

# **Iranian Intellectuals' Experience of Modern Science**

Inaugural-Dissertation  
zur Erlangung der Doktorwürde  
der  
Philosophischen Fakultät  
der  
Rheinischen Friedrich-Wilhelms-Universität  
zu Bonn

vorgelegt von  
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Zahedan, Iran

Bonn 2020

Gedruckt mit der Genehmigung der Philosophischen Fakultät  
der Rheinischen Friedrich-Wilhelms-Universität Bonn

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Tag der mündlichen Prüfung: 10. November 2017

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## Transliteration

Persian (consonants)	English
الف	-
ب	B
پ	P
ت	T
ث	Ṫ
ج	J
چ	Ch
ح	Ḥ
خ	Kh
د	D
ذ	Z
ر	R
ز	Z
ژ	Zh
س	S
ش	Sh
ص	Ṣ
ض	Z
ط	Ṭ
ظ	Z
ع	'A
غ	Gh
ف	F
ق	Q
ک	K

گ	G
ل	L
م	M
ن	N
ه	H
و	V
ی	Y
Persian (vowels)	English
آ	A
إ	E
أ	O
آ	Ā
ای	Ī
او	Ū

## Deutsche Kurzfassung

### Erfahrungen der iranischen Intellektuellen in den modernen Wissenschaften

#### Historischer Kontext:

Während der Qājāren-Dynastie (1796 – 1925) und insbesondere unter Nāṣir ad-Dīn Shāh (1848 - 1896) wurden die Iraner mit einem völlig neuen Phänomen konfrontiert, den neuen europäischen Wissenschaften, die der Ursprung aller Unterschiede zwischen ihrer eigenen Gesellschaft und dem Westen zu sein schienen. Viele Wissenschaftler glauben, dass dies der Anfang der modernen Ära im Iran ist, und dies ist der Moment, in dem der Zeitraum der bei dieser Forschungsarbeit analysierten Dokumente beginnt. Im Jahre 1851 wurde Dār ol-Fonūn gegründet, und als erste Hochschule im Iran ist sie das Symbol des zunehmenden Diskurses der sozialen Reformen und des Willens, neue Wissenschaften im Iran zu etablieren.

Seit Mitte des 19. Jahrhunderts begannen die iranischen Eliten einen Prozess des Aufbaus des neuen Bildungssystems auf der Grundlage der europäischen Wissenschaften, indem sie Studenten nach Europa schickten und neue Schulen und Universitäten gründeten. Das Ergebnis der Verbreitung neuer Wissenschaften war eine aufstrebende Klasse von sozialen Akteuren, sogenannte *Monavar ol-Fekr* (Intellektuelle). Sie waren von den neuen Entwicklungen in den europäischen Ländern beeindruckt und waren überzeugt, die gleichen gesellschaftspolitischen Reformen im Iran einführen zu lassen, um das Gesicht des Landes zu verändern und ihr Heimatland mächtiger zu machen.

Alle Intellektuellen waren auch Teil der politischen Elite oder engagierten sich aktiv im politischen Geschäft ihres Landes. Dieser Faktor ist das wichtigste Merkmal des Modernisierungsprozesses im Iran; In den ersten Schritten machte dies es unmöglich, Politik von der Wissenschaft zu trennen. Neue Wissenschaft als neues Phänomen wurde von der politischen Elite eingeführt mit dem Ziel, das Land gegen seine vermeintlichen Feinde zu stärken.

In dieser Zeit der Geschichte standen die Verfechter dieses neuen Modernisierungsprozesses vor neuen Fragen, die sie nicht beantworten konnten. Sie waren nicht

bereit, die neue Zivilisation des Westens zu verstehen und von ihr zu lernen. Sie befanden sich in einer Situation, in der sie keine andere Wahl hatten, als Europa passiv nachzuahmen und deren intellektuellen Leistungen in ihre eigene Sprache zu übersetzen. Sie bestanden darauf, neue Wissenschaften zu erwerben, indem sie sie dem eigenen Volk beibrachten, ohne über die Wurzeln und Voraussetzungen dieser neuen Wissenschaften nachzudenken. Die Idee, die Wissenschaft und Zivilisation Europas kennenzulernen, inspirierte sie und löste unter ihnen zahlreiche Diskussionen aus, die zur Entstehung eines neuen Diskurses führten.

### **Das Ziel und die Hypothese:**

Die Haltung der iranischen Akteure gegenüber den modernen europäischen Wissenschaften sowie die hybriden Formen des Wissens, die im Prozess des Erwerbs neuer Wissenschaften in nicht-westlichen Gesellschaften wie dem Iran geschaffen wurden, ist noch nicht vollständig erforscht. Die Reaktion auf moderne Wissenschaften in islamischen Ländern ist eine der dringlichsten Fragen für die Geschichte des Denkens im Nahen Osten, um die gegenwärtige Reaktion auf die Moderne in islamischen Ländern zu verstehen. In der vorliegenden Studie werden folgende Fragen beantwortet:

- Was sind die Kernelemente des Diskurses?
- Was sind die bedeutendsten Aussagen über die modernen Wissenschaften?
- Welche Veränderungen erlebte der Diskurs im Laufe der Zeit in Bezug auf historische Ereignisse?
- Wie war das Verhältnis zwischen den neuen europäischen Wissenschaften und dem traditionellen indigenen Wissen?

Das Ziel der folgenden Studie ist es, das Bild der europäischen Wissenschaft aus Sicht der Iraner und ihre Wahrnehmung des Verhältnisses zwischen neuen Wissenschaften und den traditionellen einheimischen Wissenschaften zu analysieren. Der Zeitraum für diese Studie reicht von der Gründung der ersten Akademie im Iran, dem Dār ol-Fonūn, im Jahre 1851 bis zur Gründung der zweiten Universität im Iran, der „Teheran Universität“, etwa 80 Jahre später im Jahre 1934. Im Rahmen dieser Forschungsarbeit sollen die wichtigen Voraussetzungen und Elemente des in dieser

Ära entstandenen Diskurses herausgearbeitet werden und wie sich dieser Diskurs im Laufe der Zeit entwickelt hat.

Die vorliegende Studie betrachtet die Begegnung Irans mit den modernen Wissenschaften in ihrem besonderen historischen Kontext und analysiert die Mechanismen der ideologischen Bildung über die europäischen Wissenschaften. Es wäre angebracht, den Beginn des Prozesses der Modernisierung im Iran im Paradigma der „Multiple Modernities“ zu untersuchen. Als alternatives Paradigma zur klassischen Theorie der Modernisierung sowie als Kritik an der Theorie des Weltsystems und der globalen Moderne lehnt Samuel Eisenstadt in seiner Theorie der „Multiple Modernities“ den Begriff eines einzigen Modernisierungsmusters ab und verdeutlicht, dass die Erfahrung von Modernität in jedem Land einzigartig ist. Ich habe auch einige von Foucaults Konzepten wie Diskontinuität, Epochenumbruch<sup>1</sup>, Episteme und Diskurs in dieser Arbeit verwendet<sup>2</sup>.

Die Haupthypothese dieser Forschungsarbeit ist, dass die Iraner die Epochenbrüche vernachlässigt hatten, was in der Geschichte des Denkens in Europa geschehen war. Sie betrachteten sowohl die neuen als auch die alten Wissenschaften als eine Einheit. Sie nahmen keinen Bezug auf den Grundsätzen und Voraussetzungen der neuen Wissenschaften. Deshalb hatten sie sich nicht die Frage gestellt, was die neuen Wissenschaften von früheren Wissenssystemen unterscheidet.

Solche Wahrnehmungen der neuen Wissenschaften stellten im Iran ein Hindernis für die Konzeption der Eckpfeiler der europäischen Moderne dar. Angesichts der neuen europäischen Wissenschaften entwickelte sich ein neues Hybrid der Moderne im Iran, dessen Hauptmerkmal Selektivität war; Auswahl unter modernen Konzepten, gesellschaftspolitischen Institutionen, Wissenschaften, Technologien und anderen Aspekten der Moderne.

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<sup>1</sup> Foucault betrachtet die Geschichte nicht als Gegenstand kontinuierlicher Entwicklung. Er glaubt, dass die Europäer in einigen historischen Momenten einen tiefen intellektuellen Wendepunkt erlebten, der als Bruch bezeichnet werden kann. Weitere Informationen zu diesem Thema finden Sie unter: *Die Ordnung der Dinge*, New York, 1994.

