

THE RELATIONSHIP BETWEEN SCIENCE AND GOVERNMENT IN IRAN: A HISTORICAL PERSPECTIVE

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ABSTRACT

Researchers here at this point to define the relationship between the government actions and the process of scientific activities. It can be also narrated in this way: How do politician's attitudes, policies and decisions impact the scientific arena? In common wisdom, the functions of science and thinking in a closed society with a closed government is absolutely affected and is therefore canalized in the best case and even nonexistent as a result of suppression of free, independent thoughts in the worst scenario. In this paper we shall look at the relationship between Islam, science and government in Iran from a historical perspective. We will shall by looking at science in Iran in the ancient (pre-Islamic) period, in the Middle Age after the advent of Islam, and finally in the modern period.

Keyword: Science, Democratic Government, Nondemocratic Government, Islamic Government, Modern History

INTRODUCTION

It is needless to say that the scientific advancement in any country is directly affected by the significance that science has for its rulers. On the other hand many scientists and philosophers believe that the government has a significant role in the well being and welfare of the society. In this paper, the objective is to prove that governmental policies have a direct effect on advancement of technology. Therefore based on this reasoning many governments in history have increased the pace of advancement of science and many more have in effect stopped its growth with their policies. Ibn Khaldun (May 27, 1332 AD– March 19, 1406 AD) was one of the first thinkers who discussed the significance of political decisions on the matter. He writes:

it is probable that scientific age ends anytime soon in the West heartland, as the government has shrank and disappeared (Ibn Khaldun, 1996, p. 875).

He clearly explains his concern regarding the downward spiral science as a result of weakening of governments and believes that in such a situation, researchers seek to be quiet and keep away from research and do not try to improve the conditions of the scientific realm but instead will be happy with the level achieved by the time. Michel Foucault (15 October 1926-25 June 1984), one of the prominent Western thinkers at the present time deeply believes that there is a strong correlation between political will and scientific advancement. No governance is imaginable without a degree of respect to science and no science is useless for the government on the other hand. They have a correlation, but as correlation is never the sign of causality, therefore none is the cause for the other one (Dreyfus & Rabinow, 1983 p. 216) . As there are divisions on the types of governments, namely democratic, nondemocratic and Islamic, we will study the role of science in each of these and explain the position of science in their respective policies.

SCIENCE IN DEMOCRATIC AND NONDEMOCRATIC GOVERNMENTS

There is a very close proximity between science and democracy in countries. Meaning that knowledgeable people opt for democratic governments and such governments help science to advance rapidly. Therefore, a real democracy is never achievable until a desirable level of scientific advancement in a country (k.farsoun & mashayekhi, 1992, p. 163) is achieved. On the contrary, in a closed dictatorship there is no room for advancement of science as research is banned. We can see that the fall of many governments has been the direct result of ignoring the scientific societies of their time, such as the fall of church power in the medieval period in Europe. Now even this science can be harmful as the building blocks of the Western governments is humanism which is empty of spirituality. Therefore, such governments have used science in a utilitarian way and this view of science can be harmful to the society as a whole. This will put science in the hands of a handful capitalist that use science in the way of their own profit. It is dangerous to put science in the hands of capitalist as many thinkers such as Karl Marx believe that such a process will fail scientific advancement. As a consequence of such overwhelming presence of the capitalists in the scientific and political environment, total destruction of the human society will be predictable. This is an idea endorsed by Marx, Spangler, Jürgen Habermas, and other thinkers of the Frankfurt School. As a result, for science to advance in a country there needs to be a society prepared for that, as Reza Davari Ardekani believes that in the developing nations, there is a utilitarian look at science which explain that science is just required for their success and economical achievement, rather than an understanding based on the respect for science itself.

On the other hand, Soroush believes: “the type of governance-democratic or nondemocratic-is understandable by observing its relationship with science, meaning that science-centered governments are mostly democratic and Platonic governments mostly dictatorial. Therefore through material science there will arise a dictator-like government whereas through spiritual science emerges a democratic ruling. (Soroush, 1994a p. 346) Mohammad-Taqi Ja'fari-an Iranian philosopher, (1923 - 15 November 1998) -believed that the biggest threat to science is creating a “scientific democracy” to achieve their own materialistic goals (Jafari, 2000, p. 89).

