Obj. 1: The word substance signifies not only what exists of itself--for existence cannot of itself be a genus, as shown in the body of the article; but, it also signifies an essence that has the property of existing in this way--namely, of existing of itself; this existence, however, is not its essence. Thus it is clear that God is not in the genus of substance.[26]

Once again, Aquinas reasons in a manner similar to Ibn Sina, except that Ibn Sina focuses on the definition of substance as neither in nor predicable of a subject, while Aquinas speaks of substance as what "exists of itself". Also, Aquinas does not have what I have called the "curious argument" of Ibn Sina, to wit that we can know that the definition of substance applies to a thing without knowing whether the thing exists. However, both philosophers admit that the definition might make it look like God should be included in the genus substance, and both deny this on the grounds that the definition of substance signifies a whatness or essence that is distinct from existence with certain features. So, it would appear that Aquinas, like Ibn Sina, is arguing that God is not a substance.

In his *De ente et essentia*, Aquinas mentions that some philosophers have said that God does have any quiddity or essence, because God has no essence other than His existence:

> There are three ways in which substances may have an essence. First, surely, is the way God has his essence, which is his very existence itself, and so we find certain philosophers saying that God does not have a quiddity or essence because his es-

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extra essentiam generis; nulla autem differentia posset inveniri, quae esset extra ens; quia non ens non potest esse differentia. Unde relinquitur quod Deus non sit in genere."

[26] *Ibid., "Ad primum ergo dicendum quod substantiae nomen non significat hoc solum quod est per se esse, quia hoc quod est esse, non potest per se esse genus, ut ostensum est. Sed significat essentiam cui competit sic esse, idest per se esse, quod tamen esse non est ipsa eius essentia. Et sic patet quod Deus non est in genere substantiae."*

> sence is not other than his existence. From this it follows that he is not in a genus, for everything that is in a genus has a quiddity beyond its existence, since the quiddity or nature of the genus or species is not in the order of nature distinguished in the things of which it is the genus or species, but the existence is diverse in diverse things.[27]

Despite the similarities, however, Aquinas, unlike Ibn Sina, finally asserts that God *is* a substance! He denies that God is in the *genus* substance, because of the argumentation mentioned above, which is broadly comparable to the reasoning presented by Ibn Sina; but despite this, Aquinas also maintains that God *is* a substance, indeed, the first simple substance (*substantia prima simplex*).[28] Aquinas does not maintain that God is a substance in the sense of that which underlies accidents, but only in the sense of subsistence, or existing of itself, as is implied in his discussion of the issue of whether God should be considered a person:

> Reply Obj. 3: The word "hypostasis" does not apply to God as regards its source of origin, since He does not underlie accidents; but it applies to Him in its objective sense, for it is imposed to signify the subsistence. Jerome said that "poison lurks in this word," forasmuch as before it was fully understood by the Latins, the heretics used this term to deceive the simple, to make people profess many essences as they profess several hypostases, inasmuch as the word "substance," which corresponds to hypostasis in Greek, is commonly taken amongst us to mean essence.[29]

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[27] *See Thomas Aquinas, De ente et essentia, cap. IV: Invenitur enim triplex modus habendi essentiam in substantiis. Aliquid enim est, sicut Deus, cuius essentia est ipsummet suum esse; et ideo inveniuntur aliqui philosophi dicentes quod Deus non habet quiditatem vel essentiam, quia essentia sua non est aliud quam esse eius. Et ex hoc sequitur quod ipse non sit in genere, quia omne quod est in genere oportet quod habeat quiditatem praeter esse suum, cum quiditas vel natura generis aut speciei non distinguatur secundum rationem naturae in illis, quorum est genus vel species, sed esse est diversum in diversis.*

[28] *See Thomas Aquinas, De ente et essentia, cap. 1.*

[29] *Summa Theologica, I^a q. 29 a. 3 ad 3: "Ad tertium dicendum quod nomen hypostasis non competit Deo quantum ad id a quo est impositum nomen, cum non substet accidentibus, competit autem ei quantum ad id, quod est impositum ad significandum rem subsistentem. Hieronymus autem dicit sub hoc nomine venenum latere, quia antequam significatio huius nominis esset plene nota apud Latinos, haeretici per hoc nomen simplices decipiebant, ut confiterentur plures essentias, sicut confitentur plures hypostases; propter hoc quod nomen substantiae, cui respondet in Graeco nomen hypostasis, communiter accipitur apud nos pro essentia."*

If Jerome thought there was poison lurking in the word "hypostasis," Ibn Sina seemed to think there was some of it connected with the word "substance," too. Despite the fact that Aquinas so generously cites the *Metaphysics* of Ibn Sina (*Al-Shifa'*), he does not follow him on this point: while for Ibn Sina it is dangerously misleading to call God a substance, even if we can define the word in such a way that it could apply to Him, for Aquinas what is important is only to deny that God belongs to the *genus* of substance. Aquinas leaves us, however, with the awkward position of maintaining that God is a substance who does not belong to the genus of substance, not because he finds anything wrong with the idea that substance could be a genus, but because a particular substance, God, cannot belong to any genus, and hence not to the genus of substance, despite the fact that He is admitted to be a substance.

Since *De ente et essentia* was an early essay written years before work was begun on the *Summa*, it is possible that in the later work Aquinas is actually closer to Ibn Sina than he was in the earlier work.[30] As far as I have been able to discern, however, we do not find an explicit denial of the earlier view (that God is a substance, the first simple substance), although the position that God does not belong to the *genus* of substance is maintained throughout.

The issue is complicated by the fact that the Church had used the term *ousia* in Greek and *substance* in Latin to express the doctrine of the Trinity. In Tertulian's formulation there are three persons in one substance. Greek theologians used *hypostases* for the persons. Etymologically, however, the Greek *ousia* corresponds to the Latin *essentia*, and the Greek *hypostasis* to the Latin *substantia*. Despite the etymology, Latin writers translated *ousia* as *substantia*, and when they did so, it was often with regard to an understanding of substance very different from that of Aristotle's. So, if Aquinas sometimes affirmed that God is a substance, as in *De ente et essentia*, while denying that substance is a genus that includes God, some of the awkwardness might be explained as due to his *philosophical* conviction that God is not a substance, for reasons not unlike those of Ibn Sina, while being committed to the claim that the multiplicity of the persons of the

[30] Thanks to Winfried Löffler for pointing out the chronology of the works of Aquinas, and that we ought not assume that the earlier and later words are consistent with one another. See I.T. Eschmann, O.P., "A Catalogue of St. Thomas' Works: Bibliographical Notes" in Appendix to Etienne Gilson's *The Christian Philosophy of Saint Thomas Aquinas* (New York: Random House, 1956) 381-439.

Trinity does not contradict unity of substance in some *theological* sense to be found in the creeds and patristic writings, about which there continues to be considerable controversy.[31]

Ibn Sina, has his own awkwardnesses. We will turn to a few of them when we consider how he seeks to treat things that don't exist.

There are a number of reasons why the position taken by Ibn Sina on this issue, namely that God is not a substance, is important. First, it sets the stage for much subsequent Islamic philosophical theology. By the time we arrive at Mulla Sadra, we find God identified with pure existence itself devoid of any whatness, and the proof of the sincere is transformed into a proof that it is existence itself that is necessary of existence, rather than that there must be something which is necessary of existence, as in Ibn Sina. Secondly, in Sufi theory we also find the identification of God with existence itself and a denial of the view that God is a substance. Substances are taken to be limited whatnesses in the external world, while God is unlimited existence. Several arguments are presented for the view that God is existence and is not a substance in the famous introduction to the commentary on the *Fusus* by Qaysari (d. 751/1350). Qaysari is a prominent Sufi theoretician whose work has had a profound impact on subsequent Sufi theology or theoretical mysticism. Qaysari's argument is stated as an argument that existence is not a substance, and after this it is shown that existence is not an accident and is to be identified with God.

> Nor is it a substance, for [a substance] is an existent in the outside that is not in a subject, or a whatness that is not found in a subject, if it exists, while existence is not like that; otherwise, like a determinate substance, it would be in need of an additional existence and what that implies.[32]

The basic point here displays the influence of Ibn Sina. God cannot be a substance because substance is a sort of whatness, and as such depends on something else for its existence.

Aside from the influence of Ibn Sina's arguments that can be traced in Islamic theology and mysticism, we find that the position taken, that God is not a substance, resonates with Islamic spirituality because of the emphasis on *tawhid*, divine unity, in Islam. The radical affirmation of the oneness of God leads, through a long association of oneness with being, to

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[31] See Stead 1994, 160-172.
[32] Qaysari 1375/1996, 13.

a radical affirmation of divine being, that pure absolute being is God and as such God stands outside the framework of the categories.

The main benefit of such a claim is that it provides the chief framework principle for a speculative theological metaphysics that gives shape to such theological topics as the proofs for the existence of God, the nature of the divine attributes, the relationships between God and the world and between God and man, the problem of evil, and much else. The chief objection to this sort of theology is that it makes God so abstract that the believer cannot relate to Him. However, to conceive of God in a more personal way becomes an excuse for anthropomorphism, and belief in an anthropomorphic god is just not possible for those who see such belief as little better than superstition. On the other hand, the rich tradition of spirituality in Islam, especially the poetry of the Sufis, is ample testimony to the fact that a profound personal relationship to God is not hampered by a metaphysical theology that denies that God is a substance.

4. Appendix: Ibn Sina's Non-denoting Singular Terms

Ibn Sina's ontology is one that is populated by whatnesses that lack existence in the external world as well as those that actually exist. He uses proper names, such as Zayd, in order to refer to both existing and non-existing whatnesses. This would seem to indicate that one would need a free logic or a Meinongian logic in order to formalize the sorts of arguments he offers for the claim that God is not a substance.

If we consider the texts in which Ibn Sina discusses non-existent entities, we find that a Meinongian semantics is better suited than other forms of free logic, although certain qualifications must be kept in mind. According to Ibn Sina, everything that can be called a thing has its own "proper existence" whether or not it actually exists. Actual existence in the external world is called "positive existence." Proper existence seems to be like Meinong's *Außersein*. However, the Avicennan proper existence—when non-actual—is conceptual rather than Platonic:

> …the thing exists either in the concrete or in the estimative [faculty] and the intellect. If [this] were not the case, it would not be a thing.
> …when…it is said, "The thing may be absolutely nonexistent," this is a matter that must be looked into. If by the nonexistent is meant the nonexistent in external reality, this would be possible; for it is possible for a thing that does not exist in external things to exist in the mind. But if [something] other than this is meant, this would be false and there would be no information about it at all….

> …information is always about something realized in the mind. No affirmative information about the absolutely nonexistent is [ever] given. If, moreover, information about it is given in the negative, then an existence in some respect is given it in the mind. [This is] because our saying "it" entails a reference, and reference to the nonexistent that has no concept in any respect at all in the mind is impossible.[33]

Strictly speaking, it follows that there are no non-referring terms for Ibn Sina. Terms will either refer to things in the external world, or, failing that, to things that are merely in the mind; however, information is given in predication by applying one mental concept to another, and it is only accidentally that this may describe what exists positively in the external world. So, there is an ambiguity in the term "existence". It can mean actual existence in the external world, or it can mean existence in either the external world or in the mind. This ambiguity is mostly ignored in Ibn Sina's logical works, and as a result, the impression is given that Ibn Sina holds that all true predications must be made about actually existing objects in the external world.
Nicholas Rescher has claimed:

> Avicenna is thus committed to the thesis that if ϕ is a genuine predicate, then
>
> "ϕa" is true
> E!a [i.e., a exists]
>
> is a valid inference…[34]

The inference will be valid, according to Ibn Sina, only if existence is interpreted broadly to include both positive and mental existence. In the *Logic* of the *Isharat* Ibn Sina writes:

> The affirmative is not possible except for what is positive as represented in existence or *in the mind*.[35]

Clearly this implies that there can be true affirmative propositions about things that exist only in the mind, contrary to the standard interpretation of Ibn Sina as expressed by Rescher.

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[33] Marmura 2005, 25.
[34] Rescher 1966, 73. The point is also corroborated in Morewedge 1979, 192.
[35] My italics (obviously). *Isharat*, Vol. 1, *Al-Mantiq* 1992, 244. Note that the meaning of "positive" here is not limited to the actually existing.

As we have seen, Ibn Sina is quite willing to affirm that Zayd is a man and that Zayd is a substance, and that "is a man" and "is a substance" are genuine predicates, while denying that the inference to "Zayd exists" would be valid in either case, (unless existence is understood to include merely mental existence). In the *Isharat*, Ibn Sina claims that we can know that Zayd is a substance without knowing whether he exists, and this implies that it can be true that Zayd is a substance even if Zayd does not have actual existence in the external world. Likewise, in the *Danesh nameh*, he asserts that we can have no doubt that a body is a substance while doubting whether it exists, again implying that a particular affirmative proposition about something that does not exist in the external world could be true.

Rescher refers to a discussion in Ibn Sina's logic in which he distinguishes between the negative proposition that Zayd is not a being-that-sees from the affirmative proposition that Zayd is a being-that-does-not-see. The latter has existential import, but not the former. Generally, Rescher is right, and particular affirmative propositions are taken to imply the actual existence of the subject. In fact, one has to dig fairly deep to find Ibn Sina accepting the truth of individual affirmative propositions about things that do not actually exist in the external world. Usually, the mental existents that he is willing to make affirmative assertions about are abstract entities such as numbers and kinds. However, Ibn Sina is willing to allow exceptions to this general rule where what is predicated is an essential attribute describing a nature, species or genus. In the case of "Zayd is a substance," for example, the subject, "Zayd", will refer to the proper existence of Zayd, that is, his individual whatness, to which the predicate truly applies, even if Zayd does not actually exist. In fact, even the statement "Zayd is a being that sees" might be true when Zayd does not exist, because according to Ibn Sina, one can make affirmative statements that describe the nature of a thing regardless of whether the thing exists in the external world or merely in the mind.[36] However, "Zayd is a being-that-does-not-see," will normally have existential import, because the predicate does not describe the individual nature, species or genus of Zayd, and so can only be true by describing an accident of Zayd in the external world with the implication that Zayd has positive extra-mental existence. Ibn Sina indicates that much depends on the intention of the speaker to determine whether an expression in a given format is to be interpreted with existential import or not, and whether what is predicated is to indicate the character of the species or ge-

[36] See Inati 1984, 83-86.

nus or something else.[37] We might accordingly speculate that if one were speaking of a person, Zayd, and asking whether or not that person happens to be blind, to respond with an affirmative statement, "Zayd is a being that sees," would have actual existential import. If, however, one means by this statement only to affirm that Zayd belongs to a species of sighted creatures, the affirmation could be true even if Zayd only exists in the mind.

Ibn Sina tells us that the proper existence of a thing is equivalent to its truth (*haqiqah*); and that each thing has a truth that is proper to it, namely its whatness.[38] A thing must exist either in the external world or in the mind, for otherwise it could not be meaningfully called a thing. But it seems that full determinacy only applies to actually existing objects, and mere mental existents remain indeterminate with respect to some predicates, so that neither the predicate nor its contrary can be truly applied to what has only mental existence. Exactly how much is to be included in an individual whatness remains unclear, but a merely mental existent *a* will be incomplete in the sense that for some predicate *F*, neither *F* nor its contrary *(-F)* are true of *a*. Incomplete entities are universal in the sense that different instances of the whatness of a merely mental entity could be realized in the external world. Individuality, conversely, is guaranteed by existence in the external world. It is in this sense that existence is the principle of individuality.

If we wanted to express Ibn Sina's views in terms of contemporary formal semantics, a rather complex sort of modeling would be needed. While this kind of exercise might illuminate some features of Ibn Sina's thinking, one must not forget that Ibn Sina's logic was Aristotelian rather than that of modern quantification: predicates apply to subjects rather than to variables. If we were to attempt to transpose Ibn Sina's views into a quantificational key, however, we could introduce two sets of quantifiers, "$\exists^{pro}$" for proper existence, and "$\exists^{+}$" for positive existence. For "there is exactly one" we will add an exclamation point to the quantifier.

(1) $\exists! x\ Fx =_{def.} \exists x \forall y\ (Fy \equiv x=y)$

The following propositions will then be considered true:

(2) $\exists^{pro} x$ (Unicorn x & has a horn x)

[37] Specifically, one might use either of the forms "Zayd is not a thing-that-sees," or "Zayd is a non-seeing-thing" to mean the other. See *Al-Najat*, 16.
[38] Marmura 2005, 24.

(3) $\sim\exists^{+}x$ (Unicorn x & has a horn x)

From an Avicennan perspective, this is somewhat misleading, because the term "proper existence" is used only for whatnesses insofar as meaningful information can be given about them, such as one being distinct from another, and not with regard to the possession of a type of existence other than that which is possessed by the things of the external world. However, Ibn Sina allows himself to use the language of "proper existence" for things that merely exist in the mind.

So, a sentence like:

(4) The phoenix is a bird.

would be ambiguous. It would be true if interpreted in terms of proper existence:

(5) $\exists^{pro}!x$ (Phoenix x & Bird x)

but false if interpreted in terms of positive existence:

(6) $\exists^{+}!x$ (Phoenix x & Bird x)

In fact, Ibn Sina does not consider the interpretation in terms of mental existence when he considers the assertion "The phoenix is non-seeing," which he takes to be false since the phoenix does not actually exist.[39]

If we were to scrap the Avicennan conceptualism, we would get a domain of "proper existence" consisting of everything to which one could possibly refer in a true proposition. A proper subset of this would be an "inner domain" of "positive existence". In this case, since everything would have proper existence, it would be trivial that whatever has positive existence has proper existence. Ibn Sina, however, is not willing to recognize the proper existence of every possible whatness, but only those that exist in the mind. He does not discuss the issue of whose mind, but it seems that he means the mind of the person who makes the assertion in question. There is no discussion of the mind of God in this regard.

[39] *Al-Najat*, 16.

If we want to be more true to Ibn Sina, we would have to allow that proper existence and positive existence determine two domains: things that exist in the mind and things that exist in the external world, such that the latter is still a subset of the former. There are things that exist in the mind that do not exist in the external world, like the phoenix, and it would seem that there are things that have positive existence but do not have proper existence, like things that actually exist but no one has ever thought about. At the very least, a speaker should be able to admit that there are things in actual existence about which the speaker is totally ignorant. Ibn Sina, however, would deny that we can meaningfully make assertions about things that have no existence in the soul, for as soon as we make the assertion, we posit a meaning in the soul. When we say that there are things about which we are ignorant, the term "things" has meaning for us and hence there is a whatness, no matter how incomplete, in the soul to give meaning to the assertion. Finally, there are things that exist in both the proper and positive senses. So, the set of those things that have proper existence exhausts the domain of all things about which meaningful assertions can be made. There is no room for Meinongian impossible objects in Ibn Sina's ontology, and the set of positive existents about which assertions can be made is a subset of the set of proper existents. The only existents that Ibn Sina considers at all are those about which some assertion might be made, so actually existing things that no one has thought about or mere possible objects that no one has imagined are beside the point of the sort of semantic or logical theory he is trying to develop.

When Ibn Sina speaks of substances, he sometimes describes the condition of existing not-in-a-subject as a conditional, when it exists, then what is counted as a subject exists not-in-a-subject.[40] Assuming that it exists, even if it doesn't, a substance exists not-in-a-subject. This could lead to something like a supervaluations approach to non-existent objects. According to that approach, *Fa* is true even when *a* doesn't exist, if and only if in every possible situation in which *a* does exist, *Fa* is true.

Sometimes, however, Ibn Sina speaks of mental existence and external existence as if these were two vessels: when something enters the mind, it gains one kind of existence, when it enters the actual world, it gains another type of existence. If that were the case, however, we could speak of two distinctions: between whatness and positive existence and between whatness and mental existence. There is no support for this in the texts, and it is inconsistent with the rationale for the introduction of mental exis-

[40] *Danish Nama-i 'Ala'i* 1973, 56; see above fn. 20.

tence. Ibn Sina comes to mental existence in order to find a locus of reference for terms and concepts that do not denote anything in the external world. The main distinction in the contingent existents is between existence and whatness. Informative true propositions are made about contingent existents that lack actual existence, so a referent is sought for what would otherwise be nondenoting terms.

The examples that Ibn Sina uses for things that exist only in the mind are things that exist only in the past and only in the future. This makes Ibn Sina what contemporary philosophers have called an *actualist*.[41] The following three formula may be used to describe *temporal actualism* in terms of positive and proper quantifiers. This is followed by the relevant passage from *Al-Shifa'*.

(7) $\forall^{pro}x$ ((Past x & ~Now x) → $\sim\exists^{+}y(x=y)$)

(8) $\forall^{pro}x$ ((Future x & ~Now x) → $\sim\exists^{+}y(x=y)$)

(9) $\forall^{pro}x(\exists^{+}y(x=y)$ → Now x)

> Thus, for example, if you said, "The resurrection will be, "you would have understood "resurrection" and would have understood "will be." You would have predicated "will be," which is in the soul, or "resurrection," which is in the soul, in [the sense] that it would be correct for this meaning, with respect to another meaning also intellectually apprehended (namely, one intellectually apprehended in a future time), to be characterized by a third meaning (namely, [the object] of intellectual apprehension: existence). This [pattern of reasoning] applies correspondingly to matters relating to the past. It is thus clear that that about which information is given must have some sort of existence in the soul. Information, in truth, is about what exists in the soul and [only] accidentally about what exists externally.[42]

A modal actualism could be characterized in the same manner. First, we should introduce two sets of quantifiers: one that covers the domain of all possible existents whether they exist in the mind alone, or in the mind as well as in the actual world, and another that has as its domain the things of the actual world.

The example used by Ibn Sina is not of just any non-actual possible object, but of a future object. Aristotle would have said that it has *potential being* as opposed to *actual being*. This suggests another example of the

[41] Menzel 2006.
[42] Marmura 2005, 27.

drift toward abstraction in the metaphysics of Ibn Sina: from potential existence to mental existence.

According to Ibn Sina, whatnesses can exist merely in the mind and/or they can exist in the external world, but the mind has a certain priority here, since (as stated in the above passage), "Information, in truth, is about what exists in the soul and [only] accidentally about what exists externally." Furthermore, to say that a whatness exists in the external world is only to say that it is instantiated or realized in an existing thing. As universals, whatnesses have no extra-mental existence of their own. Here we find a hint of a position with greater resonance in the mystical traditions of Islam: that whatnesses are mental constructs and that what is in the external world is only existence. This sort of development, however, cannot be attributed to Ibn Sina, and would have to wait six centuries to blossom in Islamic philosophy in the works of Mulla Sadra.

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Substance, Nature, and Immanence – Form in Aristotle´s Constituent Ontology

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1.

Aristotle is what we might call a constituent ontologist. At least, in the *Physics* and, especially, the *Metaphysics*, he presents an account of familiar particulars (the primary substances of the *Categories*) that construes them as something like mereological wholes—composites made up of constituents or components of various kinds.[1] The context for this account is a certain philosophical project—that of identifying what Aristotle calls the substance of familiar particulars. To identify the substance of a thing, he tells us, is to identify the cause of its being ($1017^{b}15$); but this formulation of the project requires parsing. Taken by itself, Aristotle thinks, the term 'being' is an incomplete expression: so taken, it fails to express any substantive content. It is only when supplemented with an expression signifying a kind under which familiar particulars fall that the term expresses a complete content. Accordingly, to identify the substance of a familiar particular is to identify that in virtue of which the particular is, say, a geranium, a giraffe, or a human being.[2]

The idea, then, is that a familiar object has its distinctive form of being (what we might call its essential character) dependently; it derives that character from one or more other things; and the things on which it depends for its character are or include things that have their own character nonderivatively. What Aristotle wants to claim is that the things from

[1] This paper brings together material from a series of recent papers in which I try to lay out the contours of what I call Aristotle's constituent ontology. See Loux 2005a, Loux 2005b, and Loux 2006. The material from section 3 is new, although the framework I employ has its roots in Loux 1991 and Loux 1995.