<sup>2</sup> In seinem Buch, *Die Ordnung der Dinge*, erklärt Foucault, dass alle Perioden der Geschichte bestimmte zugrunde liegende Wahrheitsbedingungen besessen haben, die das bildeten, was als wissenschaftlicher Diskurs akzeptabel war. Er argumentiert, dass sich diese Diskursbedingungen im Laufe der Zeit von einer Periode zur anderen geändert haben. Er nennt diese Bedingungen „Episteme“ und definiert sie als eine Reihe grundlegender Annahmen, die die Grundlage für die Konfiguration von Wissen bilden.



## Die Methode:

Der Ansatz dieser Arbeit ist es, den Diskurs in den Texten, die in dieser entscheidenden Zeit geschrieben worden sind, kritisch zu analysieren. In folgenden Texten diskutierten die Autoren über neue und alte Wissenschaften und traten mit mehreren Lesern in Diskurs:

1- *Maktūbāt-i Kamāl od-Dowle* (Die Briefe von Kamāl od-Dowle), 1985<sup>3</sup>, Köln, von Mīrzā Fat‘alī Ākhūndzādeh (1812- 1878).

2- *Se Maktūb* (Drei Briefe), 1908, Teheran, und *Şad Khaṭābe* (Hundert Reden), 1925, Teheran, von Mīrzā Āqā Khān Kermānī (1854/5-1896).

3- *Safīneh-yi Ṭālibī, yā, Kitāb-i Aḥmad* (Ṭālibīs Schiff oder das Buch des Aḥmad), 1894, Istanbul, und *Masā'il al-Ḥayāt* (Die Frage des Lebens), 1906, Tiflis, von ‘Abd al-Raḥīm Ṭālibof Tabrīzī (1834-1911).

4- *Maqālat-i Jamālī-yi* (Die Artikel von Jamāl ad-Dīn), 1883, Kalkutta, und *Resāleh dar radd-i Neicherī-yi* (Die Widerlegung der Materialisten), 1881, Mumbai, von Seyyed Jamāl ad-Dīn al-Afghānī (1838/9-1897).

5- *Majalleh-yi Kāveh* (*Kāveh* Zeitschrift), 1916 - 1922, Berlin, bearbeitet von Seyyed Ḥassan Taqīzādeh (1878-1970).

6- *Majalleh-yi Forūgh-i Tarbiyat* (Das Licht der Ausbildung), 1921, Teheran, von Abul-Ḥassan Forūghī (1885-1959).

7- *Majalleh-yi Iranshahr* (*Iranshahr* Zeitschrift), 1922 – 1927, Berlin, bearbeitet von Ḥossein Kāzemzādeh (1884-1962).

Im ersten Kapitel wird der historische Kontext vorgestellt, in welchem die moderne Wissenschaft in Europa auftauchte, indem neue Denkmuster vom 17. bis zum 20. Jahrhundert wiedergespiegelt wird. Dieses Kapitel enthält eine Einführung in die Geschichte der Übertragung der neuen Wissenschaften und Hochschulbildung in den Nahen Osten im 19. Jahrhundert und zu dem

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<sup>3</sup> Bei dem Buch handelt sich um die Veröffentlichung des 1865 in Baku verfassten Manuskripts.

historischen Kontext im Iran sowie die ersten Versuche, neue europäische Schulen und Universitäten im Iran zu etablieren.

Das dritte Kapitel bildet den Schwerpunkt dieser Forschungsarbeit und besteht aus sieben Teilen; jeder Teil widmet sich einem der oben erwähnten Quellen, deren Texte analysiert werden, um die Antworten auf Fragestellung, die eingangs erwähnt wurden zu finden. Anschließend werden alle Werke zusammen in einen größeren Zusammenhang gestellt und der historische und soziale Kontext erklärt. Das letzte Kapitel widmet sich dem Fazit und gibt einen Überblick über die Entwicklung des Diskurses während des Untersuchungszeitraums. Außerdem werden die Ergebnisse mit der Hypothese verglichen.

### **Die Ergebnisse:**

Auf Grundlage der behandelten Texte hat sich gezeigt, dass die Entwicklung des Diskurses über europäische Wissenschaften im Iran in zwei Phasen unterschieden werden kann. Während der ersten Phase, die vom 19. Jahrhundert bis zur Jahrhundertwende dauerte, wurde folgende Einschätzung über Europa in allen Texten und unter allen sozialen Akteuren - trotz ihrer unterschiedlichen Interessen und Meinungen - geteilt:

- Die westliche Zivilisation ist weit fortgeschrittener als die iranische.
- Die westliche Macht ist das Ergebnis ihrer Wissenschaften.
- Um mächtig zu werden, müssen die Iraner westliche Wissenschaften erwerben.

Ākhūndzādeh, Malkam Khān (1833-1908), Afghānī und Kermānī gehörten zu den prominentesten und einflussreichsten Persönlichkeiten dieser Periode, die trotz ihrer unterschiedlichen Meinungen positive Einstellungen gegenüber Wissenschaft und Optimismus für die Zukunft, die mit Hilfe der Wissenschaft konstruiert werden kann, teilten. Die europäischen wissenschaftlichen Errungenschaften galten als ein Instrument, um Jahrzehnte des Rückschritts zu kompensieren und die Entwicklung der Zivilisation voranzutreiben. Alle Texte äußerten sich negativ über den Iran und kritisierten die Stagnation der iranischen Gesellschaft mit der Hoffnung, dass durch die Vermittlung neuer Wissenschaften alle abergläubischen Überzeugungen verschwinden würden.

In der zweiten Phase der Begegnung der Iraner mit den neuen Wissenschaften, ab dem Beginn des 20. Jahrhunderts, waren Ṭālibof Tabrīzī, Taqīzādeh, Kāzemzādeh Irānshahr, Aḥmad

Kasravī (1890-1946), Abul-Ḥassan Forūghī und sein Bruder Muḥammad ‘Alī (1875-1942) die angesehensten und bedeutendsten Repräsentanten dieses Diskurses. Die wichtigsten Thesen, die in ihrem Diskurs geäußert wurden, waren:

- Europa kann kein perfekter Mentor sein, weil es selbst in der Krise steckt.
- Der Grund für die Krise in Europa ist, dass der spirituelle Aspekt der Welt vernachlässigt wird.
- Iraner sollen unsere religiösen und kulturellen Errungenschaften im Iran bewahren.

Trotz der Bewunderung neuer wissenschaftlicher Errungenschaften hatten die iranischen Intellektuellen dem Diskurs ein neues Element hinzugefügt. Die Grenzen zwischen europäischen und islamischen Wissenschaften wurden klarer als zuvor, zum Beispiel die Dualität der materiellen und göttlichen Wissenschaften. Die iranischen Intellektuellen kritisierten, dass die Europäer ihren Glauben an die Religion verloren und die immaterielle Welt ignoriert hätten. Sie sahen die wissenschaftliche Forschung als theologische Praxis, um die Kraft Gottes zu entdecken. Diese Tendenz hatte einen großen Einfluss auf ihre Leser und wurde zu einem dominanten Diskurs.

Die Religion blieb ein wichtiger Faktor für die Wahrnehmung neuer Wissenschaften. Die iranischen Intellektuellen behaupteten, dass neue Wissenschaften nützlich, allerdings unvollkommen seien. Diese Ansicht wuchs aus einer fundamentalen islamischen Überzeugung, nach der absolute Erkenntnis ausschließlich im Besitz Gottes ist und die Menschen keinen Zugang zu dieser Erkenntnis haben. Dementsprechend könnten neue Wissenschaften nicht alles erklären und sie würden niemals alles Unbekannte entdecken.

Unter den iranischen Intellektuellen hat die Überzeugung, dass Gott den „Menschen“ besser kennt als der „Mensch“ sich selbst, zu dem Schluss geführt, dass europäische Denker niemals ein umfassendes Wissen über die Menschheit schaffen können, welches besser ist als das, was in heiligen Texten bereits existierte. Diese These machte es unmöglich, Geisteswissenschaften im Iran zu entwickeln.

Alle Texte tendierten dazu, die positiven Aspekte der traditionellen Kultur hervorzuheben, und allmählich wurde die Idee der Notwendigkeit, die einheimische Kultur zu bewahren, berücksichtigt. Gleichzeitig trat bis zum Ende des Ersten Weltkriegs eine sehr wichtige Veränderung des dominanten Diskurses im Iran auf. Intellektuelle steigerten ihr Selbstwertgefühl und wurden mutig genug, die europäische Zivilisation in Frage zu stellen und deren Gedanken zu kritisieren. Es ist kein Zufall, dass dieser Wendepunkt gleichzeitig mit der Selbstkritik der

europäischen Denker als Folge des ruinösen Krieges in Europa war, und die Iraner waren sich der Diskussionen unter den europäischen Gelehrten bewusst.

