A Study of the Influence of Critical Thinking on the Rise and Decline of Islamic-Iranian Civilization (From 2nd to 7th Centuries of Hegira)

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دراسة تأثير التفكير النقدي على صعود وهبوط الحضارة الإسلامية ـ الإيرانية (القرن٢ـ ٧) الهجريين

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دكتوراه في العلوم السياسية وباحث في الدكتوراه من جامعة أصفهان ، إيران
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الملخص:-

خلال تاريخ الحضارة الإسلامية الإيرانية ، كان النهج النقدي أحد أهم الحلول لمفكري الحضارة الإسلامية الإيرانية في مواجهة الإنجازات العلمية والثقافية للحضارات. بشكل عام ، فإن تطبيق التفكير النقدي من قبل طبقات المجتمع المختلفة وخاصة نخب المجتمع وتوسيع روح التساؤل والبحث وتجزئة و تحليل المشكلات سيؤدي إلى تصحيح شؤون المجتمعات وتقدمها ، وعدم استخدام التفكير النقدي سيؤدي إلى ركود المجتمع والحضارة. وبناءً على هذا، فإن الغرض من هذا المقال هو ليتم التحقق من تأثير التفكير النقدي على صعود وهبوط الحضارة الإسلامية الإيرانية (القرن ٢_٧)) باستخدام المنهج الوصفي التحليلي. وتشير نتائج هذا البحث إلى أنه بمقدار توسع الفكر النقدي في مجتمعات الحضارة الإسلامية وبين النخب والنظام العلمي ، يتبع هذا أيضًا تقدم الحضارة الإسلامية الإيرانية وازدهارها.

الكلمات المفتاحية: التفكير النقدي، النظام العلمي، الحضارة الإسلامية، الصعود والهبوط.

Abstract:-

In the course of the history of Islamic-Iranian civilization, critical approach has been one of the most important strategies of the thinkers of Islamic-Iranian civilization in their encounter with the scientific and cultural achievements of other civilizations. Generally speaking, application of the crticial thinking by different social classes particularly by the elites and the expansion of the spirit of questioning, searching, and the analysis of problems have improved the situation on the ground and paved the path for the development of societies while the lack of critical thinking has caused stagnation in societies and civilizations. Accordingly, this article aims at using the descriptive-analytic method in order to assay the influence of critical thinking on the rise and decline of Islamic-Iranian civilization (from 2nd to 7th centuries). The results of this study show that the more critical thinking expanded among the societies of Islamic civilization as well as the elites and scientific system, the further advance and flourishing of Islamic-Iranian civilization is achieved.

Key Words: Critical Thinking, Scientific System, Islamic Civilization, Rise and Decline.

Problem Statement:

The course of development of Islamic Civilization in second and third centuries (of Hegira) began with the promotion of scientific thinking by the Holy Prophet of Islam. Upon the formation of the first and second translation movements in late second century of Hegira during the reign of Abbasid Caliphs (Harun Al Rashid and Ma'mun), it was followed by the intellectual and scientific productions of other civilizations. Third Century as the Renaissance era and emergence of Islamic-Iranian civilization and the Fourth Century and the first half of the Fifth Century as the Golden era and culmination of Islamic civilization and the Six Century as the beginning of the decline era and the Seventh and Eighth centuries of Hegira as the age of the transition and relocation of the heritage of Islamic-Iranian Civilization can be explored in a sinusoidal process in the history of Islamic civilization. The study of the status of critical thinking in every era and the scope of the use of the critical approach in scientific centers by scientists and intellectuals of different eras of Islamic-Iranian Civilization can be useful for presentation of the educational and cultural solutions that pave the path for the evolution and flourishing of human societies in present age. It is noteworthy that many poets, artists and scientists in different areas (medicine, astronomy, religious sciences, philosophy, mathematics, geography, poetry and etc.) in Islamic-Iranian civilization but the reason for choosing such scientists as Zakarya Razi, Abu Nasr Farabi, Abu Reyhan Al Biruni, Avicenna, Imam Muhammad Al Ghazali, Fakhr Razi and Khajeh Nasir Al Din Tusi in the present essay as the example of different eras of Islamic-Iranian civilization (from 2nd to 7th centuries of Hegira) is that these scientists had pioneered new intellectual currents and owned an independent intellectual-philosophical discourse and school. On the other hand, they adopted an analytical and critical stance as to the ideas of the previous thinkers and other civilizational achievements. (e.g. Greece and India) as well as the political structure of their own time and influenced them.

Here we struggle to study the impact of critical thinking on the rise and decline of Islamic civilization in the domain of Iranian geography using a descriptive-analytic method based on analysis of the scientific systems as well as the views of the key innovative

thinkers of different eras of Islamic civilization (from 2nd to 7th centuries of Hegira).

1- Concepts:

1-1- Critical Thinking:

"Critical" in the term "Critical Thinking" implies criticism, pathology, argument and evaluation. The word "critique" that is used in all European languages in the sense of criticism can be traced back to the Greek "Krites" that refers to separation and sometimes judging(1). Lexically speaking, critique means distinguishing the right from the wrong, separating Dinar from Dirham, distinguishing good and bad and uncovering the deficiencies and strengths(2).

Critical thinking includes a series of mental processes such as identification, analysis and evaluation of data. Critical thinking implies being skillful in accomplishing those activities that are associated with a type of logical skepticism(3).