[2] Detailed arguments for this claim are found in Section I of Loux 2005a. See, in particular, the contrast Aristotle draws in $996^{a}5$-8, $1001^{a}3$-8, and $1053^{b}9$-15. Clearly he rejects the Platonic/Parmenidean/Pythagorean view that being and unity are the substance of things. He endorses instead the view that 'being' and 'one' are to be explained by reference to some other nature ($1053^{b}13$-14).

which a familiar particular derives its character are immanent in the particular in the sense that the particular is composed or made up of them.[3]

So, familiar particulars exhibit a compositional structure. This theme is not unique with Aristotle. Even in our own day there are philosophers who invoke the constituent approach in their account of the character of concrete particulars.[4] They share with Aristotle the idea that familiar particulars are wholes of independently identifiable and metaphysically prior constituents. Taken individually, each of the constituents making up a particular falls short of, is something less than, the whole particular; taken together, they yield the whole. The relation between a composite and its constituents is analogous to that between a particular and its commonsense parts. Nonetheless, the two relations are different. The relation between a composite and its constituents is prior to that tying a familiar object and its commonsense parts. The constituents of a thing are responsible for every aspect of the thing's character, and its commonsense mereological structure is just another aspect of that character. Furthermore, it is in quite different ways that the commonsense parts and the constituents or metaphysical "parts" of a familiar object are, taken individually, less than the whole familiar object. Each of the commonsense parts of a thing is spatially less than the thing: the place a commonsense part occupies is a proper part of the place occupied by the whole. By contrast, the best we can do in response to the challenge to identify the place of one of a thing's proper constituents is to point to the place occupied by the whole. As Aristotle puts it, a particular's constituents are each substantially rather than spatially less than their whole.[5] Taken individually, each constituent induces a form of being that falls short of the form of being exhibited by its containing substance; taken together, the constituents yield precisely that form of being. Finally, while a doctrine of mereological essentialism is of dubious plausibility for the case of a thing's commonsense parts, it is inevitable for the case of its constituents. We are inclined to think that a familiar concrete object can gain or lose this or that commonsense part, but defenders of constituent ontology hold that a thing has its constituents or metaphysical "parts" essentially or necessarily.

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[3] See $996^{a}15$, $1080^{a}37$-$1080^{b}3$, $998^{a}20$ff. Aristotle contrasts what I am calling constituent ontology with theories that make the substance of familiar particulars something that exists apart from them. Wolterstorff 1991 calls such theories relational.

[4] See, for example, Armstrong 1989 and Armstrong 1997 as well as Bergmann 1967.

[5] See $1034^{b}34$-$1035^{a}5$.

On this last point, the relationship between a composite and its constituents agrees with three other compositional relations—that tying a sum or fusion of formal mereology to its proper parts, that tying a set to its members, and that tying a conjunctive property to its conjuncts. In all four cases, the composite has each of its components essentially. Indeed, in all four cases, the composite has its components both essentially and uniquely.[6] There is, nonetheless, an important difference between the compositional relation at work in constituent ontology and the other three compositional relations. The latter are all such that necessarily if it is possible for a plurality of objects to compose or make up the relevant whole (whether fusion, set, or conjunctive property) then the objects in the plurality do compose it. Not so in the case of the constituent-whole relation: the objects constituting a given familiar particular do so only contingently.

And Aristotle thinks that this relation gives familiar objects their characteristic structure. It is, of course, a particular's matter and form that Aristotle counts as its constituents.[7] He thinks it is because the particular has the matter and, especially, the form it does that it is marked out as a distinct member of its proper kind. While he tells us that a thing's matter and form only contingently compose the thing (1029^{a}21-23), he thinks that the thing has its matter and form essentially: for the thing to lose either, he tells us, is for it to cease to exist (317^{a}23-26). Finally, he thinks that a particular has its constituents uniquely. All the individuals of a species have numerically one form; but each such individual has a numerically distinct parcel of matter as a constituent (1034^{a}5-8).

2.

So Aristotle endorses the constituent approach to the character derivation we meet in the case of individual concrete objects. But why? Why does he not endorse instead a relational picture where contingent particulars have their character in virtue of standing in some nonmereological relation (participation, say, or exemplification) to some transcendent source of charac-

[6] This formulation works for Aristotle, but some constituent ontologists would insist that we say that where a thing, *x*, has as its constituents, *a* … *n*, put together in a certain order, *x* has both essentially and uniquely the property of being composed of *a* … *n* in just the relevant order. See, for example, Armstrong 1997, 178ff.

[7] A theme I do not discuss in this paper is the idea that an individual substance and an accident can combine to constitute the kind of composite Aristotle calls a coincidental. For a discussion of this theme, see Loux 2005a, Loux 2006, and, especially Loux 2005b.

ter? Or why does he not deny the need for any kind of ontological account of character, holding instead to a syncategorematic account of the predicate-terms that express the various forms of character? The answer, I think, is that Aristotle believes that of the available strategies, only the constituent approach to character derivation has the resources for providing a satisfactory account of the phenomenon of coming to be and passing away.

Aristotle takes it to be a prephilosophical truism that familiar particulars come to be and pass away, but he recognizes that the prephilosophical intuition we meet here needs defending. There are, after all, Parmenides' famous arguments to show that neither coming to be nor passing away is possible. To simplify, we can restrict ourselves to the case of coming to be. Towards showing that it is impossible for a thing to come to be, Parmenides presents us with a dilemma: for any candidate case of coming to be, either (i) the thing that allegedly comes to be comes to be from that which is or (ii) it comes to be from that which is not. But, Parmenides argues, (i) is impossible since a thing that is cannot come to be: it already is; and (ii) is likewise impossible since a thing cannot just "pop" into existence out of nothing or nonbeing ($191^{a}27$-31).

Aristotle's response is to reject Parmenides' interpretation of both (i) and (ii).[8] While denying that our prephilosophical concept of coming to be presupposes the sort of radical emergence *ex nihilo* that Parmenides reads into (ii), Aristotle insists that we can reject Parmenides' interpretation of (ii) without endorsing the contradictory idea that Parmenides reads into (i)—the idea that a thing pre-exists its coming to be ($191^{a}35$-$191^{b}25$). He wants to claim that whenever it is true that a concrete individual, *y*, comes to be, there is some antecedently existing thing, *x*, and some predicable content, ϕ, such that *y*'s coming to be is *x*'s coming to be ϕ.[9] Accordingly, the product of the coming to be—*y*—does not exist before the change, but neither does it just "pop" into existence, so that where there was nothing, there now is something. Prior to the change, there was the thing, *x*; and what happens in the change is that a universal, ϕ, not previously predicated of *x* comes to be predicated of it. The upshot is that, after the change, there exists a new item—the ϕ-ish *x*; and that new thing is our *y*.

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[8] See Loux 2006 for a detailed discussion of Aristotle's strategy here.

[9] See, in particular, the discussion of the coming to be of the musical man in *Physics* I.7. The example is the coming to be of a coincidental, but Aristotle makes it clear that the treatment he recommends for the case of the musical man works as well for the case of the generation of a substance. See $190^{b}1$-4.

What we have labeled '*x*' and 'φ' are, of course, the matter and form of our generable individual, *y*. As we have seen, Aristotle wants to claim that a thing's matter and, especially, its form are responsible for the thing's distinctive character; and he insists that we construe these sources of character as constituents of the thing whose character they underwrite. To see why, recall the schema: whenever a thing, *y*, comes to be, there is some antecedently existing thing, *x*, and some universal, ϕ, such that *y*'s coming to be is *x*'s coming to be ϕ. But notice, the application of this schema to a sample case of coming to be serves as a satisfactory reply to Parmenides only if the thing that comes to be in the change (what we are calling *y*) is nonidentical with the antecedently existing thing we are calling *x*. Suppose instead that *x* and *y* are identical. Then, either *x* pre-exists the change or *x* does not pre-exist the change. If it does, then so does *y*; but, then, *y* cannot come to be: it already is. If, one the other hand, *x* does not pre-exist the change, then *y* can come to be only by way of a radical emergence *ex nihilo*. But these are just the two options Parmenides reads into (i) and (ii).

Accordingly, if Aristotle's reply to Parmenides is to be successful, the product of a coming to be—(*y*)—must be nonidentical with the antecedently existing thing, *x*; and that, Aristotle wants to claim, is precisely how things turn out on a constituent interpretation of the product of a coming to be. On that interpretation, *y* is the φ-ish *x*; and the φ-ish *x* is a composite whose proper constituents are the antecedently existing *x* and the universal φ. But since a composite is nonidentical with each of its proper constituents, *x* and *y* turn out to be nonidentical.

While he thinks that his constituent interpretation of the things that come to be gives this result, Aristotle would deny that we get the requisite nonidentity if we endorse either a relational account of the character of familiar particulars or the extreme nominalist's syncategorematic reading of predicate terms. Aristotle would claim that on the extreme nominalist's account, we have a single thing before and after our change: we have *x* and nothing else. After the change, a new predicate term—'φ'—is true of *x*; but since the extreme nominalist denies that there is any entity over and above *x* corresponding to that term, the extreme nominalist must deny that its application to *x* does anything to alter the ontological landscape. Accordingly, the extreme nominalist must deny that what exists before the change is nonidentical with what exists after the change. But, Aristotle would claim, the same is true of the philosopher who endorses a relational account of character. On that view, the upshot of our change is that *x* stands in some new nonmereological relation to an item that has the appropriate

form of character nonderivatively; but since the relationist construes that item as a transcendent entity, the relationist must deny that *x*'s standing in the new relation does anything to alter the ontological census. There, where *x* is, we have no new entity: before the change, we had *x* and that is all we have after the change.

And Aristotle would reject the reply, by either the extreme nominalist or the relationist, that since for *y* to exist is just for *x* to be φ, we do, in fact, have a new entity once it is true that *x* is φ. He would insist that unless it is a claim expressing a constituent interpretation of the product of our change, the reply expresses nothing more than the decision to adopt a linguistic convention that allows us to abbreviate the phrase 'the φ-ish *x*' by the symbol '*y*'; and Aristotle would deny that any such decision on our part can bring it about that a new nonlinguistic entity exists.

3.

So Aristotle's constituent approach to character has its roots in the idea, first, that only things that are composite can come to be and, second, that what comes to be is always something with a distinctive form of character. Nonetheless, the constituent approach can appear problematic to someone with Aristotle's philosophical commitments. Although he wants to claim that familiar particulars have a complexity of structure that goes beyond the metaphysical picture delineated in the *Categories*, the Aristotle of the hylomorphic theory wants to preserve the core intuition motivating that early treatise, the intuition that familiar particulars—things like "a certain man" and "a certain horse"—are genuine substances (2^a12-15). Aristotle, however, thinks, first, that substances are thorough going unities and, second, that they are things whose characteristic forms of being are irreducibly basic or autonomous (1037^b27). A constituent ontologist, by contrast, tells us that familiar particulars are composed of a plurality of metaphysically prior objects and that the form of being a given particular exhibits derives from the independently identifiable forms of being of its constituents. But, then, it is difficult to see how one can hold both that familiar particulars are genuinely substantial and that they derive their character from the ontologically more fundamental items that compose or constitute them.

This tension is, of course, a central concern for Aristotle. The tension occupies him in a variety of contexts, but it receives its most detailed treatment in the middle books of the *Metaphysics*. The focus there is the concept of form. What Aristotle seeks to show is that if we understand

form as he does, we can consistently hold both that familiar particulars are composites that derive their character from their constituents and that they display the sort of irreducible unity and being that qualify them for status as substances.

The problem of substantial unity and the problem of the autonomy of substantial being are intimately related, but towards displaying Aristotle's strategy for relieving our tension, let us begin by looking at the problem of unity. The threat to unity that seems to accompany a constituent analysis comes out in a certain picture of the structure of familiar particulars. On that picture, a familiar particular is nothing but a plurality of completely independent items loosely tied together by some sort of additive or summing relation. The constituents of the particular are independent not just in the sense that it is possible for each to exist apart from the configuration that is the relevant particular, but in the stronger sense that it is possible for each of them to exist apart from any such configuration. So each item constituting a concrete particular is self sufficient; each is capable of existing in isolation, apart from any constituting context. It is a merely contingent fact about the item that it is a constituent at all. As Aristotle sees it, this picture takes familiar particulars to be captured by the formula:

this plus this plus . . . plus this,

where the different occurrences of the pronoun pick out the various constituents of the particular and the 'plus' (*kai*) expresses the summing relation that contingently connects them.[10]

This formula expresses nicely the accounts of familiar particulars found in those of Aristotle's predecessors who endorsed the immanentist or constituent strategy. Aristotle points to Empedocles as a practitioner of the strategy ($997^{b}30$-31), and for him concrete particulars are nothing but bundles of various quantities of the four elements. It is plausible to construe Democritus too as an immanentist, and he identified familiar particulars with conglomerations of atoms. In both cases, a familiar particular is just a plurality of metaphysically independent and self sufficient items—"thises"—contingently tied together by some merely additive relation. Aristotle concedes that this picture is one that conflicts with the idea that things like "a certain man" and "a certain horse" have the sort of thorough going unity characteristic of genuinely substantial entities; but he wants to

[10] See, in particular, $1043^{b}5$-14, where we meet what is essentially the formula I lay out.

deny that the picture is mandatory for practitioners of the constituent approach to character. In particular, he wants to claim that his own hylomorphic version of that approach provides the resources for preserving both the intuition that substances are fully unified objects and the intuition that things like "a certain man" and "a certain horse" are substantial.

The threat to substantial unity, Aristotle thinks, derives from the idea that each of the items functioning as constituents of a familiar particular is an independent and self sufficient entity—a "this" that can exist apart from any constituting context. Given that idea, Aristotle thinks, the best a constituent ontologist can do to accommodate our intuitions about the unity of familiar particulars is to posit some merely conjunctive relation; and that, he concludes, delivers nothing more than aggregates that fit the formula "this plus this plus . . . plus this." What Aristotle wants to claim is that the hylomorphic account of familiar particulars rejects the idea that the constituents of familiar particulars are, one and all, independent and self sufficient in this way. He concedes that the matter constitutive of a familiar particular is a "this"—it is a potential object of ostension that can exist apart from the particular as an object in its own right (1033^{b}20-24); but he denies that the same is true of the form copresent with the matter. He denies that form is a "this, a definite object" (1033^{b}23); it is something such that necessarily it exists only in a constituting context. Its categorial form permits it to exist only as a component in a familiar particular.

The idea that form's existence is tied to its role as constituent gets expressed in a number of ways. In *Metaphysis* Z.8, we are told that form is a "such" (1033^{b}22). The idea is that form is necessarily or essentially something that is predicated of one or more subjects, one or more independently existing "thises." The subjects for the prediction of the form are, of course, the antecedently existing items that count as matter for a particular of the appropriate kind;[11] and in each case, the form is just *how* the matter is, *the way* the matter is. Although the form can exist apart from any one of the items that count as its subject or matter, it is impossible for it to exist without being predicated of some matter or other. What is just the way some matter is cannot exist without some matter to be that way. So form is not a "this," but a "such"; and where it is predicated of some matter, we do not have a mere conjunction of independent and self sufficient "thises." The familiar particular is not a "this plus this plus . . . plus this"; it is, as Aristotle tells us, a "this such." It is not just a plurality of numerically distinct

[11] For the idea that the form is predicated of the matter see not just 1033^{b}20-24 but also 412^{a}17-21, 1029^{a}20-23, 1038^{b}1-7, and 1049^{a}27-36.

items additively conjoined; it is something with a predicative structure. We have items with categorially different structures and those structures fit each other to yield a predicative complex; we have distinct items that are categorially fitted out to yield, when copresent with each other, a single integrated structure.

It is, however, easy to misunderstand the nature of this predicative structure. One might suppose that it involves three items—the matter, the form, and a relation of predication tying the matter and form together. The assumption would be that numerically different items can be joined only by way of a further item. The difficulty with the assumption is its obviously regressive nature. Not surprisingly, Aristotle rejects the assumption. While conceding that other versions of the constituent strategy may require some sort of linking mechanism, Aristotle denies that any such mechanism is required on his own hylomorphic version of that strategy (1045^{b}8-21). He wants to claim that the proximate matter and the form constitutive of a familiar particular are categorially suited to deliver the required unified composite all on their own (1045^{a}22-34); and it is, of course, because the form is a "such" that this is so. The point here is that it is only if we construe form as a "this" that we will be misled into supposing the need for an additional linking constituent. In the hylomorphic theory, the form, so to speak, carries its own linkage; this is just what its being a "such" comes to. Here, it is useful to recall a comment Aristotle makes in *De Sophisticis Elenchis 22*. He tells us that it is only if we construe predicated entities as "thises" that we will find ourselves confronted with the regress at work in the Third Man Argument (178^{b}37-38).

So form is a "such"; and as something whose very nature is to be predicated of something else, a "such" carries its own predicative link. No third entity is required to tie a "such" to its "this". It is, however, a mistake to suppose that the slogan "Form is a such" implies that there is just a single style of predicative linkage associated with all forms. Here, we are better advised to attribute to Aristotle what Frank Lewis calls the Content Requirement,[12] the idea that the linkage carried by a form is dependent upon and so varies with the content of the form. There is, then, no single linkage expressed by the term 'predication'. What counts as predication varies with the form that together with the appropriate sort of matter constitutes a particular kind of composite.

[12] Lewis 1995.

The set of themes associated with the claim that form is a "such" has frequently been compared with themes we meet in Frege.[13] In Frege, the themes bear on the unity of a thought or propositional content. The Fregean view is that the items making up a single propositional content have to have the appropriate categorial form. We need a complete or saturated entity—an object—and something incomplete or unsaturated—a concept. The two fit each other to yield a single unified thought content.[14] In Aristotle, the theme bears on the unity of familiar particulars, but the claim is analogous. If we are to have a thorough going unity, we need constituents that fit each other: we need a complete or saturated subject of predication—a "this"—and an incomplete or unsaturated predicative constituent—a "such." The resulting composite is a single unified structure—a "this such."

In *Metaphysics* Z.17, the idea that the constituents making up a familiar particular have distinct, but complementary categorial structures comes out in the contrast between what Aristotle calls "elements" and what he calls "principles" (1041^{b}11-33) The elements of a familiar particular are the materials out of which it is composed; and Aristotle argues that no list of such materials, however long, is sufficient to provide a recipe for the existence of the relevant particular. The elements are independently existing "thises." Accordingly, all of them can exist without the particular itself existing. Something more is needed to complete the recipe, and what is needed is not another "this," a further element. To complete our recipe for the existence of the particular, we need to identify the way the relevant elements are put together, the way they are structured or organized. That further feature makes the plurality of elements a single unified structure; but to play that role, it needs to have a categorial form distinct from that of the various elements it unifies. To bring out the contrast, Aristotle calls the further constituent a principle, and he tells us that it is the form of a thing that is the principle that organizes and unifies the elements.

So forms are "suches" or principles rather than "thises" or elements; and because they are, there is a structure to familiar particulars over and above that associated with a mere sum or aggregate. We have a predicative structure: each familiar particular is a "this such" rather than a "this and a this" and Aristotle insists that the relevant predicative structure is the right structure. Forms are "suches," but they are *tode ti* constituting "suches." The *tode ti* (this something) epithet accompanies Aristotle's discussions of

[13] See, for example, Loux 1991, chapter 4.
[14] For the Fregean view, See Frege 1882.

substance from the *Categories* onwards (3^b10). Most commentators take the epithet to be an expression true of each substance; but I have found it useful to treat the epithet as a schema with the pronoun *ti* ('something') serving as a sort of placeholder for substance kind terms.[15] As I read him, Aristotle is claiming that for each substance, there is some true substitution instance of the schema: thus, 'this geranium', 'this dog', and 'this human being'. On my reading, the appeal to the schema highlights the idea that each substance is an individual instance or a particular member of a substance kind; that, Aristotle wants to say, is what being is for a substance.

Understood in this way, the epithet applies only to the familiar particulars the *Categories* calls primary substances. It does not apply to the forms constitutive of those particulars: to repeat, forms are "suches," not "thises." Nonetheless, it is in virtue of the predication of a form that there are things to which the epithet as I have understood it applies: the predication of a form yields something that is an individual instance of a substance kind. Forms, then, are *tode ti* constituting universals: their predication yields composites that are things like "this geranium," "this giraffe," and "this human being"; and when Aristotle applies the *tode ti* epithet, as he sometimes does, to form, this is what he is telling us.[16]

So forms are universals whose predication of the matter delivers individuals falling under substance kinds. Form, then, is the principle of individuation. Standard accounts of Aristotle's metaphysics seem to be denying this. They tell us that matter is the principle of individuation; but what they are calling "the principle of individuation" is something quite different from what I mean by that label. What they call the principle of individuation would be more appropriately called the principle of numerical diversification. They have in mind a point we mentioned earlier. They see that as a constituent ontologist, Aristotle is committed to the thesis that it is impossible for numerically distinct composites to have all and only the same constituents; they also see that all the particulars of a given substance kind have numerically one and the same substantial form; so they conclude that the different particulars must have numerically distinct parcels of the sort of matter that is constitutive of particulars of that kind; and they have the famous comment about Callias and Socrates at the end of Z.8 as a proof text for the claim that Aristotle holds the view they delineate (1034^a5-8).

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[15] See Loux 1991, 29-32.

[16] See, for example, 1029^a27-28, 1049^a35-36, and 412^a7-8.

Of course, they are right in attributing this view to Aristotle; but the term 'individuation' is not quite the right term for identifying the problematic surrounding the comment from Z.8. A principle of individuation should be that in virtue of which a thing is marked out as an individual falling under its proper substance kind; and for things like "a certain man" and "a certain horse," it is the form that plays that role. The matter of which the form is predicated lacks the articulation characteristic of the relevant substance kind; it is, as Aristotle puts it, only potentially an individual member of the kind. It is in virtue of the predication of the appropriate form that there actually exists an individual instance of the kind. So the form is what first delivers a thing with the individuality characteristic of the members of a substance kind. To use Fregean language once again, we might say that form is a kind of function from matter to an individual member of a substance kind.

So the complex that results from the predication of a form is not a mere aggregate; it is an individual instance of a substance kind. We can, however, envision a critic objecting that the individuality we meet here masks an underlying plurality. The critic will insist that we still have two things—a matter and a form, so that at the end of the day the hylomorphic theory fails to invest familiar particulars with the kind of unity required for status as substance. Our critic is not satisfied with Aristotle's attempts at contrasting hylomorphic compounds with mere heaps, bundles, and collections. The critic insists on higher standards of substantial unity than those guiding the hylomorphic analysis. Aristotle would respond that in so doing the critic puts more pressure on the concept of unity than it can bear. The critic is assuming that there is some determinate content that is pure and unalloyed unity, some substantive property that is expressed by the term 'one' taken all by itself. Aristotle, however, rejects this assumption. He thinks that the term 'one' lacks a complete sense when taken in isolation.[17] Like the term 'being', 'one' expresses a complete content only when supplemented with a count noun; and in the case of the familiar particulars that constitute the focus of Aristotle's concern, those count nouns are sortal terms expressing the various biological species. There is no such thing as just being one; there is, instead, being one geranium, one giraffe, and one human being. But it is precisely things like one geranium, one giraffe, and one human being that the hylomorphic theory delivers. Things like these are just what results from the predication of a substantial form of a parcel

[17] See, again, $996^{a}5$-8, $1001^{a}3$-8, $1053^{b}9$-15. See also $1087^{b}33$-$1088^{a}14$ and $1053^{b}24$-$1054^{a}19$.

of the appropriate matter. The critic has it wrong: there is no unity over and above the kind of unity guaranteed by the hylomorphic theory. The composites the theory delivers have the only kind of unity it makes any sense to demand.

But why can the theory be depended upon to deliver this result? The answer, I think, is found in a claim that Aristotle repeatedly issues, the claim that being and unity go hand in hand.[18] For appropriate *K*, being a *K* and being one *K* are necessarily coextensive: necessarily, a thing is a *K* if and only if it is one *K*. But, of course, the hylomorphic theory gives us things like a geranium, a giraffe, and a human being. What it is for a geranium, a giraffe, or a human being to exist is just for the appropriate form to be predicated of a parcel of the appropriate matter. But, then, in giving us things like a geranium, a giraffe, and a human being, the theory gives us the paradigmatic cases of unity—one geranium, one giraffe, and one human being.

4.

So it is because it gives us things with the appropriate form of being that the hylomorphic theory can be depended upon to give us things with the appropriate sort of unity. But, then, we are going to be satisfied with Aristotle's final word on the problem of unity only if we do not have worries about the forms of being associated with hylomorphic compounds. We need to know that the forms of being characteristic of geraniums, giraffes, and human beings are all irreducibly basic forms of being rather than mere constructions out of more fundamental lower level forms of being. Accordingly, we will concede that Aristotle has succeeded in investing things like "a certain horse" and "a certain man" with a form of unity sufficient for status as substance only if we are convinced that he has a compelling reply to our second problem, that bearing on the autonomy of the forms of being we meet in hylomorphic composites. The difficulty here, recall, is that, for a constituent ontologist, the form of being associated with any arbitrary composite derives from the independently identifiable forms of being associated with the ontologically more basic things that are its constituents. But, then, the constituent ontologist's account of that form of being would seem to be inevitably reductive; and if it is reductive, then Aristotle is forced to deny that hylomorphic complexes enjoy autonomous forms of being. Substantial being, however, is autonomous being. Since he holds that

[18] See, in particular, $1003^{b}23$-33; but see also $1054^{a}13$-19.

they are matter/form composites, it seems that Aristotle must deny that familiar particulars are genuinely substantial.

Now, the fact is that constituent ontologists have typically endorsed reductive accounts of the form of being associated with what Aristotle construes as substance kinds. Certainly, that would seem to have been the thrust of the accounts presented by the constituent ontologists (like Empedocles and Democritus) with whom Aristotle was familiar, and the same is true of modern defenders of the constituent approach. Think, for example, of the classical defenders of either the bundle or substratum theory. They analyze the forms of being characteristic of familiar particulars in terms of elementary sense properties—things like colors and shapes. But while the standard examples of constituent ontologies are reductive in this way, it is possible to be a constituent ontologist without endorsing a reductive account of the forms of being associated with the various kinds to which familiar particulars belong; or at least Aristotle thought so.