In der ersten Phase des Diskurses, die sich mit den Debatten in Europa beschäftigte, bewerteten die Iraner die Rolle der Wissenschaft in der Zukunft des Menschen optimistisch. In der zweiten Phase konnten folgende Gemeinsamkeit aller Texte, die in dieser Ära im Iran geschrieben wurden, festgestellt werden: Iraner brauchen einen ehrgeiziger Plan für die Zukunft. Die iranischen Intellektuellen betrachteten sich gleichwertig und auf Augenhöhe mit den europäischen Denkern und wollten sich an der Entwicklung von Wissenschaft und Technologie beteiligen, damit die gesamte Menschheit davon profitieren kann.

Ein weiteres Thema, das die Texte der Intellektuellen in dieser Zeit verbindet, ist die Absicht, einen Plan vorzuschlagen, wie die Iraner neue Wissenschaften übernehmen können, ohne von den sozialen Nachteilen der Europäer betroffen zu sein. Die Teilnahme am Prozess des menschlichen Fortschritts ist auch ein ganz neues Element im Diskurs. Unmut der östlichen Denker würde wegfallen, wenn sie nur glaubten, dass sie nicht nur passive Nutzer europäischer Errungenschaften sind, sondern Mitglieder einer großen Familie namens „Menschheit“ seien und zu deren Wohlstand beitragen könnten.

Die wichtigste These, die ihrem Diskurs innewohnte, lautete, dass Religion die absolute Wahrheit sei und nicht ignoriert werden sollte. Die Europäer seien nicht glücklich und das Glück könne auf der spirituellen Ebene gefunden werden. In ihrer Denkweise waren die europäischen Wissenschaften nur eine kleine Teilmenge eines größeren Wissens, in dem alle Elemente in Harmonie lebten und sich gegenseitig zur Verbesserung halfen. Die Iraner konnten neue Wissenschaften nur durch den Rahmen des islamischen Gnostizismus wahrnehmen. Sie produzierten ein neues Hybrid von Wissen, das für die nächsten Generationen von Intellektuellen im Iran sehr attraktiv war.

Sie stellten fest, dass die gesamte Krise der Europäer durch moralische Korruption verursacht wurde, die auf den Verlust des Glaubens an Gott und die falsche Wahl des Materialismus statt des Spiritualismus zurückzuführen war. Auf der anderen Seite stellten sie fest, dass Länder wie der Iran unter einer langfristigen Stagnation litten, und dass es dringend notwendig war, neue europäische Wissenschaften zu erlernen. Deshalb könnten sowohl der Osten als auch der Westen voneinander lernen. Die östlichen Länder müssen die materiellen Wissenschaften erlernen und die Europäer sollten Spiritualität akzeptieren.

Iranische Intellektuelle bestanden auf der Notwendigkeit, neue fruchtbare Wissenschaften zu erlernen und ihre veralteten Wissenschaften zu vernachlässigen. Alle lobten die neuen Wissenschaften und betrachteten sie als gültiges und wahres Wissen. Aber die Charakteristika der neuen Wissenschaften war unklar für sie, und wenn einer von ihnen versuchte, neue Wissenschaften zu beschreiben oder Kategorisierung der verschiedenen wissenschaftlichen Disziplinen zu betreiben, taten sie es stets in einem islamisch-philosophischen Rahmen.

Eine andere Argumentation, die damals unter iranischen Intellektuellen auftauchte, behauptete, dass die alten Wissenschaften nicht „veraltet“ seien. In der Tat glaubten die Iraner, dass neue Wissenschaften auf dem Boden der alten Wissenschaften aufbauten. Deshalb seien die Versprechungen und Prinzipien der alten Wissenschaften immer noch gültig und sollten als Voraussetzung für die neuen Wissenschaften angesehen werden. Die nächste Generation der Intellektuellen folgte dieser Argumentation, vor allem, weil sie im Einklang mit dem Diskurs des Nationalismus stand und die nationale kulturelle Identität bewahrte. Diese Debatte ist noch nicht abgeschlossen.

Intellektuelle betrachteten die Wissenschaft als einen einzigartigen Weg, sich im Laufe der Zeit zu entwickeln, und blockierten daher die Möglichkeit, Fragen über das Wesen der neuen Wissenschaft zu stellen. Iranische Intellektuelle schwiegen über die wichtigsten Voraussetzungen der neuen Wissenschaften. Ihre Untätigkeit ebnete den Weg, die moderne Wissenschaft auf die alte Version der Wissenschaft zu reduzieren. Sie hatten eine evolutionäre und historische Sicht auf die Wissenschaften und glaubten, dass die meisten Themen, die die westlichen Philosophen besprachen, von den iranischen Gelehrten schon erwähnt worden waren und die westlichen Philosophen nur noch neue Punkte hinzufügten.

Iraner hatten die westlichen Wissenschaften als eine fortgeschrittene Version der islamisch-iranischen Wissenschaften betrachtet. Dies führte unvermeidlich zu dem Ergebnis, dass die erkenntnistheoretischen Unterschiede zwischen westlichen und iranischen Wissenschaften nicht erkannt und berücksichtigt werden konnten. Dies wiederum hatte zur Folge, dass iranische Intellektuelle nicht die Prinzipien und Voraussetzungen der modernen Wissenschaften diskutierten, weshalb sie das Verhältnis von neuen zu alten Wissenschaften nicht formulieren konnten.

Für die sozialen Akteure hatte die öffentliche Bildung eine große Priorität und für sie war es das Beste, was man für sein Land tun konnte. Diese Annahme war das wesentliche Merkmal des Diskurses um die Jahrhundertwende. Sie alle teilten die vereinfachte Wahrnehmung der Bildung,

die effektiv sein könnte, jedoch es wurde die Kraft des Widerstandes gegen neue Ideen unterschätzt. Da die Bildungssystem im Iran als Defizit gesehen wurde, benötigen sich die iranische Intellektuelle rasch einige Reformen in die Wege zu setzen. Einflussreiche intellektuelle Kräfte versuchten, eine Politik der Entwicklung und des Fortschritts der Erziehung zu machen, und wählten die hierzu nützlichsten Bereiche der Wissenschaften aus, die am dringendsten gebraucht wurden. Sie wollten neue Technologien bekommen, insbesondere diejenigen, die mit militärischer Macht zusammenhängen.

Man kann beobachten, wie sich der Diskurs über die Zeit gewandelt hat. Ab 1866, als Ākhūndzādeh seine Ideen zur Bewunderung der europäischen Zivilisation verbreitete, bis 1932, als sich Kasravī den Europäern ganz entgegenstellte, und ihnen alle Schäden, die sie den menschlichen Gesellschaften angetan hatten, vorwarf. Es zeigt, dass diese Intellektuellen auf zwei extremen Seiten eines Spektrums befanden, das mit einer sehr positiven Einschätzung der Europäer begann und mit Ablehnung endete.

Um diese Phänomene in einer größeren Perspektive zu untersuchen und sie im Kontext der Weltgeschichte zu sehen, werden ein hierzu nützliches Konzept der Moderne und der Charakteristika der Neuzeit angewandt, über welches unter den meisten Gelehrten Konsens besteht. In dieser Hinsicht kann der Iran als ein Beispiel für ein nicht-westliches Land betrachtet werden, das der Moderne begegnet. Obwohl man im Vergleich zu anderen nicht-westlichen Ländern nicht verallgemeinern kann, was diese Forschungsarbeit über die iranische Gesellschaft herausgefunden hat, können viele ähnliche Aspekte in all diesen Gesellschaften beobachtet werden. Eisenstadts Theorie der „Multiple Modernities“ inspirierte diese Studie, die verschiedenen Aspekte der Moderne im Iran zu untersuchen und wie die Iraner damit begonnen haben, das Land zu modernisieren und dabei einige Grundprämissen der Moderne abzulehnen. Die vorliegende Forschungsarbeit bestätigt seine Vorhersage über die Begegnung nicht-westlicher Länder mit der Moderne im Fall des Irans als zutreffend.

Eisenstadt hatte zum Beispiel das Auftauchen eines modernen jakobinische Charakters<sup>4</sup> im Prozess der Modernisierung prognostiziert. Dieser Wille zur Macht ist in der Errichtung der modernen Wissenschaft im Iran zu sehen. Eines der wichtigsten Merkmale der Erfahrung der modernen Wissenschaften im Iran war die Integration von Politikern in den Erwerb neuer

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<sup>4</sup> Umgestaltung der Gesellschaft durch Manipulation und Mobilisierung der Menschen für Veränderungen.

