

Cosmology of al-Ash'arī — Introduction of Atomistic Ontology into Sunnite Kalām

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Abbreviations used in this paper;

M Ibn Fūrak, *Muğarrad maqālāt al-Aš'arī* (ed., Daniel Gimaret, Beyrouth, 1987)

Maq al-Ash'arī, *Maqālāt al-Islāmīyīn* (2nd Edition, ed., Hellmut Ritter, Wiesbaden, 1963)

Milal al-Shahrastānī, *al-Milal wa-l-niḥal* (vol.1, Cairo, 1976)

Risalah al-Ash'arī, *Risālah fī istiḥsān al-khawḍ fī 'ilm al-kalām*, in *The Theology of al-Ash'arī* (Richard MacCarty, Beyrouth, 1953)

1, General View

Though Abū al-Ḥasan 'Alī bn Ismā'īl al-Ash'arī (873/4-935/6) is called the founder of the Sunnite theology, only few of his own literary works have survived⁽¹⁾. Even the material concerning al-Ash'arī himself and the Ash'arite school are not sufficient for the researches, and that has limited the number of the academic thesis and publications concerning al-Ash'arī and the Ash'arite school. However, we have two academic publications issued by Daniel Gimaret⁽²⁾, which are elaborate works and self-sacrificing dedications to growth and expansion for the study of Islamic theology, Kalām. All of the recent researches on this sphere including mine are greatly indebted to his dedications.

Among the Sunnite thoughts, the atomistic ontology is regarded in general as being originated by al-Ash'arī, but it is difficult to find the arguments concerning to this subject clearly in his own works. Tracing the relation between al-Ash'arī and the Mu'tazilite and the development of the Ash'arite theological thoughts after him, I am studying the structure of the cosmology in al-Ash'arī, and in this paper, I concentrate on common aspects between the Mu'tazilite atomism and the al-Ash'arī's, and inspect his purpose of adapting atomism into Sunnite theology.

2, The Middle Way

In order to understand al-Ash'arī's unique position, the middle way, we have to take a brief look on his biography. He is regarded as the founder of the so-called orthodox theology in Islam, but even with such an achievement his life history is still obscure. He left behind no autobiography or confession like his later successor, al-Ghazālī. Moreover, his inventive thought was not accepted as the orthodox theory until al-Ghazālī inherited it and recognized it officially some 150 years later.

Born in Baṣrah in a family of good lineage, he belonged the Mu'tazilite circle in his early age, and as a student of al-Jubbā'ī⁽³⁾ he is reported to have become prominent and renowned among them until he was forty years old. Meanwhile, he found himself not satisfied with his master's arguments, and he began to doubt the Mu'tazilite theory. After having seen the dreams of the Prophet Muḥammad three times during the month of Ramaḍān, he finally turned to the traditional dogma based on the Qur'ān and the Sunnah. Following the retirement at his house for fifteen days, climbing the pulpit of the grand mosque of Baṣrah, he announced his reformation to the traditional dogma⁽⁴⁾.

Due to these anecdotes, it is understood that even for a short time al-Ash'arī suffered from strong mental pains and fierce tensions. Those conditions were produced from the differences and disparities between him and the Mu'tazilite for a long period. However, al-Ash'arī was not merely converted to the traditional theory, but he utilized fully and freely the polemic methods he gained through his discipline with the Mu'tazilite in order to systematize the simplicity of the traditional creed. He is told to have fought against the Mu'tazilite rationalism all his life with this rational polemic method.

Thus, al-Ash'arī employed the so-called middle way both rejecting the bigoted traditionalism and avoiding the indulgence in the abstract arguments of the rationalism. The most typical one among his middle-way methods is the argumentations on the attributes of God, where he first rejected the naïve anthropomorphism and avoided the metaphorical interpretation, and second he contrived to adapt the methods of the metaphorical interpretation without falling into the anthropomorphism⁽⁵⁾. This distinctive feature called the middle way is also found in his atomistic ontology.