Aristotle wants to deny that every form of ontological analysis is reductive. He wants to claim that it is possible to be a constituent ontologist while holding that the forms of being/character associated with the various biological species are autonomous forms of being. To see how this is to go, consider a theory that tells us that all the members of a kind, *K*, are composites of ontologically more basic entities, but holds that one of the constituents of the *K*'s is an item that meets the following two conditions; first, it is necessarily such that it is a constituent in all and only the members of *K* and, second, it has no constituents of its own. So the theory is telling us that there is an object, *x*, such that (1) necessarily a composite has *x* as a constituent just in case the composite is a member of *K* and (2) *x* has no constituents. Since *x* has no constituents, whatever character or form of being it has, it has nonderivatively; but that character or form of being is such that necessarily anything that has *x* as a constituent is marked out as a member of *K*. The character may not exhaust the form of being associated with *K*. There may be more to being a *K* than having *x* as a constituent. Nonetheless, *x* induces a form of being necessarily idiosyncratic to the members of *K*, and it does so primitively or unanalyzably. Accordingly, the theory is telling us that while the members of *K* are composites of more basic entities, one of their constituents nonderivatively and nonredundantly induces a form of being *sui generis* to the *K*'s. Now while a constituent theory, this theory does not present us with a reductive account of the form of being exhibited by all and only the *K*'s. Since it holds that that form of

being incorporates an unanalyzably basic component *sui generis* to the *K*'s, it displays the form of being as autonomous.

What Aristotle wants to claim is that for the case of each biological species, his own hylomorphic theory provides precisely the sort of nonreductive, yet constituent account that our imaginary theory provides for the kind, *K*. His theory tells us that for each lowest level biological kind, there is an unanalyzable universal such that necessarily that universal is a constituent in all and only the members of the kind. It is, of course, the substantial form associated with a kind that is the relevant universal. Since the form is a "such," a predicated entity, its being a constituent in a given composite presupposes another constituting entity—a "this" or subject of which the form is predicated. That subject is a parcel of whatever sort of stuff serves as proximate matter for composites of the relevant kind. Since the form of being unique to composites of that kind derives from both their matter and their form, the form does not exhaust the character of the kind. It is, however, what first or initially induces the relevant form of being. What plays the role of matter is something that can exist outside the context where we have a member of the kind. It is only with the predication of the form that we have a composite of the relevant kind. Furthermore, whereas the matter is itself a composite that owes its own characteristic form of being to the lower level entities that constitute it, the form has no constituents and, consequently, it has its own distinctive character nonderivatively. Accordingly, while there is nothing distinct from the form that is the principle of its character, it is the first principle of the form of being characteristic of members of the associated kind. It is, as Aristotle puts it, their primary substance.

So the form is necessarily such that it is instantiated where and only where the associated species is instantiated. The form, we might say, is equideterminate with the species. It is not, however, coextensive with the species. Indeed, their predicative ranges do not even overlap. The form is predicated exclusively of the various parcels of matter with which it is copresent. In virtue of each such predication, we have an individual member of the appropriate kind, and it is of its members that the species is predicated.

Now, throughout the middle books of the *Metaphysics*, Aristotle argues for the sort of nonreductive constituent theory I have been describing. In Z.4 he tells us that the only autonomous forms of being that we meet in the everyday world of concrete particulars are those associated with the various species in the category of substance (1030^{a}11-12). He goes on in sub-

sequent chapters to attack different attempts to provide reductive accounts of those forms of being. In Z.13, he argues against a Platonic reductionism that seeks to make the substance of the members of a kind, *K*, a universal more general, less determinate than *K*; and the argument is that only a universal equideterminate with *K* can succeed in nonredundantly inducing precisely the form of being characteristic of *K*.[19] In Z.17, the target is a materialist reductionism that seeks to make the material elements of the members of a kind, *K*, their substance. As we have noted, the argument there is that since those elements can exist outside the context where there are *K*'s, they fail to deliver the form of being characteristic of the *K*'s; it is only when organized by a principle equideterminate with *K* that the elements give us the form of being in question. In H.2, the target is a kind of modal reductionism that identifies the substance of a *K* with what is potentially a *K*. Again, the argument is that what is only potentially a *K* is something that can exist in a context where there are no *K*'s. What is required is an actuality that necessarily induces precisely the kind of character distinctive of the *K*'s ($1043^{a}3$-11).

It is, of course, form that is Z.17's principle and H.2's actuality; and it is the equideterminacy of form and species that is the central theme of those two texts. That equideterminacy is, however, only half of what is required if we are to have the sort of nonreductive form of constituent ontology that Aristotle envisions. It is also required that form have its own distinctive character nonderivatively, and that requires that it have no constituents of its own. That requirement is likewise a central theme in the middle books. As we have seen, the central reason for thinking that familiar particulars are composite entities is that they come to be and pass away. It is no surprise, then, that we find Aristotle arguing in Z.8 (and elsewhere) that form is both ingenerable and incorruptible ($1033^{a}30$-$1033^{b}19$). A further reason for thinking that a given item is composite is that it is subject to definition. Definition, one might suppose, always involves an analysis into metaphysically prior items. Forms, however, are definable, so it is no surprise that we find Aristotle undermining the supposition about definition and analysis. While conceding that the supposition holds for the definition of composites, Aristotle devotes virtually all of the very long and difficult Z.10 to a defense of the claim that a form can be defined without reference to any entities distinct from the form itself.

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[19] This, at least, is one of the things Aristotle is arguing for in the very difficult and controversial Z.13. See, especially, $1038^{b}8$-14 and $1038^{b}17$-24.

All of the ideas I have been discussing play important roles in Aristotle's attempt to display his own hylomorphic theory as a form of nonreductive constituent ontology but, perhaps, the middle books' most striking expression of Aristotle's antireductivism comes in a claim we meet in both Z.17 and H.3, the claim that what plays the role of primary substance is the nature associated with a kind.[20] Central to Aristotle's conception of a nature is the idea that the form of being associated with a natural kind expresses itself in a pattern of behavior peculiar to members of the kind. Since the focus is a substance kind, the form of being we meet here must be autonomous; and that means that its source must be an unanalyzably basic causal principle equideterminate with the kind; and, as Aristotle argues, the form is just such a principle.

What the identification of form and nature adds to the case for an antireductive form of constituent ontology is the set of teleological themes we meet in *Physics* II. The nature is the *telos* or final cause. On the one hand, we have the process of biological development that living beings undergo; and the nature in the guise of the mature flourishing organism displaying the form in its fully developed state is the final cause of that process. On the other, the nature imposes a top down pattern of organization on the fully developed living being. In that pattern, the different parts of the organism get their identity from the roles they play in the overall functional economy dictated by the nature. So the teleology of the nature is holistic. The nature gives rise to a form of life in which the whole organism in its mature state is prior both to the stages making up its biological development and the things that count as its parts. The nature, however, is the form; therefore, we have a constituent insuring that its containing composite has a history and structure that resist the sort of treatment a reductionist wants to provide. So a constituent ontologist is not committed to a reductive account of familiar particulars. One can hold that things like "a certain man" and "a certain horse" are composites of ontologically more basic entities without denying that they have the unity and autonomy characteristic of substances.

[20] See 1041b27-33 and 1043b21-23. For the canonical characterization of nature, see *Physics* II.1.

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In the Name of God, the Merciful, the Beneficent

From Aristotle's *Ousia* to Ibn Sina's *Jawhar*

SHAHRAM PAZOUKI, TEHERAN

There is a shift in the meaning of *substance* from *ousia* in Aristotle to *jawhar* in Ibn Sina. This change of meaning is not just something linguistic. It is due to two different views concerning substance in two different worlds, i.e., the Greek and the Muslim worlds.

The Greek Aristotelian world is a world of *ousia*s that are actually existent. For Aristotle, to be is to be existent. But the Qur'anic doctrine of *creatio ex nihilo* led Farabi, and Ibn Sina following him, to interpret Aristotle's prime mover as God, the Creator and Necessary Being, in relation to which other beings were interpreted as contingent beings. Thus the famous thesis of the distinction of essence and existence appeared in a definite form in Farabi and was elaborated in detail in Ibn Sina.

Based on this view, unprecedented philosophical ideas appeared among the Muslim Aristotelian philosophers. The dichotomy of essence and existence in each *jawhar* led Ibn Rushd to conclude (wrongly) that in Ibn Sina's view existence is an accident added to essence in the way an ordinary accident like whiteness qualifies a substance.

Ibn Rushd's understanding of Ibn Sina's thesis is a misunderstanding that influenced the medieval philosophers, such as Thomas Aquinas, and modern philosophers, such as Descartes and Kant, as well. This paper deals with the origin and the later development of this thesis and its developed articulation by Ibn Sina.

The true Aristotelian name for being is substance (*ousia*). Aristotle has reduced the question of what being is to what substance (*ousia*) is. His own words are clear enough. In his *Metaphysics*, he says: "And indeed the question which both now and of old, has always been raised and always been the subject of doubt, viz. what being is, is just the question, what is substance (*ousia*)".[1] The word *ousia* is derived from the Greek verb *einai* meaning "to be". Although there is a difference between *ousia* and being,

[1] Aristotle 1984, Vol. 2, 1624

Aristotle's *ousia* has kept its linguistical and ontological relation with the notion of Being.

When we enter into the Islamic Aristotelian world, things completely differ. The term coined in Islamic philosophy as an equivalent for Greek *ousia* is *jawhar*. *Jawhar* is originally a Persian word, pronounced *gawhar*, meaning a precious thing. As it appears from its original meaning, the word *jawhar*, contrary to *ousia*, has no relation with Arabic word *wujud* and Persian word *hasti*, both meaning being, or existence. Farabi who uses this term for Aristotle's *ousia* explains why this meaning of the term does not appear in Greek.[2] He explicitly distinguishes between a substance (*jawhar*) and an existent (*mawjud*).

Following Farabi, Ibn Sina's usage of this term is based on a clear separation of *jawhar* (substance) from being, essence and existence, a separation associated with his explicit formula of the distinction between essence and existence as we see it later.

In his analysis of substance, Ibn Sina makes a distinction between first substance, i.e., a particular, second substance, i.e., a species, and third substance, i.e., a genus. In this division, *jawhar* is primarily regarded as first substance, and is one of the ten categories. It could, however, never be held as the first and true instance of being qua being in the way Aristotle thought it to be, because being qua being in Ibn Sina is a general idea that covers the concept of all categories including substance.

Thus the primary meaning of substance in Ibn Sina is "the subject (*hypokeimenon*) of accidents which contains its own reason," the individual subject of predication. Every actual subject is a substance because it can be regarded as standing under (in Latin *sub* means under and *stare*, to stand) accidents.

In his *Categories*, Aristotle regards substance as the first category of the ten categories. Finding a connection between Aristotle's metaphysical definition of substance (*ousia*) and his logical definition (*hypokeimenon*) is not easy. This difficulty increases to such an extent that some of his commentators believe that there are disagreements about the concept of substance in Aristotle's works.

When we turn to Ibn Sina, the doctrine becomes more specific. Ibn Sina clearly asserts that the study of the categories belongs to logic. As a result the concept of substance as the first category is basically discussed in his logic.

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[2] Alfarabi 1986, 97-105.

As we have seen, the ontology of Aristotle is in fact an *ousia*logy based on the meaning of being as *ousia*. In contrast to this, Ibn Sina's ontology is based on his idea of the distinction between essence and existence, which has influenced all his metaphysical thought.

The second part of this paper deals with this important subject, especially its effect on the concept of substance and accident.

The distinction between essence and existence is undoubtedly one of the most basic philosophical principles in Islamic Philosophy. Through Islamic philosophy, it has even affected the history of Western philosophy in the period of Scholasticism and its influence can still be seen in modern philosophy.

Although Farabi was the first philosopher to introduce this distinction to Islamic philosophy in a definite form, in the course of Western philosophy it usually has been attributed to Avicenna. Historically speaking, the idea can be traced back to Aristotle. In some of his works, Aristotle makes a distinction between "what a thing is" and "that it is". For example, in his *Posterior Analytics*, he says: "But what a man is and that a man is are different."[3] More pointedly, we see this fact in the same work when he says: "The things we seek are equal in number to those we understand. We seek four things: the fact [that it is], the reason why, if it is, what it is."[4] In clarifying the last two things, he says: "And [after] knowing that it is, we seek what it is."[5] However, this distinction for Aristotle is a logical one, not an ontological distinction.

The Greek Aristotelian world does not allow this idea to enter into it as an ontological distinction. It was a world of *ousia*s that were actually existent. It is not a world of which it is possible to think that a substance might not exist. For Aristotle, to be is to be existent. In such a metaphysical system there is no place for the distinction of essence and existence, for essences that do not exist are from the beginning excluded. This is why in Greek literature including Aristotle's writings there is nothing to express an opposition of essence to existence.

In a passage of the fourth book of his *Metaphysics*, Aristotle himself expressly states that in substance (*ousia*), essence, existence and unity are completely unified with one another. He says: "One man and a man is the same thing and an existent man and a man are the same thing."[6] Aristotle

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[3] Aristotle 1984, Vol. 1, 152.
[4] *Ibid*. 147.
[5] *Ibid.*
[6] Aristotle 1984, Vol. 2, 1003.

indicates that when he speaks of the identification of these three, he does not mean the identification at the conceptual level. They are different at the conceptual level. He is concerned with real unity of them.

This conception of beings left no room for Muslim Aristotelians with their Qur'anic doctrine of creation *ex nihilo;* so, led by Farabi, and Ibn Sina following him, they interpreted Aristotle's prime mover as God, the Creator.

In his opus magnus, *Shifa*, Ibn Sina distinguishes between two kinds of agents: (1) agent according to the metaphysicians or divine philosophers, and (2) agent according to naturalists or the natural philosophers. The first group, by whom he means philosophers such as Aristotle and himself, believe that the agent is not only the source and origin of change and movement but also the origin of existence and the bestower of it by way of bringing a thing out from non-existence to existence. Ibn Sina says that contrary to the first group, the second group, i.e., the natural philosophers, by whom he mostly meant early Greek philosophers, believe that an agent is only the bestower of movement and not existence. An agent is that which sets in motion what already exists from one state to another.[7]

In spite of the important distinction Ibn Sina makes between these two kinds of agents, he puts Aristotle in the first group and as a result interprets the prime mover of Aristotle as the creating God, the bestower of existence and the Necessary Being, in relation to which the world is interpreted as contingent, being created by Him. One of the main consequences of this interpretation is the unprecedented division of beings into three kinds: (1) necessary, (2) possible, and (3) impossible.

The concepts of necessity, which is by definition "the negation of the possibility of negation," and possibility, which is defined as "the negation of the necessity of negation," are two important concepts in Aristotelian modal logic.[8] Aristotle believed that these two concepts are properties of the relation between subject and predicate. Due to his idea of being (*ousia*), Aristotle did not consider these concepts to have ontological value, and they were treated as purely logical.

For Ibn Sina, however, because of his idea of beings as created by God, God has to be the necessary being in order to add existence to the essences of the creatures, which are mere possible entities (*ens possible*). In this way, Ibn Sina entered this new division of beings into his ontology.

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[7] Ibn Sina 1985, 257.
[8] Aristotle 1984, Vol.1, 35-36.

The main opponent of Ibn Sina's idea of the distinction of essence and existence is the famous Muslim philosopher Ibn Rushd. In his whole philosophical career, Ibn Rushd tried to be a faithful commentator on Aristotle. As the commentator par excellence of the Greek Aristotle, Ibn Rushd criticized sharply the way Ibn Sina tried to harmonize Aristotle's philosophy with his own religious thought. Ibn Rushd feared that theological interpretations of philosophy would destroy both religion and philosophy. Theologians should not attempt to demonstrate. They should preach to the common people. As for philosophers, they should understand that a religious belief can not assume a philosophical meaning. For this reason, in his famous book *Tahafut Al-Tahafut* (*The Incoherence of the Incoherence*) which is mainly intended to reply to the arguments Ghazali made against Ibn Sina in his book *Tahafut al-Falasifah* (*The Incoherence of the Philosophers*), Ibn Rushd is even more critical of Ibn Sina than he is of Ghazali. He holds that Ibn Sina deviated from true Aristotelean thought, especially in his ontology.

Contrary to Ibn Sina, Ibn Rushd believes in the "identification of essence and existence." For him, like Aristotle, being is primarily the existent, substance. It is not something added to essence. It should be noted that by essence he did not mean the essence of a horse qua horse.[9] What he intended was that the essence of this particular horse is its existence as this horse. Thus, as a faithful follower of Aristotle, Ibn Rushd returns to the denial of the idea of any distinction between essence and existence. This denial leads Ibn Rushd to criticize Ibn Sina again and again for his doctrine of the accidentality of existence, which Ibn Rushd thought to be a consequence of that distinction.

He says: "Ghazali based his discussion on the doctrine of Avicenna, and this is a false doctrine, for Avicenna believed that existence is something additional to the essence outside the soul and is like an accident of the essence". After trying to demonstrate his claim, he again argues against Avicenna and says: "The theory that existence is an addition to the quiddity and that the existent in its essence does not subsist by it—and this is the theory of Avicenna—is a most erroneous theory, for this would imply that the term 'existence' signified an accident outside the soul common to the ten categories".[10]

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[9] It must be recalled that this [identification] is not the same sort of identification permitted for God and denied for other things by Farabi and Ibn Sina. That concerned the inclusion or exclusion of existence in what x is, qua x." Shahadi 1982, 98.

[10] Ibn Rushd 1978, 180.

The view expressed by Ibn Rushd is due to a misunderstanding of Ibn Sina. There are different meanings of *accident* and *accidental* in the logic of Ibn Sina's, which Ibn Rushd failed to take into serious consideration. In his famous book *Najat*,[11] Ibn Sina clearly points out the importance of these different sorts of accident. He says: "Sometimes a confusion is made between the different meanings of accident." In Ibn Sina's logic, one needs to distinguish between the accidents of the *Categories* and those of the *Isagoge*. We might say that *categorical accidents* are those that are predicated of a subject or need to be in a subject, and they are contrasted with substance, which is defined as that which is neither in nor predicated of a subject. On the other hand, there are what we might call *isagogic accidents*; these include all predicables that do not derive from the nature of that to which they apply. The quality of having a human shape (not *being human*, which is a secondary substance) is a categorical accident of Socrates, but is not one of his isagogic accidents, since it derives from his nature. Being snub-nosed is both a categorical and isagogic accident of Socrates. Existence is not a categorical accident, because it is not a quality, quantity, relation, or member of any of the other Aristotelian categories; although it is an isagogic accident, because its application to a thing does not derive from the thing's nature. Ibn Rushd rejects Ibn Sina's view of existence as an accident because it is not a categorical accident, while the only sense in which Ibn Sina would assert the accidentality of existence is that of an isagogic accident.

In the *Categories*, an accident is a mode of being that inheres in some other being, such as the mode of the existence of the redness in an a substance like an apple. In contrast with accident, *jawhar* or substance (*hypokeimenon*) means the subject of accidents, which contains its own reason or quiddity. Ibn Sina's attitude on the nature of substance, as one can see its later development in medieval speculation, turned strongly on the distinction between substance and (categorical) accident. Thus, the factor of being independent of other things came to be stressed as one of the distinguishing characteristics of substance.

The other important meaning of accident in Ibn Sina's logic is accident as discussed in the *Isagoge*. The *Isagoge* of the famous Neo-Platonic philosopher, Porphyry, established its own tradition of glosses and commentaries and became important in the development of Aristotlean logic in Islam. Porphyry originally intended his *Isagoge* to be an introduction to the *Categories* of Aristotle. It deals with important terms later called predica-

[11] Ibn Sina 1986, 12.

bles or universals. These universals are genus, species, difference, property and common accident.

The famous example of genus is “animal”; of species, “man”; of difference, “rational”; of property, “capable of laughing”; of accident, “white”, “black”, and “sitting”. Of these five predicables the first three, i.e., genus, species and difference are essential, yet their essentiality is relative. The term *essential* is used here by Ibn Sina to refer to the constituents of the essence or quiddity; that is, to that which cannot be removed from the essence, without at the same time, leaving the essence other than what it is. Examples are “animal” and “rational” for “human being”. As Shams Inati explains:

> Ibn Sina emphasizes that and “essential” in the sense of “constituent” should not be confused with “essence”. The former is an indispensable part of the essence, while the latter is the totality of such parts.[12]

The two remaining universals, i.e., property and the common accident, are accidental. This means that they are not constituents of the essence. However, there is a distinction between them: property is a concomitant accident. It necessarily attaches to the essence—by virtue of the essence—yet without being a constituent of the essence. An example of this is “capacity for laughter” for the human being. The common accident is a separable accident. It differs from the concomitant accident in that it can be eliminated from the conception of the essence. An example of this is whiteness for a white thing.

Ibn Sina makes a very important remark about the meaning of accident in the following passage. He says:

> [T]he late logicians believe that this accident is the accident which is the opposite of substance. But this accident is not of that kind at all. Rather, the meaning of this accident is the accidental.[13]

By accidental, Ibn Sina means isagogic accident. Here the notion of the isagogic accident is used by Ibn Sina in this context in some ways similar to the Kantian thesis according to which “being is obviously not a real predicate”.[14] Reality, as Heidegger mentions,[15] means for Kant the same as

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[12] Shams Inati 1984, 17.
[13] Ibn Sina, *Isharat*, vol. 1, 198; Inati translation, 68.
[14] Immanuel Kant, *Kritik der reinen Vernunft*, A598/B626.
[15] Heidegger 1988, 34.

German *Sachheit*, thinghood, and it corresponds to the medieval *essentia*. Hence, his thesis goes back to the distinction between *essentia* and *existentia* elaborated in medieval ontology. That is real which belongs to a *res*, to a thing, to its inherent or essential content, its quiddity or whatness. By his famous thesis, Kant means that the existence of an existent does not affect the what, the reality, or the suchness of the being. He therewith denies the minor premise of the ontological argument—that existence belongs to God's essence, that is, to his reality. Kant concludes that existence does not at all belong to the concept of a thing and it is something accidental to it.

Finally, I will give a brief account of the impact of this idea on the development of subsequent philosophy.

The Avicennean idea of the distinction of essence (*essentia*) and existence (*existentia*) has become a critical part of the philosophical tradition both in the Islamic world and in European Scholasticism. It has been the origin of many philosophical problems. One of the most important of these problems can be formulated briefly by using the terms *essentialism* and *existentialism*, where, precisely speaking, these terms are used to address the question of which of the two is fundamentally real, i.e., has a corresponding reality in the outside world, essence or existence?

In the development of philosophy in Islam, Ibn Rushd's philosophy and his arguments against Ibn Sina were not taken into consideration. The metaphysics of being in Islamic philosophy is based on the distinction of essence and existence. Ibn Rushd, however, had learned from Aristotle that being and substance are one. Thus contrary to the common view of the other Muslim philosophers, his ontology was based on a kind of *ousialogy* or *jawharlogy* which had no place in Islamic philosophy. As to the question of essentialism or existentialism, the course of Islamic philosophy led to the distinctive existentialism of the great Muslim philosopher, Mulla Sadra.

Concerning to the Scholastic philosophers, it was generally accepted by them that although in God essence and existence are identical, they had different views about the nature of the distinction between *essentia* and *existentia* in creatures. If a real distinction between them is not maintained, it would be impossible to explain how the being of creatures differ from God's.

Thomas Aquinas inherited Ibn Rushd's interpretation of this distinction together with the criticism made by Ibn Rushd against Ibn Sina. Since that time such an understanding of Ibn Sina has become common in Western philosophy. In contrast to Islamic philosophy, Ibn Rushd had a great effect

on the development of scholastic and modern philosophy. He left two important theses: (1) the thesis of the accidentality of existence derived from his misunderstanding of Ibn Sina; (2) the thesis of *ousilogy* or *jawharlogy* as the basis of a true ontology derived from his understanding of Aristotle.

His first thesis was strongly opposed by Thomas Aquinas. The concept of *actus essendi* (the act of being) of Thomas Aquinas shows that he favored existentialism. Ibn Rushd's second thesis, his *ousialogy*, had no impact on Christian Medieval philosophy. However, his *ousiology* helped to establish new systems of philosophy on the basis of his concept of substance (*jawhar*) as it can be seen in the works of the great modern philosophers such as Descartes, Spinoza and Leibniz. These substance-based systems of philosophy are very much in harmony with the idea of essentialism.

This is one of the basic differences between modern Western philosophy and the later Islamic philosophy that developed in Iran. Modern Western philosophy was influenced by Ibn Rushd's misinterpretation of the essence/existence difference in Ibn Sina, and this resulted in a tendency toward essentialism. In Iran, on the other hand, Mulla Sadra interpreted Ibn Sina as believing in the primacy of existence over essence, and all subsequent Islamic philosophy in Iran thus displayed a proclivity toward existentialism.

