ON THE THEORY OF THE DEVELOPMENT OF SCIENCE IN IRAN: AXIOMS AND POSTULATES FROM HUMANITIES AND SOCIAL SCIENCES

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Abstract: Primarily, this paper was produced to answer some critical questions raised by student association of the Faculty of Social Sciences, University of Tehran, Iran in fall 2008. The questions concerned issues such as the causes of assumingly underdevelopment of Humanities and Social Sciences in Iran. Later on, I took the cause as my personal problematic and developed it into a scholarly paper and took into consideration the socio-political developments that took place in 2009. They raised three questions that I have tried to answer them in this paper and these questions are as follows: 1-what are the main obstacles for the Social Sciences in Iran that must be dealt with in order for the Social Sciences to be recognized?; 2- to what extent the social scientists in comparison to scholars from other disciplines have been able to produce knowledge?; and, 3- are Iranian social scientists able to participate in collection actions so the results be led to offering solutions for socio-economic and media-communication problems of Iran?
I have used ethnographic, phenomenological as well as intensive interview data collection to come up with some possible and plausible answers.
I have developed some 24 axioms and postulates that I consider them as necessary elements in addressing the problematic of scientific underdevelopment in Iran in the area of Humanities and Social Sciences. In the end I have come up with some solutions that if considered can result in the development of science in the area of Humanities and Social Sciences. Also I have offered some propositions that I have used them to organize a theoretical framework that can be used to explain the development of Humanities and Social Sciences and its obstacles in Iran.

Keywords: epistemological break, Iranian indigenous knowledge, problematic of science.

I. INTRODUCTION

This paper is the result of a longitudinal research on epistemological aspects surrounding the credibility of Social Sciences in Iran. It seeks explanation for questions such as credibility of Humanities and Social Sciences in Iran and their ability to solve particular issues that involve Iranian society. The paper will also answer the questions raised by the Students' Association at University of Tehran regarding how useful Social Sciences in Iran can be.

The position of the paper is to defend Humanities and Social Sciences as a development issue and argues that the development variables are overshadowing the epistemological issues of Social Sciences. I will use this logic to explain that the questions that the students have raised have been in fact misplaced. The paper, instead, takes on the issue to restructure this line of scientific activities in Iran and address the question in its proper venue that leads to production of knowledge. In the end some theoretical arguments will be offered that can better explain problems surrounding development of Humanities and Social Sciences and its obstacles in Iran.

In order to follow this logic, the paper offers two major arguments: first it determines what the problem really is and then it will offer the axioms and postulates that can help to construct a theoretical framework for explaining the problem.

II. RATIONALE

My primary statement is that the problematic addressed by the students is confusing. The question rather is: what it is that seems so problematic here? In other words, why do we need to do a research on the issue of production of knowledge in Iran even though the existing indicators are in favor of confirming a steady progress of Social Sciences and Humanities in

Iran? This is where the rationale of the paper is resided. I don't believe the question of usefulness, reason that drives us to tackle the issue. Rather, the following reasons indicate that there are other questions as well that justify the rationale behind this research: 1-usability of Humanities and Social Sciences in Iran has long been under question, 2-Some 44 percent of Iranian students in government universities are studying in the fields related to Humanities and Social Sciences [17][1], and they are also interested in finding the answer; 3- The following questions were raised in 2008 and were sent to all 56 faculty member of the Faculty of Social Sciences of University of Tehran. It was the collection of these reasons that became the main incentive for this research. This is especially true since as of this day still no structured and detailed answer has been offered to the following questions of the students.

A) What are the main obstacles for Social Sciences to be recognized?

B) Have social scientists in Iran been able to produce knowledge compared to scientists from other disciplines?

C) Are social scientists in Iran in a position to perform collective actions concerning social issues that Iranian society is facing?

After studying the questions, the first question that comes to mind concerns the academic legitimacy of student questions. In other words, who must alternatively have asked these questions?

For this paper however, the question is: what does it really seem to be the problem?

The primary answer is; from the point of view of this paper the problem resides in a general lack of knowledge among students about the structural issues that the development of science in Iran is involved in. What lie really in between the lines of all three questions raised by the students is that they are blaming the scientific forces and making them responsible for what seem to be the problem in Iranian Academia. This paper will take, however, a different direction than the students to tackle the issue and will try to come up with possible answers for the students' questions. In order to do that, I will critically review students' questions and will provide plausible answers by employing a theoretical framework that will be presented in the end.

put forward by the students, is the only

III. RESEARCH STRATEGY AND EXPLORATIVE DATA

To approach the question and offer answers and solutions to the question of usefulness of knowledge in Iran I have chosen a research strategy that does not start with conventional deductive model of answering research questions. Rather, it starts with issues of conceptualization that originates from ethnographic, phenomenological and participatory observations. The conceptualization will help to uncover issues related to usefulness of Humanities and Social Sciences that I believe have not been handled in questions put forward by the students. The conceptualization process involves extracting concepts from my experience including: conceptualizing production of knowledge in relation to the economic variables. Economic facts have been gathered from my working experience (as a university professor in Iran) and after 15 years of teaching practice. These facts must be taken into consideration when doing research in the area of production of knowledge otherwise the same epistemological problem that the students faced will occur. These are the facts that I consider them as basic standards that must be provided for university professors so they meet their basic necessities. We treat these factors so that if they are in place then they would help professors to produce knowledge. These standards are follows:

1. There should not be any worries and concerns about housing. This is while there are still cases where Iranian professor in the final years of the second decade of their job have no housing.

2. University professors should have enough income to cover their living expenses. I will explain with numbers that this is not the case.

3. They should have enough income to cover their children's expenses regarding quality education. By and large, majority of professors pay high rates for their children education and I will discuss that their salary can not cover that.

4. Deducting the above expenses, they must have enough income left to spend on research expenses and covering their expenses on books, computers etc. Concluding from the previous points this is not happening either. Research grants have been added to available funding for professors which is not as much as needed for launching national and extensive research projects.

5. There must also be some earning left for them to save it for their retirement time. In light of the previous points, one can conclude that this is not also happening.