3, The Middle Way in the Atomism

The Sunnite atomistic ontology which proves God to be as a Creator is often said to be an inspiration peculiar to Islam, but this ontology has its origin in the Mu'tazilite atomism, which also had been formed under the influence of Neoplatonism⁽⁶⁾. Though al-Ash'arī has two faces as mentioned above; traditionalist and rationalist, his cosmology has the more aspects of rationalism. In other words, al-Ash'arī inherited the cosmology of his former master al-Jubbā'ī just as he had studied it, which was the Mu'tazilite atomism introduced by Abū al-Hudhāl⁽⁷⁾. Al-Ash'arī's atomism is said to be one of the most evident examples of his application of the Mu'tazilite theory to the traditional position. It is thought that he searched and produced the occasionalistic cosmology, and applied it to the traditional Islamic sphere, linking it with God's Creationism.

As mentioned above, al-Ash'arī did not indicate the clear arguments about his own atomism in his works that have survived until the present day. One of a few examples is shown as follows.

According to our principle, the body (*jism*) has limitation, and the atom (*juz'*) is never divided any more. God said, "Every thing We counted up, illustrating them clearly" (Qur. 36/12). It is impossible to calculate the unlimited and is also impossible to divide one thing endlessly, for it requires the two (endlessly). (Risalah, § 16)

The word of "body" means here material or thing and indicates a created world, and every thing that exists there should be limited and finite, where the unit of the atom is the smallest that cannot be divided further. This principle in al-Ash'ari is depicted briefly in *Milal wa-l-Nihal* (*Religions and Sects*) by al-Shahrastani⁽⁸⁾ who belongs to the Ash'arite school.

According to the al-Ash'ari's principle, the generated power has no effect on the generation of the things. The authority (*jihah*) of the generation is the unique decision (*qaḍīyah*), and it is not changed complying with the atom (*jawhar*) and the accident ('*araḍ*). If (the generated power) had effect on the decision of generation, it would have effect on every creature's creation, would control the various colors, tastes, or smells, and would intervene even the generation of the atoms and accidents. Then finally the generated power would grow to be able to build the heaven over the earth. (Milal, I, p.97)

This paragraph shows clearly the character of al-Ash'ari's atomism. He never gives either atoms or accidents any power, or ability, even any effect, to generate the thing, insisting that the authority (*jihah*) of the generation should be in the domain only to God. From these contexts, it is thought that this atomism is not for analysis of the structure of the universe as some of the Mu'tazilite did according to their own logical principle, but for systematizing God's omnipotence and the creation ex-nihilo according to the instructions of the Sacred Book. However, this point of view is not different from the Mu'tazilite theory on atomism, for, as Frank asserts, the Mu'tazilite efforts are done in order to describe God and systematize the universe in conformity with their understanding of the Scripture⁽⁹⁾, however rational their arguments may be.

This interpretation looks to show us one of the reasons why al-Ash'ari inherited the rationalistic arguments of the ontology and applied them to the traditional theory of occasionalism. In consideration of this position, we will see the relation between the Ash'arite thought and the Mu'tazilite ontology, through the study of atomism by Abū al-Hudhayl who introduced the concept of atoms and accidents into the Mu'tazilite theory and originated the theological cosmology and ontology, and distinctive anthropology that derived the rational ethics⁽¹⁰⁾.

4, The *juz'* -Atom

According to Abū al-Hudhayl, the whole universe is composed with atom (*jawhar* < *jawāhir*) and accident ('*araḍ* < *a'raḍ*) which adheres to atom. In general sense, the *jawhar*-atom that

denotes the substance in Islamic theology is usually understood as material or physical thing (*jism*) that exists in reality. Calling it *juz'*, sometimes *jawhar*, Abū al-Hudhayl made a change to this sense and expressed it as the minimal element or unit that constitutes the thing. He regarded the thing as aggregate sum of atoms, which is composed only by God⁽¹¹⁾. al-Ash'arī understood from this definition that the atom is simple substratum that cannot be divided further and bears or carries the accidents, not the matter as the entity that possesses the potentialities in the Aristotelian sense⁽¹²⁾. For *jawhar* and *juz'* are used without distinction in al-Ash'arī, we may use both of these two words as meaning of "atom".