The ability of the critical thinking in processing and evaluation of previous data with new data is the result of the combination of deductive and inductive arguments with the process of problem solving. Mayers believes that critical thinking represents the power of regulation of universals (ability of creation of an analytic framework), accepting new probabilities (avoiding prejudices), and stopping judgement (safe doubt, avoiding hast in judgement).(4) Ennis suggests that "critical thinking is a rational and penetrating thinking that allows us to identify which things to believe and which actions to take.(5)

1-2- **Islamic Civilization**:

Will Durant defines civilization in the following words: "The first form of culture is agriculture. It is when man settles down to till the soil and lay up provisions for the uncertain future that he finds time and reason to be civilized. Within that little circle of security—a reliable supply of water and food—he builds his huts, his temples and his schools; he invents productive tools, and domesticates the dog, the ass, the pig, at last himself. He learns to work with regularity and order, maintains a longer tenure of life, and transmits more completely than before the mental and moral heritage of his race".(6)

However, Islamic Civilization refers to a religious civilization all of the factors of which revolve around Islam and are based on Quranic teachings and the tradition of Holy Prophet of Islam (peace be upon him) and the Immaculate Imams (peace be upon them). The main constituents of this civilization is the principles of Islamic religion, ethics, cooperation, knowledge, rationality, freedom, justice, rules and regulations, so on and so forth.(7)

2- **Necessity of Engagement with Critical Thinking in Islam**:

The importance and necessity of engagement with critical thinking in Islamic society from the viewpoint of Quranic verses and Prophetic traditions can be generally summarized as follows:

1- It is in line with the verses of Holy Quran: “So give good news to My servants who hear advice and follow the best thereof. Such are those whom Allah guideth, and such are men of understanding.”.(8)

2- It is also in line with the prophetic traditions: “Jesus Christ is quoted to have said that take the truth from the people of the falsity [the infidels] and do not take the wrong from the people of truth [believers]! You must be of a critical mind”.(9) Imam Ali (peace be upon him): You have to know that the intelligent is the one who approaches different ideas with a sound thought and thinks about the consequences of affairs.(10) Imam Hussein (peace be upon him): Among the signs of a sage is criticism of one’s own words and thoughts as well as the consciousness of various ideas.(11)

3- **Definition of Critical Thinking and Its Indices**:

Critical thinking contains a series of mental processes including identification, analysis and evaluation of the data. Critical thinking implies having the skill for undertaking such activities that are associated with a type of logical skepticism.(12)

Critical thinking is a rationally grounded and “grey” thinking that moves based on reasons, evidence, and expansion of the spirit of questioning, searching, truth-seeking, analysis of questions and intelligible skepticism, revision, completion and reconstruction of the affairs for reaching the desirable situation.(13)

Shortly speaking, we can outline the key seven indices of critical thinking and their counterparts as follows:

Number of Indices	Point	Indices of Critical Thinking	Counter-Indices of Critical Thinking
1	1	Needs assessment and being concerned with the solving of the social problem	Indifference and individual profit-seeking
2	1	Scientific tolerance and flexibility	Political and ideologic prejudice
3	1	Logical skepticism of the quality of the occurrence of the events	Determinism and superstition
4	1	Collection-oriented and multidimensional approach in solving the problems	Unidimensionality and Insistence on early methods
5	1	Reformist and pathological perspective based on professionalism	Baseless optimism and stereotypic generalization
6	1	Modernist perspective based on creativity	Imitation in science and technology
7	1	Methodism and rationality	Destructive and emotional objections

We continue our study with an effort for discussing the status quo of critical thinking in the scientific structure of every period of Islamic-Iranian civilization, on the one hand, and the influence of the critical thinking on the ascension and decline of Islamic-Iranian civilization between the 2nd and 7th centuries of Hegira, on the other.

4- Assessment of the Status Quo of Critical Thinking in the Scientific System of Islamic-Iranian Civilization (2nd to 7th Centuries of Hegira):

Although Islamic Civilization took advantage of the achievements of other nations and civilizations in order to form itself just like other civilizations, it was not a mere imitator and follower rather a critic, synthesizer and completor.(14) Numerous institutions influenced Islamic Civilization in different eras the most significant ones of which have been scientific, religious and cultural centers. In addition to the mosques in which Holy Prophet and Shia Imams (peace be upon them) taught their pupils and promoted Islamic sciences, countless scientific centers have been instituted during Islamic civilization era and had different effects. One can refer to Jami Mosques, libraries, colleges, observatories, hospitals, schools and traditional theological seminaries. On the other hand, in these educational centers founded on Islamic vision numerous thinkers and scholars were raised but the

quality of the application of critical thinking in Islamic-Iranian Civilization between the 2nd and 7th centuries of Hegira in different eras was distinguished as we will show in our study.