HISTORY OF HIGHER EDUCATION IN IRAN

The modern higher education in Iran has a 100 year history, although the tradition of higher education in Iran dates back to the Sassanid Empire.

Pre-Islamic Era

As mentioned before, Nusaybin was one of the most central scientific establishments of the ancient era. With the development of science in other parts of the world specially in India, the number and the prominence of the institutions of higher education started to grow (Hill, 1993, p. 4). One of the very important scientific institutions established in the ancient Iran was the Jundi-Shapur Institute which was founded by Ardeshir I, founder of the Sassanid dynasty in 208 AC. For centuries it was the main pole of medicine, pharmacy, veterinarian, philosophy, astronomy, math, rhetoric, logic and etcetera.

Post-Islamic Era

It was not until the Great Seljuq Empire in which the contributions of Nizam al-Mulk, better known as Khwaja Nizam al-Mulk al-Tusi (born in 1018 – died on 14 October 1092), the cholar and minister of the Seljuq Empire, led to the establishment of new scientific and educational institutions. He established a chain of Nizamiyyahs (a group of the medieval institutions of higher education) during the fifth century of Islamic age. The most prominent

of those institutions are Saeedieh and Beihghie in Neyshabur, Balkh, Herat, Amol and Isfahan. In them, students studied *Fiqh*, *Hadith*, interpretation of Quran, math and medicine (Afzal, 1969, p. 2). This was the successful example of new life of education in Iran after Islam which became a building block for the development of other institutions in the years after. These institutions were financed by the fees which were intended at the students and this fee would be enough for maintaining and development of the establishment. The most prominent scientists of this era include Avicenna (980 - 1037), Ghazali (1058–19 December 1111), Nasir al-Din al-Tusi (18 February 1201– 26 June 1274, Saadi Shirazi (1184 – 1283/12910 and many more. Meanwhile, Nasir al-Din al-Tusi established a gigantic library including 400,000 books from all around the world as well as a huge observatory in Maraghe, Neyshabour. Hulagu Khan (a Mongol ruler who conquered much of Southwest Asia) is said to have financed these establishments (Nasr & Leaman, 1993, p. 542).

Unfortunately, with the decline in national peace and unity the pace of science in Iran started to deteriorate and with the Mongol invasion of Iran began in 1219, and it completely stalled. Until the beginning of the Safavid Empire in 1502 which marked the beginning of the Golden Islamic Age in science and art. One of the most important factors of the high speed development during this empire was the national unity which was the result of unifying the religion of the people. Even the Jundi-Shapour Institute ceased to be a governmentally financed scientific establishment at the middle of the Safavid rule (Tayeb, 1974, p. 5). As mentioned before, the Shiite Islam was the unifying factor in Iran when Safavids came to power. In the religious establishments of the time Shiite fiqh and hadith was taught relentlessly and many scholars were educated during this time.

HIGHER EDUCATION IN MODERN HISTORY OF IRAN

With the beginning of the age of communication and commerce, the idea of establishing modern educational and scientific institutions was born in the Qajar Dynasty in 1794. It all started with Dar al-Funun, established in 1851, the first modern institution of higher learning in Persia. It was founded by Amir Kabir and it was considered to be a poly-technique at first (Dorani, 1997, p. 129). He had been schooled in Russia and Turkey and felt the need to a modern educational system for educating a new generation of experts to run the country. He first intended to introduce science and engineering to normal people. Therefore, the institution started with engineering, pharmaceutical sciences, medicine, fighting, mining as well as history, geography, natural studies, math and etcetera. (Shabani Varaki & Mohammadi Chaboki, 2008, pp. 17-49) He believed that international lecturers have to keep their distance from politics and concentrate on teaching only. This is the reason behind his interest in hiring lecturers from Austria, rather than from Russia, France or Britain, where it had benefits in Iranian politics. Amir Kabir was blackmailed, crumbled and assassinated by the order of the King, and after a period of 50 years, the institution was almost deteriorated. After the Persian Constitutional Revolution and with the inflow of French lecturers, the institution gained its weight again and played a huge role in introducing the western culture and civilization to the Persian people (Hashemi Rafsanjani, 1967, p. 137).

The first official university in Iran (Tehran University) was founded in 1928 by Shah Reza Pahlavi. The building blocks of this university were based on the French model of education and even the design of the university followed a French tradition (Adle & Marefat, 1992, p. 106).