We use in this study mainly the accounts in his *Maqālāt al-Islāmīyīn (the Opinions and Discourses of the Islamic Believers)* in which he collected the polemic arguments of various denominations, religious sects, and schools in Islam, that had been in circulation until his days, objectively without adding his own opinions or refutations. Though he left us only few sentences of his own on the atoms and accidents, his *Maqālāt* is the first-class data on the tendency of the thought in his time. We can see there the Mu'tazilite arguments concerning the atom and the atomism, and search al-Ash'arī's own attitude towards these arguments.

Abū al-Hudhayl said that to the thing (*jism*) there are [such atoms as] right, left, outside, inside, upper side and lower side, and the thing has at least these six atoms (*ajzā'*); one of the pair is right and the other is left, one of the other pair is outside and the other is inside, and one of the pair is upper side and the other is lower side. The single atom (*juz'*) that is no more divided contacts (*yumāss*) these six examples and then it would move, stand still, conjoin (*yujāmi'*) with other thing, and then it become possible for the thing to realize the existence and the sense of touch. It is impossible for the thing to carry (*yaḥtamil*) [the nature] of color, taste and smell, or any nature of the accidents (*a'arāḍ*) other than that we mentioned unless these six atoms conjoin together. If they conjoined, they become a thing and then this thing carries what we described. (Maq, pp.302-3.)

Every *jawhar* is not thing (*jism*), and it is impossible for single *jawhar* that is no more divided to become a thing, for a thing should be long or wide or deep, but single *jawhar* is not like this. This is the claim of Abū al-Hudhayl, Mu'ammār and then asserts al-Jubbā'ī. (Ibid., p.307.)

Though Abū al-Hudhayl insists that the *juz'*-atom or *jawhar*, which cannot be divided further, be in six directions, right, left, inside, outside, upper side, and lower side⁽¹³⁾, it is inevitable for the thing to have specific factor in order to realize its quality or character, but this factor is thought as non-material, which Abū al-Hudhayl called accident (*'arāḍ*), whose name is inherited afterwards, and we will study it later.

As for the atoms (*jawāhir*), they are in one same species, and they are by themselves

jawāhir. Even though they are not different each other actually, they [look] to differ by themselves and [look] to coincide by themselves. The advocate of this view is al-Jubbā'ī. (Ibid.,p.308)

We now come to the definition of the atom by al-Jubbā'ī that it itself is homogeneous and has no characteristic feature, and it is accident that gives to the atom realization of the character. This position of al-Jubbā'ī is inherited from Abū al-Hudhayl, and transferred to al-Ash'arī as we mentioned above.

The atom, the minimum element for constitution of the thing, is always homogeneous, and the nature that either contradicts each other or coincides each other exists only in accident that is attached to the atom. Because the thing could not realize its specific character without accident, as we saw above in Abū al-Hudhayl's statement, the *juz'*-atom or *jawhar*-atom must carry the '*araḍ*-accident to realize its existence. In this context al-Jubbā'ī called the atom the carrier of the accident (*hāmil al-'araḍ*)⁽¹⁴⁾.

For the atom to realize its existence, it is also inevitable to occupy the space. Though there is few clear statements on space-occupying (*mutaḥayyiz*) of the atom in *Maqālāt*, we can see this principle in al-Juwaynī's *Shāmīl*⁽¹⁵⁾. There al-Juwainī, one of the biggest Ash'arite names after al-Ash'arī, illustrated the space-occupying aspect of the atom and depicted various controversies in tenth and eleventh centuries⁽¹⁶⁾. There we studied two essential rules for the atom to realize its existence; the inevitability of the accident that gives the character or nature to the thing existent, and the atom's space-occupying aspect.

Abū al-Hudhayl said; God may separate the body (*jism*) and make impossible its aggregation until it attains to the state of atom that cannot be divided further. The atom that cannot be divided further has not length, width, depth, aggregation and separation. God may aggregate another and may separate another, and [even] mustard-seed can be divided [by God] in half then in quarter, then in one-eighth until every particle cannot be divided further. Abū al-Hudhayl allowed the atom movement, standstill, isolation⁽¹⁷⁾. (Ibid., pp.314-5.)