In order to collect data, I have used various secondary data as well as qualitative information that I gathered through interviews with my colleagues in Sweden, Canada, USA, Denmark, and Britain, India, Australia.

I have also used an ethnographic and participatory observation approach to collect other data needed to categorize axioms and postulates.

The purpose of this strategy is not to use a quantitative approach and explain relationship between variables that result in substantiation of the paper's claim. Rather, the objective of the paper is to indicate how I drag 24 axioms from my observations and data and what axioms and postulates are needed in order to come up with a theoretical explanation of what is happening in scientific community in Iran. This theory can explain what makes students to believe that: 1- there is a shortage of knowledge in Iran; and 2- the university professors must be blamed for this shortage of knowledge.

IV. WHAT IS THE NATURE OF THE PROBLEM THAT THE STUDENTS ARE REFERRING TO?

As I indicated the students directed their questions to the university professors. The nature of the problem however, was not identified and it needs first to be clarified here. I break the above question down into two more workable questions as follows:

1. Is the problem (whatever its nature) related to the amount of production of   knowledge that is being produced by the   professors?
Or
2. Is it related to structural shortcomings?

Here I first compare salaries and workload of university professors across world in order to indicate that the questions of the students have been misdirected at University professors.

The data available in Table one is from 2006 but it is also valid for 2008 and 2009 as the source indicates. Comparatively, gross income of Iranian professors based on 2010 payments is 2500-2600 USD for full professors, 2000-2100 USD for Associate Professors and 1500-1700 USD for assistant professors. The net salary after deductions comes down to 2000, 1600 and 1200-1400 USD respectively. The Salary structure of Iranian University system compared to the payment records of Table one ranks Iran to be 10th. However, the experienced professors earn much less than the countries listed in Table two.

Maybe an example from an African country gives us a better idea about the low salaries of Iranian Professors. The Kenyan Federation of Kenya

Employers [8][2] reports that in this average African country, the annual (and monthly)[3] salaries of university professors are as follows:

	Annual	Monthly
Professor	$80,703	$6,725.25
Associate Professor	$74,306	$6,192.16
Senior Lecturer	$62,437	$5,203.08
Lecturer	$52,129	$4,344.08
Associate /Assistant lecturer	$42,738	$3561.50

TABLE I:
AVERAGE MONTHLY SALARY OF UNIVERSITY PROFESSORS BASED ON DOLLAR'S EQUIVALENCY VALUE AND BASED ON WORLD BANK'S RATE OF DOLLAR– YEAR 2005-2006.

Rank	Country	Average Salary of New Faculty Members
1	Canada	$5,206
2	USA	$4,589
3	Australia	$3,810
4	Germany	$3,683
5	Britain	$3,345
6	France	$3,259
7	Saudi Arabia	$3,162
8	New Zealand	$3,114
9	Japan	$2,979
10	South Africa	$2,560
11	Malaysia	$2,049
12	Colombia	$1,987
13	Argentina	$1,751
14	India	$1,151
15	China	$682

Source: [12]

Compared to average salaries in Denmark which amounts to 7,840 US dollars monthly (94,080 annually), Kenya is paying a very noticeable salary to the professors there just to make the country develop [13]·[4]

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[2]http://www.usiu.ac.ke/events/wasc/wasc08/Docs/Exhibit%203.4%20Faculty%20Salary%20Review%20Report.doc
[3] I calculated the monthly payments.
[4]http://www.dst.dk/asp2xml/puk/udgivelser/get_file.asp?id=14468&sid=sy2009

The evidence indicates that on average the salary of Iranian professor is no comparatively too low. This however, does not prove the point of this paper about the fact that the salary of Iranian professors does not match the expenses and especially the workload of Iranian professors. That is why here we discuss the workload of some university professors who are being paid a lot higher than Iranian professors.

TABLE II:
AVERAGE MONTHLY SALARY OF EXPERIENCED PROFESSORS BASED ON DOLLAR'S EQUIVALENCY VALUE AND BASED ON WORLD BANK'S RATE OF DOLLAR – YEAR 2005-2006

Rank	Country	Average salary of experienced professors
1	Saudi Arabia	$8,490
2	Canada	$7,992
3	USA	$7,385
4	Australia	$6,570
5	South Africa	$6,105
6	New Zealand	$6,061
7	Britain	$5,589
8	Japan	$5,546
9	Germany	$5,108
10	France	$4,551
11	Malaysia	$4,422
12	Columbia	$4,079
13	Argentina	$3,950
14	India	$2,071
15	China	$1,845

Source: [12]

Figure I indicates that the average teaching hours spent in University of Western Ontario in Canada was about 2.7 hours per week. This meant most of the times of the faculty members were spent on preparations, supervision and research. In comparison, university system in Iran follows a universal regulation based on which the minimum weekly teaching hours is now 14 hours for the assistant professor, 13 hours for Associate and 11 hours for full professors. In addition, they are supposed to do preparations, supervision and all other duties. Personally and as an Iranian

for more information see: the Chronicle of Higher Education [19]

university professor, I have realized, I must stretch the 24 hours a day span to 36 hours day span in order to be able to fill up my duties. That is why; I stay as late as 11 PM at the faculty almost every day, and always feel stressed out and feel pain in my body all the time and due to too much stress. This may not be the normal life of all professors but this indicates that even for those who can not meet their duties, it is not because they do not want to but it is because the duties are so much and the salaries are so low that they find it impossible to find a logic to convince themselves for doing it.

The causal effect of workload and salaries has been documented by the evidence that Fox and Milbourne [9] have discovered in Australia. They studied 26 out of 32 departments of economics in Australia and figured out that if 10 percent is added to teaching hours of university professors, it will decrease their research turnover by 20 percent. This is while, if 10 percent is added to their grant benefits, it will increase their research turnovers by 15 percent (Ibid).

V: COMPARISONS AND CONSEQUENCES

My experience in Iran indicates that Iranian professors at the level of Assistant Professor are paid 1200 to 1400 dollars, associate professors are paid 1600 to 2000 dollars and full professors are paid up to 2500 dollars.

The other concluding remark is that average amount of teaching in classroom varies between 14 hours for assistant professor, to 13 hours for associate professors and 11 hours for full professors. The other factor that helps us to understand the problem of salary structure in relation to workload is to compare the salaries to GDP.