After the Second World War, Shah Mohammad Reza Pahlavi the successor of Shah Reza Pahlavi decided to shift gradually from the French to American standard of education. Based on this decision, he tried to attract the attention of the American academia to the Iranian

educational atmosphere. In 1960, Shah Mohammed Reza Pahlavi, invited University of Pennsylvania president Gaylord Harnwell to come to Iran and examine Iran's higher education institutions. Harnwell prepared a report at the Shah's request, entitled A Pattern for a New University in Iran, and the Shah subsequently decided that University of Pennsylvania would assist the Iranian government in transforming Pahlavi University into the only institution in the Middle East based on American-style higher education. The University of Pennsylvania thus became highly influential in shaping many of Pahlavi University's departments and institutions.

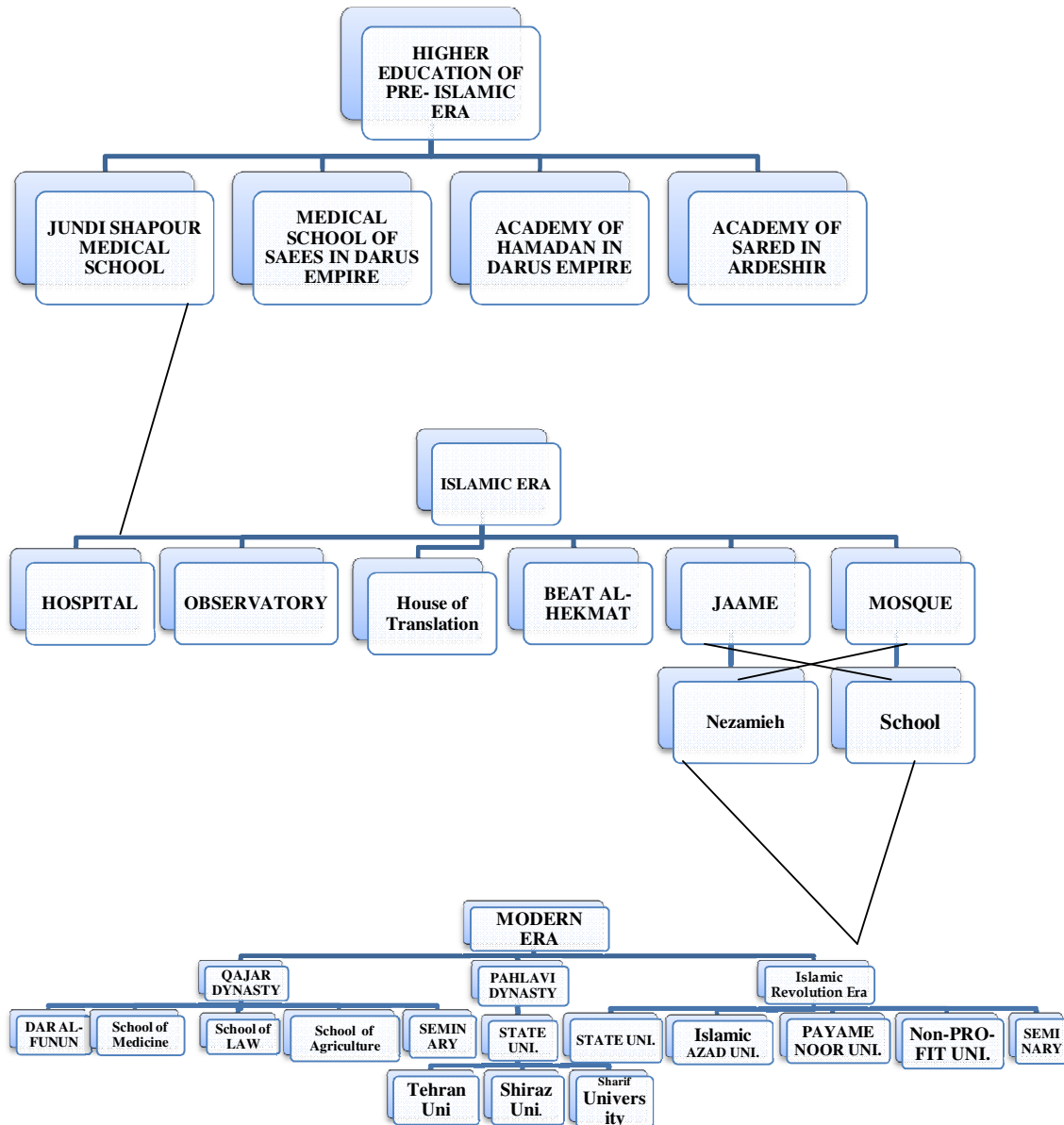


Fig 1: Higher Education System in Iran: Pre Islamic, Post-Islamic Era and Modern Era