Abū al-Hudhayl denotes God as the creator of the atom, but he doesn't affirm clearly that God be the creator of all the accidents. We can read from the statements above that he recognizes, however, that most of character of the thing existent is given by God, who creates the atom and gives it the accident. No one but God endows the thing existence.

Gimaret says that al-Ash'arī's position is very plain to understand and there every existent can be perceived, seen and heard as far as they are existent⁽¹⁸⁾. In al-Ash'arī, God who is also existent can be seen, that asserted the possibility of ingenuous creed of "vision of God" (*ru'yah Allāh*) in the hereafter. However, the existent, including God, need accident to realize its existence, though God's accident is eternal.

5, The 'araq- Accident

The atom is substrate of accident, but itself cannot exist without accident. In other words, the accident is a decisive factor to realize the existence of thing. A thing exists through the God's creation that endows existence to the atom still in state of non-existent⁽¹⁹⁾. The thing doesn't become an existent until the accident of generating is created and attached to the atom. Most of scholars agree that at the moment when the atom is created the accident is also created, then the thing comes to have the time, space, direction, and movement so as to exist. As we have already seen, though it is the accident that gives the thing its peculiarity while the atom is homogeneous without any character or nature, the atom is also inevitable factor as a substrate for accident to be realized.

The general rules on the characteristics of the accident most of Islamic atomists including al-Ash'arī agreed are as follows⁽²⁰⁾. In order to realize its existence, every 'araq-accident requires the substratum or location to be inherent in, and this substratum is called *juz'*-atom. Every accident, whatever it may be, could reside in any atom, provided that there is no accident that has contrary nature, though each accident has its pair-accident with contrary nature. One accident cannot reside in two atoms at the same time, while plural accidents can reside in one atom simultaneously. Two accidents that resemble each other cannot reside in the same atom. No accident can continue to exist more than one moment, and every accident can be perceived. The quality that is potential to the accident can be realized only in atom that carries it. Consequently, the things, the substances or materials, that constitute this created world, are corporeal bodies. They are made up through aggregation of the atoms to which adhere the accidents in state of composition, juxtaposition, contiguity, and conjunction.

According to al-Ash'arī, the 'araq-accident as well as atom has temporal aspect; it can continue to exist only for one moment, the idea of which separated him from his former master, al-Jubbā'ī who maintained that some of the atoms could last by itself without any accident that was generated in it⁽²¹⁾. However, studying the statements in *Maqālāt*, most of the scholars agreed that the accident is not stable but transient, and they differed in the state of this transience.

al-Jubbā'ī once said that every motion (*ḥarakāt*) doesn't continue but there are two kinds to rest (*sukūn*); they are rest of inanimate (*jamād*) and rest of aminate (*ḥayawān*). Rest of the intentional living (*al-ḥayy al-mubāshir*) that he makes by himself will not continue, but rest of the dead will continue. He said that [those accidents] as colors, tastes, smells, life, power (*qudrah*)⁽²²⁾, and health will continue, and told about the duration of many accidents. He also said that accidents that the living makes by himself intentionally are not lasting.(Maq, p.359.)

We understand through these statements that al-Jubbā'ī classified the accidents into two types; those that are made by living beings intentionally cannot continue to exist more than

one moment, but those that are made by God as the rest of the dead or such accidents as colors or tastes can continue to exist more than one moments. However, we cannot find there any connotation of the factor that causes the accident to dure in existence. Some of the accidents could continue, but it seems that they would continue by themselves.

Abū al-Hudhayl said that the accidents contain two types; one of them can continue and the other cannot continue. Every motion cannot continue, and rest has two types; one can continue and the other cannot continue. He argued that rest of inhabitants in the Paradise be the rest that will continue. Similarly, their existence (*akwān*)⁽²³⁾ [in this world] and their motions are ruptured and determined to the end. He claimed that [the accidents of] colors will continue, just as tastes, smells, life, and power will continue by the duration (*bi-baqā'*) without being in the substrate (*lā fī makān*). He also claimed that the duration is by the God's order to the thing, "Continue!" (*ibqah*). The same order [is done] to the duration of body and to the duration of all accidents that are to continue. (Ibid., pp.358-9.)