As a good example from table one, table two, and table three, Indian Universities pay less to their faculty members than many other countries including Iran, but if compared to GDP the rate of their salary would be 8.73 times of their GDP per capita, meaning their monthly salaries are as much as 8.73 times greater than their country's average GDP per capita. Compared to Iranian professors whose comparative payment in relation to GDP would be 1.67 times of GDP (calculated based on UNDP's

Figure 7:   Top 10 Activities
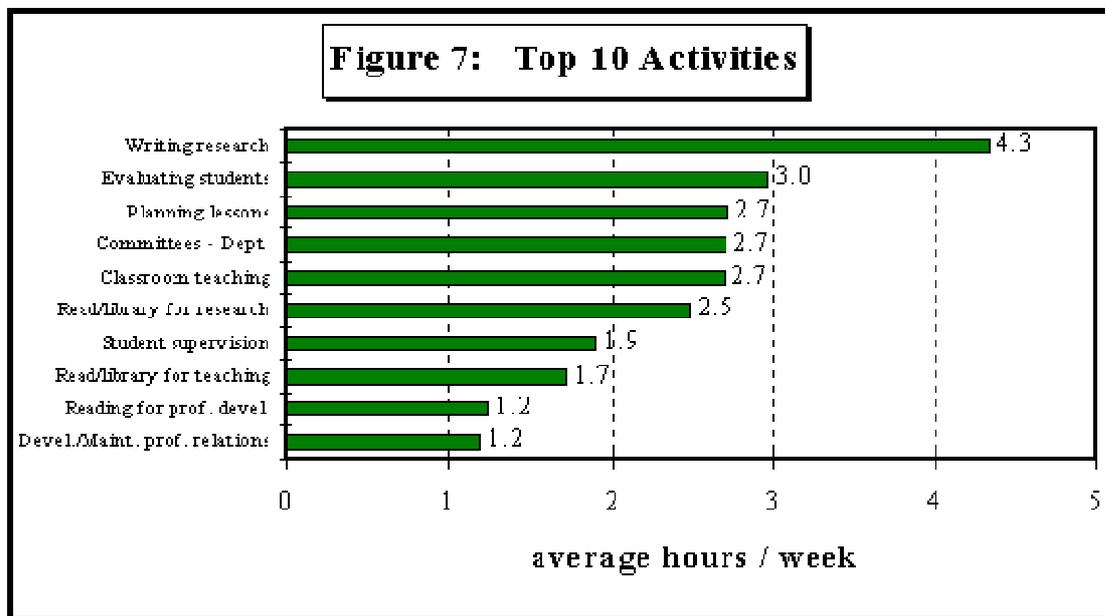
Source: University of Western Ontario [18][5]

TABLE III:
COMPARATIVE MONTHLY SALARIES OF UNIVERSITY
PROFESSORS TO GDP PER CAPITA IN 2005-2006, BASED ON
DOLLAR'S EQUIVALENCY VALUE AND WORLD BANK'S RATE
OF DOLLAR

Rank	Country	Average
1	India	8. 73
2	South Africa	5. 77
3	Columbia	5. 38
4	Saudi Arabia	3. 74
5	China	3. 47
6	Argentina	3. 31
7	Malaysia	3. 25
8	Canada	2. 24
9	New Zealand	2. 19
10	Australia	1. 75
11	Germany	1. 68
12	United States	1. 67
13	Britain	1. 65
14	Japan	1. 63
15	France	1. 58

Source: [12]

Human Development report, 2009: Table one)[6] it is equal to the same amount of salaries that the US professors earn. Economist, Amol Agrawal (2010) also agrees on this issue regarding acceptable salaries on Indian Professors and agrees that Indian professors' salaries are high compared to GDP. This comparison indicates that Iranian professors must be paid at least based on the third world standards meaning 5 to 8 times of the country's GDP per capita so the country can develop.

The other factor is to see if production of knowledge by Iranian professors is worth enough to defend their situation against low payment. I compare two countries of Iran and Saudi Arabia which are located in the same region and their salary structure is available in Tables above. Eftekhari [7] in the latest research on Iranian higher education system reports that Production of knowledge in Iran is better than Saudi Arabia in which university professors get more payment than their Iranian counterparts. For example, University of Tehran ranked 368 among top

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[5] The study surveyed a total of 1,030 faculty members and 2,060 possible responses throughout the 52-week period were collected. However, excluding incomplete surveys a total of 840 complete surveys were collected (accessed at: http://www.uwo.ca/western/workload/workload.html) .

[6]http://hdrstats.undp.org/en/countries/country_fact_sheets/cty_fs_IRN.html

universities of the world in 2009[7a],[7]. According the latest available statistics, University of Tehran produced 1156 international papers in 2008[8],[a8]. It should also be noted that overall, 11 Iranian Unicversities are among the top 20 Universities in the Middles East[9].

Earlier I indicated that Indian Professors are paid more than Iranian Professors in comparison to GDP. This is while Agrawal criticizes Indian professors not contributing to Indian universities to rank better.

Based on the above facts we can so far argue that the workload of faculty members in Iran for the most part is greater than norms and standards in most developed countries. The amount of payment to professors in Iran does not match the workload they have to perform.

Therefore, the students' questions were misplaced and misdirected and therefore, need a new approach and explanation to lead to plausible answers. That is the reason this paper claims there should be a logical apparatus that can be used to explain what is happening in Iranian Higher education system.

In order to do that, the second part of the paper addresses axioms and postulates that can help explain why students believe science, particularly Social Sciences in Iran are not as applicable and productive as they seem to be in developed countries.

VI: AXIOMS AND POSTULATES
GUIDES TO CONSTRUCTION OF A THEORY OF
THE DEVELOPMENT OF SCIENCE IN IRAN

Before I go further it should be noted that an axiom here is a statement that I have drawn from my experience in academic institutions in Iran and other parts of the world, and I take it to be true. The most possible and plausible axioms so far can be listed as follows:

1) I take althusserian approach to claim that we also need an epistemological break in Iran's scientific problematic [2] [10]. This however, means:

a) One must have a genuine problematic based on which a theory can be established. Kuhn [15] also

refers to anomaly and its significance for development of science.
b) In our case here, one needs to discern the a priori problematic and the nature of it in Iran.
c) One needs to discern its inefficiency for establishing the above-mentioned theoretical structure that must have been compatible to Iranian type in the first place and from the beginning.
d) One needs to discern the necessity for creation of an epistemological break.