4-1- Assaying the Status Quo of Islamic-Iranian Civilization between the Years 150-220 Hegira:

Mosques are among the most significant religious and scientific centers where the Holy Prophet of Islam (peace be upon him) and his disciples struggled to teach religion and religious sciences to the muslims at the early days of Islam. Every religious scholars usually had a scientific circle as people sought to learn different religious sciences in different circles. In one scientific circle, the science grounded in argument and documentation is the axis of all dialogues. In this circle, the pupils have the right to ask questions from their master and teacher, criticize, ask for reasons, and provide evidence. In other words, the class was in a state prevailed with rational dialogue and scientific participation. Sometimes there were infidels, natural scientists and atheists and held talks and dialogues with Muslim Scholars concerning particular issues. Shia Imams were pioneers of this type of debates and scientific dialogues in this era. After mosques, the first scientific center in Islamic Civilization is Bait Al Hikmah [House of Wisdom]. Some scholars attribute the establishment of Bait Al Hikmah and as a result, the beginning of the first translation era to Harun Al Rashid. Later in the era of Ma'mun, a group of translators at Bait Al Hikmah under the supervision of **Yuhanna ibn Masawaih** (circa 777–857) (**Janus Damascenus)** translated different books. Among the most well-known translators of Bait Al Hikmah was Hunain Ibn Ishaq. Hunain Ibn Ishaq translated some 130 works of Galen and many books by Aristotle and Hippocrates which were mostly in the field of philosophy and medicine. Bukhtishu family were also among the translators who believed in Nestorianism and provided translations in philosophy and medicine. Ibn Muqaffah one of the renowned Iranian translators of Bait Al Hikmah translated "Kalilah va Demna" as well as some ethical works.(15) Muslims' acquaintance with the works and achievements of Greek, Iranian and Indian civilizations and also the expansion of rationalism in Islamic societies are among the positive effects of Bait Al Hikmah. But the dominant approach of this center was merely the translation of the works of other nations (e.g. Iranian, Roman, Greek and Indian works) and it was forgetful of the criticism

and assessment of the content of these works and the evaluation of the scale of consistency of the discussions of these books with Islamic Principles. Moreover, Bait Al Hikmah was a governmental institution and only some individuals with a political orientation consistent with the Caliphate System were active in it and their scientific contributions were ordered and chosen and this restricted the course of critical thinking.

4-2- Assessment of the Status Quo of Islamic-Iranian Civilization between the Years 250-450 of Hegira:

In this period of the history of Islamic-Iranian Civilization, many scientific systems took form including the scientific institutes and great libraries that were constructed in Buyid era(16). These new scientific structures not only were a place for book conservation rather they also provided a platform for education and research. The most important libraries consisted of the Library of Abulfazl Ibn Ameed the number of the books of which was more than what can be carried by a hundred camels.(17) Sahib Ibn Abbad Library had 260 thousand books. Moreover, Moqaddasi writes of the Azuddi Library in Shiraz that a copy of every book authored so far in different sciences exists in this library. The books related to every science were kept in the same shelf with a list covering the names and details of the books.(18)

Scientific institute (Dar Al Elm) was also like the library of one of the scientific centers in Islamic Civilization. The difference lied in the fact that the educational and research dimension of this institute was more than library and the latter was considered to be part of it. Among these scientific institutes one can refer to Shapur Ibn Ardashir Scientific Institute in Baghdad (Shapur was the minister of Baha Al Dawlah Ibn Azd Al Dawlah). He bought a house in Karkheh Neighborhood and transferred different books in science and technology into there the total number of which was more than ten thousand volumes and he gave the name “Dar Al Elm” to it and endowed it to the knowledge-seekers. Dar Al Elm of Sayyid Radhi; he was born in 359 in Baghdad and became one of the greatest scholars and poets of his time. He provided a house at Karkheh neighborhood for the knowledge seekers and gave the name “Dar Al Ulum” to it where all needs of the students were met. Moreover, Dar Al Elm of Sayyid Murtida (Baghdad, 355) can also be mentioned. He had a library where some eighty thousand books were kept.(19)

The majority of these libraries were home to different scientific books from other nations and cultures as well as the works of other Islamic sects and thus, the students could freely assay and criticize them and through such a libertarian atmosphere and culture, many scientists emerged in this period of golden history of Islamic Civilization. Here we examine some of these renowned scientists who had their own particular style and were of global fame in most of the sceinces of their own time. Moreover, they owned a critical thinking.

4-2-1- Zakarya Razi (251-313 A.H.):

He is a rationalist in philosophy but his methodology is based on empiricism. Razi's natural philosophy is founded upon "experience and experiment". As Razi takes advantage of inductive methods in his studies of nature, he applies the logical deduction method to the results and inference of judgement.(20)

The scope of the use of critical thinking in the structure of Razi's thought can be observed in his significant work entitled "Objections of Galen" which is a critical assessment of the ideas of Galen. At the beginning of this work, he asserts that people rebuke me because of my objections of a great sage like Galen. Then, he offers the following scientific and well-substantiated answer in response to the critics: "Medicine and philosophy do not accept one's surrender to the masters and mere acceptance of their words and a philosopher does not expect such a surrender from the strudents. This is why Galen himself in his work entitled Manfi Al Aza has taken to task those who impose their own ideas and words to their followers without a reason and argument." Razi says: "Galen's mistakes would have been due to the negligence in writing but there are certain themes in there that are unacceptable due to the development of sciences" .(21)

I do not consider a philosopher the person who rebukes me due to the exploration of these objections; because he turned his back to the tradition of philosophers and resorted to the tradition of flurry that highlights the necessity of imitation of the great men and refusal of objecting them. The philosophers traditionally insist on searching for the answers of one's questions without any recklessness. It is Aristotle who says that I love Plato and Truth but when a conflict occurs between these two, I would prefer to side by Truth insteado f Plato; and in many occasions, he has challenged the ideas of Plato.