Wissenschaften. Sie waren die Akteure der Einführung neuer Wissenschaft in die iranische Gesellschaft. Gleichzeitig gehörten sie zu einer neu aufkommenden sozialen Gruppe von Intellektuellen, die repräsentativ für die herrschende Klasse war.

In dieser Hinsicht sollten neue Wissenschaften die Macht des Staates garantieren. Politiker bestimmten die Mission und das Ziel der Wissenschaft sowie wissenschaftliche Objekte. Die Fragen, die die Wissenschaftler beantworten wollten, waren keine Fragen über die Erkenntnis der Welt, sondern Fragen, die für Fortschritt im Iran relevant gewesen sind. Die Wissenschaft war kein Instrument, um die Welt oder die Menschen zu verstehen, dennoch sie war ein Instrument, um die Lücke zwischen dem Iran und den europäischen Ländern zu schließen.

Die Schlüsselfragen im Fachbereich der Geisteswissenschaften im Iran haben ihren Ursprung in der politischen Betrachtung: Wissenschaftliche Themen traten nicht aus der neugeborenen Akademie als eigene Ideen hervor, sondern mit diesen Ideen wurden den Wissenschaftlern beauftragt. Alle Intellektuelle waren an den politischen Aktivitäten beteiligt, und dieser Faktor ist das wichtigste Merkmal der Bedingungen der Institutionalisierung der Wissenschaft im Iran. Mit anderen Worten ist die politische Betrachtung der wichtigste Faktor der intellektuellen Aktivitäten im Iran.

Eisenstadt behauptet in seiner Theorie der „Multiple Modernities“, dass neben den Strukturveränderungen und den neuen institutionellen Formationen der Kern der Moderne die Kristallisation der Interpretationsformen der Welt und der ontologischen Vision eines ausgeprägten Kulturprogramms sei. Die Vorstellung und Definition von „uns“ im Gegensatz zu den Unterschieden zu den „Anderen“ und nach der negativen oder positiven Einstellung zum Westen und zur Moderne, die Ermittlung einiger Besonderheiten zur Unterscheidung unserer Kultur gegenüber den anderen Kulturen sind die Strategien zum Wiederaufleben eines indigenen Kulturprogramms.

Eisenstadt behauptet, jede Gesellschaft versuche, im Prozess der Modernisierung ein kulturelles Programm zu bewahren. Es bedeutet, trotz umfangreicher struktureller Änderungen sowie Veränderungen in der Erscheinung und dem Lebensstil einer Gesellschaft, die vor der modernen Ära stehen, dass das Hauptaugenmerk des Diskurses auf der Erhaltung des Kerns der Kultur gerichtet ist. Der dominierende Diskurs bestimmt spezifische Bereiche der Kultur, die nicht aufgegeben werden sollten.

Alle Gelehrten waren sich einig, dass die Moderne eine Verschiebung der Konzeption des menschlichen Handelns bedeutete, der Autonomie und des Ortes des Individuums im Zeitablauf.

Später wurden im Iran Individualismus und Humanismus als negative Aspekte der neuen Zivilisation in Europa gesehen. Daher fehlte dieses Grundelement der Moderne im iranischen Diskurs und alles, was man sehen kann, ist die Argumentation dagegen.

Die Intellektuellen begrüßten neue Technologien, aber sie interpretierten neue wissenschaftliche Errungenschaften durch ihre eigenen ontologischen Voraussetzungen. Im Gegensatz zu der europäischen These, die die Existenz von verschiedenen möglichen Antworten auf die gleiche Frage akzeptiert, nahmen die Iraner an, dass nur ihre eigenen ontologischen Antworten gültig seien und sich die europäischen Wissenschaftler in der Zukunft mit ihren fertigen Antworten an den spirituellen Ansatz anpassen würden.

Die Iraner bildeten, wie andere Nationen, die europäischen modernen Gesellschaften begegneten, ihre eigene Version der Moderne und versuchten, die Kernpunkte ihres Kulturprogramms nicht zu verlieren. Im ständigen Aufbau ihrer neuen kollektiven Identitäten, ihrer Vorstellung von sich selbst und den „Anderen“ lehnten sie selektiv viele Aspekte der europäischen Moderne ab und schufen ein neues Hybrid der Moderne.



# Chapter 1

## Introduction

The 19<sup>th</sup> century was a period of drastic changes in all aspects of Iranians' lives. They encountered a new Europe which in one hand promised a better life for humankind through achievements in science, technology and culture, but also included newly powerful states which could potentially become a threat for countries like Iran on the other. After suffering major defeats against the Russian army in the first half of the 19<sup>th</sup> century, Iranians began to raise fundamental questions about the relationship between the vulnerable “self” and the advanced “other”. The result of questioning the status quo was the notion that it was necessary to be civilized and to acquire the “new” European science, since science was perceived to be the origin of European power. Many scholars believe that this is the beginning of the modern era in Iran.

In an attempt to incorporate the new European science, Iranian elites started a process of building a new educational system based on the European model by sending students to Europe and by creating new-style schools and universities. The fruit of the dissemination of new science was the emergence of the *Monavar ol-Fekr*, or intellectual. They were impressed by the developments in European countries and were convinced to make the same socio-political reforms in Iran in order to change the face of the country and to empower it. These intellectuals, who were the agents of change in society responsible for translating and transmitting this new kind of knowledge, left their own footprint on the institutionalization science in Iran. They presented the

very first articulation of the presupposition of the new science, as well as an emerging discourse about it. This preliminary discourse played a decisive role in the future of science and scientific institutions in Iran.

The attitude of Iranian agents towards modern European science as well as the hybrid forms of knowledge created in the process of acquiring new science in non-Western societies like Iran, is not well understood. When it comes to the study of modernization in Iran, most of the studies are limited to the political, economic, and social arenas. The emphasis is mostly on institutions and structures, not on individuals and agency, and science is rarely an object of study in this field. Taking the 19<sup>th</sup> century as a point of departure, the purpose of this study is to analyze the picture of European science as it appeared to Iranians' eyes and their perception of the relationship between new science and the traditional indigenous science. The period covered in this study will range from the establishment of the first academy in Iran, the Dār ol-Fonūn, in 1851 to the foundation of the second university in Iran, Tehran University, about 80 years later in 1934.

The aim of this study is to find the key presuppositions and the elements of discourse created in this era and its development and maintenance in the course of time. In this respect, the concept of “discourse” plays an important role in my research. Using Foucault's definition of discourse in his *Archeology of Knowledge*<sup>5</sup>, this study considered this concept as the underlying system of rules or additional structures that determine the use of language. These additional structures are produced historically and the discourse is an interrelated set of statements that serve to convey, embody, and reinforce a range of valid claims about what is true and knowable by a given group of people at a given time. Discourse is a group of statements that are accepted without question and consists of a limited number of statements for which a group of conditions of existence can be defined<sup>6</sup>.

Discourse contributes to the creation and re-creation of the relationship between social elements; it shapes social structures and it is shaped by the structures as well<sup>7</sup>. This reciprocal relationship also exists between discourse and language, discourse and previous discourses, discourse and media and discourse and its contributors. For instance, discourse is formed by contributors and it forms the contributors<sup>8</sup>. Discourse both encourages people to talk about certain

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<sup>5</sup> Michel Foucault: *Archeology of Knowledge; and the Discourse on Language*, New York, 1972.

<sup>6</sup> *Ibid.*, p. 25.

<sup>7</sup> Norman Fairclough: *Critical Discourse Analysis: The Critical Study of Language*, London, 1995, p. 73.

<sup>8</sup> Barbara Johnston: *Discourse Analysis*, Oxford, 2008, p. 10.

things and to avoid talking about others. This means that discourse is a territory in which language is used in a particular way, rooted back in the collective historical experiences of the people of a particular society, and this makes it difficult for the people to think and to talk in a framework outside of the dominant discourse<sup>9</sup>.

This study intends to discover the hidden and unspoken meanings inherent in the articulated language of the new science. Those subjects or issues that are absent from the discussion or were neglected by the authors are as important as those issues that are present in the discourse. The fundamental questions of this study are as follows:

- What are the main elements of the discourse?
- What are the significant propositions about the modern science?
- What changes occurred within the discourse during this time, in terms of historical events?
- What was the relationship between the new European science and traditional indigenous knowledge?

Throughout this research the “new science” is defined as the norms and concepts which emerged during the early modern period in the 17<sup>th</sup> century; a period known as the “Scientific Revolution”. Science, in its new form, was a systematic explanation of the perceived world. It sought to produce true statements about the world, which should be subject to verification, and should be independent from ontological or metaphysical assumptions. The observer also should be neutral and detached from the subject of the study. In short, scientific data is self-evident, value-free, and context-free. A brief history of the developments which led to the birth of modern science in Europe, the premise of this new science, as well as the criterion of what is science, will be elaborated in the next chapter.