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Substance, Causality, and Freedom – An Ontological Revision of the Theory of Agent Causation

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1. Introduction

Libertarian conceptions of free will are discussed on the basis of three different approaches: (a) non-causal theories (Ginet 1990, McCann 1998) assume that a mental or bodily action H is free when H was not caused; (b) indeterminist-causal theories (Mele 1995, Ekstrom 2000) consider a bodily action H as free when H was produced by the mental processes of the agent in an indeterminist manner; (c) and finally, according to *agent causation* theories (Chisholm 1985, Taylor 1966) a mental and bodily action H is free when H was caused by the agent himself.

From an ontological point of view, all approaches falling under (c) represent a special challenge, since they are based on strong metaphysical assumptions regarding how the relationship between causality and freedom should be perceived. On the one hand, they share the notion with the collective suggestions under (a) that free actions cannot be reduced to one of the different variants of event causality (regularity thesis, counterfactual or probabilistic analyses, transfer theories). On the other hand, they are – similar to the approaches that fall under (b) – compatible with the notion that actions are the causal products of the motivational conditions of a person. Nevertheless, they cast doubts on the fact that this alone can be the basis for explaining where the libertarian thought of a free will exists.

Proponents of agent causation assume that persons who have special abilities act differently in order to make decisions. Therefore, a type of *substance causation* which emphasizes the intervening character is the focus here. Three basic ontological assumptions constitute the basis of this aspect: (i) agents are substantial particulars; (ii) substantial particulars are three-dimensional objects that exist in time according to the traditional *endurance-persistence model*; and (iii) agents are causes that are not caused[1]

[1] Accordingly, one hopes to avoid the general basic problem of libertarianism, that free actions are neither determined through complete causation, nor brought about purely

(i.e., they are the origin and the last source of their decisions because they are only able to intervene in the natural process of things by means of causal hypotheses).

While this approach originally implied a strict separation between event and agent causation, subsequently[2] – in response to various objections[3] – there has been some backing away from this assumption. The starting point is the realization that it is not necessary to believe that event and agent causation are mutually exclusive.[4] Basically, this requires overcoming the traditional notion that there is always a causal determinant involved in the causation of a free act. If one considers the production of an act as a complex co-determined event that results from the simultaneous fusion of two separate causal chains (*double causation*), then the alleged disconnection appears to be invalid. According to a *moderate reading* of agent causation both forms of the causality are compatible with one another, as soon as one understands the cause for the event as indeterminist – similar to the theories given under (b).

In the following, I will first sketch the main objection that has spearheaded the opposition to the original version of agent causation. Then, I present arguments for the case that in a moderate reading this difficulty can be resolved; but unfortunately, only at the cost of another problem. Proponents of agent causation have always assumed that the classic luck objection – i.e., an agent cannot be free as long as his action has a purely random cause – can be invalidated with the concept of substance causation. This assumption, however, is countered by the new, moderate reading. Accordingly, this gives rise to the following dilemma: if one accepts the moderate reading, then the concept of substance causation cannot be used as a means for resolving the objection to random actions. If one remains instead with the original perception that motivated the moderate reading, then the problem appears to be one that cannot be resolved. In the final section I try to indicate a path with which one can overcome this dilemma. However, in the process it should become clear that it is not the original understanding

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coincidentally on the basis of random factors. This is so since, in both cases, any action on the part of the agent would detract from his active control.

[2] See Taylor (1966, 262).

[3] For discussion of this objection, see Aune (1977), Ginet (1990), Keil (2000) van Inwagen (2002).

[4] The following are also among the approaches that, in recent times, in one form or another, have pleaded for a compatibility of event and agent causation: Alvarez/Hyman (1998), Chisholm (1995), Clarke (1996; 2003), Markosian (1999), von Wachter (2003).

of causality that needs revision; much more than that – in order to arrive at a successful defense of agent causation – basic ontological assumptions must be modified. Only under the assumption of a four-dimensional agent causation – this is the central claim – can the dilemma mentioned above be resolved.

2. The Problem of Temporal Causation and the Approach of an Event-Integrated Agent Causation

The plausibility of agent causation, based on substantial individual entities, was already questioned at an early stage with an objection by C. D. Broad (1952):

> "I see no prima facie objection to there being events that are not completely determined. But, insofar as an event is determined, an essential factor in its total causes must be other events. How can an event possibly be determined to *happen at a certain date* if its total cause contained no factor to which the notion of date has any application? And how can the notion of date have any application to anything that is not an event?" (Broad 1952, 215 – my italics).

Since then the missing association of a date serves as the main argument against the approach of agent causation.[5] This may make one wonder what Broad's objection is all about. First of all, let's consider the following clarification:[6]

The Causal Argument:

(P1) If an event E is caused at time t, there has to be a cause C such that: (i) C is different from E; (ii) C occurs at a certain time, and (iii) C causes that E occurs at t.
(P2) Requirement (P1) is only fulfilled by entities that themselves occur at a certain time.
(P3) Events are entities that occur at a certain time.

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[5] Even though, naturally, there are further considerations that speak against agent causation, Keil (200, 364 and 382) for instance alleges that the present 'objection to association of a date' is already sufficient to rebuff this approach. Based on this, Broad's argument represents a 'irresolvable problem' that particularly concerns substance causality, since the 'false' manner of existence of persons and entities is principally not suited to explain the temporal occurrence of causal relations.
[6] Compare: Clarke (2003, 197ff.).

(P4) Agents are entities that do not occur at a certain time because the continuously exist in time.

Therefore:

(K) Agents cannot be the causes of events.

Even though this argument is formally valid, two objections can be made: (i) it is not always the case that events occur at a certain time. Let's think about an event such as the 'Thirty Year War' that took place for many years, or an episode-like event such as tidal changes and sunrises. In view of such types of events, premise (P3) needs an explanation. (ii) Moreover, even though agents exist continuously in time, they can exist at a certain time in which they themselves are the cause of an event. Based on the fact that the agents within an interval of time – e.g. from t_1 to t_3 – have the same causal ability, it cannot be deduced that the causing action did not take place directly at t_1, t_2 or t_3. This problem could be easily resolved by means of temporal indices. However, not only are the premises (P3) and (P4) of the above argument too strong; the entire objection seems to assume what actually must be shown. It already contains the ontological judgment that substantial particulars persist in a way that rules out the possibility of causal effects being compatible with temporal association.

Does this mean that Broad's objection is totally redundant? Not entirely. Even if Broad's objection as a causal argument contains a hidden *petito principii*, he is possibly correct in another way:

The Explanatory Argument:

(P1*) If an event E is caused at time t, there has to be a cause C such that: (i) C is different from E; (ii) C occurs at a certain time, and (iii) C or parts of C explain why E occurs at time t.
(P2*) Subordinate requirement [(P1*) (iii)] is not fulfilled by entities that themselves exist continuously in time.
(P3*) Events are entities that do not exist continuously in time.
(P4*) Agents are entities that always exist continuously in time.

Therefore:

(K*) Agents cannot be the causes of events.

The decisive modification applies to the sub-condition [P1* (iii)]. Why should we consider premise (P2*) to be more appropriate than (P2) in the causal argument based on this condition? Is there something more in favor of (P2*)? I think that if one takes the following thought into consideration, then one can really find a reason: Let us assume that an agent S exists during the time interval from t_1 to t_3, whereby his action H at t_3 is the direct cause for a certain event E – e.g. the occurrence of an explosion. If one asks, why S has caused the explosion at t_3 and not at t_1, then the fact that S existed at t_3 with the corresponding causal ability does not appear to be a satisfactory explanation. Then, the same applies to the point of time t_1 and t_2 equally. What we need is a *contrasting* explanation that tells us how one can differentiate between cases where the explosion did not occur, but the same agent existed. The mere reference to the agent's causal ability does not help here. One can possibly explain the occurrence of H at t_3. But this explanation is not contrasting. For this purpose an additional reason would have to be provided that makes it clear why such a cause did not occur at the point of time t_1 and t_2 respectively. The agent's absence, in any case, cannot be offered as an explanation. In other words (P2*) is better justified since it does not generally deal with the date and time of the substance causation, but with the explanation that the reference to the causal ability has in comparison to other situations – in which the agent also existed but was not the cause of the concerned event.

Let us summarize: Broad's objection is not very convincing in the form of a causal argument; but that does not mean that the objection aimed at a date and time is meaningless. As the modified variants of the original arguments show there is at least an explanatory shortcoming in the context of agent causation: reference to the agent as a cause for his action may include a certain time, but it does not furnish a contrasting explanation why one and the same agent under similar conditions – but at a different time – did not produce such an action.

Based on the background presented it makes sense to assume that the concept of agent causation is – in contrast to that which has been claimed so far – compatible with causation through events. In this case, the standard objection can easily be countered:

> "In contrast, on an integrated agent-causal account, a free action is caused by the agent (a substance) *and* by certain agent-involving events, such as the agent's having certain reasons and certain intention. Given such a view, when an agent directly causes an event, part of the total cause of that effect *is* an event – a date en-

> tity, something that occurs at time, something the occurrence of which at a time may explain why the effect occurs when it does." (Clarke 2003, 198)

If causation represents a free action of a complex co-determined event, two important matters can be connected to one another: (i) the agent himself is the cause and source of the total event brought about (the actual execution of H); (ii) in the process of bringing about the event there is an additional event involved that can be associated with a date and time as a part of the total cause. Seen in this manner, every reference to the agent is a contrasting explanation. Then, in addition to the causal ability – that an agent has as a substance – there is a special event that based on its date and time explains why the agent performed his action at t_3 and not at any other time. The contrasting event consists in the agent having had a reason or the intention to actually perform the action H only at t_3. In other words, the agent himself *plus* the integrated event of the 'having' in the process of the causation yield a causal explanation that is adequately significant.

Thus the approach to *event-integrated* agent-causation appears to have the necessary resources to be able to counter the accusation of the missing date and time factor. Despite this, I will make it clear in the next section that an event-integrated approach must strive to be able to keep the problem of the contrasting explanation under control. Generally, it would be questioned if the regress to an indeterminist understanding of event causality is the most appropriate way to protect the incompatible intuitions that are connected with a libertarian concept of the freedom of action and decision.

3. Causal Explanation and Indeterminist Control

Broad's causal argument gets settled as soon as one moves away from the claim that it is impossible for events to be an integral component of agent causation. Does this also apply to the objection of the contrasting explanation? Does the mere reference to the agent in the context of the moderate reading furnish a significant explanation? An answer to this question mostly depends on what one understands by a causal explanation. Consider, for instance, the following definition.

Definition of Causal Explanation:

EXP is a causal explanation $=_{df.}$ there is an entity x and reference to x in EXP is an appropriate means to explain why a certain effect has occurred.

If one assumes this definition is correct, it will quickly become clear how an action associated with date and time can be explained on the moderate reading. This becomes particularly clear if one fortifies the sub-condition [(P1* (iii)] of the explanatory argument in the following manner: not only the total cause C, but *every essential* part of C must be able to explain why E occurs at time t. Accordingly, one can now object: If the agent himself is supposed to be an essential part of the total cause of his action, then this part must be able to explain why the action has occurred at t. This is apparently not possible in the framework of the moderate reading.

Randolph Clark (2003) – who is known as the main proponent of the event-integrated approach[7] – has directly reacted to this accusation. He differentiates two perspectives under which the highlighting of causes are of interest to us. While the reference to events aims to explain the effects that have actually occurred, this is not the case with the causal mention of agents – understood as substantial particulars. The latter fulfills the purpose of answering the question of *why* someone had the opportunity to make an active choice between various action alternatives. The reference to substances makes it clear that someone who wants to do something different as an alternative to the existing action must have the ability to intervene in the context of his intentions. Therefore, the above definition of the causal explanation is too narrowly stated. Since answers that are given to why-questions do not concern – at least not in the first instance – genuine causal explanations; they are related to the agent's ability to control which of the different action and decision alternatives determine his actual behavior. Thus, considerations that concern the exercise of active control are not aimed at causal explanations in the real sense. And if one accepts that within the framework of the event-integrated approach the agent is not cited for the sake of a causal argument, then the difficulties associated with it do not represent a serious problem.[8]

Certainly, it can barely be disputed that why-questions exhibit various aspects, especially natural pragmatic ones. Nonetheless, I still believe that Clark's rescue attempt is not ultimately convincing. Essentially, I have three basic doubts. First of all, the following objections can be raised from the external perspective. When an agent produces an event caused by an action this does not happen because the agent *himself* creates a certain event– at least not according to the moderate viewpoint. The real reason is

[7] Compare: Alvarez & Hyman (1998).
[8] See Clarke (2003, 200).

that the production of his action has the *property* of being a co-determined event that occurs at a specific point in time. Substantial particulars can bring about action-initiated events associated with date and time only indirectly. This means that the date and time of the effect is not of the type that is brought about *simply* by the substantial particular.[9] It is not the production of the being of a substance, but the event of 'having' a complex property that is temporally determined as the cause. However, in this case, it is impossible for a proponent of the moderate reading to claim that the mentioned explanatory argument does not represent a difficult problem.

Secondly, one must remember that until now agent causation has been championed by those who hold *incompatibilist* theories of free will. An agent only performs a free action – which is a prerequisite to being responsible for an action – when the causal factors that have led to the action are under his control. This control is at best guaranteed by the fact that the agent himself is the only originator of his action. With this background it is helpful to make it clear what goes against a compatibilist view of the theory of agent causation. For instance, let us take the following suggestion:

The Compatibilist Version of Agent Causation:[10]

The action H of the agent S is free (in terms of morally responsible) if and only if (i) H is caused, and (ii) the cause of H is S.

This suggestion appears to be inadequate regarding the sole authorship criterion. It only says that S is the cause of H, but does not rule out that there may be external factors that have made it necessary for S to bring about H. Thus, complete causal control by the agent appears to be ruled out.

Are we justified in extending this skepticism also to the moderate reading? Certainly not. Since, according to this point of view, the traditional assumption of a linear causation must be rejected, if one assumes the principle of co-determination, then it is certainly conceivable that there are causes which are beyond the control of S. But this does not lead to the conclusion that S has not performed the action H freely. This is so since in addition to the event associated with date and time of 'having' certain reasons and intentions (that can be determined by external factors) there is at least one other cause that is within the active control of S. But perceived in this manner, the moderate version of agent causation would be compatible with

[9] For discussion on this point, see O'Connor (2002, 353).
[10] See Markosian (1999, 268).

a broad conception of determinism; since under the last stated aspect H can be brought about by S even though there are other deterministic causes which are beyond S, but have influenced the bringing about of H as a co-determined total event.

Regardless of how one finally evaluates the compatibilist approach, it makes at least one point clear: based on the revisionist causal understanding, which forms the basis of the moderate reading, it seems to be impossible within the framework of this approach to protect the libertarian intuitions that are normally linked with the concept of agent causation.

This suspicion can be fortified in two respects. Proponents of the moderate reading assume, as seen, that the performance of a free action is a complex co-determined event. It then remains unclear how the libertarian notion that the agent is the cause and last source of his action, fits in with the claim that the agent's intentions and reasons only have causal relevance associated with date and time because there is an integrated event – the 'having' of reasons or intentions at t – whose causation did not originate from the agent. It thus stands to reason that there could be reasons or intentions of agent causation that explain the occurrence of *his* action, regardless of whether we comprehend the occurrence of these reasons as a part of the particular action that was initiated by the agent himself. But how can something contribute to the willful characterization of a person's action when the person himself does not have any influence over it? When the manner in which reasons determine actions are excluded from the active control of the agent – so that the agent at no time has any influence on them that can be considered as explanations for his action – it is not clear at all how the event that should explain the performance of his action is itself linked with the performance of the action itself.[11]

Moreover, it must be considered that the *philosophical* problem of free will is derived from a basic intuition, that freedom is a necessary prerequisite for moral responsibility. In this connection it can be shown that an incompatibilist approach can only promise results when it is able to represent the condition of the authorship and the principle of alternative possibilities together.[12] The latter principle is necessary at least for the appreciation of deontic judgments. The agent's ability to decide if he can be reprimanded for something or not depends on whether there are deontic alternatives that

[11] As O'Connor (2002, 353) has argued, this could lead to a causally shielded event C* that still lies *before* a co-deterministic total causation E that causally determines the total event.

[12] I have justified this position in detail in Schmechtig (2006b).

are subject to the agent's unlimited control. But, this assumption need not be incorporated into a compatibilist theory. Therefore, the account of event-integrated agent causation runs the risk – because it overlooks the separation of both notions – not to be able to explain why the choice between deontic alternatives is a necessary prerequisite for the understanding of moral obligations.[13]

4. Substance Causation and the Problem of Luck

With this I have come to a third counter plea. The starting point is the question of whether an event-integrated reading has the appropriate means to invalidate the so-called *luck objection.* Traditionally it is assumed that libertarianism can be attacked from two directions. Not only must a strict determinism be declined. A purely accidental causation would also disagree with the libertarian concept of free action. Usually, the agent himself – and not an indeterminist event – is the originator of the action. But, is this assumption enough? Is the agent's control within the moderate reading strict enough to ban the hazard of bringing about an accidental action?

Let us pose the following comparison: in the actual world W the agent S decides at time t to execute the action H. Furthermore, there is a possible world W* in which the same natural laws apply and which with regard to past events is fully identical with the actual world W at time t. However, S in W* decides against executing H. Up to time t it is totally open whether H takes place or not. According to the luck objection the agent has no causal control over what he would decide at t. Even though it is his decision whether he will execute the action H in the actual situation or not, but this decision is arbitrary. In just the same manner he could have decided differently in the context of W*. The difference between his actual action in W and a possible action in W* is based on purely random factors.[14]

Before one contemplates whether this objection is a sweeping one, two constraints must be imposed: First of all the argument does *not* indicate that the actual decision – which was made by S in W – happened at random. Similar to the representation of the explanatory argument, the decisive critical point is actually that the mere reference to an agent is too little. In order to arrive at a form of control, a more concrete understanding of the

[13] For a general discussion of this issue: Haji (2004, 145f.).

[14] Clark (2003, 412) has referred to the fact that with the help of the classical 'rollback argument' it can be argued in a similar form.

control is required in which the contrast between a merely possible action and the actual causation of H appears to be justified deliberately.[15]

Secondly, a solution of the luck objection cannot simply end with the claim that the agent's person determines the performance of his actions.[16] The speculation that the problem of luck only occurs where entities like events form the basis of an indeterminist causation must itself be justified. If one uses an event-integrated approach for the justification, then one actually assumes that there is an additional entity at play in addition to the agent's causation. As seen, there is an event E – the 'having' of reasons or intentions by S – that co-determines the action H. Accordingly, it can at least be claimed for the occurrence of this additional event that it is not under the control of S. And the general objection seems to be aimed at this.

In view of the last-named consideration one is inclined to defend the moderate reading of agent causation: Of course, events play an important role within the event-integrated explanation, but, in spite of this, the agent is a substance that finally performs the action. In contrast, however, Haji (2004, 140) has objected to this saying that the luck objection has two different aspects. The first aspect pertains to the fact that as a result of the fortuity of the decision, the agent himself disappears as a source of active control.[17] The moderate reading, however, is not affected by this difficulty. This is because as long as the action H is co-determined by the agent qua substance, there will always be something whereby the actual causation in W differentiates itself from the event of a possible causation in W*. In contrast, the second aspect is that in spite of the agent's ability to intervene in the natural course of events at any time, there is a problem of *extended* control, i.e., the reference to the agent (whose ability for intervention) does not guarantee that the contrast between the actual and a possible execution of H has arisen on the basis of a non-accidental decision. The solution of the extended control aspect requires more than the claim that there was no fortuity because the agent always had the opportunity to intervene causally. What is missing is the fundamental explanation of why the nature of this control should not be subjected to the luck objection.

Is there a fundamental explanation? Along with Derk Pereboom (2006) I would say: 'Yes', there is one; but its price is too high. The aimed expla-

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[15] In contrast, Clarke (2005, 215f.) has represented the view that notions of causal control within the framework of the event-integrated approach do not depend on a debate about contrasting explanations.

[16] See, e.g., Ginet (1997), Haji (2004), Mele (2005).

[17] Compare the aspect of the disappearing agent in Kane (1996) and Pereboom (2006).

nation happens to lead back to the problem of temporal causation. As Peerboom makes clear, a solution to the luck objection is possible if an agent's reification is understood in such a manner that his causal force is not a component of the caused (complex) event. According to this, the agent has causal strength *exclusively* on the basis of his being a substance. Two characteristics are typical for this fundamental role of substance: (i) the agent is the cause of his decisions without himself being causally determined in a similar manner; (ii) there is a type of causal control that is behind every event causation, whereby the presence of such a control decides if the agent is morally responsible for his conduct.

This explanation is fundamental, since here the original assumption of a co-deterministic causation – which is indispensable for the event-integrated approach – is dispensed with. It appears that the luck objection can be averted only for this reason. Apparently the aspect of extended control concerns an understanding of causation for which it is not significant as to what takes place at which time. What is decisive is solely that the agent has the ability as a substance to do something that corresponds to his advance choice. However, this point of view has the consequence that the assumed substance causation must not only be able to be determined indirectly – as substances that are constitutive components of events – but also to have an independent ontological status. Moreover, with respect to the question of extended control, it seems to assume the following concept of agent causation:[18]

Agent's Causal Definition of Event-Causation:

An event C causes another event E if and only if there is a free agent S, and the bringing about the occurrence of an event C is an appropriate means for S to bring about the occurrence of an event E.[19]

Regarding this *reductionistic* approach, different objections can be raised.[20] At this juncture I am not interested if such objections are justified. It is im-

[18] There are some proponents of agent causation, which based upon this or a very similar definition have represented the approach that the acting agent should be granted not only an epistemological, but also an 'ontological priority'. In this connection it is assumed that agent causation is not limited to the intentional actions of natural (living) substances. All persisting objects (living or non-living) therefore have a causal force. See, e.g., Lowe (2002, 195f. and 208ff.).

[19] A very similar formulation can be found with Menzies & Price (1993, 187).

[20] See, e.g., Hausmann (1998), Keil (2000), Woodward (2003).

portant if the mentioned definition of event causation fits in with the standard objection discussed in the introduction (explanatory argument). My thesis is that the approach of agent causation concerning this question confronts a fundamental dilemma: either one tries to solve the problem of the association with date and time by extending the process of agent causation to include a co-determined event, with the result that there is a part of the total cause that can be associated with date and time, in which case this solution has the big problem that due to the integrated event causation it is subject to the luck objection; or one tries to cancel the luck objection by neutralizing the problem with the conception of a substantial agent causation. However, with this procedure – even if it is convincing – one ends up again with the first problem. Once again it cannot be explained why reference to the agent is a contrastive explanation. Based upon the reductionistic treatment of event causation, it is impossible to separate the actual situation – in which the causation by H actually happened – from those cases in which nothing was done even though the agent with the same ability had already previously existed. If one combines both lines of argument then one can formulate the following objection:

The Dilemma Argument:

(A1) An adequate explanation of free will should be able to invalidate both the luck objection as well as the problem of temporal causation.
(A2) The luck objection is only avoidable within the framework of agent causation when there is a substantial explanation of the agent's extended control.
(A3) The problem of temporal causation is only avoidable within the framework of agent causation when the agent's causation contains a co-deterministic event.
(A4) A substantial explanation of extended control presumes a *reductionistic* approach of event causes.
(A5) An explanation of temporal causation presumes that events are a *necessary* component of agent causation.
(A6) The assumptions (A4) and (A5) are incompatible.

Based on (A1) the following is applicable:

(K) The approach of the agent causation does not furnish an adequate explanation of free will.

At last it becomes clear with this argument that an event-integrated justification of agent causation leads to a dead end. Therefore, in the remaining section I will pursue a different path. The basis of my approach is the conviction that it is not the original concept of agent causation that requires a fundamental revision in the context of the 'double causation'; far more – in order to avoid the mentioned dilemma – modification must be made at another location.

5. Four-Dimensional Agent Causation

If one compares the different approaches to agent causation, it becomes noticeable that there is a large agreement in one point:

> "All AC [agent-causal] theorists required that we think of agents as thinkers which *endure* through time, such that they are *wholly* present at each moment of their existence."(O'Connor 2002, 341 – emphasized P.Sch.)

In contrast to this I would like to represent the view that the cited dilemma argument is most easily rebuffed when one dismisses this basic assumption. The solution to the luck objection collides with the problem of temporal causation not because of the agent-related causal concept, but because of the fact that the temporal existence of substantial particulars is understood in the traditional *Endurance-Persistence Model* (EPM for short).[21] Only under this determination is one compelled to introduce an event entity in addition to agent causation, whereas we have seen that such an extension of the agent concept represents the actual problem.