Theophrastus has criticized the ideas of Aristotle in clearest part of philosophy after geometry, i.e. logic.(22)

4-2-2- Abu Nasr Farabi (259-339 A.H.): In the introduction of "Ehsa Al Ulum [Enumeration of Sciences]", Farabi says: This book helps the researchers to know well the subject-matter of every science they want to learn and allows them to be informed of its profit and result. It gives them a force to be able to establish a harmony among different types of sciences in order to identify the noblest, the most rooted and firmly grounded ones of them. It also set the ground for them to distinguish the true scientist and the one who pretends to be a man of science without having a substantial basis and evidence in his own pretended science". As to the process of human rationality, Farabi argues that human reason is a genetic and natural factor and it works first on sensibilia and analyzes, processes and synthesizes them in order to provide a new conceptual product. Human mind imagines with its imagination. It perceives the sensibilia and offers judgements of them that lay the groundwork for their general rules. It is in the same spirit that the reason conducts the first generalizations. Mind first considers these individual facts as such and then synthesizes them. In his "A Comparative Study of Plato and Aristotle", Farbi claims that it is clear that reason does not suffice to sensation when it proceeds to offer judgements, because if it was so it would never achieve any certainity"(23). In the aforementioned discussion, Farabi has implicitly emphasized the main coordinates of critical thinking, i.e. analysis, synthesis and data processing to which we referred in the part devoted to the definition of critical thinking. Farabi is one of those thinkers who has fathomed the philosophical achievements of Greek Civilization based on critical thinking and redefined them in line with the geometry of religious knowledge.

4-2-3- Abu Rayhan Al Biruni (362-442 A.H.):

Al Biruni has informed the reader of his works of the possible misunderstanding or partial understanding of an issue. Even when he is fifty eight, he would promise his reader to pursue the problem at length and publish the conclusion he draws from his studies. He continuously determines the limits of his own knowledge and although he has a limited knowledge of Indian prosody, he still prefers to speak of this category even in limited form because he believes that one should not sacrifice the good for the better. He was

seemingly afraid of having no enough time for completing his own knowledge.

Al Biruni is the enemy of those who are afraid of saying "I do not know" lest confess their ignorance and whenever he faced a deficiency in one's honesty, he would express his anger and disgust. "Conflict over the verbal difference is what we keep ourselves away from it; if these opponent intend the same meaning of the words, we agree".(24) In "Kitab Al Athar", he argues that he has decided to choose a position between excess and negligence as this moderationism is out of caution. Being cautious of something that is exposed to doubts, he argues, is a sign of foresight and this is in practice what leaves its contingency to reach necessity.(25) In his book "Masudi Law", Al Biruni notes that "I have done the thing that is expected to be undertaken by every man in his own occupation. Meaningly, the efforts of the past people should be warmly received and reviewed without being daunted by the greatness of the past masters. This will allow us to help the future ones to have access to the intellectual heritage of the past people".(26) Al Biruni clearly shows his scientific tolerance while he insists that finding truth is his school's basis and not mere insistence on the useless verbal debates.

4-2-4- Avicenna (370-428 A.H.):

Intellectual structure of Avicenna contains a distinguishing and critical rational insight and method. In "Asrar Al Ayat", Avicenna states: "Your superiority, intelligence and difference as compared to the laity does not lie in the fact that when you hear difficult words you would deny them as a whole and say that the ordinary men accept such issues while the chosen ones keep themselves away from them, rather if you have a proof to deny it you have to do it otherwise you would consider it to be a contingent matter. Denying a word just based on its superficial impossibility is not right". Avicenna states that there are strange things in the nature as well as in active transcendent faculties and passive lower faculties" .(27)

Some contemporaries of Avicenna after reading his works raised some questions of his thought and even some would harshly criticize him. This philosopher did retort the questions of these two groups of critics away from dogmatism and prejudice. Here are some examples of his answers of the objections:

I) When the "Logic" of Kiab Al Nijat reached Shiraz, the scholars of Fars studied it and one of them casted a number of doubts and sent the questions and objections to Avicenna via Abu Al Qasem Kermani in Isfahan. Avincenna studied the objections and provided the answers in five pamphlets of ten pages and sent back to the scholars in Shiraz.

II) Eleven answers of Avicenna to the objections raised by Abu Saeed Abi Al Kheyr.

III) Avicenna's answers to eighteen questions by Abu Rayhan Al Biruni who raised ten more questions which were all responded by Avicenna's pupil Abu Abdullah Masumi.(28)

Generally speaking, in the structure of Avicenna's thought, there is no place for adoption of an approach that proceeds to deny the ideas without criticism and scientific assessment and argument.