19<sup>th</sup> century Europe is characterized by its adherence to historical progress: a conception which asserts that history began at a specific point in time and evolved continuously and constantly. In this regard, due to scientific and technological development, Europe was considered to be more advanced, while the rest of the world seemed archaic and stuck in the past. Through contact with European intellectual trends, Iranian intellectuals adopted the concept of historical temporality from European thinkers. They took it for granted that science, like history, is the subject of evolution and that new science were the natural developments of older knowledge. In this context,

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<sup>9</sup> Ania Loomba: *Colonialism / Postcolonialism*, New York, 2005, p. 38.

all the changes and developments in European thought were perceived as an inevitable process in the evolution of knowledge. While knowledge refers to a system of wisdom and cognition of the world, in relation to its impact on human thought, the word “science” was used by 19<sup>th</sup> century scholars to differentiate these new developments from “knowledge”. In Iran, these two concepts were translated as one word: *‘Elm*. Therefore, both terms were perceived as a single concept. They simply considered both the new science and the old ones, as a unified entity. I am claiming that Iranians have neglected this fundamental distinction, which was so central to the history of thought in Europe. They were silent about the premises and principles of the new science.<sup>10</sup> Therefore, they raised no question as to what makes new science different from previous systems of knowledge.

To investigate my hypothesis, I incorporated Foucault’s concepts of “discontinuity” or “rupture”. Unlike traditional historians, he does not consider history to be the subject of continuous development. Rather he believes that in some historical moments, Europeans witnessed a deep intellectual turning point that can be labeled as a rupture. In such a historical scene, new conditions of thought had been shaped that were a major departure from previous forms of knowledge. The old order of wisdom and reason was destroyed for the sake of the new order of things<sup>11</sup>.

One should not forget that even in 19<sup>th</sup> century Europe science was not a specific discipline and the study of the history of science did not begin there until the 20<sup>th</sup> century<sup>12</sup>. Before this time, Europeans themselves were not aware of the differences between modern science and the classical or ancient ones. Therefore, I do not intend to blame Iranian intellectuals for not contemplating these issues which were intellectually impossible for them to conceive in the 19<sup>th</sup> century. Rather I attempt to show that such a set of presumptions about the new science functioned as a barrier to comprehend the cornerstones of European modernity. Coming to terms with European science resulted in the formation of a new hybrid modernity in Iran which was characterized by selectivity; selecting among modern concepts, socio-political institutions, science, technology, and other aspects of modernity.

I also found Foucault’s definition of Episteme fruitful, because it elucidates what exactly are the turning points in the history of Western thought. Exploring how man came to be an object of knowledge, Foucault declares that all periods of history have possessed certain underlying

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<sup>10</sup> The premise of European science is discussed in the next chapter.

<sup>11</sup> Michel Foucault: *The Order of Things*, New York, 1994, p. 214.

<sup>12</sup> For example, one of the first studies on the history of science is *An Introduction to the History of Science* written by George Sarton in three volumes, published between 1927- 1948.

conditions of truth that constituted what was acceptable as scientific discourse. He argues that these conditions of discourse have changed over the time, from one period to another. He calls these conditions “episteme” and defines it as a set of fundamental assumptions that constitute the basis for the configuration of knowledge. Apart from all the criteria attributed to the positive science, he claims that by manifestation of a new episteme, history does not develop in perfection, rather its conditions of possibility are constantly changing. Based on how rationality had been formed in Europe, he divides the history of science into three periods in terms of their epistemic properties: the Renaissance, the Classical age, and the Modern age<sup>13</sup>.

Science during the Renaissance is characterized by finding resemblances between things. Language in this episteme is sacred and conveys the secrets of the natural phenomena in harmony with each other and with the whole universe. Classical age began in the 17<sup>th</sup> century. Because of the rupture in Western thought, resemblance was no longer important, rather identities and differences were emphasized<sup>14</sup>. Language was considered to be neutral and an objective tool to represent the world before human comprehension. The general area of knowledge included identities and differences, finding an order in things, making measurements, and the concept of universality<sup>15</sup>.

By the advent of the modern era in the 19<sup>th</sup> century it became possible to think about “thinking,” a development associated with Emmanuel Kant. This development was followed by many other advances in the positive science as well as the emergence of the history of science. Foucault sees all the advances to be consistent with the classic episteme, save one: the Kantian critique. Foucault marks this advancement as the threshold of our modernity because it posed questions about the limits of representation<sup>16</sup>. In this era human beings became the subject of scientific studies, which means the agent of cognition was at the same time the subject of deliberation, or humans became both the subject and the object of science.

One of the properties of episteme in the modern era is that knowledge be considered an area made up of organic structures, and of internal relations between elements. Each has a function and all perform together<sup>17</sup>. Another characteristic shift in the modern episteme is the decisive change

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<sup>13</sup> Foucault (1994), preface: xxi.

<sup>14</sup> Ibid., p. 49.

<sup>15</sup> Ibid., p. 218.

<sup>16</sup> Ibid., p. 241.

<sup>17</sup> Ibid., p. 218.

in ways of generating knowledge. The modern way of thinking emphasizes the sovereignty of the subject.

By accepting Foucault's conception of epistemic periods during the history of science that he described in his book; *The Order of Things*, and the Foucauldian concept of discontinuity, the main epistemological elements of Iranian intellectual discourse, as well as formation of ideology concerning new science will be discussed in this study. Although, in the case of Iran, changes in discourse and of the epistemic elements can hardly be studied, since we have limited documentation and data before the middle of the 19<sup>th</sup> century. For that reason, this study had to be limited to the discourse evolving after the above-mentioned historical rupture. Prior to the period under consideration, science in its traditional form existed in Iran, but according to the goals of this study, this study will not discuss its specifications, its social status and how it continued to live after adapting European science. These issues are beyond the scope of the current study.

The other key concept in my research which is vital to elaborate, is the word "modern" and various derivatives of it such as: "modernity" and "modernization". The word "modern" means whatever pertains to the present or recent times, and as an antonym for antiquated or obsolete, and the modern era refers to the historical period of inception of the scientific and technological successes in the Europe in the 16<sup>th</sup> century. For almost five hundred years people first in Europe and gradually in the other parts of the world experienced "modernity" as a process of radical changes in the cultural values and in socio-political institutions, which was more or less accompanied by the feeling that modernization presented a threat to their history and traditions<sup>18</sup>. This process has been grounded on three major cornerstones: rationalism, secularism, and humanism, and emerged in the 16<sup>th</sup> century as the result of the Renaissance. Emphasis on the autonomy and sovereignty of reason and of the individual are fundamental premises of the enlightenment. Marshall Berman in his remarkable work on the experience of modernity maintains that modernity means being ready in every moment to detach from the past and to radically and continually transform the physical, social, and moral world we live in<sup>19</sup>. He illustrates the 19<sup>th</sup> century modern environment with constant changes, permanent renewal in all the modes of individual and social life<sup>20</sup>.

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<sup>18</sup> Marshall Berman: *All that is Solid Melts into Air; Experience of Modernity*, New York, 1988, p. 16.

<sup>19</sup> *Ibid.*, p. 40.

<sup>20</sup> *Ibid.*, p. 94.

The greatest founders of modernization theory, Karl Marx (1818-1883), Emil Durkheim (1858-1917) and Max Weber (1864-1920), all take it for granted that the canonical version of European modernity would expand all over the world<sup>21</sup>. Nevertheless, diversity in the age of globalization has proved that modernization is not a set of fixed patterns of structural changes<sup>22</sup>. As an alternative paradigm to the classical theory of modernization as well as a critique of world systems theory and global modernity, Samuel N. Eisenstadt (1923-2010) suggested instead his theory of multiple modernities, first in an article in *Daedalus* in 2000, following by his book entitled *Comparative Civilizations and Multiple Modernities*<sup>23</sup>. He accepts the uniqueness of the experience of modernity in every single country in the world, and its main presumption is to reject the notion of a single pattern of modernization<sup>24</sup>. I found it useful to investigate the beginning of the process of modernity in Iran within the paradigm of multiple modernities. In the last part of my conclusion, I will contemplate Iranian modernity in its special historical context and analyze the mechanisms of ideology formation concerning European science.