There are also two types among the accidents, but they are simply those of "continue" and those of "not-continue". Contrast to al-Jubbā'ī, Abū al-Hudhayl maintained clearly that the accidents of "continue" could continue by the accidents of duration (*bi-baqā'*) even without substrate of atom (*lā fī makān*). Furthermore he claimed that every accident be created and commanded to continue to exist by God. It is natural for us to understand that in Abū al-Hudhayl two positions are intermixed; one is naturalistic concern and the other is theological creed. However he took more moderate position than al-Jubbā'ī's, so that al-Ash'arī could inherited the former's argument, not from the latter's, who was his master. Then al-Ash'arī adapted it to a part of Nazzām's⁽²⁴⁾ position.

He was said to insist that God create the things all in one time (*ḍarbat^{an} wāḥidat^{an}*), and every moment (*fī kull waqt*) the thing is created.(Ibid., p.404.)

Though al-Nazzām was a maternal nephew of Abū al-Hudhayl, he insisted that the composing elements of the thing be minute and permeate each other, which either be visible on its surface or be hidden inside the thing, as oil in the sesame, butter in the milk, flour in the wheat⁽²⁵⁾. This position is called as a hidden-theory (*kumūn*)⁽²⁶⁾. On the contrary to his uncle-master who developed the atomism that served much to affirm God's omnipotence, he only acknowledged movement as accident, and that theory placed him out of the circle of the theologians of his days. As we saw above, he thought that God created the things all at once, then the things are hidden until time of existence comes, when they are endowed a change to come to existent. He never said clearly that the factor or realizer of the existence is to be God, therefore he is understood to limit God's omnipotence.

al-Ash'arī revised this hidden-theory and claimed that God create and recreate every thing anew in every moment. The atom seems to us to continue to exist, but it is only with the

accident of "duration". This principle is also applied to God who is eternal, however God endures forever with his "eternity", and so does with his other attributes⁽²⁷⁾. On the contrary to God's duration, the accidents of duration in the things cannot continue to exist by themselves. It is only by God who keeps up recreating the accidents of duration in every moment that the atom seems to be continuous.

6, Constant Creation

The idea of constant creation or continuous creation appears in the Qur'ān.

He who originated creation and repeated it, and He who gives you sustenance from the sky and the earth, is a creator other than God? (17/64)

The Qur'ān tells that God's act of creation should be done not all at once, but must be repeated at each moment when the thing will exist out of its status of void⁽²⁸⁾. This doctrine of continuous creation is called "*al-khalq al-jadīd*" (constant creation) which was further developed in al-Bāqillānī's atomism⁽²⁹⁾ after al-Ash'arī. But it was al-Ash'arī who introduced it into the Snnite theory of occasionalism as we studied before.

"Constant creation" denotes that extinction of the thing, that the thing cannot continue further, means simply that God stops to give the accident of duration to the atom, as Ash'arī says, "God extinguishes a thing"⁽³⁰⁾. For one accident in atom cannot last two moments in succession, God creates each atom and its accident in each moment so that the thing may seem to exist more than one moment.

The thing continues always with [God's] recreation of duration given to it from moment to moment (*yabqā dā'im^{an} bi-tajaddud al-baqā' lah ḥāl^{an} fa-ḥāl^{an}*). (M. p.238.)

According to al-Ash'arī's "continuous creation", the duration of the things is given by the accident of duration God creates anew in every moment. In his ontology, atom and accident, both of which compose the thing, are created exclusively by God. Hence, It is quite natural to say that not only the Snnite theology originated by him, but the Mu'tazilite Kalām refuted by him aimed to reconcile the mechanical analysis of the world with the revelation, the teaching of the Qur'ān, instead of discovering the physical system of the things and the world⁽³¹⁾. In a sense, Islamic theology, Kalām, was not developed with the intention of explaining the essential qualities of the substances and the world, but with the intention of systematizing the truth of the revelation and comprehending the structure and the nature of the things as the created by God.