In addition to the aforementioned cases of critical thinking of Islamic Civilization, the enumeration of the number of books and works that have been authored with a critical nature in Fourth Century, can strengthen the claim of the existence of a direct coordination between critical thinking and the evolution of scientific system and as a result, the flourishing of Islamic Civilization. Here we proceed to evaluate Ibn Nadim's Kitab Al Fihrist authored in fourth century. Ibn Nadim's Al Fihrist provides a list of the works published by Arab and non-Arab authors in Arabic till 377 A.H. By evaluation of Ibn Nadim's "Kitab Al Fihrist", one can assess the scale of the use of the critical method and the application of scientific debates by early Islamic scientists until the Golden Age of Islamic Civilization, i.e. Fourth Century of Hegira.(29)

In this book, certain works by similar titles involving the term "criticism" are explained. One can even find some works with themes of criticism, refutation, denial, dialogue and commentary of other works by scientists and this in turn shows the popularity and expansion of critical thinking between the third and fourth centuries the frequency of which is determined in the following table:

Books authored within the framework of critical thinking as listed in Ibn Nadim's Kitab Al Fihrist	Frequency
Works with the title "Refutation"	128 times
Works with the title "Commentary"	60 times

Works with the title “Denial”	32 times
Works with the title “Argument”	9 times

According to the discussions made in this period of Islamic Civilization, sciences and human knowledge were oriented towards generalization in Islamic society and they were popularized among different social classes and libraries was considered to be the symbol of general scientific discourse. Many students fom different Islamic countries would gather in a school and this popularization of thinking and science gradually led to the expansion of intellectual debates. On the other hand, Knowledge Houses were open to different sciences including medicine, astrology, theology, philosophy, science of prophetic traditions, and Quranic exegesis. These scientific debates and dialogues provided an exceptional context for the critical analysis of ideas. This in turn set the scene for raising more researchers and scientists in different sciences in third and fourth centuries.

4-3- Assessment of the Status Quo of Islamic-Iranian Civilization between the Years (450-600 A.H.):

In this era of the history of Islamic-Iranian Civilization, the most important then established scientific order was Nizamyyah as founded by Khajeh Nizam Al Mulk Tusi the powerful minister of Seljuqis in the cities of Isfahan, Baghdad, Neishabur, Amul, Cairo, Balkh and Harat.

Khajeh Nizam Al Mulk Tusi’s goal of establishment of Nizamyyah schools not only was the general education of the people in society rather raising dialecticians to prevent from the development and expansion of the extensive missionary actions of the Ismailite followers as well as other sects who were against the Shafei denomination. The graduates of Nizamyyah schools were used as the government staff who sought to secure the foundations of religious unity in the territory of Saljuqi government. Moreover, one of his key goals was to expand the Nizamyyah in response to the activities of Jami Al Azhar of Cairo. He also aimed at attraction of the believers of other sects to Shafei Islam. To put it otherwise, Khajeh Nizam Al Mulk Tusi considered critical thinking and learning dialectical arguments to be a means for beating the critics of Shafei Islam at Nizamyyah. Here we assess the thoughts of two thinkers who were directly related to Nizamyyah from the point of view of application of critical thinking;

4-3-1- Imam Muhammad Al Ghazzali (450-505 A.H):

In “Incoherence of Philosophers”, Ghazzali criticized the ideas of Farabi and Avicenna in theology and considered many of them to be in conflict with the revelation. In this work, he enumerates the mistakes of the philosophers as regards twenty problems. In Problem Thirteenth of “Kitab Al Tuhafat Al Falasifah”, Ghazzali discusses the paradoxes and incoherences of the ideas proposed by philosophers as to “God’s knowledge of the particulars”. He openly condemns Avicenna’s view of the quality of Divine Knowledge of the particulars and considers it to be an example of apostasy.

Moreover, as to the thought of the esoteric thinkers, Ghazzali says: “First, I collected their books and works and I got so involved in criticism of them that I faced the objection of some people of truth. They objected that I have articulated the ideas of these thinkers in a way that they themselves could not handle it and this was indeed in the interest of these scholars(30). Yes, the combination of the sayings of the prophets and Sufis with philosophers leads to the emergence of two dangers, i.e. the danger of denial and the danger of acceptance. The danger of denial originates in simple-minded people. These people think that since the genuine words are inscribed in the books of philosophers and combined with their false words, they deserve to be denied.(31) As to doubt, Ghazzali says that if there is nothing in these words that would cast a doubt of your inherited beliefs, you will not benefit from them; because if someone is not doubting he has not made any observation and the one who does not observe cannot see and is lost in ignorance.(32) In his assessment of the ideas of philosophers in “Incoherence of Philosophers”, Ghazzali does not offer the correct solution of the presented problems, rather he are engaged with the refutation of the ideas of the philosophers and even he delves into the details of the ideas as far as he needs; thus, his cirticisms are mostly rhetorical and dialectical.(33) In “Al Mustazhari” and “Tuhafat Al Falasifah”, Ghazzali in most cases denies and refutes the ideas of his own opponents based on his Asharite beliefs as well as his Shafei religion and in fact, criticism is a weapon for elimination of the opponents while criticism must be used as a means for the development of the thinking capabilities of the citizens. In another place, he criticizes the tradition of dialogue among the professors of Nizamyyah and

considers it to be a means for boasting and bragging on behalf of the masters.(34)

4-3-2- Fakhr Razi (544-606 A.H.)

believes that “baseless opposition and conflict can be neither a sign of rationality nor the cause of greatness of the men of reason. These people who use ill language as regards the great men of thought are not going to be considered a great thinker. They only reveal their ignorance; but on the other hand, their predecessors were not in accord with the early thinkers in all fields.They even casted doubts of their words and expressed ideas against theirs. If this is an undesirable action, the predecessors are worthy of criticism not worthy of imitation and if as we believe it, it is a desirable action, then imitation cannot be trustable in all fields” .(35) Imam Fakhr uses his early comments to conclude that “Imitators choose the path of excess while the opponents adopt the path of negligence and these are both undesirable and refuted”. Then, he insists on the middle path between excess and negligence and defines it as follows: “Our chosen path is contemplation of the difficult issues and reflection on their points and nuances. This method is undoubtedly a secure path and method. In many cases, it leads to conclusions that are not consistent with the old accepted ideas”.