VII: LOGICAL RESULT FROM MY EXPERIENCE

An epistemological break has not taken place in Iran yet.
2) Science operates as an apparatus [4]. The objective of the apparatus of science is to produce knowledge but it must first demonstrate that there is something problematic.

My experience with Iranian students, however, indicates that they have a hard time coming to the conclusion that there is something problematic. I have had a hard time explaining to them what the nature of a problem is. The shocking fact is that as soon as they understand it they start producing significant scientific materials.

RESULT: Scientific activities at the student level, most of the time, are geared to luxurious objectives such as fascinating audience with jargons and hard to follow discursive texts than offering solutions to real problems. Real issues have been sacrificed to the benefit of playing games with created necessities and discursive statements. This is where I locate the development of academic opportunism. Also, this is where I locate the development of academic opportunism that evades producing responsible and plausible knowledge.

Under the current student culture, being recognized as a student and the involved expectations is more geared to collective movements than to contributing to epistemological break. I do not think, judging professors, is part of the process of epistemological break.

3) Historical sociology of science in a global scale shows how science works within limitations. If history is evidence, intellectual development has been under the influence of; 1- philosophical arguments, 2- religious thoughts, 3- scientific challenges. In such sophisticate intertwined issues, it is hard to bring the social matter to a clear understanding so the epistemological break can take place. Nevertheless, science works based on sensible matters or based and effort approximate intellectual findings to a reasoning

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[7]http://www.topuniversities.com/university/1089/university-of-tehran

[7a]http://topratings.wordpress.com/2007/09/07/top-ratings-top-100-middle-east-universities/

[8]http://www.irane1404.com/NDetail.aspx?NewsID=666&TopicID=1&TypeID=3

[a8]http://www.topuniversities.com/schools/data/school_profile/default/universitytehran

[9] http://topratings.wordpress.com/2007/09/07/top-ratings-top-100-middle-east-universities/

stage or to wisdom (see Trigg, 2001). This means, science works in its limitations.

RESULT: We must expect what the Social Sciences are capable of answering. This means we need to know that Social Sciences work based on real entities and can not be idealistic. I have not found this approach in student culture in Iran.

4) Science needs organizational rules. Organizational pillars of science include: a-physical environment; b- bureaucratic system, c-equipment, facilities and materials such as library etc., d- supportive financial institutions, e-academic social forces and 6- educational and research programs.
The current higher education system in Iran puts a great deal of pressure on professors rather than distributing the duties based on the above organizational segments.
In addition, an interaction between professors and students must result in production of knowledge, as the major duty of such organization. This is while students define university based on their own expectations of the job market.

RESULT: First, usability of science in relation to job market is not organizationally defined and It does not seem to be the duty of a university to worry about that. Second, it would be logical to claim that this is rather a reductionist type of approach that blames university for job market and uses this as and an indicator to evaluate the usefulness and applicability of science in Iran.

5) Production of knowledge aims at making life easier. Now, the question is how the students approach that. It should be first noted that traditionally and culturally, science in Iran has been divided into Humanities and non-Humanities in which Humanities and Social Sciences have always been ranked second after engineering and medical sciences. It should also be noted that "knowledge" must first be produced so it can help make life easier as it is implied in students' questions. However, the students have a different approach than we know about the nature of science. Their approach is based on what they know about engineering and medical sciences. The problem, however, is that based on this approach Humanities and Social Sciences can not produce knowledge. This has become one of the cultural elements of Iranian society so that when you ask even a child what he/she wants to become when they grow up their first answer is either engineer or doctor. Humanities and Social Sciences have not entered their value system [7].

RESULT: This is what causes many people to look for applicability of Humanities and Social Sciences. Not many ask whether or not human beings feel more satisfied than before technological development affected human life.
The main task of Humanities and Social Sciences, as we define it here, is to provide awareness of social life so behaviors can be directed towards a better life. This means Humanities and Social Sciences can not produce sensible tools as it is the case in engineering and medical sciences.

6) Life-world in Iran has become enormously medicalized due to misconceptions about the nature of science. Consumption of medications, cosmetic surgeries, and enormous development of medical industry has turned the country into a medicalized society where the main discourse of media and people revolve around the question of fabricated anxiety and panic around question of health. Basmenji [5] indicates that during the period of 1982 to 1989 consumption of pharmaceuticals increased by 64 percent[10]. Cheraghali [6] (Figure I.) indicates that since 1989 till 2004 the consumption of pharmaceuticals in Iran has continuously been on the rise (30 percent annually) although its market tended to stabilize in 2004.
Not many scholars question why and how such an enormous type of unhealthy society has been formed. Or, what are its causal links to the unprecedented admiration of the disciplines of engineering and medicine.

RESULT: Only Humanities and Social Sciences can create an epistemological break in this process. This is where I put the usability, usefulness and applicability of Social Sciences and Humanities and Social Sciences. This is a fact that students do not tend to take into consideration.
The clash between various sciences is more of an ideological than scientific one resulting in a discursive game in which Humanities are blamed for the lack of scientific development something that is not related to only to Humanities but also other disciplines must offer their response.

7) Historical origins of academia go back to Humanities and Social Sciences. Formation of the institution of academia in history is more related to fields of Humanities and Social Sciences than any other sciences.
New science which puts "usefulness" forward as a valuable element of scientific activity, came to existence after modernism and industrialization started in the 16th and 17th centuries. This new science has assumed objectification of human body as a given and sacred fact of science.

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[10] http://www.ams.ac.ir/AIM/0472/021.htm

Studies however show that becoming technologic is not necessarily relevant to having a happy society.

For example, Amish societies in the US whose members are estimated to range between 16000 and 300000 [3] live based on the principle of staying away from technology and relying, instead, on humanly relations. They use very limited technology and most of their daily life's needs are produced by natural methods [14]. Their level of life satisfaction is not only lower than the main American society but some studies indicate it is even higher.