Education in Iran after the 1979 Revolution

With the occurrence of the revolution in 1979, the High Council on Cultural Revolution took the responsibility to re-establish and to reform the educational system in Iran. As of the acts passed during the 1980's in the parliament, all children aged between 7 and 18 are eligible for free-for-all education in governmental schools and institutions. Vocational and technical schools are also available for those who are interested, as those who are interested in higher education can proceed to university degree upon sitting for the university entrance examinations.

The Cultural Revolution

The Cultural Revolution (1980–1987) was a period following the 1979 Islamic Revolution in Iran where the academia of Iran was filtered of Western and non-Islamic influences to bring it in line with *Shia* Islam. Currently, the Iranian educational system has many students in first degree, second degree, PhD and doctorate. There are 400 educational and research centers in Iran which work in governmental, private, and distant study areas.

Higher Education Authorities in the Islamic Republic

This part divided into two broad categories:

Council on Iranian Cultural Revolution

As the highest policy maker in the educational matters this council has the following authorities:

- a) Evolving the educational atmosphere and cultural backbone of the society in line with Shiite Islam interpretation;
- b) Spreading and enforcing the Islamic teachings in the society;
- c) Spreading scientific and cultural incentives in line with Islamic *Sharia*;
- d) Protecting and spreading the Islamic and national values.

The Organization and Government of science and Technology in Iran

Its most important duties are:

- a) Developing, suggesting and enforcing agenda on all the educational and research institutions and guaranteeing cooperation between them;
- b) Defining the overall policies of the ministry;
- c) Setting the rules and regulations on hiring, enrollment, and employees' benefits which are previously set by the related authorities;
- d) Funding the universities and public institutions with the cooperation of the Ministry of Finance;
- e) Planning for educating experts in the areas of research and development;
- f) Setting rules and regulations on scholarship students and hiring them;
- g) Funding research and development funds for applying institutions;
- h) Running random auditions to the institutions of higher education in Iran;
- i) Certifying and assessing the foreign educational institutions;
- j) Permitting new institutions to be established or discrediting the disqualifying ones;
- k) Managing the permanent seat of the Islamic Republic in UNESCO.(Ministry of Science, 2010)

SCIENCE IN CONTEMPORARY ISLAMIC REPUBLIC OF IRAN

Iran has always been a cradle of science for all its history and since the beginning of industrial revolution in the West; Iran has always been active in the direction of industrialization. This process took place during the Pahlavi era in which access to science and technology was fast and easy, but at the expense of self-belief and independence in both scientific and cultural aspects. With the rise of the Islamic Revolution in the 1970s and the beginning of self-awareness and religiosity in Iran, a fundamental shift in the mentalities of the Iranian people started to take place as a result of which huge revelations, both in quality and quantity, started to happen in the scientific and religious arenas. The Islamic revolution happened as a result of endeavors of believers and revolutionaries with an emphasis on Islamic values and a belief in a return to self and the real identity of the Iranian people. The main concern of the Islamic Republic is to manage the different social and economical needs under the supervision of the Islamic values and principles. One of the clear indications of the importance of science in the Islamic Republic is its Constitution in which a heavy legal allowance has been put to support research and science and the lawmakers as well, have a priority to pass laws and regulations which legally support scientific revelations and contributions and protect the Creator's rights. The Constitution has in itself several occasions which do so, to be named are:

- 1- In the 1st and the 2nd Amendments to the 1st Principle of the Constitution it reads "The Islamic Republic functions on the bases of belief in the necessity of following Allah obtained by (a) the Holy Text and *Hadith*, and (b) scientific and technological shifts of humanity." (Article 2) Clearly it is impossible to profit from scientific and technological shifts without research and study.
- 2- The 2nd and the 4th Amendments to the 2nd Principle of the Constitution necessitates: The 2nd: "The general knowledge of public by the right mixture of media and press." (Article 3, 2nd Amendments) The 4th: "Emphasizing on the importance of research and creativity in scientific, technological, cultural and social aspects by supporting scientific and cultural institutions and by awarding researchers." (Article 3, 4 Amendments) Based upon this principle the Islamic Republic is required to use all the necessary resources to encourage creativity and research.
- 3- The 24th Principle of the Constitution indicates that the press and the publication are to publicize anything unless it is against the Islamic principles and/or public/national interest. It's needless to say that the freedom of speech plays a very major role in development of creative and critical thinking in a society.
- 4- The right to free, compulsory education has been guaranteed under the 30th Principle of the constitution until the age of 18 and to support free higher education up to the point of independence of the country. It is clear that illiteracy is the biggest obstacle to read and research and one of the first and most important responsibilities of the Islamic government is to tackle this problem and to raise the knowledge of the public specially the kids and alike.
- 5- The 1st and the 3rd Amendment of the 43rd Principle of the Constitution declare that the economics of the Islamic government should be in a way that supports and helps the nourishment of the educational potentials of the public.
- 6- The 141st Principle of the Constitution has prohibited people from having more than one public-sector job and has emphasized the role of research and non-stop learning in the career life of individuals. This suggests that even as an executive manager in the public sector, a person needs to read and do research and being needless of

reading and nourishing has no practical meaning. Everyone needs to read and should do research and examine their respective field of responsibility.

By surveying the different Principles of the Islamic Republic's Constitution we can learn that:

- (a) One of the necessities to reach to the goals of the Islamic Revolution is learning the principle of the science and technology which is impossible to achieve unless by supporting research and development in the country.
- (b) One of the responsibilities of the Islamic Government is to guarantee the rights and the privileges of the academic societies to support research and development and to nourish creativity. Therefore the Islamic government is required to allocate funds and support for this aim.
- (c) The government is required to set required economical policies by which the financial concerns of the academic society be eased and the obstacles as such are eliminated to support and encourage the soul and determination to create and research.
- (d) Reminding the executive managers of the country that everyone needs to study and keep nourishing and nothing can and should be an obstacle to research.
- (e) The Constitution has an emphasis on spreading scientific institutions and scientific journals.

The Islamic Revolution of 1979 happened at a time when both modernism and secularism were being spread very fast around the globe. In spite of this, the revolution happened under a totally Islamic constraint. Since the beginning of the modern education in Iran in the 1800s, up to a century after that, the Iranian educational system was occupied by foreigners (Hazeri, 1998, p. 29). The Islamic Republic tried to fill their place with revolutionaries. The intention to 'revolutionize' the country was in itself a very heavy weight for the new Islamic Republic and there could be nothing worse than the imposed war of 1980 and its impact upon the Islamic Republic. In spite of all of this and the numerous problems that such events have created for the Islamic Republic, many skills and abilities have risen out of necessity. Sanctions were not an obstacle, but they were merely harsh measures to encourage self-belief and creativity. It has not stopped Iran from obtaining nuclear power, stem cells, nanotechnology, and so forth. On the other hand, the war was not as late Saddam Hussein once suggested a 'three-day' war, but one which led to independence of many industries and capabilities.

Such experiences have had enormous effects on people one of which is strengthening the power of Islam in people's hearts and minds. One of the first actions taken after the revolution was to fight illiteracy. In 1980, when around 75 percent of people were illiterate, Ayatollah Khomeini ordered the creation of the Literacy Movement, and this was the beginning of the Cultural Revolution in Iran, by the direct order of the leader in 1981. It coincided with the expansion of higher education among the youth: The first entrance examination for the Islamic Azad University (a chain of private universities in Iran) took place in 1981. Ali Mohammad Kordan believes:

The establishment of the Islamic Azad University was one of the decisions of the Islamic government to expand the quality and the quantity of available study opportunities (Jahanbegloo, 2000, p. 63).

Overall, the number of universities across the country has had a sharp rise. To this should be added the expansion of the infrastructure of the current facilities and the number of offered programs and students. The number of students has risen from 250,000 to 1,200,000 in a

period of just a decade. This steady rise was never delayed by the war and its consequences (Mansouri, 1999, pp. 142-143).

In spite of heavy expenses required to offer the nation a modest educational infrastructure, it was a very necessary, inevitable cost; otherwise, the heritage of the former regime would be an obstacle to the goals of the Islamic Revolution. This truth roots in the reality that the supply and demand were not balanced during the Pahlavi era. Besides, the education offered in that era was not suited to the requirements of the society (Asghandi, 2003, p. 31).