Why do proponents of agent causation believe that their approach is only justified when the traditional (EPM) is true? I think it is the specific interconnection of two assumptions that play a decisive role here: (i) substances are viewed as continuants, with which the separation between the *occurrence* at the present moment and the *constituted being* in a four-dimensional sequence (of temporal parts) does not seem to make sense. Events exhibit a *hybrid* existence status with respect to type and the man-

[21] Usually one differentiates between two rival approaches of the persistence explanation. The traditional *Endurance-Persistence Model* (EPM) says: an object O persists $=_{df.}$ O is entirely present at more than only one point of time. On the other hand, the definition of the *Perdurance–Persistence Model* (PPM) is: an object O persists $=_{df.}$ O has temporal parts and none of these parts is completely present at more than one point of time.

ner in which they occur chronologically, while the opposite is claimed of substantial particulars.[22] Continuants do not have genuine temporal parts since they are entirely in the present throughout their existence. Thus it is impossible for there to be an earlier temporal component of the continuant that did not bring about the actual causal event since it has already elapsed at the time of the present causation. (ii) Secondly, one assumes that there is a *necessary* connection between the manner in which the object's persistence must be explained and the general idea of temporal existence that can be inferred from it. While the traditional (EPM) is supposed to be inevitably connected with a *three-dimensional present tense* time concept, the counter position demands – the *Perdurance–Persistence Model* (PPM in short) – a *four-dimensional eternal* view. And since both time conceptions are mutually exclusive, one perceives endurance-objects that exist in a four-dimensional space to be unthinkable.

If one considers both assumptions together, then the impression is given of agents who continuously have a causal ability so that one is inevitably fixed to a three-dimensional present time conception. It is because of this conception that the problem of temporal causation represents a risk for the approach of agent causation. In view of this, the question arises as to why continuants should not be taken to have temporal parts and in a four-dimensional space. The advantage of (PPM) is obvious. Insofar as substances have temporal parts, a rebuttal of the explanatory argument is easy to contemplate: even though the agent exists continuously in time, e.g., in the interval from t_1 to t_3, there are different temporal parts that explain why the action H occurred at t_3 and not at t_1. However, from the agent's causal point of view, (PPM) requires that which continuously exists to be the total of all temporal parts (space-time-worm). In contrast to this, that which actually performs the action at a certain time is always only a temporal part of this totality.[23] It is then certainly not the causal ability of the temporal

[22] Therefore, the view is often represented that causal effects can only be produced by such entities which in a specific way exist in the time period. Events could take place within a temporal interval even though they have genuine parts which at this time period have already happened and do not belong to the present occurrence of the events. Obviously events are better suited to explain the temporal occurrence of a cause. One can say about an event that its occurrence at an earlier time period was the cause for a certain effect, even though the same event is presently occurring and does not produce this effect. In contrast by substantial individual entities which are totally present at all times this seems to be possible. Compare the hybrid temporal existence status of events: Lombard (1999, 256ff.), Schmechtig (2006, 100ff.).

[23] For discussion on this point, see O'Connor (2002, 341).

part that continues to exist. So how can the causal ability that is only available with the totality of all temporal parts provide an explanation for something caused at a specific point of time? Such ability would also still exist when the particular temporal part, which represents a concrete causation, is already in the past. But, of course, this means that a contrasting explanation would be impossible.

In addition it would be implausible to claim that it is not the agent *simpliciter*, but merely a temporal part of him that performs an action. Just what does it mean to be an instant part of the agent? We normally speak in the case of natural substances only of temporal parts as states of the same object that have occurred in previous or subsequent phases of its life. However, the state associated with a specific phase of its life is not an independent continuant, which continues to exist in time in spite of changes. And a reification in the context of the (PPM), that the quantity of all instantaneous states is that which actually persists, also does not help. This is because under this claim the following adequacy condition (the explanation of persistence) would be violated: something can only be called a persistent object –continuously existing despite changes – when it itself is the object of the change, i.e., the concerned object is the carrier of those properties which themselves change.[24]

Admittedly, objections of this type have a certain justification. Still, from this does it follow that there is no alternative to the traditional (EPM)? I don't think so. This is because it is principally wrong to assume that a necessary linkage must exist between the persistence of substantial particulars and a three dimensional time approach. If one rejects this incorrect *linkage thesis*,[25] then we are free to determine the agent's temporal existence on the basis of external relations to predecessor's and successor's phases. According to this the agent does not persist because there was a previous state that exists at the present point of time in exactly *this* previous state, but instead because previous or subsequent states of the agent are predecessor or successor phases that are constituted together in a four-dimensional space. And even though the presently occurring agent is linked via external relations to such predecessor and successor phases, they do not represent independent temporal parts of a spatiotemporal whole. Instead, the phases must themselves be understood as autonomous substantial particulars. Their distinctiveness lies therein, that on the one hand – at time of their present occurrence – they are perceived as three dimensional enti-

[24] For this suggestion, see Haslanger (2003, 331ff.).
[25] Compare to a detailed justification of this claim: Schmechtig (2006a).

ties; but on the other hand, beyond the present point of time – within a four-dimensional space – they are constituted with other predecessor and successor phases (linked by means of external relations). If one views the agent's continuous existence under the prerequisite of a *two-dimensional* time approach[26] the adequacy condition just discussed remains intact because substantial particulars whose persistence is explained in this manner have causal ability *simpliciter*; and of course are themselves – as carriers of the respective properties – the proper subject of changes.

In view of the fact that the suggested modification contains elements of both persistence models, it is appropriate to speak of an independent (third) explanatory approach.

The Exdurance–Persistence Model:[27]

An agent S persists $=_{df.}$ (i) S is a three dimensional substantial individual entity; and (ii) the present occurrence of S is linked with different predecessor and successor phases in virtue of external relations; and (iii) the temporal existence of S includes all predecessors and successors with which S is constituted in a four-dimensional space.

Since the model is based on a two-dimensional time concept it is easy to see how the cited dilemma argument can be circumvented. In a manner similar to the above example, an agent S – who continuously exists throughout a temporal interval from t_1 to t_3 – causes the action H in the present at time t_3. Even though S is entirely present at t_1, there are various predecessor phases with which S is linked in a common four-dimensional space. The independence of these phases explains why H has not been caused either at t_1 or t_2. In order to create the explanatory contrast sought, it is not necessary to introduce an additional event. It is enough to know that there are predecessor phases, which, on the one hand are linked with S –

[26] The discussion concerns a two dimensional time conception, because the agent's *appearance in the present* according to an A-sequence of time is understood as *being in the present*, whereas, in contrast the continuing existence (persistence) has to be perceived in the form of a hybrid connection that exists between the agent's appearance in the present time and his *constituted being* in a *four-dimensional* sequence of the predecessor and successor phases (B-sequence).

[27] The concept of *Exdurance* originates from a suggestion by Sally Haslanger (2003, 319). In comparison to her concept I assume that objects which persist in the context of the *Exdurance theory* are no 'perduring particulars', but are only represented by the usual ordinary three-dimensional objects.

according to the common constitution in four-dimensional space; but which, on the other hand – what concerns the ontological status of the present causation by H – are drastically differentiated from S. This is because at t_3, the actual cause of H is of course, only S, but no predecessor or successor phases of the present S.

If one considers the agent's temporal existence within the framework of the *Exdurance-Persistence Model* then premise (A3) of the cited dilemma argument must be dismissed. Thus, the agent's approach is no longer subject to the luck objection. And if at the same time a co-deterministic event causation is dispensed with, then the objection of the contrasting explanation can also be invalidated. In other words, if one revises the predominant view that the continued temporal existence of agents is linked to the traditional (EPM), the whole objection falls apart. Whether it is possible to maintain that an agent's causality is the only form of causality is an independent question. One is, in any case, not bound to a reductionistic view with the proposed solution. One need only retain the idea that there are continuants whose temporal existence – in virtue of constitutive relations – is anchored to different predecessor and successor phases in a four-dimensional space.

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In the Name of God, the Merciful, the Beneficent

Substantial Motion and Perpetual Creation*

ALI ABIDI SHAHRUDI, QOM

1. Introduction

The discussion at hand involves the connected ideas of motion *(harakat)*, origination *(huduth)*, and perpetual creation *(khalq jadid)*. These are subjects that hold a privileged place in the religious sciences and that have instigated human thinking to further inquiry from time immemorial.

The present discussion is an investigation into the theory of "perpetual creation" as found in philosophy and mysticism. Hence, the substance of this work in its overall structure and particulars is not tantamount to a statement of the personal opinions of the author. What does indeed pertain to this humble writer is: firstly, the methodology employed; secondly, the determination of the details and the points of convergence and divergence in the theory of perpetual creation from the two perspectives of philosophy and mysticism; thirdly, the exposition of some of the corollaries of the theory in question based on precepts that are in part and from a certain perspective to be attributed to this present author; and fourthly, some additional details and their consequences that can be called the "theory of the fifth dimension."

Before the formal appearance of the theory of substantial motion, any material body was known to have extensions in three dimensions. Mulla Sadra added time as a fourth dimension to the existing three spatial dimensions; and now it seems quite logical that in accordance with subsequent philosophical research a fifth dimension should be added to these four known dimensions. The fifth dimension is supported by principles found in Islamic philosophy. By drawing on this material, the theory of substantial

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motion makes the existence of this infinite dimension all the more fruitful, for things in this fifth dimension are essentially independent of time, but nonetheless maintain a type of association with matter and on this account are concomitantly in harmony with the flow of time. Immaterial perfections that are acquired by way of movement have an essential precedence over the temporal forms that "precede" them, even though in accordance with the theory of the causal chain of events, they appear temporally later. Needless to say, this issue of the temporal posteriority of immaterial things is one of the most intricate issues of philosophy, and a brief article cannot deal with it in a fully adequate manner.

The discussion that follows is about a profound and paradigm-shifting theory, which in its present form is one of the distinctive features of Islamic philosophy. This theory is known by two names in traditional scholarship. The more popular name is *substantial motion (harakah jawhariyyah)*. The other name is *perpetual creation (khalq jadid)* or *new creation*.

Technically speaking, *substantial motion* is a philosophical term, while *perpetual creation* is more meaningful within the framework of Islamic mysticism where it has been discussed with more frequency. For centuries before the appearance of the theory of substantial motion, the term *perpetual creation* was used in Sufi writings and the basic tenets of the theory were openly discussed. Hence this latter term must be studied within the context of both philosophy and mysticism.

To begin with, it must be ascertained how substantial motion and perpetual creation are treated and explained in the fields of philosophy and mysticism respectively. From there the differences and divergent views of these two fields must be seen. Finally, it must be established whether the two terms in question are in reality talking about a single theory, or whether there exist two separate theories pertaining to two different fields of knowledge. In the latter case, the term *perpetual creation* will be ambiguous, since the term has not been used exclusively in the field of mysticism. Philosophers have also used this term, but with a meaning that is equivalent to *substantial motion*.

The author of this article feels that in reality we are dealing with two different theories. Though these theories have much in common, *substantial motion* is a concept quite distinct from that of *perpetual creation* as used by the Sufis. Hence it will be seen that the term *perpetual creation* lends itself to two different and discordant meanings which must be logically expounded.

2. The Theory of Motion in the Category of Substance

Before Mulla Sadra, philosophers imagined that motion was limited to four categories—place, position, quantity, and quality. Others, in fact, were of the opinion that it was limited to less than four. Nevertheless, the vast majority of philosophers believed that motion was not possible in the other categories, including the category of substance. It was Mulla Sadra who, for the first time, introduced the idea of motion in the category of substance in a scholarly fashion. Mulla Sadra himself insisted that some ancient philosophers were also supporters of this theory, and he cited phrases from their writings that bore a resemblance to the theory of substantial motion in order to support his claim.

3. Definitions of Motion

In different sciences and philosophical systems there are various definitions of motion, each one defining the term from its own particular vantage point. Here only the definition of motion that is used in Islamic philosophy will be used, ignoring all other definitions despite any relevance that they may have to the Islamic definition. Islamic philosophy, in its turn, has put forward a number of definitions for motion. The more important of these definitions are briefly outlined below.

(A) Motion is the first perfection for a thing that has potential, insofar as it has potential.

This definition of motion takes into consideration the actuality and potentiality of things, their perfection and imperfection, and the relation of moving things to their potential. Accordingly, motion is for the purpose of acquiring actuality and perfection that the moving thing lacks. The sought perfection that is presently non-existent in the mover is the final cause of all motion and is known as the "second perfection." Motion itself is a state of a thing that lacks it (i.e., that is stationary) and hence is itself considered a type of perfection. Because the phenomenon of motion always and logically precedes the second and final perfection, it is called the "first perfection." Moreover, because this first perfection is tantamount to the reason and means by which a thing in potentiality can achieve its desired and final perfection, it would be appropriate to label it an "instrumental perfection", even though philosophers traditionally do not seem to have used such an expression. Another point that emerges from this definition is that motion is possible only for things in potentiality and that perfect existents in actu-

ality are free from the deficiency of motion and have no need of it. An existent in potentiality, once it achieves its second and final perfection, also becomes relatively needless of motion and only goes on to require motion with respect to other secondary perfections. So, considering the instrumental nature of motion, we can modify the initial definition to read as follows: *motion is the first and instrumental perfection of a thing in potentiality with regard to its potentiality*.

(B) Motion is the gradual departure of a thing from potentiality to actuality.

This definition also brings the issue of potentiality and actuality to bear upon the fundamental basis of all motion, but in this definition the form of motion is a type of gradual displacement as opposed to a sudden or instantaneous translocation. Gradualness brings with it certain features such as: succession, order, and continuity. Hence motion is a state that is continuous, contiguous, and successive. And because it always starts from potentiality and terminates in actuality, it has an origin and an end. Moreover, because it is measurable, it must be counted as being among the quantitative realities. In consideration of the points mentioned above it can be said that *motion is a quantity that is contiguous, non-static, gradual, and directional*.

(C) Motion is the acquisition of the potential limits of a category in a continuous way.

This is Mulla Sadra's definition, and according to him it is more inclusive than the other definitions. The features of this definition are as follows.

(a) A category is something that is contiguous but nonetheless capable of division into parts and limits. The category relating to motion is but the indication of the extension related to the motion. Hence the attributes of this category are the same as the attributes of the extension.

(b) Distance and extension potentially include parts and limits.

(c) Motion is a gradual phenomenon that eventually covers all the limits of the extension.

(d) Motion is a state that accepts prolongation and incrementally stretches to cover its associated extension.

(e) Motion is a prolongation that conforms to its extension.

(f) Motion has parts and limits in potentiality that exactly correspond to the parts and limits of the extension.

(g) Motion and extension are both a type of continuous quantity but with this difference that motion is a fluid quantity, in flux and ever-changing,

whereas extension, in so far as it is to be distinguished from motion, is in a state of quietude and is unchanging. Here it is necessary to mention that motion is not an essential instance of the category of quantity. In fact the essential instances of quantity are amount and number. Motion, by contrast, just like the natural body, is capable of quantification, and because of its existential concurrence with quantity in the concrete world, can be counted as one of its instances. Similarly, there is an existential concurrence and unity between motion and time. These two are seen to be distinct upon analysis but are united with respect to the extension that they refer to.

4. Basic Types of Motion

According to Ibn Sina, *motion* is a name that is used to denote two concepts. First, it is a reality that is continuous but does not exist as a complete whole in the external world. This is because so long as the moving body is between the origin and end, not all of its parts have been realized; and when the moving agent reaches the end, motion comes to a stop. Hence motion as a fluid and contiguous reality does not have any concrete external existence. This concept is known as "traversing motion" (literally "cutting motion," *harakah al-qat'iyyah*).

Second, it is the mediating state of the moving agent between the origin and the end; in the sense that when the moving thing is supposed to be at any given limit along the extent of the distance to be traversed, it is seen not to be at that limit before or after the given "static" moment. Ibn Sina held the reality of motion to correspond to this second conceptualization. This concept is known as "mediating motion" (*harakah al-tawassutiyyah*).

After the time of Ibn Sina, many long and extended debates on the nature of traversing motion and mediating motion took place. For their parts, Mir Damad and Mulla Sadra held Ibn Sina's opinion to be invalid and said that it is mediating motion, not traversing motion, that has no concrete reality. Moreover, the existence of traversing motion, conceived of as a contiguous flux and a series of continuous changes that are measurable, can be demonstrated. Criticisms that have been raised against motion can be shown to pertain to a concept of motion other than that of traversing motion.

In the gradually flowing continuum of motion, every hypothetical part is *potential* with respect to the parts that come before it, and was *actual* with respect to the parts that come after it. In other words, every point of the points of this continuum is the "non-existence" and "fading away" of past points.

The passing-away of any part is concomitant with the emergence of another part, just as the ascendance of a part accompanies the descent of another in the cyclic continuum of motion. In addition, it is known that existence and being are identified with light [in Mulla Sadra's view of Illuminationist philosophy], and nonexistence and nonbeing are equivalent to darkness. Hence, motion is a continuum of light and darkness—continuously and successively giving light and becoming dark.

Another corollary of this definition of motion is the fact that motion, whether with or without an end, is an originated phenomenon that is always "emerging anew" and does not have pre-existence. This is because the essence of motion is founded upon origination and this very act of "emerging anew", and because every part or event of motion is preceded by non-existence. It can hence be concluded that the entire essence of motion is that of being preceded by non-existence. Based upon what has been presented up until now, we can briefly list some of the characteristics of motion.

I Motion is the first perfection for that which is in potential.
II Motion is an instrumental perfection.
III Motion is in its origin always in potential, and at its end in the state of actuality.
IV Motion is directional.
V Motion is continuous and contiguous.
VI Motion is gradual, in-flux, passing, and in a state of instability.
VII Motion is capable of being partitioned and measured, like all other continuous quantities.
VIII Motion is infinitely divisible.
IX Motion is essentially temporal.
X Motion is concomitant with being and non-being—a matrix of existence and non-existence.
XI Motion is originated, or emerging anew from nothing.
XII Motion is absolute. That is, motion is a concretely existing reality (in terms of philosophy) and hence has in itself a number of essential attrib-

utes. This is in contrast to the way that pure mathematics would approach the issue. For mathematicians, motion is a relative reality that takes on meaning only after an [external] framework is designated for it. Without regard to any particular framework, motion is characterized by its necessary properties—such as are discerned by referring to a number of arbitrarily or conventionally established principles.

XIII Motion is analytically composed of potentiality and actuality, as per the order among its parts.

XIV Motion is a form of mediation between pure potentiality and actuality, or an admixture of the two. This characteristic is different from the one above from a certain perspective, and from another perspective it is identical to it.

XV Motion is non-instantaneous because it is impossible for it to at once in a moment, (unless it is considered with respect to eternity *(dahr)*).

XVI Motion is a prolongation and extension in a direction other than the three spatial dimensions.

XVII Motion is coordinate with time.

XVIII Motion is coordinate with extension.

XIX Motion is not composed of indivisible parts.

XX Motion is not intermittent or discontinuous, with gaps.

XXI Motion is subsistent while at the same time being originated and "emerging anew." The subsistence of motion coincides with its being originated.

XXII Motion is compatible with the possibility of intensification, even though the latter is not a necessary concomitant of motion, unless, of course, we expand the scope of the concept of intensification to include the acquisition of any type of actuality whatsoever—regardless of whether this actuality is situated on the horizontal chain of interrelated phenomena or on the vertical chain of being and becoming. In this case, all instances of motion, even simple changes of physical state and position, become perfective and intensional motions. From a terminological and linguistic point of view such an expansion in the scope of a notion is not problematic, but from a scholarly and philosophical point of view it does not seem right. This is because the ontological reality of intensification is not affected by a change in the designation of a given term. Philosophically, the concept of intensification entails a stronger or more intense perfection than the perfection that came before. Such a concept can be envisioned to hold true in the case of a vertical and existential intensification. But on the horizontal level, intensification is not possible. In a similar fashion it is argued that it is cor-

rect to speak of a horizontal “gradation” of existents as the principles of ontology lead to such an idea. But it must be remembered that the basis of gradation on the horizontal level is gradation on the vertical level. To attempt to prove the existence of a horizontal gradation without reference to the vertical, is to attempt to establish the existence of a difference without the existence of differing aspects. Hence, one cannot correctly conceive of intensification on the same level or within one level. But motion on one level or in a horizontal sense can be conceived and correctly so, (being known as local motion, or locomotion). From this we can conclude that motion is not concomitant with intensification. Finally it can be noted that a number of valuable corollaries follow from the relative independence of motion and intensification, the theory of the fifth dimension being one of them.

XXIII Motion is indicative of the coincidence of existence and change. This is because the existence of motion is based on there being a continuous change occurring. In other words, existence can be divided into two types: subsistent existence and changing existence. The existence of motion is a changing existence that is a constant state of flux. Its very existence is in that it continuously flows and is in a state of passing. If even for an instant its fluidity or fluxion were to be negated, motion itself would be negated and would cease to exist. If there is no change, there is not motion. Motion subsists only when there is some change. This particular characteristic important in discussing the persistence or identity of the subject, i.e., the object of motion or the moving subject.

Motions, due to their innate inconstancy, are dependant upon six things:

a) Mover or agent and source of motion.
b) Receiver or accepting subject of motion.
c) Category or extension in which the motion takes place.
d) Origin or point from which the motion initiates.
e) End or point towards which the motion approaches.
f) Time, which is an essential attribute of motion.

What is meant by the “subject” is the entity that has “moving” as a real attribute and that can be described by the adjective “moved.” The moving subject is a composite mixture of potentiality and actuality, and such a situation cannot arise except in the case of material bodies. It can be concluded that motion is a material phenomenon that is particular to material bodies and that outside the realm of the material, motion is inconceivable.

Substantial subjects move within the categories in which motion is possible in such a way as to gradually and in a continuous fashion traverse the

limits and parts of their extensions that constitute the category. During this passage, the moving substance goes through a new limit of its extension at every moment. These limits are sometimes the different individuals or subclasses of a single species, and at other times they are the different species of a single genus. This conception of motion in a category has a number of implications, one of which is that every category that allows for motion, in addition to having an individual at rest before moving, also has an individual that is in flux during the motion.

As mentioned in the introduction, motion is generally said to take place in four categories. Let's consider, first, motion in the categories of place, position, and quality. Motion in these categories can be explained as follows. Because a material body does not need its accidents for its very existence, it naturally also is not affected by changes in its non-essential attributes. Hence it is possible for such a body to give up the individuals and species of the mentioned categories and to take on other individuals and species of these categories. Thus it is not required to retain them and at any moment can accept a new individual or species, which it can abandon at either the very next moment or later. Hence, there is no problem in the idea of the motion of a substantial subject in the categories of place, position, and quality.

Consider next, motion in the category of quantity. The idea of motion in the category of quantity has been controversial. Ibn Sina admits to consternation when he attempts to defend the idea. Sohravardi, the founder of the Illuminationist school of philosophy actually denied the possibility of motion in the category of quantity.

The main objection to quantitative motion hinges on the problem of the identity of the subject during its motion. There is no doubt that motion needs a subject. The concept of the motion of a body in an amount (i.e., an instance of quantity) entails that at every moment some part of the amount is obtained, and in the next moment, it is lost. The loss of some part or amount of the body necessitates the loss of the body itself, since the subject of change is a particular quantity of body. Since a corporeal quantity cannot exist without its particular amount remaining constant, we are forced to conclude that as soon as the motion begins, the moved object no longer exists. The negation of the moved is tantamount to the negation of the motion itself. Hence the assumption of motion is equivalent to the negation of motion—a contradiction. It is precisely because of this problem that some, like Ibn Sina, have sought in vain for identity in the subject of quantitative

motion. Others have denied outright the existence of motion in the category of quantity.

A reply to this objection can be given as follows. The subject of motion is the body, and it is clear that this body must maintain its identity and individuality throughout the act of motion. But the point to note is that the particulars of the amounts associated with the body during the motion have no bearing on this identity. Rather it is the existence of the very nature of amount that serves to give identity and individuation to the subject, and the constantly changing particularities of the amount do not harm this identity in the least. Hence a body is capable of motion in its parts and limits through motion in quantity.

The reply to the objection above can be put in another form. The subject of motion in the category of quantity is either the matter (prime matter) or the very nature of the amount that maintains its identity during the act of motion due to the fact that the changes in amount are continuous and contiguous.

Other replies to this objection, both from the school of Peripatetic philosophy and that of transcendental philosophy, have been given. One such reply is that the specific natural body, in so far as it is a subject for quantitative motion, maintains its identity during any and all changes because as a species it needs nothing other than a specific form and an indefinite body; changes in the instances of the body that pertain to genus or matter do not harm the identity of the specific body in the least. In addition, there is no reason to believe that the changes in amount during quantitative motion invalidate the identity of the subject. Where the change is gradual, there is no reason to doubt the identity of the subject during motion.

6. Causes of Motion

Philosophical discussions of motion have established that the immediate cause of motion in material bodies is an internal agent that is known in the field by the term “nature.” Causes or factors that act upon bodies from the outside are either coercive agents or auxiliary causes. Instances of volition or motion by “will” are seen to be forced or constrained by remote causes. Hence all of these different types of motion—coercive, volitional, and natural—are attributed to the specific form of the body. This specific form is the innate nature of all bodies.