As we saw above, the atomistic ontology in the Snnite thoughts is regarded generally as being originated by al-Ash'arī, but it is difficult to find the obvious argument concerning to this

subject in his own works that have survived until present days. Nevertheless, we could trace to a certain extent his polemic position of the ontology through our studies on the relation between him and the Mu'tazilite theology, and could throw light on his atomistic cosmology; that is his "*al-khalq al-jadīd*".

As Frank says, the atomistic arguments of the early Kalām didn't play real role to explain the physical structure of the things and universe⁽³²⁾. The atom in both al-Ash'arī and al-Mu'tazilite is persistently a necessary element or substratum for constituting the created world. According to Abū al-Hudhayl, all corporeal things are constituted through aggregation of created atoms which are composed, conjoined, and contacted by the function of created accidents that adhere to the atoms. al-Jubbā'ī also said,

[More than] two atoms each of which cannot be divided further will set in the composition (*ta'rif*), and one composition [of the atoms] can occupy [more than] two locality (*yakūn fī makānain*). (Maq, p.303.)

Here, we understand that in al-Jubbā'ī, the thing is also made up through the composition of the plural atoms, and one composition of atoms could contain several accidents in it and could occupy the spaces so as to realize its existence in this world.

From these perspectives, we come to know that in the atomism of Kalām, the atom is primary principle for the existence of thing. To be exact, the atom is not a mere part such as obtained from ultimate division of the thing, but the inevitable minimal part to make up the aggregational body of a thing existent. In other words, it is the atom that commences constituting the body in this world. This argument on the superiority of atom would lead to the priority of the individual over the collective. This polemic seems to be quasi mechanistic view of the universe, and has developed the unique theology in anthropology, theory on the soul, and cosmology such as the continuous creation, all of which work for the occasionalism in order to prove God's omnipotence and the Creation ex-nihilo.

The atomism in Kalām was transmitted in due time to Europe to influence the Medieval Christian Theology. We have come to the stage where we have to research the linkages that connected the Islamic thought to the Western thought and to analyze the development of Islamic theology, Kalām, through perspective of the comparative thought.

Notes

- (1) It is said that he wrote many books; 99 or 55, but 7 books are survived, among which only 2 books are looked certain as his own writings. They are *Kitāb al-luma' fī al-radd 'alā ahl al-zaigh wa-l-bida'* and *Maqālāt al-Islāmiyyin*. The former is "the Book of Aphorisms" where he explained his fundamental position clearly, but many terms used there have ambiguities in definition of the meaning, probably because of its condition of manuscripts. The latter is "the Collection of the opinions and discourses of Islamic believers", where he mentioned almost all arguments that appeared until his time without any biased

connotation or prediction. It is said to be written in Baghdad during his later years and is such an objective and careful work that we can use it as an earliest first-class data to know the theological environment at the time. Cf., Walter C. Klein, *Al-Ibānah 'an Uṣūl Ad-diyānah* (New Haven, 1940, Rep. New York, 1967), pp.29-30.