For Eisenstadt the idea of multiple modernities presumes that the best way to understand the contemporary world is to see it as a sequence of continual constructions and reconstructions of a multiplicity of cultural programs. These ongoing reconstructions of multiple institutional and ideological patterns are carried forward by specific social actors in close connection with social, political, and intellectual activists, and by social movements pursuing different programs of modernity, holding very different views on what makes societies modern. Eisenstadt found Shills' definition of "tradition" appropriate for his theory. Crucial for Shills are the varying tensions and antinomies between the transcendental and mundane, the universalistic and particularistic, and the totalistic and pluralistic dimensions in the orthodox as well as heterodox currents in the civilizational religious cores. Such tensions are prevalent in Iran up to today. Despite the secularization process, which began in the mid-19<sup>th</sup> century, the religious core of the Iranian civilization maintains its continual impact on the collective identities. Looking from the multiple modernities perspective, the Iranian perception of modern science will be seen in a context where there are various tensions and antinomies between conserving cultural sources and the desire to be modern.

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<sup>21</sup> S. N. Eisenstadt: "Multiple Modernities", *Daedalus*, vol. 129, no. 1, 2000, p. 1.

<sup>22</sup> Gerhard Prayer: "S. N. Eisenstadt: Multiple Modernities- A Paradigm of Cultural and Social Evolution", *Protosociology*, vol. 24, 2007, pp. 5-18.

<sup>23</sup> It was published in 2003 in 2 volumes in Leiden and Boston.

<sup>24</sup> Prayer (2007), p. 9.

## 1-1- Method

My approach will be to apply critical discourse analysis on seminal texts written during that crucial time. In order to investigate the discourse and to find its main elements, I will use linguistic discourse analysis, which its main figure is Norman Fairclough. Critical discourse analysis, or simply CDA, is defined as the analytical framework for investigating the relations between language, power, and ideology<sup>25</sup>. In fact, in CDA, we are dealing with some fields outside language like socio-cultural context. For Fairclough, an ideal CDA contains three dimensions: looking into the properties of the text, discourse practice, and socio-cultural practice and analyzing the interrelations between them. The analysis of the discourse practice means paying attention to the processes of text production, how the text contributes to and is ultimately consumed by its assumed audiences<sup>26</sup>.

To map a systematic analysis of written texts I used Fairclough's method as well. He studies the relation of language and historical context in three phases, including:

- Description of the form
- Interpretation
- Explanation<sup>27</sup>

The first phase would be a linguistic review, which entails looking into the surface of the sentences as well as the word order. However, since the detailed information about the linguistic order of the text would not help me to find the answer of my questions, I skip this phase. The second phase, which is interpretation, involves finding semantic episodes or significant proposition of the texts, as well as finding a focal point among them. The focal point is defined as a proposition that all the other propositions are derived from it. Finally, the explanation phase consists of viewing the text within its historical context and through any interaction with other social factors, which are involved in the construction of the discourse. The approach of this study is to go through the following steps:

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<sup>25</sup> Fairclough (1995), p. 23.

<sup>26</sup> Ibid., p. 9.

<sup>27</sup> Muḥammad Javād Gholāmrezā Kāshī: *Jādūyi Gofīār* (Magic of the Discourse), Tehran, 2000, p. 75.



1- Identifying the paragraphs in which the author directly discusses the new science and its relation to traditional Iranian science, and attaining the principle assumptions about modern science.

2- Studying selected paragraphs of each author, isolated from other texts and isolated from their social-historical context, and trying to find the focal point of the text and the main elements relevant to this focal point.

3- Analyzing these articulations interrelated to the other texts and to the social-historical context of Iran, and understanding the transformation of discourse during the period under consideration.

4- Looking from a broader perspective and considering Iran as a part of a greater context, one among many other non-Western countries, which experienced similar encounters with modernity and the various European sciences.

To understand the order of the discourse, its articulation as well as its evolution in the period mentioned, this study determined the most important Iranian agents who contributed to the acquirement of the new science and who participated in the formation of the discourse or its substantiation. The priority has been given to those intellectuals who contemplated the relation of the modern and the traditional science, and in between them, Iranians who were acquainted with both traditional science and European modern science. This study relies on the primary Persian texts written by these intellectuals in the period under investigation.

The influential and interesting texts were not all written by famous figures. Many less-known intellectuals also published articles on the relationship between modern and traditional science. They mostly wrote their articles for specific journals. These journals will therefore be browsed for related articles. Criteria for selecting a text include characteristics such as direct discussion of the relationship between the new and old science, having a large readership, and contributing in the discourse formation. The textual sample of the study and my reasons for choosing them are as follows:

1- *Maktūbāt-i Kamāl od-Dowle* (The Letters of Kamāl od-Dowle), 1985<sup>28</sup>, Cologne, by Mīrzā Fat‘alī Ākhūndzādeh

Ākhūndzādeh (Akhūndov), (1812- 1878) was a playwright and propagator of alphabetic reform, and one of the earliest and most outspoken atheists to appear in the Islamic world. Ākhūndzādeh was-explicit in his hostility to the religion.

2- *Se Maktūb* (Three Letters), 1908, Tehran, and *Şad Khaṭābe* (Hundred Speeches), 1925<sup>29</sup>, Tehran, by Mīrzā Āqā Khān Kermānī:

Kermānī (1854/5-1896) was a pioneer in speaking about modern philosophy and Western thought in Iran and was familiar with both new science and traditional indigenous knowledge. He was the first individual who posed the concept of Iranian nationalism and examined the history of ancient Iran with new historiographical methodology.

3- *Safīneh-yi Ṭālibī, yā, Kitāb-i Aḥmad* (Ṭālibī’s Ship or the book of Aḥmad), 1894, Istanbul, and *Masā’il al-Ḥayāt* (Life’s Issues), 1906, Tbilisi, by ‘Abd al-Raḥīm Ṭālibof Tabrīzī

Ṭālibof (1834-1911) was an influential intellectual and a social reformer, and his books achieved great eminence. Even during his lifetime, he had a vast audience and his books were used in schools as textbooks.

4- *Maqālat-i Jamālī-yi* (The Articles of Jamāl ad-Dīn), 1883, Calcutta, and *Resāleh dar radd-i Neicherī-yi* (The Refutation of the Materialists), 1881, Mumbai, by Seyyed Jamāl ad-Dīn al-Afghānī

Afghānī (Assadābādī) (1838/9-1897) was one of the most distinguished intellectuals of the 19<sup>th</sup> century and was responsible for introducing the concept of pan-Islamism. He had a great influence on intellectuals in Iran and in the other Muslim countries. Most of the Islamic movements during the last century were inspired by his ideas. He was familiar with Western science and created a pervasive ideology of how to tackle Western thought.

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<sup>28</sup> The book was originally published in 1862 in Baku.

<sup>29</sup> The date of first publication of these two books is unknown.

5- *Majalleh-yi Kāveh* (*Kāveh* Journal), 1916-1922, Berlin, edited by Seyyed Ḥassan Taqīzādeh

Taqīzādeh (1878-1970) edited two series of a prominent journal called *Kāveh*. This journal was the main organ of the new Iranian nationalist culture and many of the great writers of this period cooperated with it. Taqīzādeh was a controversial figure who was involved in political activities all his life.

6- *Majalleh-yi Forūgh-i Tarbiyat* (The light of Training Journal), 1921, Tehran, by Abul-Ḥassan Forūghī

Forūghī (1885-1959) was the younger brother of famous Muḥammad ‘Alī and the son of Zokā’al-Molk Forūghī; both of whom were influential elites in their own right. He became involved in decision making in Iranian education policy. He is known for his efforts to compromise religion with the new rational science.

7- *Majalleh-yi Iranshahr* (*Iranshahr* Journal), 1922 – 1927, Berlin, edited by Ḥossein Kāzemzādeh Iranshahr

*Iranshahr* (1884-1962) was the editor of this journal and wrote most of its articles. Due to its passionate patriotism and appealing ideology on the reconciliation of Western materialism with Eastern spiritualism, the *Iranshahr* journal became one of the most influential texts of its time.

In preparing a short biography about each intellectual or of the journals, I used primary sources of the period including memories, diaries, and journals. In addition, I used some distinguished secondary sources on the history of contemporary Iran and specifically the Qājār period, written by scholars such as Fereydūn Ādamīyat, Ervand Ābraḥamian, Ḥamid Elgar, and Edward Brown. Apart from the secondary sources, I also benefited from research related to the history of science and education in Iran or critical works about Iranian intellectuals and their ideas.

## 1-2- State of the Art

This study will contribute to modern Iranian intellectual history. The efforts of two distinguished scholars on criticizing terms of thought in Iran provided the inspiration to fulfill this research. Ārāmesh Dostdār and Javād Ṭabāṭabāei have both propounded controversial ideas that caused many debates among advocates and opponents. Among the many books Dostdār wrote in previous decades, the following are the best known and include his core ideas.