It can be concluded that all of the material (and physical) faculties and forces are dominated by metaphysical ones. From another perspective, all

of the physical and metaphysical powers throughout existence are nothing but the Divine "armies"—none of them being outside His power and might. The divine origin, from the perspective of philosophy, is the cause of all causes and the first mover of all motions without there being in that origin itself any change or motion. This is because His setting something into motion is not by immediate contact so as to create an accidental change in the mover. The divine agency of motion is by force and vertical. It is executed by the immediate mediation of the motive natures of material bodies. Hence, the nature of every body is the mediating and proximate cause of physical motion. In these circumstances, motion is tantamount to being an essential property of matter. The soul and other immaterial realities are then to be seen as mediating and remote causes of motion. The divine origin is the principle cause, true origin, and the first mover for all motions.

The principle of causality has given rise to valuable laws of general application. One such law is that of the "Consonance of Cause and Effect vis-à-vis Stability and Change." This law can be divided conceptually into two laws or two sub-laws:

1. A cause that is either stable or changing has an effect that is respectively stable or changing.
2. An effect that is either stable or changing has a cause that is respectively stable or changing.

It is this second law that is of use to us in the present discussion. It basically says that the cause of a stable thing is stable; and the cause of a changing thing is changing. This is because if the cause of a changing thing had stability, necessarily all of the parts and limits of the changing thing would all at once come into being—leaving no room for any further change. Such a scenario would entail that the effect is stable, something which is contrary to the original supposition.

Proving Substantial Motion

In the discussion above a number of necessary but not sufficient introductory ideas were presented in a very summary fashion. From among these, four are fundamental and have direct relevance to the subject of research at hand. These four are:

I The nature of material bodies is the immediate cause of all motion.

II The concept of motion in a category is that the substance passes through various potential parts and limits within the category. At every moment an individual or species of the category is created and in the next moment passes—only to be followed by another one newly originated.

III Motion in the four categories is possible and occurs in reality. In the two categories of place and position, this takes place without any controversy.
IV Cause and effect are consonant with respect to stability and change.
The specific and substantial nature of bodies, as has been explained, is the immediate cause of various material motions. Motion is a single continuum, ever-changing and in flux. No part of this continuum has any stability—continuously a part is destroyed and a part is originated.

Nature, the cause of motion, is either stable or changing. If it is stable, it must have an effect that is also stable, just as the law of the consonance of cause and effect vis-à-vis stability and change was seen to imply. In this case, motion as an effect of a stable cause must itself be stable and static. That is, all of the parts of motion must come into existence together and at one time because their cause was the same and it is not possible for an effect to oppose its cause. But this would imply that motion is no longer motion, because the essence of motion is nothing other than change. Hence, either nature is not the cause of motion, or motion is not a changing continuum. Neither of these possibilities are logically acceptable, so it can be concluded that the first part of the proposition that was stated as, "nature… is either stable or changing," is invalid. Hence, it can be concluded that the second part is necessarily correct, meaning that specific and corporeal nature is a reality that is essentially changing, moving, and in flux. Change must be taken to be an essential attribute of the substance of nature; the latter being in no way ontologically posterior to the existence of nature.

Essential attributes are not causal, other than in an accidental sense. Hence there cannot be any type of stability in a bodily substance. The substance of nature is a continuum in flux and essentially alterable. In reality, at every moment an individual or a species of substance leaves the scene inclining towards non-existence, and another individual or specie after non-being acquires being.

This demonstration implies that the cause of motion is itself in motion and changing. In explaining this it must be concluded that change and motion is essential to nature and, from another angle, they are identical to nature. Hence the existential reality of all nature is specific, corporeal, real, flowing and passing. Even bodies that are apparently static and still—not appearing to move in any one of the four categories mentioned—are nevertheless, according to the above proof and in line with their inner natures, in motion.

7. Objections to Substantial Motion

The main objections that have been raised against substantial motion are the following.

(A) Substantial nature is either potential or actual. There is no state between these two. The generation and corruption of substantial nature are instantaneous because substantial forms do not increase or diminish, precisely because there is no intensification in a form. So, the substance either remains in the middle as it is, or it actually ceases to exist. In the first case, no change actually took place in the substance; for if it did, then this would be in contradiction to the supposition that it remained what it is, because the substance would not be the very same substance that existed before. In the second case, intensification, for instance, would be reason for the destruction of the substance and the generation of a new one. But this is not intensification. The intensification of a substance would mean that the substance should become more intense and more perfect while enduring and maintaining its identity.

(B) If intensification causes the perishing of one substance and the appearance of a new substance, then there must necessarily exist between the former and the latter substance the possibility of the existence of an infinite number of substantial species in potentiality. But we saw from objection (A) that there is no middle state for a substance between pure potentiality and pure actuality.

(C) If intensification causes a substance to come-to-be and another one to pass-away, the result would be a succession of indivisible instants, something that is invalid according to the principles of philosophy. This is because either all or some of the substances that are created during the motion of intensification would linger for more than an instant, or on the other hand they would exist for just one instant and no more. In the first case, motion would change to stillness. In the second case, a succession of instantaneous substances would occur, leading to a succession of instants of time, which is known to be null and void.

(D) If intensification causes the passing-away and coming-to-be of substances, then there must necessarily exist an infinite number of actual substances between the perishing substance and the generated substance. This is because the continuum that intensification represents contains the possibility of an infinite number of substantial species in potentiality—on account of the fact that a substance is neither pure potentiality nor pure actuality and hence between the perishing substance and the created substance

there exist an infinite number of actual substances. But this is not possible as an infinite series in actuality cannot fit into a finite measure.
(E) Because prime matter or *hyle* is pure potentiality and capacity to become, it has no actuality in itself or by itself. Hence it cannot move within the category of substance. And if it attempts to move by the support and help of a substantial form, it is attempting the impossible. For in the case where we assume that it is in motion, the substantial form—according to the law of motion—does not maintain its identity. When the form goes, matter also passes-away. With nothing left, how can nothing be said to be in motion? But if it is said that the subject of motion is a substance in actuality, we would turn around to ask: in this substantial motion, does the moving substance endure until the origination of the new substance? If this is the case, then during this interval it has not moved and this is contrary to the assumption that the substance is constantly moving. If, on the other hand, it is said that it does not endure and that another substance comes about that is different from the one before it and the one after it, then in reality the original substance has ceased to be and what now exists is not what was before.

8. Replies to the Objections to Substantial Motion

We will refrain from answering each of the objections individually and will let one general answer suffice. All such objections result from not using the laws of motion in a comprehensive fashion. Motion, as a flowing continuum, maintains a single identity from start to finish throughout its extension. The origination of new parts and the elimination of the previous parts are not in the manner of discrete ruptures so as to cause a break in the identity and a fault in the individuation of the essence. The thing that continuously flows, and is always in a process of changing, persists. Its very endurance and persistence resides in the origination and emergence of new parts. Hence if the category of material substance is a changing and flowing category, no problems arise for persistence. This is because it can be said that the substance both endures during the motion and that it does not endure, if only for this reason that this is the very nature of all that is flowing. From two different perspectives their persistence can be affirmed and denied.

If the objection of Ibn Sina and others regarding the intensification of substance were admissible, then it would have been necessary to negate the existence of change and intensification in all categories without exception.

On this basis and given that a substantial form is by definition self-subsisting, rather than subsisting in another, to interpret substantial motion we can say that a substantial form is motion itself with regard to its renewal and fluidity, but with regard to its substantiality, the persistence of its universal quiddity and its existential identity, it is the subject of motion. Considered as that specified by the limits of its form, the substance is the category and extension in which motion occurs.

On this account there is no need to assume the existence of anything in motion other than the substantial form, despite the worry that matter in the moving substance is not actual, since matter, contrary to the opinion of Ibn Sina and his followers, is not destroyed during motion, but persists through its continuous connection with temporal forms. Hence, it may be correctly said that the subject that persists through substantial motion is prime matter or *hyle*, because this matter is always not bound to any particular substantial form. The dependence and subsistence of matter on a substantial nature is actual, and this nature continues to exist throughout all the changes and alterations of the substance.

In addition to this argument, it is possible to find a subsisting subject of substantial motion even according to Peripatetic principles. In short, according to the characteristics and laws of motion, there should be no difference between substance in flux and the other categories that are traditionally known to accept motion. These latter categories accept motion by remaining in a state between pure potentiality and pure actuality and by recourse to their essential characteristic of fluxion. The category of substance and the changes it undergoes is not an exception to this rule. Hence, between the old and the new substance there exist an infinite number of substances, albeit potentially in a gradual continuum.

So, there is no intelligible reason to object to motion in the category of material substance; and based on the demonstration presented above, the theory of substantial motion is perfectly logical and philosophically sound.

Consequences of Substantial Motion

Here we shall review the fruits of this theory, although in a very summary fashion.

I Substantial motion gives rise to a type of general and consequential motion in all categories without exception—there remains nothing that can be called stable or still.

This corollary does not contradict the arguments against motion in some particular categories, because these arguments are specific to essen-

tial motion originating in these categories, while what is asserted here is a kind of derivative motion that follows upon substantial motion.

II Material (or physical) substance is originated in time because every individual of it was non-existent, being preceded by the absence of time. This precept applies to every individual, and because it is a general precept that is unconditional, it also applies to the conglomeration of individuals taken as a whole. This implies that all material substances in all of their modalities are originated. And this in turn means that the entirety of the material universe is a single creation that has been originated in time. Moreover, in so far as all substantiality, in its essential gradual and in flux modality is preceded by non-existence, it needs this prior non-existence for its very subsistence; and with respect to future time, it is once again in all of its essence non-existent; it depends upon this posterior non-existence for its inner subsistence.

From this it can be concluded that the past of the material world is nothingness and that the future path for the world is once again towards dissolution and nothingness.

III There is a possibility of wayfaring from the physical realm to the metaphysical one.

IV The attributes of a genus can be applied to its species in relation to the differentia that come about during the motion of the prime matter in the category of substance.

V Common individuated, substantial quiddities may be distinguished due to their new and posterior differentia.

VI Body is extended in a fourth dimension that is perpendicular to the three spatial ones. This corollary says that in the same way that the mathematical body is perpendicular to the plane, the dimension of time is perpendicular to the entire body both in a mathematical and a philosophical sense. Hence the fourth dimension is not just a “calculated” reality based on mathematical theory, it is a concretely existing reality. Going further, there is another corollary to this one which induces the existence of another dimension from the perfective motion of things in an extension that is perpendicular to the known four dimensions. We will return to this later on in this article.

VII Motion in categories does not require the actual occurrence of intensification in them. It is not necessary that every part of motion should be more perfect and more actualized than the one that preceded it. What is concomitant with motion in categories is the possibility of the occurrence of intensification in them and not the occurrence itself.

VIII Creation is perpetual. The proof of this corollary lies in the exposition of the concept of substantial motion. If change in substance is viewed from the perspective of form and matter and their interrelation, then it is seen to be motion. But if the same change is viewed from the perspective of absolute being and a preceding non-existence, then it is "perpetual creation" or "new creation." Finally from the perspective of the unity of motion with material substance, which is at every moment being created, it can be seen as a kind of divine initiative and setting into motion.

9. Analysis of Creation and Motion

Creation in its absolute sense is origination and bringing into being. It is synonymous with ontological causation. Essentially this latter term denotes bringing about the existence of a thing and accidentally it denotes bringing about the quiddity of the thing.

Substantial motion has a corollary known by the name of "perpetual creation," which says that at every moment the Divinity creates a new substance along with its consequents. Every new created thing requires a new act of creation and the universe is continually in a state of becoming and origination—God is at every moment the Creator, the Originator. Now, when we consider the fact that perpetual creation is a corollary of substantial motion, we can conclude that perpetual creation in its philosophical meaning is specific to the material universe. In this way it can be said to have the same characteristics that were enumerated for motion earlier—for from a certain perspective, perpetual creation is really the same as the motion of universal substance.

Now that we have come to understand the concept of perpetual creation in philosophy, we will turn to its conceptualization in the realm of mysticism and will begin to examine the points of commonality and different that exist between the two notions.

10. Perpetual Creation in Mysticism

The term "perpetual creation" has been used in a much more extensive way in mysticism than it has in philosophy, and, as is apparent from the statements of mystics, it comprehends and includes the whole of contingent reality, and not only the material world.

Theoretical mysticism begins with the axiom that the only self-subsistent being is the Necessary Existent, which has no quiddity other

than its existence. Hence, there is no independent reality other than God. The entire universe and all it contains are consequences of the Necessary Existent, whether at the level of essence, effects or acts. The first essential creation from the Divine Origin is the general existence of the all-pervasive emanation or grace (*fayd al-munbasit*). This emanation is stable and unchanging and in itself contains no distinction or multiplicity. The recipients of this all-embracing emanation and grace are the quiddities and entities of the contingent order. These quiddities and entities are nothings and non-existent in the absence of the creative impulse. It is only through creation that they come into existence. The matter for the forms of the universe in all aspects is prime matter or *hyle*. It is the first subject, which in one regard is the same as the general existence that is produced by the Divine Origin; the forms of which are like accidents and particularizations of the said subject.

The multiplicity of manifestations is due to the multiplicity of recipients of grace, the objects of quiddity, and the impossibility of the repetition of any particular manifestation. Consequently, an infinite number of existential forms have appeared in the reaches of eternity and time, and an infinite number of divine signs—in both the horizons and in the souls of man—have disclosed themselves for the wise.

The root of time is eternity (*dahr*), which pervades the entire universe from its highest to its lowest realms. In the higher realms, the word "eternity" is used for it and in the lower ones the word "time."

The self-disclosure of God or manifestation has two aspects. In one respect it is what brings about persistence (*baqa'*); and in another respect it is what brings about annihilation (*fana'*). Sometimes these are called two types of self-disclosure or manifestation: preserving manifestation and annihilating manifestation. The differences between them arise from different conceptualizations of the realm of fact (*nafs al-amr*) and the plurality of the intelligible aspects. Contingent entities have no capacity for persistence on their own; and, of course, they would never come into existence in the first place without divine manifestation.

Thus, there is a continual need for constant renewal, continual self-disclosure of reality. The attributes of being renewed and being a manifestation are applied to the recipients of divine grace, the contingent entities or objects. Manifestation itself as the work of God, on the other hand, is devoid of all multiplicity and repetition. According to the principles of theoretical mysticism, there is no opposition between stability and non-multiplicity of manifestation, creation, and emanation on one side, and

perpetual creation, infinite existents and multiplicity in the created order on the other.

Renewal, according to the Sufis, applies to all existents in creation that are subject to the divine command. This inclusiveness of renewal in mystical theory has met with numerous objections from philosophers. According to the Sufis, both the material and immaterial worlds have been temporally originated, where temporality is to be understood with respect either to eternity (*dahr*) or time. To have a temporal origin means to be preceded by nothingness in eternity or in time. Renewal also takes place in eternity or in time. A complete comparison between the views of the philosophers and the mystics on time and eternity warrants an independent study.

Identity among the momentary and renewed creations is maintained due to a fundamental and general element of stability. In the cognitive exposition of every motion and any process of change and renewal, there is the outstanding need for a persisting subject. It is for this reason that philosophers search for such a stable subject in the four or five categories which allow of motion. Not finding such a stable subject, some philosophers have been led to doubt and even deny the possibility of motion is some of these categories. It is for this reason that almost all of the philosophers who came before Mulla Sadra denied the possibility of motion in the category of substance. A similar problem is encountered in the theory of perpetual creation understood in its widest and mystical sense. In their search for this stable and constant element, researchers in the field of mysticism have posited different possibilities and depending on their conceptualizations, have come up with different names for it: (1) substance, (2) *hyle* or prime matter, (3) extended soul, (4) fixed entity, (5) essence, (6) creative will in actuality, (7) general existence, as the first divine act.

11. Perpetual Creation from Two Perspectives

In a highly complex manner and with great intellectual exactitude, metaphysics painstakingly posits the two world theory of lower and higher (physical and metaphysical), each of which has its own specific characteristics. The metaphysical world was created first by God and has characteristics such as: stability, immateriality, and actuality devoid of any potentiality. The physical world on the other hand was created after and has neither stability, immateriality, nor pure actuality. Throughout this lower order, from the regions of the natural substances to the plane of the accidents

and what follows from them, there is a single continuum in motion that is substantial, fundamental, and sequential.

Prime matter, which is absolute potentiality, moves in material substance, bit by bit discovers its horizons, and moves towards an infinity that it cannot reach. While this prime matter has an ontological need for substantial forms, it does not cease to exist once they lapse and return into nothingness, for the generation and corruption of substantial forms is not disparate and discontinuous, in such a manner that once a form leaves the matter, the matter is destroyed and there is no longer any subject of motion. Annihilation and origination occur in a continuous and connected manner so that the substantial form is maintained through the entirety of the extension of its motion, and, subsequently, the matter associated with these forms is maintained to ensure the possibility of motion. Along with the motion of the substantial form, the entire structure of the natural world, from its accidents to its matter, undergoes motion, renewal and change. All that accompanies substance is caught up in the tempestuous flood of annihilation and origination.

In accordance with the law of natural succession, all of nature is in motion and constant regeneration. The subject of substantial motion, as well, cannot avoid this changing; and is only able to retain its identity by continuous association with a natural substantial form.

In the concept of motion, there is only a renewal of individuals flowing in a category. Progress or development in existence is beyond the boarders of motion, and pertains to other features of the things in motion. Perfection takes place through an extension other than that through which motion occurs and the three dimensions through which material phenomena are extended. For this reason, we will call it the *fifth dimension*.

Entities moving in the matrix of the natural world progress in a direction that is perpendicular to all corporeality. At some point in the matrix, a perpendicular force sets movable substances in the direction of perfection through the extension of the vertical chain of being. Then the worldly era comes to an end for these moveable substances and they enter upon a divine era.

On this basis, substantial motion has two parts: (a) the part pertaining to motion in the horizontal realm, and (b) the part pertaining to motion in the vertical realm. Each of these realms has its own special sort of temporality, each of these with its own particular set of conditions and laws. Perpetual creation and renewal take place in both temporal dimensions, so that the entire world is recreated and originated at every moment, and it is through

this recreation that substantial motion can take place in which the universe is directed towards new perfections and actualities. At all times, in vertical directions and ways, the walls and barriers of materiality are broken and another step is taken beyond the physical.

This is how perpetual creation is seen from a philosophical perspective. From the perspective of theoretical mysticism, however, perpetual creation takes on another form altogether—mainly because in this way of seeing things it is not limited to the natural realm. The universe, in so far as it is a single totality, is always being originated. From the sacred intellects to the dominating lights that compose the supernal heavens, or from the lights of divine commands to the lights of the angelic realm, or from the celestial and elemental isthmus to the lowest levels of the *hyle*, all are in a state of alteration, change, and renewal. It is only the most perfect light of the the Almighty Lord, as the origin of every existent, that is static and unchanging. The divine self-disclosure and manifestation, in so far as it is associated with Him, is also stable, universal, and unitary.

Manifestation is from one aspect the universal act of God, and from another perspective it is the absolute and universal existent that emanates from the origin. Contingent quiddities and entities on the other hand, are eternally created at every moment. If there were only an initial act of creation without perpetual renewal, the world would immediately lapse into nothingness. Contingent entities are nothing but the determinations, connections, attachments, consequents, and effects of divine creation, manifestation, and emanation. Continual origination and renewal pertains to these associations *(ta'alluqat)* of manifestation, not to manifestation itself, (other than perhaps in an accidental way). Perpetual creation, then, refers to the origination of these associations of manifestation in relation to the contingent quiddities originated in the wake of these associations. If the associations stop existing, then things also become non-existent. It is in these recreations, in their context of differentiation, that the conditions for ontological progress appear and the perfective chain of being and becoming looms into full view. But if the context were not one of difference but rather one of similarity, then renewal and origination would exist without perfection. Even where what appears seems to be similar to what was before, there are differences, albeit hidden and suppressed. It is due to this fact that things are imagined to be static by some.

Both the Sufis and the philosophers agree that there is constant origination and renewal, that the lack of a capacity for essential self-preservation is equivalent to incapacity for essential existence, and that an essential ca-

pacity for annihilation is equivalent to pre-eternal essential nothingness. Both also agree that there is a kind of extension that corresponds in some ways to temporal extension in time. Both admit that change sometimes occurs without progress toward perfection, but that change in another context will be developmental or progressive. Although both hold that identity requires us to posit something that remains stable, the exposition of what this is differs among the mystics and the philosophers. Both hold that what is renewed is existence, and that renewal is continuous.

The mystics and the philosophers differ in that the Sufis hold that perpetual creation is universal, that every created thing is constantly recreated, while the philosophers hold that this renewal is specific to the material world. The foundational principles to which philosophers and mystics appeal also differ. Philosophers hold that identity is preserved through change by what is most base, i.e., prime matter; while the mystics posit a more sublime constant through change. Nevertheless, both agree that existence is also preserved and static, and that existence cannot be identified with matter. The subsistent in the philosophical explanation of substantial motion is situated in the changing substance itself, whereas in mysticism it is external to it. However, the mystics do not see constant creation as a form of motion, as the philosophers do. In philosophy, constant creation can be seen as a consequence of substantial motion.

In Islamic philosophy, motion is always explained in terms of mediation between the potential and the actual, and hence, in Mulla Sadra's system, substantial motion is always in the direction of perfection. In Islamic mysticism, on the other hand, there is an arc of descent and an arc of ascent with respect to which motion can be said to take place.

This then was a very summary account of the theory of perpetual creation in the fields of philosophy and mysticism. It was presented by listing the characteristics, commonalities, and differences of the theory in both fields. We would most gladly accept any and all criticisms and opinions relating to the article.

In the Name of God, the Merciful, the Beneficent

Psychic Substance: A Meeting Point between Metaphysics & Spirituality

MOHAMMAD ALI SHOMALI, QOM

The discussion of the human soul, its existence, nature, eternity and perfection occupies a focal position in Islamic philosophy. All Muslim philosophers concerned themselves with the subject of the soul. The most detailed and most important works on this subject are those of Kindi, Farabi, Ibn Sina, Ibn Rushd, Mulla Sadra (Sadr al-Din Shirazi) and 'Allamah Tabataba'i. Referring to different types of substance discussed in Islamic Philosophy, this paper focuses on psychic substance, or soul, and reviews the nature and faculties of the soul highlighting the main characteristics of psychic substances and what features distinguish them from other substances along with a discussion about happiness of the soul.

1. Substance and its different types

Muslim philosophers recognise two aspects of every contingent being: quiddity (nature or whatness) and existence (being). All quiddities are universal and it is only existence which individuates. In this regard, M. T. Misbah writes:

> Another issue is the problem raised in Islamic philosophy of whether a universal may be individuated by means of specific accidents. Every accident in reality also has a whatness to which the mind attributes universality, and therefore it participates with whatnesses of that which has accidents in the need to be individuated. And this question can be repeated with regard to them, as to how they are to be individuated. How is the addition of a universal essence to cause the individuation of a universal essence of that which has accidents?
> Finally, Farabi offered the solution that individuation is an essential requirement of entified existence. Every essence in reality is found to be individuated by existence. Specific accidents each of which is individuated by its own existence are considered mere signs of the individuation of the essence of that which has acci-

dents, and cannot be truly considered the cause of the individuation."[1]

Quiddity (*mahiyyah*) is divided into substance (*jawhar*) and accident (*'arad*). The reason for this classification is that either a quiddity can exist in a locus (or *subject*) that has no need of it for existence or it can exist without being in a locus that does not need it for existing.[2] The former is called "accident", such as quantity, quality and relation. The latter is called "substance", such as body that has no locus or form to exist in a locus or subject, while its locus is in need of it.

Now let us focus on substance. On the basis of an inductive survey, the metaphysicians normally first divide substance into five kinds. For example, Allamah Tabataba'i explicitly states that the five-part division of substance is based on induction and there is no rational argument that the number of types of substance cannot be more than five.[3]

- matter *(maddah*), a substance that possesses potentiality;
- form *(surah*), a substance that gives actuality to matter e.g., bodily form *(al-surat al-jismiyyah)* gives actuality to mater in respect to its three dimensions;
- body *(jism*), a substance that is extended in three dimensions;
- soul *(nafs)*, a substance free of matter in its essence but connected with it in action;
- intellect *('aql)*, a substance that is free of matter both in its essence and in action.

It has to be noted that neither form, like bodily form, nor soul *technically fall under* the category of substance, though existentially they are substances. As far as I know, this is a distinction that has hardly been attended in Greek philosophy. For the Greeks either something was a substance or not. However, Muslim philosophers believe that something may fulfil the requirements for being a substance, but still not be of a species of which substance is a genus. This means that they are not like accidents in need of locus that does not need them for its existence. In other words, they are not like predicables or qualities of something else. Essentially the soul and bodily form can exist independently from the body or any locus, but yet, they are different from other types of substance.