Those who believe that imitation of the views of the predecessors is necessary turn their back to the secure method and right path and choose to imitate and leave aside the reason and proof.(36) Imam Fakhr Razi despite his scientific power and dexterous proficiency in rhetorics and also in spite of being supported by the ruling government of his time, did not clear any room for the expression of the ideas and religious views of the believers of other sects (e.g. Shia Muslims, Ismailites, Karamian and so on and so forth). Due to this lack of tolerance and dogmatism, one of the opposing groups called Karamian poisoned him due to his radical stances on them and this led to his death. The critical approach of Fakhr Razi was a means for denial of the opposing theories of the Sunni Muslims and this shows the lack of scientific tolerance and critical spirit of the scholars of that time.(37) Accordingly, in the era of Al Ghazzali and Razi (5-6 Centuries A.H.), fair scientific criticism that sustains the flourishing of the capabilities of the society was neglected and most scientific dialogues led to sectarian conflict.

The study of the status quo and educational system in Nizamyyah school suggests that scholars were mostly engaged with the interpretation and annotation of the existing textbooks in order to pave the path for exact articulation of the discussions and they refused to get involved in independent research and investigation.(38) The main goal of the Nizamyyah schools was marginalization of other religions and eradication of opposing sects, on the one hand, and promotion and officialization of Shafei Islam, on the other. Many thinkers and scholars were incarcerated or prosecuted as a result of facing the charges of infidelity. The sermons held in Nizamyyah were mostly arranged for refutation of the opposing views and they were the most important factor in intensification of the religious conflicts and debates even resulting in bloody confrontations.

On the other hand, insistence of Abu Hamed Ghazzali as the most famous and influential dean of Nizamyyah school on Shafei jurisprudence as well as the religious and jurisprudential ideas of his master Abu Al Maali Juwayni and on the other hand, state support of Khajeh Nizam Al Mulk Tusi of them led to the formation of a closed ideologic network between the political institution and religious institution.

This led to the effort for promotion of Shafei jurisprudence in Islamic World as the only official religion and ban of the missionary activities of other religions and crackdown of their followers.(39) Khajeh Nizam Al Mulk Tusi took advantage of a new educational system to expand the Islamic Thought based on a Shafei reading as against other religious sects and intellectual schools in the whole Islamic world.

These religious debates weakened the existing fragile bonds of Islamic unity; insofar as one of the main causes of the fall of the cities of Khurasan and Iraq in the course of invasions of Mongol Turks was the occupation of the people with religious superstitions and losing their touch with the true ideals of Islam.(40) On the other hand, these debates led to the expansion of Sufi Order. This order had a tolerance-based approach and indifferent towards the political and social issues.(41) However, exclusivist notion of science in addition to creation of tension with other sects and agitation of scientific environment led to scientific stagnation and laid the ground for the stagnation of Islamic Civilization.

As a result, “in late sixth century and early seventh century for several decades after the Mongol Invasion, the innovative dimension of Islamic works was weakened while the imitation of the past masters and synthesization of their writings as well as the interpretation, denial or confirmation of their ideas were strengthened in their works. Moreover, subject-matters studied by the scholars became even more limited to the point that knowledge and thinking in Islamic world underwent through a serious stagnation and as a result, its fall started.(42)

4-4- Assessment of Status Quo of Islamic Iranian Civilization in Seventh Century of Hegira:

In this era of history of Islamic-Iranian Civilization, the most important scientific system was Maraghah’s Observatory and Rabe Rashidi. Maraghah’s Observatory was constructed in the time of Hulagu Khan under the supervision of Khajeh Nasir Al Din Tusi in Maraghah City. Maraghah’s Observatory not only was known as one of the great scientific centers rather as a scientific organization and institute where all branches of sciences were taught. This center was an academic institute that after Jundi Shapur and Nizamyyah and Mustansaryyah schools was considered to be among the greatest Islamic scientific centers.(43)

Khajeh Nasir after the establishment of Maraghah’s Observatory the costs of which were covered by endowments decided to allocate allowances for the students who devoted themselves to the then lesser pursued majors, i.e. philosophy and medicine, which were almost on the verge of forgetfulness. The higher allowance and support helped these fields of study to regain their popularity. In other words, Khajeh determined three Dirham for the philosophers, two Dirhams for the physicians and half Dirham for the traditionalists. Moreover, establishment of a great library with more than 400 thousand volumes after the Mongol Invasion and the looting and killings was not an easy task.(44)

According to Khajeh Rashid, in the time of Abaga Khan some hundred scientists had been trained in this Observatory.(45) Admittedly, these people had no concern of the costs of their education and life. They had offices near the Observatory and could study and write books in peace. At the scientific complex of the

Observatory, Shia, Sunni and Christian scholars were teaching and learning.(46)