- (2) Daniel Gimaret, *La doctrine d'al-Ash'arī*, Paris, 1990, *Théories de l'acte humain en théologie Musulmane*, Paris, 1980.
- (3) Abū 'Alī Muḥammad bn 'Abd al-Wahhāb al-Jubbā'ī (?-915-6), One of the most renown of the Basrian Mu'tazila. Al-Ash'arī was a fellow disciple of his son, Abū Hāshim. Cf., "Al-DJUBBĀ'Ī", *The Encyclopaedia of Islam CD-ROM Edition*.
- (4) Walter C. Klein, [1940;1967], pp.25-28.
- (5) In the Qur'an, God is described as having hands and face and as sitting on the throne so vividly that people could draw the corporeal images, and believe God as corporeal and seen with human vision. Some of the traditionalists insisted on anthropomorphism literally, but al-Ash'arī, rejecting any corporeal meaning or limitation on God, argued that they are God's eternal attributes, whose natures are to be believed without asking how (*bi-lā kaiḡa*).
- (6) On the influences of Neoplatonism in Islamic theology, see my article, 「プロティヌスとアブー・フザイルの—者論—新プラトン主義とイスラーム神学—」("the One" in Plotinus and Abū al-Hudhayl — Neoplatonism and Islamic Theology —) 『哲学・思想論集』(Studies in Philosophy, No. 27, University of Tsukuba, 2002) and Note (1) (Ibid., p.89.)
- (7) Abū al-Hudhayl al-'Allāf (752-3? -840-1) was the first theologian of the Mu'tazilite speculative theory, and he opposed the anthropomorphism of the popular Islam, doctrine of determinism of the Jabrite and extreme traditionalist, and the Shi'ites divinization of 'Alī's descendants. Cf., Albert Nader, *Le système philosophique des Mu'tazila* (Beirouth, 1956), Recharad Frank, *The Metaphysics of Created Being According to Abū L-Hudhayl Al-'Allāf* (Istanbul, 1966.). "ABU' L HUDHAYL AL-'ALLĀ F", *The Encyclopaedia of Islam CD-ROM Edition*.
- (8) Abū al-Faṭḡ Muḥammad bn 'Abd al-Karīm bn Aḡmad Tāj al-Dīn Al-Shahrastānī (1086,7-?), little is known about his life. His *al-Mīlāl wa-l-Niḡal* includes large range of theoretical information of his day, from almost all religious dogmas and sects, both inside and outside of Islam, and ideologies and philosophies that had been known until his time. This is also precious first class data collected objectively.
- (9) Frank[1966], p.4. "Nevertheless, whatever the specific intellectual orientation of a particular author, there can be little doubt that the great majority of the Mu'tazila intended, on one plane or another, to define and validate the truth of Islam with the utmost fidelity to the revelation as they understand it."
- (10) On the Mu'tazilite rational ethics, see my work, 『イスラームの倫理—アブドゥル・ジャッパール研究』(*Ethics of Islam—A study on 'Abd al-Jabbār*, Tokyo, 2001.), and my article, "Reason and Revealed Law in Mu'tazilite Ethics" (*Miscellanea Philosophica*, University of Tsukuba Philosophical Association, 2000.)
- (11) Cf., Frank[1966], p.16. Maq, p.363.
- (12) The terms of *jawhar* and *juz'* as well as '*araḡ*' were translations of the Aristotelian terms; substance to *jawhar, juz'*, and accident to '*araḡ*. The followers of Aristotle in Islamic philosophy and theology sought to clarify the physical structure of the natural world.
- (13) It is difficult to define these six directions as six species of the atoms or as directions to which atoms can be attached each other. If one atom is cubic in shape, six atoms could adhere from these six directions. I think Abū al-Hudhayl claimed that the minimal thing or body is composed of at least six atoms that are attached in six directions. But the line is made with plural atoms attached abreast, and it is difficult to