Refuting the idea of reincarnation (*tanasukh*), Mulla Sadra in his *Al-Asfar* makes a very important remark about the relation between soul and

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[1] Misbah Yazdi 1999, lesson 24.
[2] For example, see Tabataba'i 2002 and 1981.
[3] Tabataba'i 1981, 93.

body. He argues that unlike what most people think, it is the soul that carries and contains the body and not vice versa. The soul uses the body as an instrument to act and exercise its power as long as the soul has not developed into the status of complete independence wherein it will not need body at all. Since the soul is abstract (as we will argue later), there is no way of thinking of the physical body as container or carrier of the soul.[4]

The quiddities of the soul and bodily form are simple and therefore are not compounds of a genus (that is, substance) and differentia (the distinctive part in the essence or quiddity that distinguishes one type of substance from another).

Muslim philosophers such as Mulla Sadra and ‘Allamah Tabataba’i have a sophisticated argument here. According to them, form and differentia (*fasl*) are identical in their reality and it is only the way we consider them that makes them different. On the other hand, we know that the differentia is simple and does not need in turn a genus and another differentia to come into existence; otherwise there would be an endless series of differentia. ‘Allamah Tabataba’i puts the result as follows:

> The inclusion of bodily form in this classification is an accidental one, for form is differentia negatively conditioned and the differentiae of substances do not fall under the category of substance, though the term substance may be predicable of it (in the sense of technical predication), as was seen in the discussion on quiddity.[5]

The same applies to 'soul'.[6]

2. Soul

Definition: As we saw earlier, soul is a substance which is free of matter in its essence but connected with it in action. Soul is a form for the body to which it belongs. A very typical definition of soul is that it is a primary perfection (*kamal al-awwal*) for a natural body capable of performing the secondary perfections (*kamal al-thani*) necessitated by this primary perfection. A primary perfection is what makes a thing what it is or what constitutes the essence or nature of something like its differentia or genus. For example, sensation and voluntary movement are essential elements for

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[4] Shirazi 1378 A.H., vol. 9, 47.

[5] Tabatabi´i 2002, section 5, part 5.

[6] Tabatabi´i 2002, section 6, part 2. The author has a note here in the footnote: “The soul as such is form for a substantial species and the differentiae of substances do not fall under the category of substance”.

animals. Likewise, sensation, voluntary movement and the ability to think are essential elements or primary perfections for human beings. In contrast, a secondary perfection is an external quality that is accidental to the nature of the species or genus, such as touching for animals or writing for human beings.

2.1 Parts of the soul

Normally Muslim philosophers, like some of their Greek predecessors, have argued that there are different types and levels of the soul:
A: The non-rational soul: This consists of:
A.1: The plant soul: This is the soul at its lowest level. The plant soul is a primary perfection for an organic natural body inasmuch as this body can take nourishment, grow and reproduce. Since these qualities are shared by all living beings including human beings and other animals, the plant soul is shared by all of them. What makes a flower or tree different from us is not their possession of the plant soul, since we and plants share this type of soul. What makes us different is that we have something more. If an animal is in a vegetative state it means that is has lost its sensation and voluntary movement, but still has the essential qualities of the plants such as taking nourishment.
A.2: The animal soul: This type of soul is more developed and perfect than the plant soul. The animal soul is a primary perfection for an organic natural body inasmuch as this body has sensation and voluntary movement. Of course, this soul has all the above-mentioned qualities of the plant soul. What makes it different from the plant soul is that it has two more abilities: the ability for sensitive understanding and the ability for moving at will. The sensitive power has both external and internal senses. The external senses are touch, taste, smell, hearing and sight. The internal senses which are accepted by most Muslim philosophers are common sense, imagination and memory. Ibn Sina adds two more i.e. representational power and estimative power. The locomotive power is divided into that which causes movement and that which actually moves. Explaining the difference between these two, Shams Inati writes:

> The former, the desiderative power, subdivides into the appetitive and the irascible. The appetitive causes movement toward what is imagined to be necessary or beneficial in the pursuit of pleasure. The irascible causes avoidance of what is imagined to be harmful or an impediment in the pursuit of dominance. The power

> that actually moves uses the nerves to relax the muscles at the demands of the appetitive power or tighten them at the demands of the irascible one.[7]

B: The rational soul: This type of soul is even more developed than the animal soul. The rational soul is a primary perfection for an organic natural body inasmuch as this body can act by rational choice and grasp universals. The rational soul is divided into:
B.1: The practical intellect: The practical intellect (*'aql al-'amali*) is responsible for understanding what is good for oneself, for family and for state. It must be noted that "intellect" or "*'aql*" here means human reason and is completely different from the intellect which was discussed earlier as an immaterial and entirely abstract substance. The practical intellect corresponds to the three disciplines which form practical wisdom (*hikmah al-'amaliyyah*), i.e., ethics, home management, and politics. The practical intellect is the rational soul turning its face downward and attending to itself and the world around.
B.2: The theoretical intellect: The theoretical intellect is responsible for understanding universal concepts. This corresponds to the disciplines which form theoretical wisdom (*hikmah al-nazariyyah*) such as mathematics and metaphysics. The theoretical intellect is the rational soul turning its face upward, since universals are not to be found in the material world. According to a classification by Kindi, which is accepted by other Muslim philosophers, the theoretical intellect is divided into the following:
I the material intellect (*'aql al-hayulani*), which is empty and has the potentiality for grasping the intelligible forms or universals. As Ibn Sina has pointed out, the reason why this type of the intellect is called "material" is that it is potential and receptive just as matter is potential and accepts form.
II the habitual intellect (*'aql bil-malaka*), which grasps universals and has the ability to use them but does not always do so.
III the actual intellect (*'aql bi'l-fi'l*), which grasps universals in actuality and is always ready to use them.
IV the acquired intellect (*'aql al-mustafad*). This is the highest level of human understanding, in which the theoretical intellect becomes able to acquire universals in the purest form.
This is a more traditional way of classifying different levels of the intellect. In a more articulated way of classification of different ranks of the intellect, 'Allamah Tabataba'i writes:

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[7] Inati 1998.

> The metaphysicians mention four ranks of the intellect. One of them is that which is in a state of potentiality in relation to all intelligibles. It is called the material intellect on account of its being similar to [prime] matter in being devoid of intelligibles and its potentiality in relation to all forms. The second is the intellect by faculty *(‘aql bi al-malakah)* which is the rank wherein it intellects self-evident concepts and judgements; for the knowledge of self-evident things precedes the knowledge of speculative matters. The third is the intellect in act which intellects speculative matters through the mediation of self-evident concepts and judgements, though some of them are based on the others. The fourth is the intellect which partakes of all self-evident and derived intelligibles corresponding to the realities of the higher and the lower realms by virtue of having present before it all of them and its consciousness of them in act. Thus it is a knowing world similar to the external world and is called acquired intellect *(‘aql al-mustafad)*.[8]

2.2 The existence of the soul

Despite some controversy over other types of substance, there seems to be no dispute among Muslim philosophers about the existence of psychic substances. Especially when it comes to human beings, they all admit that there is a principle in human beings which is different from physical body and is the main thing responsible for their life, movement through will and understanding. Of course, they may disagree in details and this makes their philosophical positions distinct. However, a very important issue for Muslim philosophers has always been to demonstrate the existence of the soul as an immaterial being which is independent from the body in its essence, though there are interactions between them and some kind of interdependence in their acts.

At the very beginning of his inquiry about the soul in the *Shifa’* (*Healing*), Ibn Sina argues for the existence of the animal soul from the fact that animals perceive and move with some degree of will. On the other hand, we know that physical bodies do not have will. Therefore, these acts must belong to a principle animals have other than their bodies. This principle is what is called soul.

What is more important to illustrate is the existence of the rational soul. However, this may be an easier task because we have first hand and immediate experience of the rational soul on the one hand, and the acts of the rational soul are more sophisticated and distinct from those of the body. Ibn Sina’s example of the suspended man (*rajul-e mu‘allaq*) is intended to prove that the rational soul is aware of itself apart from any body. Ibn Sina

[8]Tabatabi´i 2002, section 11, part 5.

suggests supposing that you are physically and mentally healthy, your eyes are closed, your fingers are open, hands and feet are open so that they do not touch each other or your body, the weather to be exactly as warm as your body, in a quiet and dark place, standing on nothing. Should you be created suddenly in such a condition, Ibn Sina argues, certainly you would have a very clear and profound awareness of yourself, though you may totally be inattentive to your body and the material world around you. [9] Of course, Ibn Sina does not consider this as a demonstration (*burhan*); rather he tries to refer us back to our conscience or intuitive knowledge.

In the *Shifa'*, Ibn Sina also argues that the soul must be an incorporeal substance because intellectual thoughts themselves are indivisible. Salim Kemal articulates his argument as follows:

> Presumably he means that a coherent thought, involving concepts in some determinate order, cannot be had in parts by different intellects and still remain a single coherent thought. In order to be a coherent single unity, a coherent thought must be had by a single, unified intellect rather than, for example, one intellect having one part of the thought, another soul a separate part of the thought and yet a third intellect having a third distinct part of the same thought. In other words, a coherent thought is indivisible and can be present as such only to an intellect that is similarly unified or indivisible. However, corporeal matter is divisible; therefore the indivisible intellect that is necessary for coherent thought cannot be corporeal. It must therefore be incorporeal, since those are the only two available possibilities.[10]

I think Ibn Sina's argument from the idea of indivisibility does not just refer to the fact that a consistent thought cannot be distributed among different intellects. It is rather more general. Neither the soul nor its qualities, such as knowledge, can be divided, even in respect to one person. You cannot refer to your reality as a person and say that the *right side* of my reality or the *left side* of my reality is so and so, while we know that material things can be divided into smaller parts which can also be divided into parts once more, ad infinitum, if the means were available. Elsewhere I have written:

> They also knew that if a person lost a limb, he or she was essentially the same person, with a handicap. Their notions of themselves did not seem to suffer in the process. Thus many philosophers concluded that soul is independent from the body…

[9] Ibn Sina 1375 A.H., Al-Namat 3, chapter 1; Ibn Sina 1956, Al-Nafs, essay 1.
[10] Kamal 1998.

> As noted with the loss of limb example, philosophers knew that humans even after losing parts of themselves were the same. We all seem to have an understanding of ourselves as a whole, as something which is not divisible, and which is simple and not compound. When we get our hair cut, we do not feel any less afterwards. That which remains besides our body and is not on the floor of the barbershop is what we are after.[11]

To prove the existence of the soul as an immaterial being, Muslim philosophers such as ‘Allamah Tabataba’i argue:

> [W]e find in human souls the property of knowledge, and the intelligible forms are non-material, existing for the knower and being present for him. And had the knower not been non-material through his freedom from potentiality and his possession of pure actuality, there would be no sense in anything being present for him. Hence, the intelligent human soul is non-material. It is a substance because it is the form of a substantial species and the form of a substance is a substance, as explained above.[12]

Of course, there are more arguments used by Muslim philosophers to show that the soul is incorporeal.

2.3 The eternity of the soul

Muslim philosophers generally believed that the non-rational part is linked essentially to the body and therefore they agreed that the non-rational soul comes into existence simultaneously with body and that it may be destroyed after the destruction of the body.

In respect to the rational soul, philosophers such as Ibn Rushd, who believe that the rational soul is originally not separate from matter, contend that the whole human soul comes into existence and is eventually destroyed. People such as Kindi and Ibn Sina, who attribute non-materiality to the essence of the rational soul, assert that this soul has no end. Some, like Farabi, believed that the rational soul may or may not survive eternally. Shams C. Inati writes:

> Al-Kindi and Ibn Sina, for example, strongly adhere to the view that all rational souls are indestructible because by nature they are simple. Al-Farabi reminds us that the reason for eternal existence is the rational soul’s knowledge of the eternal aspects of the universe. From this he draws the conclusion, as did Alexander of

[11] Shomali 2006, 48.
[12] See Tabatabi´i 2002, section 6, part 7.

> Aphrodisias before him, that only those rational souls that have this knowledge at their separation from the body are indestructible. Other rational souls are eventually destroyed. Ibn Sina finds in the grasping of the universals the grounds for happiness, not the eternity of the soul. Ibn Rushd seems to hold that only the acquired intellect can be indestructible; but the acquired intellect, he argues (as does his teacher Ibn Bajja), is divine and numerically one in all. Ibn Rushd was attacked for this view because it denies eternal existence of individual souls.[13]

2.4 Happiness of the soul

The soul is a unity with all its parts working for one final end. Of course, each part of the soul may have its own lower ends as well. For example, the plant soul serves the animal and rational souls, but has its own aim to protect life with nourishment, growth and reproduction. Now the question arises: what is that final end?

Muslim philosophers believe that the ultimate end or happiness of the soul depends on its ability to separate itself from the demands of the body and to focus on grasping the eternal aspects of the universe. As we saw earlier, by reaching the state of the acquired intellect one becomes “a knowing world similar to the external world” (*‘aalam-an ‘ilmiy-an mudaahiy-an lil-‘aalam al-‘ayni*). This is a very typical formulation among Muslim philosophers. For example, Mulla Sadra says, "[through *Hikmah]* man becomes an intelligible world resembling the objective world and similar to the order of universal existence".[14] Explaining how the soul can gain knowledge of all knowable subjects, ‘Allamah Tabataba’i writes:

> …the soul is non-material essentially, not in act; by virtue of its essential non-materiality it intellects its own essence in act, but its actual attachment [to matter] necessitates its gradual transition from potentiality to act in accordance with different degrees of preparedness. And when it attains to complete non-materiality and is no more preoccupied with the regulation of the body's functions, it apprehends all knowables in the manner of non-differentiated knowledge, becoming an acquired intellect in act *('aql mustafad bi al-fi'l).*[15]

Thus, Muslim philosophers aim at knowing and introducing God and the world of creation through concepts and conceptual arguments that are easy to access, understand and communicate for most people and, as said above, become “a knowing world similar to the external world”. This does not

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[13] Inati 1998.
[14] Shirazi 1967, 20.
[15] Tabatabi´i 2002, section 11, part 11.

mean that they are only interested in theory and not in practice. A very important part of philosophical inquiry for them is related to practical disciplines, such as ethics, home management and politics. It should be noted that for them unlike most of their Greek predecessors ethics is very broad and deals with the subtle issues related to one's relation with God. Thus, for them a proper philosopher is one who knows the real world in a general way (that is, through universal concepts) and also knows what to do in the real world in respect to one's relation with oneself, family, society, state, nature and God. Knowledge including both the theoretical and the practical seems to be the ultimate end of philosophy as a discipline for some of the Greek predecessors of Muslim philosophers. For them whether someone acts according to what he learns through philosophy or not has nothing to do with philosophy as such. One may act immorally and still be a celebrity in philosophy. Perhaps the roots of this idea may be traced to remarks by Aristotle that knowledge and wisdom are not sufficient for leading a virtuous life and achieving felicity.

What about Muslim philosophers? Are they satisfied with just knowing the realities of the world and knowing what a proper course of action in certain circumstances is? It seems to me that for Muslim philosophers—even the Peripatetic ones—doing philosophy involved what I can formulate as: *bearing witness to what you know and witnessing what you know in the real world.* For example, the first Muslim philosopher, al-Kindi writes in his *On First Philosophy*:

> Philosophy is the knowledge of the reality of things within people's possibility, because the philosopher's end in theoretical knowledge is to gain truth and in practical knowledge to behave in accordance with truth.[16]

I think here we find a shift. Instead of saying the end in practical knowledge is to know how to behave he says, "to behave in accordance with truth". The case of Ibn Sina is more significant. In his '*Uyun al-Hikmah* he suggests that philosophy or *Hikmah* is "the perfection of the human soul through conceptualization of things and judgment of theoretical and practical realities to the measure of human ability".[17] In this definition he seems to suggest that philosophy is just about knowing theoretical and practical realities as much as possible. Of course, it is clear that he takes this by itself just one (and not all) perfection for the human soul, compared to those

[16] Cited in Nasr 1996.
[17] Ibid.

who do not have such knowledge. Later in his life he distinguished between Peripatetic philosophy and what he called "Oriental philosophy" *(a/-Hikmat al-Mashriqiyyah)*. Oriental philosophy is not based on ratiocination alone but included realized knowledge. It has been suggested that Ibn Sina's idea of Oriental philosophy set the stage for the Illuminationist philosophy or *Hikmat al-Ishraq* of Suhrawardi.[18] Interestingly, Ibn Sina in the last three sections (*al-namat*) of *Al-Isharat wa al-Tanbihat* presents a very nice and, indeed, a masterpiece on mysticism. A great commentator of *Al-Isharat wa al-Tanbihat*, Nasir al-Din Tusi is his own monograph: *Awsaf al-Ashraf* gives a scholarly account of the spiritual journey towards God and different stages that a wayfarer has to go through to be able to meet God.

Therefore, it seems clear that Muslim philosophers saw a close relation between the theoretical aspect of rational soul and the practical aspect of it, between thinking philosophically and leading a virtuous life. In this regard Nasr writes:

> This nexus, which is to be seen in all schools of earlier Islamic philosophy, became even more evident from Suhrawardi onward and the *Hakim* came to be seen throughout Islamic society not as someone who could only discuss mental concepts in a clever manner but as one who also lived according to the wisdom which he knew theoretically. The modern Western idea of the philosopher never developed in the Islamic world and the ideal stated by the Ikhwan al-Safa who lived in the fourth/tenth century and who were contemporary with Ibn Sina was to echo ever more loudly over the ages wherever Islamic philosophy was cultivated. The Ikhwan wrote, "The beginning of philosophy *(falsafah)* is the love of the sciences, its middle knowledge of the realities of existents to the measure of human ability and its end words and deeds in accordance with knowledge." (*Rasa'il,* I, Cairo, 1928)[19]

According to Suhrawardi and all later Islamic philosophers, *Hikmah* must be realized within one's whole being and not only mentally. Suhrawardi believed that a *Hakim* (sage) is one whose soul can ascend to the world of lights and, therefore, has achieved the purification of soul as well as the perfection of the theoretical faculty of the soul.

Mulla Sadra, the founder of *transcendent philosophy*, shows sympathy toward the conventional definition of philosophy among the Peripatetic philosophers in some of his works. For example, in the beginning of *Al-*

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[18] See Chapters 1 & 17 of *History of Islamic Philosophy* edited by Sayyid Husayn Nasr and Oliver Leaman. It should be noted that in Arabic "Mashirq" and "ishraq" are from the same root "shuruq" meaning illumination or shining.

[19] Nasr 1996, 23.

Asfar al-'Aqliyyah al-Arbi'ah he introduces philosophy as "the perfecting of the human soul to the extent of human ability through the knowledge of the essential reality of things as they are in themselves and through judgment concerning their existence established upon demonstration and not derived from opinion or through imitation". However, it is very clear from entire work that he is very much concerned with qualities of soul other than knowledge as well. In the first section of the same work which deals with being or existence, Mulla Sadra shows his concern about detachment from passions and purification of the soul from its material defilements. Indeed, Mulla Sadra, his contemporaries and most of his successors have very high esteem for philosophy and see genuine philosophers as the most perfect human beings standing in rank only below the prophets and Imams.

It should be noted that in Islamic philosophy the way to know God and the world is not restricted to conceptual knowledge. Supporting the idea of the Illuminationists,[20] 'Allamah Tabataba'i argues for the possibility of the soul having immediate knowledge of its cause as follows:

> That is so because the existence of the effect, as mentioned earlier, is dependent on the existence of the cause and is sustained by it; it is not independent of the cause. Hence, when the cause and the effect are non-material, the effect is present with all its being for the cause, without there being any barrier between them. It is known with immediacy to the cause through its existence itself. Similarly, when the cause and the effect are non-material, the cause is present with its existence for its effect, which is sustained by it, being independent through the independence of the cause, and there is no barrier separating them. Hence it is known to its effect with an immediate knowledge.[21]

Thus, theoretically it is possible for all human beings to have an immediate knowledge of God, our final cause. Now, the question arises why there are people who cannot *find* God. To be able to understand this better we should explore further the idea of "immediate knowledge". Immediate knowledge here means knowledge by presence (*al-'ilm al-huãuri*) and that is when the object of knowledge, i.e., what is known, by itself is present to the subject of knowledge, i.e., the knower, and there is no resort to any conceptual image of the object to mediate between the two. In contrast, conceptual knowledge (*al-'ilm al-husuli*) is based on the concepts or images of the knowable. Therefore, what is primarily known is the image and

[20] The Illuminationist (*Ishraqi*) philosophers are those who took their inspiration from Sohravardi.
[21] Tabatabi´i 2002, section 11, part 12.

then through the image the knowable is known. Conceptual knowledge constitutes most of our knowledge, but it is subject to mistakes and illusion. Immediate knowledge admits no mistake, because there is no separation or distance between the knower and what is known. It is only when we try to interpret it and put it in a conceptual framework that we may make mistakes. For example, when I am feeling happy or hopeful or hungry this feeling is known immediately to me and cannot be mistaken. However, when I try to interpret it or explain what has caused this feeling I may make mistakes. I may really have such feeling without knowing what the true explanation for that is. Sometimes we may even not be able to describe our feelings or spiritual experiences by words.

In the case of immediate knowledge of God which is possible for all people, what may actually happen is that there may be some people who are so preoccupied with other things that their attention gets diverted from this knowledge to other things. It is also possible that some people may have this first hand experience of God but may not be able to *read* or interpret it in a proper way. Indeed, people like Ibn Arabi argue that no one has ever loved or worshiped anyone other than God. He says:

> Nothing other than God is loved. He is what appears from whatever is beloved in the eyes of whoever loves. There is no being except that it loves. Thus the whole universe loves and is loved and all these go back to Him just as nothing has ever been worshipped other than Him since whatever a servant (of God) has ever worshipped has been so because of wrong imagination of deity in it; otherwise it would have never been worshipped. God the most High, says (in the Qur'an): 'and your Lord has commanded not to worship but Him.'(17:23) This is the case with love as well. No one has ever loved anything other than his Creator. However, He, the most High has hidden Himself from them under the love for Zaynab, Su'ad, Hind, Layla, dunya (this world), money, social position and all other beloved subjects in the universe.[22]

The highest perfection of soul depends on having immediate knowledge of God consciously and constantly. I think it is this kind of knowledge that is necessarily linked to purification of soul and living virtuously. To be able to *see* God through everything and then *seeing* everything through God is much different from the conceptual knowledge that there is a necessarily

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[22] Heydarpoor, Mahnaz, *Love in Christianity & Islam* cited and translated into English from Ibn Arabi, *Al-Futuhat al-Makkiyyah*, 1994, Vol. 2, 326. Ibn Arabi adds that: "mystics have never heard any poem or praise or the like but about Him (and they saw Him) beyond veils." (Ibid)

existent being who is present everywhere and that everything is created by Him. Thus, as said above, if Muslim philosophers introduce God and the world of creation through concepts and conceptual arguments it is just because they are easier to access, understand and communicate for most people. Then every person needs to experience this in his life and that very experience cannot be communicated to anyone else.

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Ibn Sina on Substances and Accidents

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There was a vivid and influential dialogue of Western philosophy with Ibn Sina in the Middle Ages; but there can be also a fruitful dialogue of Western philosophy with him today. I do not approach Ibn Sina as a scholar but as a metaphysician and admirer. I was attracted to him because of similarities between our ontologies, and have learned a lot from him. Moreover, I think that only metaphysicians can fully appreciate Ibn Sina's achievements and his greatness.

A crucial move for Ibn Sina's theory of substance is his distinction between existence and actual existence.[1] Ibn Sina's concept of existence is really new. The concept of actual existence or actuality (*energeia*) is to be found already in Aristotle. Aristotle equates being actual with being a substance (*ousia*) and with having a substantial form (*eidos*) which plays the role of essence (*ti en einai*). Insofar as a substance has and is a substantial form it is actual. Prime matter has no actuality according to Aristotle but merely potentiality. Indeed, Aristotle takes prime matter to have no being whatsoever and to be unknowable. Nevertheless, he draws on it in his ontological analysis. Hence it should be granted ontological status. That argument may have been one of the reasons which led Ibn Sina to discern existence in the sense of having ontological status or simply being there. At any rate it allows him to give ontological status to prime matter, although he takes it to have nothing but potentiality and to lack individuation. Like Aristotle, Ibn Sina holds that prime matter is not a "this there" (*tode ti*), i.e., a located particular, and also that prime matter without essential form is undifferentiated (unindividuated), i.e., that without essential form there is only one prime matter. Nevertheless, Ibn Sina's granting ontological status (existence) to prime matter is enough to make the actual substance a clear complex. Aristotle takes it to be basically simple.

Ibn Sina's upgrading of prime matter goes so far as to categorise it as a

1 Ibn Sina 1960, 45ff.

substance though not a substance with actuality, not an actual substance. An actual substance is always a composition of prime matter and essential form. With actual substance turning into a composition, into a complex, the problem of unity arises which is the question of how the constituents of the complex are held together.