RESULT: This type of modernism gave rise to the development of technologism as an ideological matter and reduced knowledge to being sensibly useful. This is while technologism is not necessarily linked to feeling of happiness.

8) Question of usefulness, in nature, is a non-academic issue and has been ideologically transferred to scientific fields. The main duties of the institution of academia are 1- production of knowledge and awareness in any areas related to human life; and, 2- transfer of knowledge to those who can contribute to production of cumulative knowledge. If "usefulness of knowledge" means it must be sensibly applicable, it only applies to hard sciences and leaves out contribution of Humanities and Social Sciences to increasing social awareness. Even some illnesses such as Kuru in Africa which became epidemic in the 1970s were eventually treated through anthropological studies. The medical disciplines were also involved in the process but they failed to come up with solution as the cause of it was not a medical cause rather a socio-cultural cause.

RESULT: The question of usefulness, therefore and by definition, should be rather directed at non-academic institutions such government or policy makers. These institutions must make use of "knowledge" that is produced within the institution of academia. Therefore, it would be naive to think there is a structural link between usefulness and application of knowledge and credibility of any science.

9) As Foucault argues: usefulness of knowledge is a discourse and not an objective fact. Usefulness of knowledge depends on who holds the power of interpreting the usefulness of knowledge.

From this standpoint, the question of usefulness is misleading. Usefulness of knowledge, as a general rule, was a concept that was imported to the process of production of knowledge as an adjunct. This is a legacy of modernism and not a requirement for production of knowledge.

RESULT: Categorization of knowledge and various sciences which was done to distinguish between better or worse knowledge and science, has led to further institutionalization of dichotomies such as me and other, rural versus urban etc. This has also led to justification of destroying those forms of life and knowledge that do not fit the modernist definition of knowledge which is based on usefulness to modern world.

10) The fabric of the new world is more socio-humane than technologic. The fabric of new world puts desires and human issues in front line as a priority unlike the modernism era that treated nature and the world as an object that could be manipulated unlimitedly. The concerns of human beings are rising on issues related to technological development. These concerns include pollution, and environment disasters, etc. There are more questions and concerns now, regarding the nature of world's environmental problems. Most of these questions are being directed at technological development. This indicates that the production of knowledge should not be evaluated in an ideological manner that places value on technology. Now the question is becoming more similar to: what needs to be done in order to save humanity from the results of technological development and its threats to human life?

RESULT: This time in history, Finding solutions for a better human life rests in disciplines such Humanities and Social Sciences. This is where we believe the importance of Humanities and Social Sciences resides. One can interpret it as usefulness of Humanities and Social Sciences but the important issue is that we have been neglecting that capacity that exists in the field of Humanities and Social Sciences for finding solutions for human problems.

11) The logic behind academic degrees is misunderstood in Iran. Traditionally and logically, every higher education level (BA, MA and PhD) has been organized in such a way that one can not expect to exceed the defined standards and expectations for each level. My observations convinced me that the faculty members in Iran understand these standards and treat students in accordance with each level's expectations and standards. The problem; however is that the students' culture in Iran does not fully support this procedure and does not follow these expectations. Student culture produces students who make their judgments about the university system based on standards of the higher degrees rather than their own degree level. Obviously, my conclusions do not apply to

all students but the active ones have shown me to carry these types of attitudes. It should be noted that this paper was produced based questions that was raised by Student's Association; therefore my judgment about student culture is not far off.

RESULT: Students of each level may logically be able to critique their own internal issues regarding science, but when it concerns faculty members, they are not following standards of the logic of critiquing that must be present for each level. This is causing them to make the type of judgments that are not logically plausible.
Such misjudgments have caused a great deal of pressure to be placed on the faculty members and they have been forced in some cases to reduce their academic standards. I have cases where the faculty members in various universities surrender their standards to the benefit of students.

12) Science has become increasingly bureaucratized in Iran. It seems to me that institution of science is not supposed to completely operate in accord with bureaucracy unless bureaucracy acts as a service-provider for science. In other words, one can not expect the bureaucratic system to pass mandates so to control and regulate production of knowledge and operation of scientific institutions. At the best, a scientific system that operates on this basis may contribute to academic opportunism or may cause production of knowledge to slow down but it can not definitely promote constant development in the process of knowledge production. This is especially true when bureaucratic rules are constantly changing and can not create a stable academic system.

RESULT: The position of university professors as independent and autonomous producers of knowledge has been violated because of too much bureaucratization of scientific institutions in Iran. Social Sciences have been damaged, in particular, basically because of overpower of engineers in bureaucratic systems that regulate scientific activities in Iran. To me this is also one of the reasons that are causing problems that the students have been addressing.

13- Iran and its socio-cultural specificities should be the basis of production of knowledge. Avicenna (980-1037 AD), Ferdowsi (940–1020 AD), Mowlana (1207-1273 AD), Razes (865-925 AD), Omar Khayyam (1048-1092) and other local Iranian scholars used the same basis to revitalize Iranian identity through their literary and scientific contributions.
Iranians, have more available possibilities today than were available during Avicenna's era. Social Sciences should take local approach and produce

social theories based on two elements of Iranian local experience and global experience. This is especially true if any epistemological break is expected to take place.

RESULT: The basis of social theory is set to be mostly relied on imported schools of thoughts. Although it is in nature of human science to share thoughts but the balance between locale thought and global ones have been missing in Iran. In addition, it seems trusting local scientific forces has been a missing element in scientific activities in Iran especially in the field of social theories. This has been very damaging in the cumulative aspect of science. I still witness MA and PhD dissertations whose main objective is to create Social Sciences rather than following what has been already produced.

14) a historical knowledge and a history-conscious academic activity and their importance for scientific development is missing in Iran. Given the amount of historical knowledge that Iranians in the past have produced and contributed to its accumulation, one can not ignore its importance for production of knowledge about current issues. If followed it should and can lead scientific activities in Iran. Historical knowledge informs ways of thinking in Iran because it bridges the gap between the past long history of Iran and its contemporary problematics that all disciplines need to address. Most of what I have observed among students is a critical review of the past history for the objective of rejecting the past as opposed to learning from it for further accumulation of knowledge.