- illustrate how to make the circle or globe with these atoms. See Gimaret[1990],pp.60-62, and Alnoor Dhanani, *The Physical Theory of Kalām, Atoms, Space, and Void in Basrian Mu'tazili Cosmology* (Leiden,1994),pp.137-139, 167-176.
- (14) Maq, p.307. "The atom (*jawhar*) is that when it exists, it becomes carrier (*hāmil*) of the accident. (...) The advocate of this opinion is al-Jubbā'ī."
- (15) al-Juwaynī, Abū al-Ma'ālī, *al-Shāmil fī uṣūl al-dīn* (Ed. 'Abd al-Nashshār, Alexandria, 1969.) p.156.
- (16) Cf.,Dhanani[1994],pp.62-64.
- (17) Here Abū al-Hudhayl admits that the atom could possess possibility of movement, standstill and isolation, but these are regarded as functions of atoms, not as nature, in order to adhere to six directions or to aggregate other atoms or to separate from others. Cf. Frank[1966],p.39. Frank refers to this paragraph and said, "these 'parts' can exist separately in isolation..."
- (18) Gimaret[1990], p.50, "Al-Ash'arī a un principe très simple, radical : tout ce qui existe, du fait même qu'il existe, est perceptible ; plus exactement, tout existant, en tant que tel, peut être vu et entendu."
- (19) Maq. P.363. "Abū al-Hudhayl said that creation of the thing is construction after not having existed (*ba'da an lam yakun*), and the thing [before the creation] is not the identical [in nature]. It is the will of [God] to the thing, He says, "Be!". The creation with the object of creation (*ma'a al-makhlūq*) occurs in such a condition. It is impossible for God to create some thing when He wills not it and says not to it, "Be!". As for "non-existent" see note 28.
- (20) Cf., Gimaret[1990], pp.76-97, Dhanani[1994], pp.38-43. Maq, p.369-370.
- (21) Gimaret[1990], p.49. Gimaret said that Jubbā'ī claimed the atom could continue by itself not with something created in it. But in Maq, p.359 al-Jubbā'ī did not claim that all atoms can continue by themselves.
- (22) "power (*qudrah*)" here means autonomous ability to create the action, especially human ability to act freely.
- (23) Dhanani translates *akwān* to "location", but I take it the plural of *kawn* (existence, being, occurrence). Cf., Dhanani[1994], p.44.
- (24) Abū Ishāq Ibrāhīm bn Sayyār al-Nazzām (?-835/845). He had made up more elaborate theology than his uncle Abū al-Hudhayl, that was based on the natural philosophy, but his position was too strange in his days to be accepted. Gimaret held that al-Ash'arī adopted Nazzām's position of creation exceptionally, and al-Ash'arī's continuous creation was not different from Nazzām's theory. Gimaret[1990], p.49. But I think Nazzām is an anti-atomist and his position is completely different from al-Ash'arī's in the ontological structure, even though there is one or two similar expressions on the God's creation. Cf.,Maq,p.319,330c
- (25) Milal., p.55.
- (26) Contrary to his uncle, the only accident he acknowledged is movement and every other "change" is hidden in the interior of the atom. This theory is called *kumūn* (theory of latency), and al-Shahrastānī said that al-Nazzām took it from philosophers who held the hidden-emerged theory. Milal, p.56. Cf., Dhanani[1994], p.50. Nader[1956], p.146. "KUMUN" *Encyclopaedia of Islam, CD-ROM Edition*.
- (27) About the argument on the attributes of God, see Shiojiri[2001],pp.43-62. The argument on the attributes of God is the fierce issue that divided the Mu'tazilite from the Sunnite, mainly from the Ash'arite.
- (28) The concept of "void" (*'adam*) or non-existence in Kalām is derived from the Aristotelian term "privatio", and the Mu'tazilites held the void, non-existence, as a condition of thing or body that has potentiality of existence. Before the creation of the things in this world, God knows every entity in void-condition and on creating the things, God gives accidents of existence to those non-existent entities

(*ma'dūm*). According to al-Khayyāṭ, one of the Baghdadi Mu'tazilite theologian, the non-existent (*ma'dūm*) is a thing which can be known and which we can inform. Its atom is atom in void (*fī al-'adam*), and its accident is accident in void. This principle is applied to every specie and kind of the thing. Milal, pp.77.

(29) The development of "*al-khalq al-jadīd*" in al-Bāqillānī will be studied later in my next article. Gardet and Anawati said according to *Muqaddimah* of Ibn Khaldūn, it was al-Bāqillānī who introduced the atomism into the Sunnite theology. But I think it was al-Ash'arī who succeeded it from the Mu'tazilite arguments and applied it in the Sunnite theology however crude it might be. I agree that it was al-Bāqillānī who elaborated and established this theory in the Sunnite theology. Cf. Gardet & Anawati, *Introduction à la théologie Musulmane* (Paris,1981), pp.62-64.

(30) M, p.241, al-Ash'arī seems to inherit this principle from Abū al-Hudhayl's claim seen in Maq, p.366.

(31) Without doubt, in Islamic Kalām the atomistic cosmology emerged under the Hellenistic influence of Aristotelian concepts and Neo-Platonism, but most of Kalām-theologians (*mutakallimūn*) applied those concepts for the polemic proof of the existence of God the Creator. In both Mu'tazilite and Ash'arite theologians, the Hellenistic cosmology is transformed religiously and used to prove God's continuous creation through atomistic composition of the world, not to prove the physical principle of the visible world. Cf., Danani[1994], pp.182-194, Nader[1956],pp.154-155. "DJAWHAR", "ARAD", *Encyclopaedia of Islam, CD-ROM Edition*.

(32) Frank[1966], p.40.