- *Emtenā‘i Tafakor Dar Farḡangi Dīnī* (The Refusal to Think in a Religious Culture), 2003,

Paris, by Ārāmesh Dostdār

- *Derakhsheshḡā-yi Tīre* (The Dark Sparkling), 1999, Paris, by Ārāmesh Dostdār

The term “Refusal to Think” was coined by Dostdār in *Emtenā‘i Tafakor Dar Farḡangi Dīnī*. He maintains that science seeks to discover the world, while religion claims that it already possesses the knowledge. Accordingly, he declares that religion lacks inquiry, because for believers sacred texts ought to reveal the truth. Using historical examples, he attempts to show that there were some thinkers in the history of thought in Iran who questioned established discourse of religious presumptions, such as Zakariya Rāzī (854-925) and Nāṣer Khosrow (1004-1088). However, their discussions ultimately did not provoke a reaction and were ignored after a short time.

Critical of the contemporary situation of intellectualism in Iran, Dostdār chose to prove his claims again by using historical examples in his other famous book, *Derakhsheshḡā-yi Tīre*. He identifies Fat‘alī Ākhūndzādeh and Jalāl Āle Aḡmad (1923-1969) as influential intellectuals from two separate historical periods. Comparing their opinions, Dostdār’s main argument is that the Iranian mindset did not change over 130 years from the first attempts to acquire European science and civilization. He attributes this stagnation to the Iranians’ state of moods, such as inaction and fear of changes, as well as residuals of a religious mindset.

- *Darāmadī Falsafī bar Tārīkhe Andīshe-yi Sīyāsī dar Iran* (A Philosophical Introduction to the History of Thought in Iran), 2006, Tehran, by Javād Ṭabāṭabāei

- *Zavāl-e Andīshe-ye Sīyāsī dar Iran* (Decline of Political Thought in Iran), 2010, Tehran,  
by Javād Ṭabāṭabāei

Javād Ṭabāṭabāei is a distinguished historian of political thought and the ideas expressed in his series of books prompted many debates among Iranian intellectuals.<sup>30</sup> In searching for the cause of the decline of thought in medieval Iran, Ṭabāṭabāei uses a comparative methodology and propounds a philosophical overview of the history of political thought in Iran. He introduces the question of “conditions of thought” that made modernity possible in Europe. By investigating some influential political treatises, he attempts to determine what those “conditions” were that made “thinking” impossible in Iran. By providing detailed information on the historical examples of the search for rationality among Iranian scholars, he provides various reasons why all of them ended in failure. Furthermore, in an article titled “Contemplation on the Embassy and Travelogues of Iranians”<sup>31</sup>, he reviews Iranian travelogues to Europe in the Safavid and Qājār periods, in order to trace Iranians’ perception of the new political order in European countries. Ṭabāṭabāei’s main argumentation is that the authors of travelogues were not cognizant of the fundamental changes in European thought, and that their explanations of the modern political institutions were simplistic descriptions.

Incited by Dostdār and Ṭabāṭabāei’s critical ideas, many scholars in recent years began to study the history of thought in Iran. One example is Majīd Adībzādeh’s *Fertile Modernity and Unproductive Thinking*<sup>32</sup> in which the author intends to answer the question of why modernity acted as a fertile and dynamic power in the West, and led to the development of the critical Humanities, but ended with an entirely different result in Iran. In spite of establishing new Western style schools and universities, and teaching Western humanities, the critical approach to social sciences could not be successfully established and Iranian thought remained unproductive. He found the answer in the lack of individuality in Iran and the contradictions between modern phenomena such as states, universities, and the humanities.

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<sup>30</sup> Two books mentioned above, are in fact the first and second volumes in the series. The third one, in which he deals with the same question but in the 19th century, was published first in 2006 under the title of *Maktabe Tabrīz; Mabānī-yi Tajadod Khāhī* (The Tabrīz School and the Foundation of Modernism).

<sup>31</sup> “Ta‘amoli dar Sefārat va Safarnāme-hā-yi Iranian”, *Iran nameh*, vol. 17, 1998, pp. 55-88.

<sup>32</sup> Majīd Adībzādeh: *Fertile Modernity and Unproductive Thinking; Historical Challenge of the Modern State and Fertility of Humanities in Iran*, Tehran, 2011.

- *Jāme‘e-Shenāsī-ye Roshd va Ofūl-e ‘Elm dar Iran* (Sociology of Rise and Decline of Science in Iran), 2000, Tehran, by Muḥammad Amīn Ghāne‘ei Rād

Muḥammad Amīn Ghāne‘ei Rād viewed medieval history from a sociological perspective. He focused on the period between 750 to 1100, frequently associated with scientific development, and searched for the reasons of this success. He compared this “Golden Age” with the later era of decline in order to identify those elements which initiated this development. He concluded that the emergence of a cultural movement called *Sho‘ūbīye*, which advocated cultural tolerance as well as empirical sciences, had been instrumental in scientific development in that era.

- *Mavāne‘i Roshdi ‘Elmī dar Iran va Rāhi Ḥal-hā-yi ān* (Obstacles of Scientific Development in Iran and their Remedies), 2004, Tehran, by Farāmarz Rafi‘pur

Farāmarz Rafi‘pur deals with socio-political structures in his research about the reasons for scientific stagnation in Iran. He attributes the problematic situation of scientific production in Iran to the malfunction of some of the social and political institutions. For instance, scientific networks, the education system, the value of the science in the political sphere, and relations between students and professors, or between professors and the university, all play an important role. In his concluding chapter, he proposes remedies for the current problems within scientific institutions in Iran.

The process of modernization in Iran has been studied in a variety of ways. Some examples of work on this topic include ‘Abbās Milāni’s *Tajaddod va Tajaddod Setīzī* (Modernity and Anti-modernity) and Dāriyoush Homāyun’s *Ṣad Sāl Keshākeh bā Tajaddod* (A Hundred Years of Challenging with Modernity). However, they are mostly dealing with the shift that social and political structures experienced during the 19<sup>th</sup> and 20<sup>th</sup> centuries. In the present study, my focus is not on the socio-politic structures but on interpretation of the individuals from their historical status. Thus, the following works are more relevant to the experience of modernity in Iran.

- *Refashioning Iran; Orientalism, Occidentalism and Historiography*, 2001, New York, Muḥammad Tavakoli Ṭarqi

Muḥammad Tavakoli Ṭarqi discussed Iranians’ encounter with modernity in many articles and particularly in his book *Refashioning Iran*. Tavakoli’s approach in this book is postcolonial theory,

which challenges Eurocentric historiography and calls for the rethinking of what is commonly known as modernity. Tavakolī attempts to introduce a fresh narrative of the history of Iran regarding Iran’s scientific endeavors, which was neglected by former scholars. Drawing from a broad knowledge of Iranian intellectuals and Persian primary sources produced during the Qājār period, his book makes a valuable contribution to this field of study. I should also mention one of his articles in *Iran nameh*<sup>33</sup>, entitled “Tajadode Ekhtīārī, Tamadone Āriyatī va Enqelābe Rohānī” (Inventive Modernity, Borrowing Civilization, and the Spiritual Revolution), in which he debates the pros and cons of European civilization.

- *Who Is Knowledgeable Is Strong: Science, Class, and the Formation of Modern Iranian Society, 1900—1950*, 2009, California, Cyrus Shāyeq

Another work which deals with the experience of modernity from a postcolonial theoretical framework is *Who Is Knowledgeable Is Strong*. In this book, the author brings forth a sociological overview of the development of medical education in Iran, by introducing various social agents engaged in the propagation of this science. Introducing the community known as *Ādamīyat*, which is equivalent to humanity, Shāyeq suggests that the members of this community embody the proper etiquette for a sanitary life. In fact, *Ādamīyat* means behaving like a “gentleman”, a conception that is far from the concept of humanity in Europe.

- “The Emergence of Scientific Modernity in Iran; Controversies Surrounding Astrology and Modern Astronomy in the Mid-Nineteenth Century”, *Iranian Studies*, vol. 30, no. 1/2, 1997, pp. 5-24, by Kāmṛān Arjomand

In his article, Kāmṛān Arjomand raised the same question as the present study and presented the historical context into which new science entered Iran. He investigated three modern astronomical treatises written by Iranian scholars in the 19<sup>th</sup> century in order to explore their encounter with this science. He showed that apart from different social and educational backgrounds of the authors and regardless of their opinion, they propound no reason for their refutation or advocacy of new astronomy. At the turn of the century, Islamic scholars gradually began to make a compromise between the heliocentric world and Quranic teachings.