RESULT: Even though Iranian scholars realize the importance of historical knowledge, the historical sociology of Iran has not even been born yet so it can practically find the socio-cultural linkages of the past and the present. That is the reason we witness some abnormalities in production of knowledge especially in the field of Humanities and Social Sciences. These include a lack of responsibility in addressing real and significant socio-economic issues in a great deal of student papers and in a noticeable number of MA and PhD theses.
It should also be noted that unlike what students identify as a problem, my research indicates that the structural educational problems have caused students to ignore history. That is what that is causing local knowledge to lag behind and higher education can not be exclusively blamed.

15) Creativity, locality and individuality together form the basics of production of knowledge and are more important than global aspects of scientific activities.

Local possibilities here are regarded as the basis of production of knowledge while the experiences of other societies can not be ruled out. This means, theoretical apparatuses should be made to answer local needs. This does not mean that international schools of thought can not help. On the contrary, the tradition of translation in the west was invented to help importing ideas from other parts of the worlds. The point here is the thought-sharing experience that balances between local and global thoughts.

RESULT: This axiom helps us to bear in mind that unlike the past century the scientific imports especially in the field of Social Sciences can not be regarded as the pivot of scientific actions. This is what leads scientific activities in Iran towards "creativity". Lack of "creativity", has been the central point of critiquing scientific institutions by some Iranian students.

16) Civilizations have competitors and depending on what level of civilization a society is in, it will determine its place in the contemporary world. Therefore, levels of civilizations now shape the new world. The current world order operates based on the principles explained by Nicolas Luhmann's in his systems theory [16]. The world is similar to a system in which every country is supposed to find its place in the system, i.e. part of weakening or strengthening loop in the system. The differences in civilizations create societies with different aspirations and goals and objectives. In order to be useful scientifically, Iranians need to create knowledge about Iranian civilization and its competitors. This is not something that we can escape from it.

RESULT: I don't think students in Iran have realized what their claims regarding Iranian civilization history, are. In the past the same lack of knowledge led Iran towards socio-political collapse, i.e. during Safavids (1499-1736 AD) and Qajars (1879-1925). I think the secret behind endurance of Iranian society lies in its civilization that needs to be addressed in scientific activities. I think the Iranian students do not have awareness about this, which is why they won't push towards theorizing Iranian society rather they are more prepared for consuming imported knowledge than accepting local view. The worst part is that most of them don't believe in local sources.
The lack of understanding the place of Iran in the world system has caused other issues such as diverging tendencies and elite immigration to be put aside, as there is not enough national incentive to encourage national convergence. There is also a conceptual overemphasis on the role of state in organization of theory. State constructs the single independent variable in our theories.

17) Science has been contaminated with formalism. Science in Iran is intensively formalized and one indicators of it is evident in the fact that the institution of academia is not directly involved in introducing scientists and scientific elites. Academic ceremonies are often held in the state of un-necessary and rhetorical praising of names rather than addressing the life-time achievements. Not many scholars have indicated the contributions these unnecessary rhetorical ceremonies would have for the development of science.
This is while the university system has reached an effective mechanism (annual promotions and various professorship ranks) through which only productive forces get to the level of full professorship.

RESULT: As mentioned before, this can lead us to a solution for the development of science, that is to provide full and associate professors with the possibility of selecting their MA and PhD students rather than being assigned with students that have been selected through a universal entrance exam. If this solution be put in place it will help the professors to train those students who enter the programs based on their interest in the professors and his/her area of research.

18) Economy of science needs change in two areas: a-faculty salaries and b- research budget. The salary structure of the faculty members need to keep up with the international standards and should be balanced based on the workload. None of these are currently standardized.
The research budget in Iran right now is less than 1.5 percent of GDP (that was planned to be increased to 3% in fifth development plan) and not only needs to be increased but be allocated to universities so it can be distributed to faculty members and their students based on grant structure that is calculated based on annual production of knowledge. Right now, bureaucratic procedures get in the way of budget allocation causing lack of effective links between economy of science and proper academic institutions.

RESULT: Lsck of balance between economic incentives and production of knowledge has caused academic degrees to lose their meaning. Some universities in Iran are evaluated by the students based on their contribution to migration of elites not based on their contribution to development of the country.

19) Iranian students assume they can solve their identity problems through Social Sciences. We have witnessed that a great number of Iranian students tend to search for their identity answers after entering academic institutions. This includes finding answers to philosophical questions regardless of the discipline. That is the reason their scientific problematic often revolves around sophisticated philosophical questions. They intend to solve the world's problems rather than producing knowledge about their own society. Their university goal tends to be passing a stage from which they can immigrate abroad. The Iranian universities therefore, are a medium and a platform for immigration. I interviewed Annabel Sreberny, who is faculty member at SOAS, UK, and she explained how she had seen the same pattern in Iran since 1970s. She argued: students keep having the following ambitions since 1970s: How should I fight the government, 2- how should I leave Iran, 3- how should I choose my wife and 4- how can I own a car?

All this is happening at the expense of sciences and their objectives which include producing knowledge, awareness and contributing to problem-solving. Sometimes, it seems the students don't have clear questions that need to be answered scientifically.

My observations indicate that the displacement of generations which is the key to socio-cultural changes and I consider it to be the motor of scientific mobility has been taking place in Iran in a very sluggish manner [1]. That is the reason this pattern resisted since the 1970s.

RESULT: A students' everyday life is under the effect of alienation. Therefore, they don't see universities to be providing them with optimum requirements of life. Instead they find their goals in finishing their degrees and leaving university's life and migrating from Iran. Universities are therefore considered to be a platform and a middleman that can help them find the remnants of their identity through migration.

It should also be noted that the students are able to change themselves first, because without that change they can not blame individual scholars or institutions for what they see as lack of achievement.

Seeing things as personal and seeking the solutions for personal problems has been overshadowing the process of finding solutions for national problems in the institution of academia in Iran.