One of the problems of the current educational government of the Islamic Republic is that the ratio of educational expenditure to the total national gross income is not even up to the ratio of most developing countries. This shows disrespect to the academic society of the country. The present leader of the Islamic Republic has a deep concern regarding the issue:

The compensation to the mismanagement and insufficient growth [in the pas] t lies in today and tomorrow. The elite [class] should take scrutiny and research very seriously and their endeavor is expected to override what is required from them. Increase the volume [of work] and use every single opportunity. Study and study accurately. Do not be satisfied with the minimum required, and [further] study... Up to 20-30 years, don't say it's too much [it isn't](khamenei, 1998, pp. 4-7).

Such concerns have had a strong effect on the situation, although the growth has not been linear and sometimes quality has not caught up with quantity in many areas. The feedback from the academic elite can have a huge impact on accrediting the endeavors in this area.

Reza Mansouri writes in a paper:

Professional research is very new in Iran. Before the Islamic Revolution only 3 percent of the physicists were actively engaged with research. The total number of articles therefore did not even reach 200 a year. Based on the research incentives and impact Iran was not among the top 25 developing countries, but after the [Islamic] Revolution things started to change. This year the number of articles produced by Iranian scientists surpasses 1000 and one of those articles attracted more than 100 citations (Mansouri, 2004, p. 240).

Ali Mohammad Kordan answer to the question: What are the impacts of the West on the Iranian educational system said?

The goal of the anti-Westernization of the country after the 1979 [Islamic] Revolution is avoiding the negative aspects of the Western civilization and attraction of the technological and scientific gains. In spite of that, this acceptance is not a form of closed-eye imitation which is encouraged by the academic society (Jahanbegloo, 2000, p. 63).

Shapour Etemad has done another valuable piece of research on the outcome of the scientific portfolio and activities of Iran between 1970s and 1992. He believes that the scientific research in Iran has in fact decreased during the peak of the Islamic Revolution and this process had its worst effects during the hardship of the sanctions in the 1980s. In spite of that he believes that we are currently at a proper position relative to the days before the revolution:

The number of articles published in 1991 (1370) is approaching its peak in 1973 (1535). With the establishment of many doctoral courses during the recent years we can easily hit the proper level in a short time. There is still a good place to ask whether we have really lost anything do far or not...(Etemad, 1999, p. 43) ?

A few years later many things had changed, to the extent that when he was asked about the situation of the educational centers around the country, he answered:

By considering the historical context of events, we are at a proper position relative to the pre-Revolutionary era—specially in the fields of engineering and medical sciences. We can now say that we have completely overcome the sudden fall in scientific research as a result of the imposed war. In fact we are now at a position in which we are doing far better in these fields, compared to the past. From a statistical point of view, in the days of peak oil prices the investment in universities soared for a year or two between 1978 and 1979. As a result, the scientific papers produced in one year reached to an unexpected height, but in the decade which followed, the fall began and the rise that followed the end of war ended in today's 400% increase in number of scientific papers to a historical 2000 papers a year, and still projected to increase (Etemad, 2003, p. 14).

Therefore, we conclude that in spite of all the problems ahead, the production of science in Iran is on its right track and is continuing its strong rise very smoothly. Faced with the question: Why have we not reached the developed world if the pace of scientific research is very fast? He replies: That's the issue. It is fast, very fast, but not steady enough [yet]. Try to relate this to earlier discussions about the views of Iranian's religious intellectuals on the importance of science within an Islamic polity.

What is the religious justification (legitimizing) for science within a democratic Islamic government?

Among the politicians of the Islamic Republic the priority is to reach to a point where we are producers of science not merely importers. One of them has said:

We know no boundaries to hit. We aim for the sky. Our goal is not just gaining science, but spreading and developing it. We tend to accept that science is with others, but we want to change that mentality, by changing the role of university [from just teaching to producing]. For reaching this aim we need to shift to a more defensive phase not a passive, relative one (Mansouri, 1999, pp. 265-266).