Ibn Sina points out that matter cannot be free from an essential form, that the former needs the latter to be actual, and that essential forms do not exist separately from matter.[2] However, that mutual dependence does not seem to Ibn Sina sufficient to ground the togetherness of matter and form in an actual substance. He understands the problem of the unity of the actual substance as the task of showing that the matter and form that come together are necessarily together. Ibn Sina argues that the potentiality of prime matter to receive essential forms does not make the connection with the form it has necessary, since it is a potentiality, and ready to receive any form. That implies that it could have received another form. He argues that this is shown by the occurrence of substantial change, i.e., change of essential form. Correspondingly, although the essential form cannot exist separately from any prime matter, it could be the essence of another prime matter. Ibn Sina also argues against there being a relation between matter and form in the Aristotelian sense, i. e., against the assumption that there are the relational accidents 'being the essence of matter *m*' and 'being the matter of essence *e*'. These relational accidents would entail each other and make matter and form necessarily related entities. The main conclusion of Ibn Sina's deliberations concerning the unity of the complex of matter and form is that it is of itself not necessary but contingent and that its unity must be caused from outside. Thus, Ibn Sina grounds the connection between matter and form on a causal accident and holds that with this accident the connection becomes necessary.

I agree with Ibn Sina that the possession of essential properties is not necessary but contingent. Instead of "contingent" one sometimes says "factual". In accordance with this use I ground the possession of essential properties on facts, although I ground also necessity on facts, namely general facts. The possession of properties is founded on atomic facts. And I concur with Ibn Sina that taking into account the cause of the actual

2 Ibid. 119ff.

substance will lead to the conclusion that it is necessary.

However, I would argue that the problem of the unity of the actual substance and the problem of the unity of complexes in general has to be distinguished from the question: “What caused the complex?”(in the customary sense), though many contemporary philosophers as well as philosophers of the idealistic tradition in the wide sense, confuse the two questions. In my ontological analysis there is a marked difference. The connection between matter and essential form is based, as was mentioned already, on a certain fact, namely the fact that the matter has that form, while the cause of that fact is another fact, e.g., the fact that a certain chicken egg had a certain temperature at a certain period of time is the cause of the prime matter of the resulting chicken having the essential form of a chicken. This genetic explanation is quite different from the ontological explanation of the structure of the actual chicken as a composition of matter and form.

Concerning the categorial structure of the actual substance I disagree with Ibn Sina. From the assumption that the essence of a substance can change, which I share with him, I draw the conclusion that it must be external, i.e., that the essential form is connected with the substance only by a certain fact. It is the fact that the respective prime matter has the respective essential form.

This further implies that the prime matter is the substance by being that which has the essential, the substantial form. Ibn Sina, as was mentioned already, categorises prime matter as a substance but continues to consider the actual substance, i.e., the complex of prime matter and essential form, as the substance proper. But with respect to prime matter he makes another important move. Not only does he realise that matter has to have ontological status, as was mentioned already, but he also sees that there must be some entity which makes prime matter prime matter.[3] That entity he calls material essence, which is distinguished clearly from the corporal essence, which makes an actual substance a corporal (material) rather than a mental substance.

Instead of “prime matter” I name the corresponding category “individual”. What makes an individual an individual? Its individuality.

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3 Ibid. 133.

One could characterise the individuality of an individual as its “categorial essence” and distinguish “categorial” and “substantial” essence.

I claim that there is no categorial change and that the connection between an individual and its individuality is closer than that between it and its substantial and other properties. The latter are connected by facts; the categorial properties not. The categorial properties are internal, one could say, the substantial and other properties external. This distinction mirrors the distinction in Ibn Sina’s ontology between the actual substance, which is complex, and prime matter, which is simple. Individuals are simple only after a fashion. The individuality is not a constituent of the individual (only facts have constituents), but it is present at the individual (analogous to the form in a literal sense of shape which is present in a body without being a spatial part of it).

Like prime matter in the Aristotelian tradition individuals are substrata. They are the bearers of the substantial properties. But in contrast to the Aristotelian tradition, they also bear all other first order properties. According to Ibn Sina’s ontology prime matter plays the role of substratum by forming a complex with substantial properties (essence). The other properties (the accidents) are added by inhering in the complex. Ibn Sina explains that the inherence does not imply being part of the actual substance.

We have seen that Ibn Sina upgrades prime matter considerably by categorising it as a substance and by giving it an essence of its own. But he did not go so far as Aquinas to localise it and give it the task of individuator. However, Aquinas assimilates matter to form and does not continue Ibn Sina’s upgrading of matter. Ibn Sina held the view that it is the essential form that individuates matter and, as far as bodily substances are concerned, that lends them extendedness and a place in space. The individuals of my own ontology are localised and are also individuators. However, they individuate only themselves and only indirectly the facts of which they are constituents. It has to be added that like Suarez, I subscribe to the principle that each entity (at least each simple entity) has to individuate itself. That implies that there is a problem of individuation not only for substances, for concrete things, but also for essences and accidents, it implies that individuation is a problem for all categories. It implies also that the search for a principle of individuation, i.e., for an

entity other than the entity to be individuated, is misguided as far as simple entities are concerned.

Like the Scholastics, I advocate the view that diversity (i.e., the ontological ground of individuation) is a transcendental. That implies mainly two contentions: (1) that diversity is not an entity (*res*), and that there is no relation of diversity, and (2) that diversity transcends the category boundaries, that it is not restricted to certain categories but occurs in all categories and that it is therefore equivalent to—though, of course, not identical with—being an existent, with existing. We have explained in accordance with Ibn Sina that existing is the same as having ontological status and not with being an actual substance, as in Aristotle. Now, the doctrine of transcendentals as sketched implies that what has ontological status is diverse from every other existent and is thus individuated. Accepting that doctrine. one could challenge Ibn Sina by pointing out that he cannot grant ontological status to prime matter without granting it also individuation.

Why is Ibn Sina convinced that prime matter is of itself not individuated and that it has to be individuated by essential form? For two reasons, I think: the first is that he thinks of individuation in terms of differentiation, i.e., diversity is reduced to qualitative difference). That was standard until Suarez, and underlies also the so-called Leibniz-Russell Definition of identity or rather the logically equivalent definition of non-identity (diversity). It goes well with Aristotle's view, which Ibn Sina adopts, that prime matter is a substratum (*hypokeimenon*), a bearer of the substantial form and that the relation between matter and form is predicative. Matter has form. Hence there is a similarity between the relation of matter-form and substance-accident. Aristotle considers the substance also as the substratum of its accidents.

Individuation by differentiation is dubious on two accounts. Firstly, it leads to an infinite regress, since it grounds the diversity of property bearers on the diversity of properties and gives rise to the task of grounding the diversity of the properties, etc. Such a regress arises with all principles of individuation, i.e., it arises always if entities are individuated by other entities, not only if the other entities are properties. Secondly, one may object to individuation of a constituent of a complex by another constituent. Clearly, a complex is a complex only by virtue if its

constituents being diverse from each other. The circumstance that there are more than one constituent presupposes that they are diverse. One constituent cannot make another constituent another constituent because for that it has to be already another constituent.

An additional consideration can be brought forward against Ibn Sina's individuation of the complex actual substance by one of its constituents. It is plausible—though not inevitable—to base the individuation of a complex entitiy on the individuation of its constituents. While simple entities individuate themselves, the individuation of complex entities is derived, according to this view, from the individuation of their constituents. With regard to that, the individuation of actual substances as complexes seems somehow difficult in Ibn Sina's ontology. Clearly, the substantial form does not individuate the actual substance. This is not because it is general. Ibn Sina takes it to be as such neither general nor particular. Only in an actual substance and together with matter does it become particular. Hence one can say that neither matter nor substantial form are individuated independently of an actual substance. That seems to make derived individuation of the actual substance lose its ground. One wonders how individuation can be based on what is not individuated itself. And one can hardly make sense of Ibn Sina's machinery of individuation.

Aquinas seems to be better off at this point. He grounds the individuation of the actual substance on the spatio-temporally specified or determined substantial form, i.e., on the substantial form with a designated matter. This is clearer than what Ibn Sina offers. And it is clearly individuation by differentiation.

I should mention that Ibn Sina gives a straightforward and simple answer to the question: "What individuates actual substances?", namely: "their accidents".[4] The answer does not seem to me satisfactory because the problem of individuation, even of complexes, is a fundamental ontological problem for each kind of entity. Therefore, it cannot be solved by entities which are added (by *symbebekota*). However, the answer would be adequate if the question were not: "What grounds the diversity between actual substances?" but "By what marks do we recognise actual substances?". And the attempt to replace the fundamental theoretical

4 Ibid. 140.

problem of individuation by the practical problem of reidentification is common in analytical philosophy, from Strawson on. But it certainly is not in accordance with Ibn Sina's metaphysics. Ibn Sina is the opposite of an anti-metaphysician such as Ghazali or Wittgenstein.

Now, there are interpretations according to which existence is Ibn Sina's principle of individuation.[5] For these one has to take into account Ibn Sina's distinction between existence and actual existence. It gives rise to the question of whether existence or actual existence is the principle of individuation. In answering, existence has to be excluded since prime matter is assumed to exist but not to be individuated. Surely, something cannot have the principle of individuation and not be individuated. What about actual existence as a principle of individuation? As was mentioned already, Ibn Sina holds that the actualisation by virtue of the essential form particularises prime matter in the first place. Particularisation (turning an entity into a particular) and individuation (making it diverse from every other entity) are closely related. Do they coincide in this case? One may wonder whether the conception of particularisation is clear, and doubt that an entity which is not a particular can be turned into a particular. Aquinas explains how an essential form furnishes a principle of individuation, namely by maximally specifying the form: a human body, e. g., is individuated by specifying human flesh in general into this flesh. The maximally specified essential form then is what grounds the diversity of this human body from all other entities. And since the essential form brings actual existence to the concrete substance there is a close connection between actual existence and individuation. This connection is particularly close since a maximally specific essential form brings individuation only by making a substance actual. Hence, one could consider actual existence as the cause of individuation. Nevertheless, while the maximally specific essential form is able to ground the diversity of a concrete substance from all other concrete substances, actual existence as such is not. A particular substantial form lends actual existence to a substance but it is not the same as actual existence.

The main motive for attributing to Ibn Sina the view that existence is the principle of individuation is to find in him a principle of individuation

5 See the paper by M. Shomali in this volume.

which is applicable also to God. The individuation of God is without doubt a difficult problem. But it can be solved as in Aquinas by considering him an exceptional case, which is very much in accordance with monotheistic theology.

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God as Substance without Substance Ontology

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Theists often defend substance ontology. After all, God is supposed to be a substance. In particular, traditional Christian doctrine teaches that God is a substance: the council of Constantinople in 381 declared that God is a substance (ουσια), more precisely three persons in one substance. Does a theist therefore have to accept substance ontology, as for example Thomas Aquinas did? In this paper I shall spell out the reasons for calling God a substance and argue that theism, nevertheless, does not require substance ontology but is compatible with an alternative ontology which I call stuff ontology.

1. Substance Ontology

A classical substance ontology assumes that the world is made up of things each of which belongs to a kind.[1] More precisely, it assumes that each thing contains a property bearer that is kinded: it is an exemplification of a kind universal, i.e. it is an individual that stands in the relation of exemplification to a certain universal which may have other exemplifications. An exemplification of a kind universal bears properties each of which is an exemplification of a property universal. Further it is a common thesis of classical substance ontology that substances act. They have powers to bring about certain states of affairs. All causation is reduced to agent causation.

My main reason for rejecting substance ontology is that most of the stuff of the universe does not seem to consist of substances. Let me give three reasons for this claim:

First, most things seem to belong to many kinds no single one of which is objectively more important than all others. Substance ontology claims that each thing belongs to one and only one kind in a special way, its substantial kind. That is the one of which the property bearer is an exemplification. It is also the one that is responsible for the conditions of the dia-

[1] Professor Loux explains this in his contribution to this volume; see also Loux 1974 and Loux 1998.

chronic identity and of the existence of the thing: if it ceases to be a thing of that kind it thereby ceases to exist. So according to substance ontology, one must discover which of the kinds to which the thing belongs is the substantial kind.

The trouble with this is that there does not seem to be such a unique substantial kind of each thing. A particular apple, for example, belongs to many kinds: it is a fruit, an apple, a Golden Delicius, etc. Substance ontology claims that one of these kinds is the thing's ontologically fundamental kind. Usually the *lowest* kind ('infima species') is taken to be the substantial kind. But there is no lowest kind because for each kind there is a lower one. We can form the concept of a red Golden Delicius, of a red and sour Golden Delicius, etc. These concepts might not be common or practical but there is nothing in the thing which makes such concepts impossible or inadequate. If this is true, then the claim that only one of the kinds to which a thing belongs is ontologically fundamental is false.

Second, substance ontology assumes that the conditions of the diachronic identity of a thing are fixed in the thing. The substantial kind of a thing *A* also determines under which conditions *A* ceases to exist and under which conditions something is identical with *A*. But it seems more plausible that the conditions of diachronic identity are fixed not in the thing but in the sortal concept under which the thing is traced. The thing has to have certain properties in order to fall under a concept, but which of the sortal concepts under which a thing falls is used in order to trace it through space and time is your choice. Contra substance ontology, the conditions of diachronic identity are not to be discovered in the thing. For example, take a certain statue made of bronze. You can trace it through space and time as a statue or as a lump of bronze. If you take it as a statue it ceases to exist if it is melted. If you take it as a lump of bronze it does not cease to exist if it is melted. However, substance ontology claims that the bearer of the properties of the thing, e.g. its being five kilograms in mass, is an exemplification of a kind universal, and this determines objectively whether the thing ceases to exist if it is melted.

Third, substance ontology entails that there is one correct way of carving up the world into things. If the yolk of an egg has a density of 1.2 g/cm^3, then there must be a property bearer that is bearing a property which is an exemplification of the corresponding property universal. You might want to say that the egg yolk *as well as* the whole egg instantiate the universal, but this would mean that the density in one place consists in the universal being exemplified several times. This would be ontological over-

determination. The substance ontologist should therefore assume that some portions of matter are property bearers and others are not. My objection against this is that the material world does not seem to consist of chunks in this way. On the macro as well as on the micro level we carve up reality into things in various ways none of which is better than all others. The most plausible version of substance ontology claims that the real substances are the particles, but modern physics suggests that the material world does not consist of particles and nothing in between, but rather of fields. Furthermore, it suggests that, unlike substances and unlike 'atoms' as they are traditionally conceived, the particles do not have determinate conditions of diachronic identity.[2]

2. Stuff Ontology

Let me sketch an alternative which I call stuff ontology:

- The material world is not partitioned in chunks, any portion of matter can equally well be taken as a thing. Although some portions are more handy than others because they have a stronger causal or functional unity, there is no one ontologically correct way of carving up the material world into things.
- Every portion of matter belongs equally to many kinds, no one of which is the ontologically fundamental one.
- A portion of matter can be traced through time by various sortal concepts, its diachronic identity is therefore relative and subjective.
- Material things do not act but cause states of affairs only through being constituents of states of affairs that cause other states of affairs.

This is a radical departure from classical substance ontology. Stuff ontology denies that material things are substances and that the world consists of substances. I now want to show how theism, nevertheless, is compatible with this ontology and that there is still good reason for calling God a substance. For this I shall list features of God which, according to what philosophers usually mean by a substance, are typical features of substances.

[2] For more arguments against substance ontology see Wachter 2000, ch. 3.

3. God is Concrete

First, on all accounts it is a necessary feature of a substance that it is concrete. By this it is meant that a substance is ontologically complete, as opposed to, for example, a property, such as a particular stone's being seven kilograms in mass. That the stone is concrete means that it includes all its properties and other ontological constituents. (By properties I mean its individual properties, also called 'tropes'.) An abstract entity, such as a property, exists together with other abstract entities within a thing. It depends on them, it cannot exist without them. A concrete entity is independent in the sense that it does not need to exist together with other entities.

God is concrete in this sense, he is not just an aspect or a property of a thing. In particular he is not an aspect or an emergent property or the 'being' of the world. That God is concrete rules out some non-traditional versions of theism, as they are popular among theologians of the last two hundred years. Theologians who say that there is a God but that he is not a person often seem to think of God (as far as they state at all what they mean by 'God') as an inner-worldly aspect of reality. Such a God would not be concrete. Also the God of process theology does not seem to be concrete.[3]

But according to classical theism, as for example assumed by Christianity, God is distinct from the material world as well as from human beings and their mental lives. As he brought about everything besides himself through his action, he is the cause of it all and could exist without it. Only a concrete God can be the cause of the universe and could exist independently of it.

To accept this one does not need to accept classical substance ontology. All you need is a notion of concreteness, which stuff ontology does have. It just uses it less restrictively than substance ontology does, because it takes the complete content of every region of space to be a concrete entity. Thus stuff ontology is compatible with the existence of a concrete, personal God who brought the universe into being and sustains it and could exist on its own.

It is convenient and adequate to use 'substance' in a wide sense so that to be a substance is just to be concrete. According to this usage God clearly is a substance. In any case, to be concrete is a necessary feature of being a substance, and God has this feature.

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[3] Griffin 2001, 5-7.

4. God Persists

Another necessary feature of a substance is that it persists through time. While concreteness is a feature that God shares with material things, I need to assume that God differs from material things in the way he persists through time. According to stuff ontology a material thing can be traced with different sortal concepts through space and time, so its diachronic identity is in a sense relative: if you refer to a thing *A* at one time and to a thing *B* at another time, there may be no fact of the matter whether *A* is identical with *B*. We can also express this by saying that material things do not have determinate conditions of diachronic identity.[4] For example, it may be nothing to be discovered whether a certain ship is identical with the ship of Theseus. There is no fact of the matter whether the ship of Theseus is identical with the ship rebuilt with the planks of the old ship.

God's diachronic identity (like, I believe, the identity of human beings) is of course in no sense relative. Whenever you refer to God, or to a divine person, at one time there is a fact of the matter whether he is identical with a certain a God referred to at another time. You might find this trivial, but I do not find it trivial because I deny it for material objects. I need to assume that God can create things that do not have absolute diachronic identity and in this respect have a different ontological structure than he has. But there is no problem with this. There is no metaphysical principle according to which if one entity has absolute diachronic identity everything has to have absolute diachronic identity.

According to stuff ontology, material things do not have determinate conditions of diachronic identity, but they are in time. That is why material things can be traced through space and time by sortal concepts or by pointing at them. That is also why they are involved in events which stand in temporal relations to each other.

According to theism as I consider it, God is in time too. He persists through time, as we do, which is a necessary feature of a substance. However, there is also a long tradition in Christian philosophical theology (e.g., Boethius and Thomas Aquinas) of taking God to be outside of time. This view, which is based on the assumption that anything in time is bound to perish, is less compatible with the thesis that God is a substance. A God

[4] Lowe 1998, 34.

who is outside time is more like a Platonic entity or like a principle than what philosophers usually call a substance.

There are many claims commonly made about God that seem to imply that God is in time. For example, God is supposed to be the cause of the universe. Causation takes place in time and it involves things persisting in time during which something happens. Entities that are outside time are causally idle. Further, God is supposed to be a person, that is, someone who acts. Actions happen at a time, there is a time before and a time after, and they have effects in time. If God were outside time, that could not be the case. Moreover, God is supposed to be present. He is supposed to be present at particular occasions, and he is supposed to be present everywhere at all times. All this seems to imply that God is in time and that he is a substance persisting in time. It does not entail, however, that he is a classical substance or that classical substance ontology is true. The difficulties here arise for the view that God is outside time, not for the view that he is not a classical substance or that classical substance ontology is false.[5]

5. God is a Free Agent

Philosophers who use the term 'substance' at all generally call things that *act* substances; therefore, another reason for calling God a substance is that he acts. He is supposed to have powers (namely limitless power, power to do anything that is possible). He is supposed to have reasons for actions, for example moral reasons. Moreover, he is a free agent, that is, his actions are not caused by anything else. They originate in him so that he can cause something *de novo* or *ex nihilo*.

Some take the ability to act to be a necessary feature of a substance. On this view all causation is reducible to agent causation. But even if this is not assumed, the ability to act is sufficient for being a substance. Properties, principles, or Platonic forms cannot act. The ability to act and to cause something through action presupposes the necessary features of a substance which I have mentioned already: Only something that is concrete can act. Only something that persists in time can act.

Again, this does not entail that classical substance ontology is true or that God is a classical substance. It entails only that God has a mental life, that he persists in time, and that he has powers to act intentionally. The things he creates may have any ontological structure. They may be persons

[5] For the standard arguments for God being in time see Wolterstorff 1975 and Swinburne 1993. Recent contributions to the debate are in Ganssle and Woodruff 2002.

or not, they may have absolute diachronic identity or not, they may or may not have kinded property bearers, they may or may not be bundles of properties.

We need to distinguish here the theistic concept of God from the Hegelian concept of God as the infinite. If you take God as the infinite you are led to say that there is nothing that is distinct from God. This has led some authors to pantheism. The concept of God as the infinite might have arisen from a confusion: God has infinite power, infinite knowledge, etc.; so he is limitless in this sense. We have to distinguish this from the claim that there is nothing that is distinct from God. According to theism the universe and everything that is created is distinct from God and is caused by God.

6. Causal Independence

So far I have given three reasons for taking God to be a substance: God is concrete, he persists in time, and he causes through action. Another feature of substances is described by Professor Loux and by Professor Legenhausen in their contributions: substances have unity and independence. For example, a horse has a strong unity: its body is cohesive and its parts are connected through functional dependencies. Traditional substance ontology tries to capture this by talking of the form and of the substantial kind. But we can describe unity also without these concepts. Furthermore, we can distinguish various kinds and various degrees of unity. Other things being equal, the stronger the unity of a thing, the more reason there is for calling it a substance. Likewise, the more independent something is, the more reason there is for calling it a substance.

Philosophers who do not take every concrete object to be a substance reserve the term ‘substance’ for entities with a certain kind of unity. The left half of this table, on such a view, is not a substance. Neither is the sum of this table and the book lying on it. The book on its own may count as a substance because its function, depending on the cooperation on its parts, constitutes a unity, the unity of a machine. Also a horse has a functional unity. In a way, the horse’s unity is even stronger because its organs cannot be as easily dissembled and reassembled.[6]

God has a very strong unity. First, his properties cannot be separated from each other. Furthermore, he cannot change his properties. For exam-

[6] Roman Ingarden, in his *Der Streit um die Existenz der Welt* (1965, § 43), systematically distinguished between different kinds of unity and analysed the difference between the unity of an organism and the unity of a machine.

ple: His omnipotence depends on his omniscience because if God were not omniscient he would not be omnipotent because to have a power one needs the knowledge how to bring about the state of affairs.

Second, God is not dependent on any concrete parts. A horse is dependent on its organs: they must function and they must be a part of the body, i.e. they must be correctly connected to the other organs.

If there is a God, God is causally independent from the universe and everything contingent. He brought it all into being and nothing can exist without God sustaining it. He is the only thing that is causally dependent on nothing else at all. He could exist without anything else existing. This constitutes a further reason for calling him a substance.

7. The Trinity

God's unity is also the reason why in Christian doctrine God is taken to be one substance although there are three divine persons. The unity is first causal. The Father caused the Son and the Father together with the Son caused the Spirit. Secondly, the unity is personal: None of the divine persons would do what any of the others would not have him do. As the three divine persons have access to each others mental life and act this way in unison they can count as one agent and as one substance.[7]

8. Necessity

We need to consider another reason why one might deny that God is a substance. God is supposed to be necessary. While, for example, the world could also exist without me and I might never have existed, the world could not exist without God and God could not fail to exist. God, if there is a God, exists necessarily.

Necessary existence is usually attributed only to things that are not substances, for example numbers or Platonic forms. So, is God like these ideal entities and therefore not a substance? For Thomists and others who take God to be outside time it is difficult to deny this, but if God is in time, his necessary existence amounts to something else. A temporal entity exists necessarily if its existence had no beginning (i.e. there was no time when it did not exist) and if it is impossible that it ceases to exist.[8] This is the case

[7] For recent contributions to the philosophical debate about the Trinity, see Davis et al. 1999.

[8] Wachter 2001.

for God, if he exists. His existence is supposed to have no beginning. And he could not cease to exist because he is powerful enough to prevent his abolition, and due to his character it is impossible that he commits suicide. This way his necessary existence and his being a substance are compatible.

I conclude that there are good reasons for calling God a substance, that theism does not require substance ontology, and that theism is compatible with stuff ontology.

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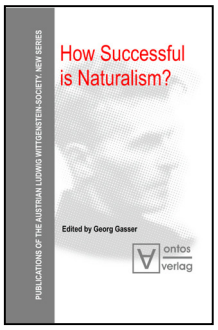

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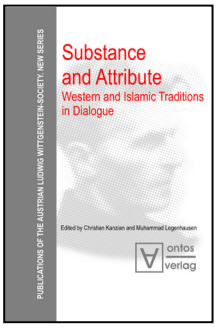

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