20) Pre-university and university educational systems in Iran lack structural linkage. In most countries pre-university schooling is structured in such a way to facilitate transfer of knowledge needed for university education. In Iran these two systems except for the basics operate independent of each other. While schooling is based on an old-fashion memorizing system, which produce individuals who know how to compete individually but don't know how to work collectively, universities require students to be independent researchers and have creative minds and sense of team work.

RESULT: The inconsistency between the two systems causes university students to feel frustrated with completely new expectations that are introduced to them when they enter universities. Their frustration happens due to the fact that they are supposed to re-socialize scientifically and this seems shocking to them and damages their mental energies. This is probably the main cause for the students to question the credibility of university-based system of education.

One more surprising result of such inconsistency is that getting children to enter the higher education has become the most prominent objective of Iranian families. They spend millions of Tomans to register their children in a good private school (pre-university education sometimes costs parents 5000 dollars annually). This exhausts families' financial resources and when the students get to government universities there is no intention and no resources remained for them to spend on university educations. Pre-university education creates unreal expectations among students and when they enter university, psychologically they are ready to look for anyone to put the blame on and the easiest and most accessible is university and professors. This is especially true when they realize their heavy studies in pre-university schooling do not mean they are free from studying when they enter university.

21) World operates as a system. We need to realize that the world operates as a system and Iran is part of it as being located in the weakening loop of the old systemic relations. Living in such system requires academia to come up with different types of theoretical approaches and much stronger information than those countries in the strengthening loop of the world system.

RESULT: Old information does not benefit Iranians if they expect to live well than before in the current world system. To my understanding some scholars have been able to adapt themselves and their knowledge to this type of systemic thinking and I now can identify a number of scholars who have developed strategic thinking and produce strategic knowledge. Nevertheless, I don't think most of scientific forces have been able to adapt themselves to systemic type of

thinking and most of students can also be situated in this category. This is the reason they keep critiquing university systems as opposed to critically finding national solutions for Iran's situation.

22) Academic spirits and academic life styles are, in nature, part of the production of knowledge. Students and faculty members in various high ranked universities of the world follow noticeable codes of spirits to show their sense of academic affiliation. This sometimes operates as unwritten rules that shape students' academic and cultural norms. This however, is not the case in Iran because the institution of academia in Iran has organized itself based on rejecting the local capabilities.

RESULT: For the most part, academic spirit in Iran is based on promoting a better life. Nevertheless, some universities encourage migration of graduates causing a universal culture of despair. To this one must add the students' culture that also supports migration from Iran.

23) Academic affiliation both among faculty members and students is necessary.
Academic affiliation specially is important where standards of scientific activity are set to offer first-hand education and introduce skilled workforce to various sectors of the economy. This issue has also been damaged in academic atmosphere in Iran due to expansion of an instrumentalist approach to the institution of academia, as pointed out it axioms 20 and 22.

RESULT: I have witnessed that the reproduction of academic affiliation has not taken place even in well-known Iranian universities. Instead a steady critical approach has been in place that creates a sense of despair that causes students to look for their goals abroad. Plagiarism is now a matter of concern for many university officials in Iran. I have found a direct link between a decrease of academic affiliation among students and an increase in peer supporting plagiarism; it seems more as a culture now than as infrequent incidents.

24) Universities are supposed to represent schools of thoughts. This last axiom is a response to University of Tehran's Students' Association. The long history of civilization in Iran indicates that Iranian plateau represents a philosophical and a particular school of thought. Although University of Tehran has not clearly stated its approach in the field of Humanities and Social Sciences but it has been prominent in areas of Theory, Methodology, Development studies, New

media, Communication, Rural studies, Demography, Anthropology and culture, History, Interpreting social history, Sociology, and Iranian Cinema.
Establishing various degree programs at the MA and PhD levels all indicate the creativity of scientific forces at the University of Tehran. I have not found it however to be the case among students. In other words, I have not found a link between students' culture and disciplinary developments. Despite all the efforts made by the universities to produce knowledge, the students as expressed themselves in their questions addressed here, still see things critically unacceptable.

RESULT: Despite all these developments still it is hard to make it plausible to the students that Iranian scholars in universities have their own theoretical positions and should not necessarily imitate imported theories. Unless faculty members explain imported views their own theoretical arguments can not be accepted. It is still hard to convince the students that Iranian professors are specialized and have produced a noticeable amount of knowledge.
The consequential points of the above 24 axioms and postulates must first result in propositions about the typology of problems that the development of sciences in Iran are facing. Later in the paper I will synthesize the axiom and the propositions together with the problems posed below to reorganize a new theoretical framework that can better explain scientific development in Iran and its obstacles.

VIII: TYPOLOGY OF IDENTIFYING PROBLEMS OF THE DEVELOPMENT OF HUMANITIES AND SOCIAL SCIENCES IN IRAN

The above mentioned 24 axioms lead me to identify various approaches towards identifying what the nature of problem is. Having said that, it seems: the problems and criticism that the Humanities and Social Sciences in Iran are facing are not so much related to the question of whether Humanities and Social Sciences are basically science or not, rather they are related to the question of the nature of knowledge they produce. For instance, we now know that Iran has some 32,200,000 internet users ranking Iran to be the 11th country in the world (internetworldstats, 2010)[11]. Only this very knowledge alone can help us to monitor communication issues that make Iranians to act so distinct in this field. That can also help us to create multilayer theoretical postulates that can contribute to explaining

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[11] www.Internetworldstats.com

current issues concerning changes in Iran. Having said that, two types of problems seem to be important to deal with here;

1) If the 24 axioms are to be considered as a response the first two questions of the students, addressed at the beginning of the paper, one can realize that what seems to be problems of Humanities and Social Sciences in Iran are not in fact related to Humanities and Social Sciences. I had a focus group interview with six of my colleagues in 2008 and they all concluded that, excluding five or six countries in the world one can not find other countries to be prominent in the field of Humanities either. That means the problem on the part of students is more related to their lack of knowledge about the world, and definition of Humanities and Social Sciences, than being related to universities and professors in Iran.

2) The second fundamental problem of Social Sciences relates to the fact that the epistemological break has not taken place and these sets of sciences have not turned into problem-solving tools. Rather, they are used as some intellectual tools that entertain private gatherings and bring prestige to those who make comments by referring to Social Sciences' prominent figures. In other words, Social Sciences are not applicable due to culture of its graduates and students who do not practice it as a tool.