Overall, these are a selection of necessities to reach to scientific goals of the Islamic Revolution:

Recognizing the Right to Think and Act Upon

Perhaps one of the most important results of the Islamic Revolution is the revival of the self awareness and national identity and self steam among the Iranians for this important result that Iranians have the power to think and to act upon the result. What is therefore needed now the most is to strengthen this idea by creating proper atmosphere to nourish the potentials, and the significance of hard work should not be forgotten as well as it is quoted in Sura Najm (Quran,53:39) : “And that there is not for man except that [good] for which he strives.” But the important thing is how much actions are put upon the Islamic principles: “It is not the matter of how comprehensive Islamic faith is; the important thing is how to use *this comprehensibility*.” Mohamad Javad Larijani reminds us.(Larijani, 2001, p. 95)

Therefore, only by creating enough support, proper atmosphere, and the creation of a steady flow between thought, action and execution which can lead to creativity and productivity.

Understanding the Difference between Societies and Their Needs

The Western civilization has failed to globalize its culture to all over the globe and this a reminder that every society needs its own identity and it has been the path among the Iranian

politicians to emphasize on the Islamic identity and this means relating this to discussion of religious intellectuals in separate section. It is impossible to be at odds with the needs of the society when setting rules or policies for it.

Putting Together Hawzah and University

These are the two major institutions with which every Iranian is in touch. Therefore when we talk about scientific breakthrough we definitely mean in both the directions of *Hawzah* (a seminary of traditional Shiite Islamic studies) and university. They both have their own philosophy and have to work independently but in a cooperative way. What matters most is their proper division of responsibilities in producing the Islamic science in the production of which both need one another.

Maintainign A Critical and Technocratic View toward the Modern Science and Technology

It is needless to mention that the precondition to this is Islamic science. In fact, the more we become aware of the modern world, the more interested we become in actions towards more and more of it [knowledge]. Dr Mehdi Golshani believes: "Teaching the philosophy of science and sociology of science under the light of Islamic world view is necessary"(Golshani, 1998, p. 179).

Creating and Maintaining Proper Concepts Suited To the Current Situation of The Country

This is especially important when approaching the liberal arts and humanities. Concepts in humanities are the tools of interpretation and because of the religious backbone of the Iranian society, government interpretations should take up a religious outlook because The Western concepts which lack the element of religion cannot be used in interpreting a religious society.

Creating and Strengthening the Scientific Institutions between *Hawzah* and University

Such institutions have to be the place of gatherings and discussions for researchers and rhetoricians and there should be a proper space for discussing professional issues regarding different fields. In this way the scientific society will gain a better idea of its potentials for a more meaningful and correct form.

Emphasising On Interpretational and Combinational Methods in Scientific Research

Monotheism is the main principle of the Islamic faith. Proficiency, on the other hand, is the main principle of the modern science. Although science has had very positive impacts by its existence, but it is still not the aim. The real goal of science is unifying the meaning of so divided and wide range of knowledge into one channel to know the only Divinity.

Late Mohammad Taghi Jafari has written extensively on the matter:

It seems to me like abounding any of the two [science and Divinity] for the sake of the other has led to division from the law of knowledge: the necessity to analyze and look holistically. We should remember that not all analytical scrutiny is science, nor is all holistic methods a part of philosophy (Jafari, 2000, p. 89).

CONCLUSION

The important and critical role which is played by the governments in setting policies friendly to producing science in a country is one of the themes which were repeated in this study. As proved in the lines above, the process of producing science is to a great extend dependent on the policies and the rules which are in practice. In the section related to the essence of

governments and its meaning for scientific research we explained the democratic and dictatorial regimes in their own separate forms. In dictatorial regimes, as a direct result of closed societies, and political oppression and the lack of freedom, there is almost no potential for the enhancement of science and research. On the other hand, in democratic nations, as a result of open societies and freedom of expression, there is much space for scientific research and investigation. In several former Iranian governments there have always been a number of patriotic, efficient officials, despite the fact that the governments were corrupt, who took positive actions in spreading scientific thinking. In history, wherever there is a trace of dictatorship and ignoring the science and scientific figures, we see a decline in the power of the rulers. A good example is fall of the church in Europe. In trying to find out the reason behind our status as an underdeveloped nation we need to consider the factor of the dictatorial regimes in the recent and the far history of Iran. The apparent fact is that with the rise of totalitarian powers in Iran and the fall of the Islamic civilization the development of science and scientific research stalled. On the other hand, with the rise of free and democratic rulers, and by providing the necessary needs of the educated class we can see a rise in the rate of scientific development in the country, thus attracting the best minds. Dictatorships have always resulted in brain drain and a downfall in scientific research in the country.

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