It is important to note that Maraghah's Observatory was not merely a center of astrology rather Khajeh Nasir Al Din Tusi took advantage of the interest of Hulagu Khan in the astronomy and fortune telling in order to establish an Observatory with all equipments. Later he gradually turned the Observatory into a comprehensive institute of scientific production just like the current hub universities. For these scientific centers and their institutes including the Observatory and the great library, Nasir Al Din took advantage of a large group of the scientists and sages. He used the endowed properties for covering the costs. The final result of the works of Khajeh and his colleagues in this Observatory and its great library was the design of Ilkhanid Zij that included tables and new arithmetic points. In addition to the unlimited financial aids from the governmental treasury, all endowed facilities across the country were at the service of Khajeh Nasir Tusi to cover the costs of Observatory. Every city determined a deputy who would gather the revenues and send them to Maraghah for the Observatory.(47) Maraghah's Observatory was active until the time of the rule of "Sultan Muhammad Khudabandeh" in the year 703 A.H. and later it was gradually forgotten.

Khajeh Nasir Al Din Tusi (597-672 A.H.):

Khajeh Nasir Al Din Tusi was born in 597 A.H. in Tus, northeast, Iran. Khajeh Nasir Al Din Tusi is a Shia philosopher and theologian in seventh century of Hegira. Khajeh Nasir is the author of many books and essays in ethics, logic, philosophy, theology, mathematics and astronomy. Nasiri Ethics, Awsaf Al Ashraf, Asas Al Eqtebas, Sharh Al Esharat, Tajrid Al Eteqad, Jameh Al Hesab, and the renowned Ilkhanid Zij and Tazkirah fi Elm Al Hayah in Astrology are among his significant and renowned works .(48) Khajeh Nasir defends Avicenna's ideas before the doubts and criticisms of Ghazzali and Fakhr Razi but in some cases (e.g. theology and proofs of monotheism, he levels objections against Avicenna. Moreover, he is against the invasion to and slaughter of the Muslims by Mongols but he turns it into an opportunity to use his influence in Mongol Court to make the Mongol invaders to convert to Islam and in this way, he paves the

path for the establishment of Islamic government. He also opens the door of scientific dialogues with his contemporary scientists.

In his Tazkirah Al Nasiryyah on astronomy, Khajeh Nasir has leveled serious cirticisms of the movement of the moon and other planets particularly Venus and Mercury as depicted in Ptolemaic astrology. In this work, Khajeh proposes a new system instead of the Ptolemaic system. These criticisms were in fact new steps for reforms that were conducted by Copernicus and this is also an innovation of Khejaeh.(49)

Khajeh Nasir has also authored a critical commentary to Abhari's "Tanzil Al Afkar" entitled "Ta'dil Al Me'yar fi Naqd Tanzil Al Afkar". Sadr Al Din Qunawi (Khajeh's contemporary mystic) had a correspondence with Khajeh Nasir in which some questions and answers were exchanged between the parties and they peacefully raise some criticisms of each other (50). It is noteworthy that the presence of scientists and scholars from all across the world at Maraghah Observatory regardless of their race and religion was the only measure respected by Khajeh Nasir. Such great figures as Allameh Qutb Al Din Fakhr Al Din Maraghabi, Muhyy Al Din Magharri, Ali Ibn Mahmud Najm Al Din Usturlabi and others were active in this center. The name of "Al Arabi" the renowned Christian philosopher and dictionarist is also mentioned among these lecturers of this scientific center who had been teaching the Eucleadian geometry and Ptolemaic astrology. Moreover, due to the influence and domination of Chinese court over the Ilkhanids, Chinese scientists including "Fao Mon Je" were working in this center. This is an indication of Khajeh Nasir's insistence on communicative rationality in the field of civilization building and urbanization. Then, Khajeh Nasir's scientific approach is a combination of critical rationality, communicative rationality and religious rationality (theology).

Conclusion:

Scientific debates of the students the circular structure of teaching and in general, the critical style in traditional seminaries were one of the influential examples in the scientific system of Islamic Civilization. This analytic-critical style in the history of Islamic civilization found different functions; in third and fourth centuries, this led to the formation of an open scientific space based on

communicative rationality as well as the critical rationality and thinking. The famous scientific debate between Avicenna and Abu Rayhan Al Biruni concerning eight philosophical problems is one of the brilliant examples of this.

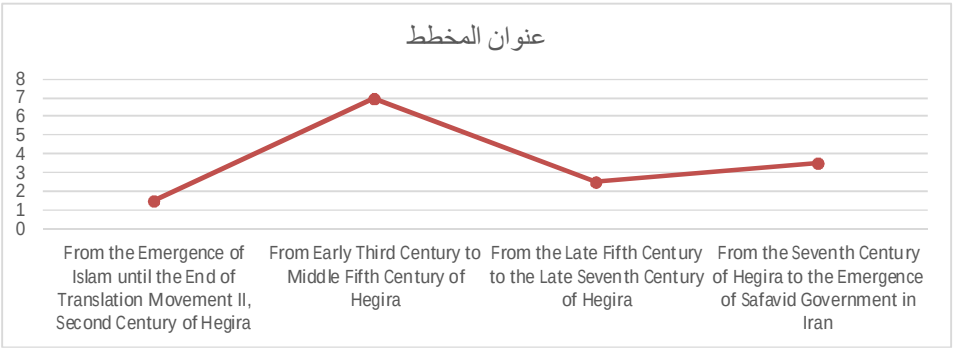
However, in later centuries, the debates sometimes lost its scientific function and would lead to bloody conflicts in political and social fields. It needs to be mentioned that this style in the scientific system of Islamic-Iranian civilization had a direct impact on the flourishing and fall of the Islamic-Iranian civilization in different eras.