If the above problems are set to be reason for lack of development of sciences in Iran then maybe one way for the Social Sciences is to break up with the traditional sources and restructure their sources and restructure their scientific social forces that support these attitudes. One possible way is to provide Humanities and Social Sciences with possibility of admitting their students based on their own criteria rather than being admitted through a universal entrance exam.

In addition, it should be also noted that social matter that defines what the indigenous Social Sciences should be, is now have characteristics that are affected by communicative, religious and civilization symbols as well as by literature and Iranian history. This means social matter is less under influence of political-economic processes than before in 1970s. Iranian Social Sciences have inherited most of their legacy from that period and still are lagging behind Iran's major social issues that concern, generations, women, media and communication, history and literature.

A break from both traditional scientific forces and from traditional sources sounds to be the best way to realize epistemological break.

HERE ONE CAN ASK:
- Why are a large number of student research projects done within academic areas but not outside in the field where everyday life is taking place?
- Why don't students launch research projects that will concern societies other than Iran?

To me the answer lies in the fact that the students do not see anyone else but universities and faculty members. They don't even go about to study student lives, especially where their academic life style is concerned.

IX: CONCLUDING REMARKS AND SOLUTIONS FOR THE DEVELOPMENT OF SOCIAL SCIENCES

If one must still insist on the assumption that Social Sciences in Iran are not developed, then I would think there are eight solutions that must be taken into consideration in order for the Social Sciences to develop:

1. One must see the process of epistemological break as a strategic and civilization-based process. This is because I don't see Iran as only a society but I see it as a civilization. Iran's civilization's achievements can inform the development of Social Sciences in a broader sense than is seen by the students.

2. Even if a judgment has to be made, it should not be made about the totality of Humanities and Social Sciences in Iran. This is because Social Sciences have shown some acceptable developments in some areas that I addressed earlier.

3. A refinement of social forces of science must take place in Iran. This could be done through putting the value of production of knowledge in place as a priority and criteria. This can also be done through presentations in public sphere of scientific community, such as in conferences and academic journals. This means all politics of evaluations need to be modified to the favor of exclusively evaluation of knowledge in public sphere. Right now critical views are excluded from publications in academic journals. In other words, what is published rarely is criticized. It is only the refereeing process that monitors papers. The critical papers must be added to journal papers.

4. Scientific and academic degrees need to be practically recognized. This means a student must practically accept his/her status as a student. This recognition has to take place among faculty members too, who rank from assistant professor to full professor.

5. The task of academic evaluation in some academic areas must be done by high ranked academic figures. This is where I would think a number of fundamental issues rest. I have seen

students evaluating the most complicated academic issues, something that requires a great deal of experience and knowledge.

6. Provision of five-year research plans by the faculty members. This needs to be accompanied by admitting MA and PhD students based on these plans and by faculty members and not by entrance exam. There should be two criteria here: A- a strong conviction shown by the candidate on the research plan of the faculty member, B- a voluntary application for entering programs must be put in place, as opposed to current system of entering Social Sciences through a universal entrance exam.

7. Encouraging the government institutions to use and operationalize research findings.

8. Raising faculty salaries based on universal standards and assigning annual grants to them. This means bureaucratic procedures must be eliminated and only university professors have access to their grants.

X: FINAL POINT
CONSTRUCTING A THEORY OF SCIENTIFIC DEVELOPMENT IN IRAN

The above eight propositions operate as eight variables that if linked together logically can shape the theory of scientific development in Iran. Following I offer this theoretical framework by linking them in a logical manner.

Logically, propositions number 6, 7, and 8 can be named economic independency variables (variable **a**).

Also, propositions 3, 4 and 5 can be named as marginal academic variable (variable **b**).

Proposition number 2 is called the progress of sciences variable, and; finally proposition number 1 is called a variable that indicates the level of epistemological break. Now these four new variable must be synthesized so they for our theory. The relationship between these variable can be summed up as follows:

Variable **a** + Variable **b** $\longrightarrow$ Variable **2**

$\updownarrow$

Epistemological break
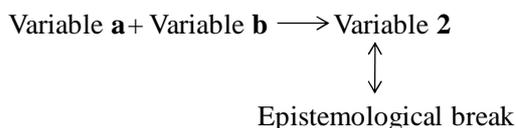
It should, however, be first noted that variables involved in causal relationship with variable 2 are what we are looking for them so we can use them to explain what can causes variable 2. Logically if economic independency variables (as our primary causal variable named variable **a**) are present then the level of satisfaction among university professor will increase and it will result in an increase in production

of knowledge. Although this is a necessary variable but logically this is not a sufficient variable and is not the only effective variable as we have discussed before. Here is where I would put the marginal academic variables (variable **b**). If refinement of academic resources (variable 3), recognition of academic degrees (variable 4) and surrendering the power of evaluation of academic activities by university authorities (variable 5) takes place, variable b can cause a situation that paves the way for further infrastructural and structural grounds for development of Humanities and Social Sciences. If marginal academic variables are combined with economic independency variables, they will contribute to further development of Social Sciences and Humanities.

Here I think there is a logical interrelationship between variable one and variable two. If epistemological break is to take place then the deployment of Social Sciences is a necessary precondition but we already discussed that development of Social Sciences takes place only if variables **(a)** and **(b)** are present. Development of Humanities and Social Sciences is also a precondition for epistemological break. Therefore a better strategy is to work on variables **(a)** and **(b)** so they can contribute to the development of Social Sciences and once the primary steps are taken the grounds for break will appear as a resulting ground of the development of sciences.

As long as these structural relations are not set in place, one can not expect universal culture of production of knowledge taking form. We will, instead, be still relied on infinite work load of the faculty members and some students who use their personal interests for production and often their efforts receive less attention than they must. This is where I think the importance of respecting faculty members rests who in such a situation where the institution of science lacks structural relations keep producing knowledge.

I do not have much to say about the third question as I do not believe that a lack of collective behaviors in the institution of academia will violate individuals' wisdom. I think a more effective venue through which faculty members can communicate with the outside world is science and production of knowledge.

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