It is noteworthy that the denial essays and criticial answers written by the scientists of the third and fourth centuries concerning their ideas did not lead to Takfir while in the ideas of Imam Muhammad Al Ghazzali in fifth century and the ideas of Ibn Taymyyah in seventh century one finds open excommunication of some scientists of fourth century and their followers as well as the excommunication of the Shia Muslims. Takfir or excommunication closed the door of dialogue, on the one hand, and would open the door of conflict and separation, on the other. Thus, it will destroy the basis for civilizational unity. Furthermore, the door of jurisprudential argument and exegetical debate was open until the end of sixth century. Later they were banned from scientific circles and seminaries and gradually they were replaced by Salafism and imitation of the early scholars and jurists of second and third centuries.

This led to the fall of the spirit of questioning and lack of the application of critical thinking in the scientific community which in turn gave rise to the stagnation of Islamic civilization. The formation of closed and semi-closed political and scientific spaces, on the one hand, and also the killing of the scientists and people by the Mongols and destruction of the libraries and civilizational structures, on the other hand, gradually led the Islamic society of Iran in seventh and eighth centuries of Hegira to Sufism, poetry and imitation and such poets as Hafez, Attar, Rumi emerged in this space and did not show any interest in medicine, astronomy, mechanics, and politics.

Accordingly, the time of Zakaria Razi and Farabi, Avicenna and Abu Rayhan (circa 250-400 A.H.) due to the insistence on Quranic verses and prophetic traditions, on the one hand, and the use of critical rationality and empirical rationality, on the other hand, is

known as the the era of flourishing. In the era of Ghazzali and Fakhr Razi due to the weakness of philosophical rationality and empirical rationality as well as the insistence on the Sunni Shafei reading of religion and also the occurrence of the Mongol Invasion and the killing of scientists and destruction of libraries and urban facilities, the process of the development of Islamic Civilization experienced a decline but in next era under the influence of the actions taken by Khajeh Nasir Al Din Tusi through the change in the political structures (Ilkhanid rule), scientific and social structures (system of endowments and Maraghah Observatory), the path was paved for civilization building. Later upon the emergence of Sheikh Bahaei and Mulla Sadra as well as the scholars who had moved to Isfahan from other areas of Islamic world, the simultaneous teaching of rational, traditional and empirical methods was pursued and the dialogues and scientific debates were conducted in the form of critical observations in Safavid seminaries of Isfahan (Ninth and Tenth Centuries of Hegira). Accordingly, the basis of Islamic civilization is renewed in Safavid Era and this process moves upward.



Finally, based on our discussions in this essay, one can conclude in general that the assessment of the process of rise and fall of the history of Islamic Civilization shows that by application of the critical thinking and creativity of the elites as well as the creation of an open space scientific dialogue, Islamic Civilization has had an evolutionary course. On the other hand, when the constructive criticism is replaced with the destructive criticism and scientific imitation, and ideological prejudice and religious excommunication takes the pace of thinking, research and jurisprudential argument, Islamic Iranian

civilization starts to fall. Accordingly, the more scholars, elites and students of religious sciences move towards the application of the peaceful and fair approach of critical thinking, the more developed became the scientific system of Islamic civilization. On the other hand, the more they have moved towards imitation and prejudice, the closer this civilization became to the verge of decline.

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(14) . Abd Al Hussein, Zarinkoob, Record of Islam, (Tehran: Amir Kabir Press, 2008),29.
(15). Ibid, 49.
(16) Buyid Dynasty (320-447 Hegira/ 932-1055 AD) is an Iranian government from a Shia Daylamite origin that ruled in central, western and southern parts of Iran and Iraq.
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(30) It is noteworthy that the anti-Shia political structure in Saljuqi era and the relatively closed scientific structure of the Nizamyyah schools in Ghazzali's time had a direct impact on the fall of the spirit of dialogism and rationalism in citizens. Thus, Ghazzali has distanced himself from Takfiri beliefs after his spiritual revolution and when he writes "Revival of Religious Sciences".
(31) . Muhammad, Ghazzali, Eteraafat, (Tehran: Ataaei Press, 1970), 68-73.
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(34) . Munir Al Din Ahmad , Islamic Education Institution, (Mashhad: Astane Quds Razavi,1989), 80-90.
(35) . Fakhr Al Din, Razi, Al Mabahith Al Mashriqyyah fi Elm Al Elahyyat va Al Tabieyyat,(Tehran: Asadi Library, 1996), 4.
(36) . Ibid, 4.
(37) Since sixth century onward, innovative aspect of the Islamic works started to get weakened and imitation of the works of the past masters became a tradition and gradually science and thinking faced stagnation (Ibn Futi, 1932: 53). After a while following the fall of Saljuqis and the expansion of the influence of Ilkhanids in Baghdad and Shia thoughts of Khajeh Nasir Al Din Tusi andalso the construction of the schools of Mustansariah and its allocation to the four deominations, Nizamyyah schools started to decline. Mustansariah school is the first school specially for the Sunni sects. Its construction began by 625 A.H. and it was inaugurated in a magnificent session in 631 A.H. and named after the Caliph Al Mustansar.

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