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<sup>33</sup> Special issue on Aḥmad Kasravī, Vo. 20, no. 1-2, Spring and Summer, 2001, pp. 195-235.

- *Taṭṭavorāt-i Gofteman-hā-yī Hovīyyatī dar Iran* (The Development of Identity Discourses in Iran), 2005, Tehran, by Ḥassan Kachūyān

Among the research which is methodologically relevant to the present study, I especially benefited from the work of Ḥassan Kachūyān on the development of identity discourse in Iran. Using discourse analysis to understand Iranian intellectuals' perception of the modern era, Kachūyān provides a historical overview of the situation in which the question of identity arose among Iranian elite and became a problematic issue. Considering the question of identity as a common problem in the "orient", he refers to Sa'īd's conception of "orientalism" and attempts to propound a pattern for the transformation of identity discourse from the beginning of the 19<sup>th</sup> century to the present.

- *Iranian Intellectuals and the West*, translated into the Persian by Jamshid Shirazi, 1998, Tehran, by Mehrzād Borūjerdi

Mehrzād Borūjerdi prepared a good survey on the encounter of Iranian intellectuals with the West, from the 19<sup>th</sup> century up to today. He uses Foucault and Sa'īd's concepts to investigate how the political discourse developed over time. Studying works of the most prominent intellectuals as his study corpus, Borūjerdi intends to show the role different elements played in the formation of the Iranian intellectual mindset: on one hand the power dynamics and social structures inside Iran, and the relationship between Iran and European countries on the other.

Other important scholars who devoted their works to the discourse analysis of Iranian intellectuals in contemporary history include Muḥammad Javād Gholam Reżā Kāshi<sup>34</sup>, Taqī Āzād Armaki<sup>35</sup> and Maqṣud Farāsatkhāh<sup>36</sup>. I benefited from their use of discourse analysis as a methodology in their investigations. Furthermore, in order to provide a historical background for my study, I referred to studies on the history of constructing educational institutions in Iran and enjoyed the detailed information available in these books.

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<sup>34</sup> *Naẓm va Ravande Taḥavole Goftāre Demokrāsi dar Iran* (Order and Evolution of Democracy Discourse in Iran), Tehran, 2006.

<sup>35</sup> *Modernīte-yi Irāni: Roshanfekrān va Pārādāīme Fekri-yi 'Aqabmāndegi dar Iran* (Iranian Modernity; Intellectuals and Paradigm of Backwardness in Iran), Tehran, 2001.

<sup>36</sup> *Sarāghāze Noandīshī-yi Mo 'āṣer* (The beginning of Contemporary Modernity), Tehran, 2009.



- *Tārīkhe Mo'asesāte Tamadonī-yi Jadīd dar Iran* (The History of New Civilizational Institutions in Iran), in 3 Volumes, 1992, Tehran, by Ḥossein Maḥbubi Ardakāni

The first volume of the book published in 1975 constituted the first comprehensive history of modern education in Iran. Ardākni's book is still regarded as a vital source of information on schools and higher education in Iran, as well as on the foundation of new European technological achievements such as railroads, radio, electricity and industrialized factories. Using European travelogues, Ardakāni traces Iran's encounter with new science, back to the era prior to the Safavid dynasty and continues his report to the end of Qājār period. He was an expert of Qājār history, and one can find a rich account of the schools and important newspapers which were emerging in this period.

- *Education and the Making of Modern Iran*, 1992, New York, by David Menashri

In his book, Menashri provides extensive information on the evolution of the education system in Iran, from sending students to Europe during the Qājār period to the establishment of Tehran University in 1934. The book deals with the Iranian perception of European education and their first attempts to adapt a new educational system, as well as the consequences of education in the realms of politics, economy, and society. The author tries to show us a clear picture of the conflicts between 'ulama, intellectuals, Qājār princes and the other social agents engaged to the issue during last two centuries.

- *Education, and the Discourse of Cultural Reform in Qājār Iran*, 2001, California, by Monica M. Ringer

Using Max Weber's theory of modernization in her book, Monica Ringer tries to elaborate the role of educational institutions in the development of rationalization in Iran. She investigates Iranians' endeavor in establishing new styles of schools and universities during the Qājār period, and provides extensive accounts on the individuals and communities involved in acquiring new European education. She argues that the outstanding feature of this period is intellectual debates on modernization and its consequences for Iran.

- *The Dār ol-Fonūn; Educational Reform and Cultural Development in Qājār Iran*, PhD thesis, Near Eastern Languages and Literatures, New York University, 1994, New York, by Maryam Ekhtiyār

Maryam Ekhtiyār devoted her doctoral dissertation to the topic of the Dār ol-Fonūn, the first higher education institute in Iran. She gathered rich accounts of the events which culminated in the establishment of this school, and provided a comprehensive report on the curriculum of the school and statistics on its teachers and students. Ekhtiyār attempted to show the impact of Dār ol-Fonūn on the education reform in particular, and socio-political reforms in general, by presenting detailed information on the cultural activities of the school and the technologies it introduced to society.

## **Chapter 2**

### **Historical Context**

## 2-1- Europe

In the course of the 17<sup>th</sup> century, an ongoing dialogue intensified between the disciples of ancient literature and those who called themselves advocates of modern literature, which eventually pervaded all other aspects of intellectual life, including science.

<sup>1</sup> The French writer, Charles Perrault (1628-1703), the author of *Quarrel of the Ancients and the Moderns*, could not imagine that the concept of “modern” would play such an important role in the coming centuries. During the 17<sup>th</sup> century, the term “modern” became synonymous with anything new. Historians agree that modernization began in the 17<sup>th</sup> century when Europe experienced a series of dramatic changes in society. These included the loss of a unified medieval church, colonial expansion overseas, the shift from a feudal based economy to one based on commercial entrepreneurship, the rise of nation-states<sup>2</sup>, and finally the emergence of modern science.

Although my intention here is to clarify the historical context of 19<sup>th</sup>-century Europe and its impact on Iranian intellectual life, we should perceive this century as a continuation of the preceding epoch. Therefore, in this chapter I will review those interconnected scientific and intellectual developments that made the advent of modern science possible in Europe and not in

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<sup>1</sup> F.H. Cohen: *How Modern Science Came into the World: Four Civilizations, One 17th-Century Breakthrough*, Amsterdam, 2010, p. 605.

<sup>2</sup> F.H. Cohen: *The Scientific Revolution; A Historiographical Inquiry*, Chicago, 1994, p. 4.

other parts of the world. Then I will briefly introduce the historical background of the Middle East in general and Iran in particular. In order to investigate properly the writings of Iranian intellectuals of this period in this dissertation, the following historical overview is necessarily simplified.

### **2-1-1- Early Modern Europe**

The growth of science and radical technological advancements characterized the period between the 16<sup>th</sup> and 19<sup>th</sup> centuries in Europe. However, the story of modern science began earlier, in the 14<sup>th</sup> century, through progress in art and literature. This development was largely the result of an increased interest in ancient Greek, Roman, and Arabic texts, and preceded the Renaissance, which entirely transformed the European mentality in the early modern period. In Italy, both military and practical needs and demands initiated a period of technological innovation in engineering. Solutions provided by ancient scientists were no longer sufficient. These engineers, most notably Leonardo da Vinci (1452-1519), required a more precise knowledge of nature<sup>3</sup>.

Two events in Germany in the 16<sup>th</sup> century accelerated the speed of changes in Europe. The first event was the development of the printing press, which facilitated a dissemination of new ideas and consequently challenged traditional doctrine, culminating in the protestant Reformation under Martin Luther (1483-1546). The second development in the 16<sup>th</sup> century was the idea of European superiority, a return to the concept of the ideal civilization from ancient Greece: education, discipline and urban living were the cornerstones of civilized society. Countries were judged by their civility. In this regard, Europe considered itself superior to the rest of the world.

The first transformation in science happened around 1600, when Nicolas Copernicus (1473-1543) created a realistic mathematic science hypothesis that radically transformed the ingrained habits of thought. He asserted that it was the Earth that was rotating, not the stars. Two other names should be mentioned who made a major contribution in changing the mode of science: Galileo Galilei (1564-1642) and Johannes Kepler (1571-1630), because they applied mathematics to motion. This was the real beginning of modern science, a process through which mathematization of nature began, and which continues today<sup>4</sup>.

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<sup>3</sup> L. Pearce Williams: "The Rise of Modern Science", *Encyclopaedia Britannica* online, URL: <https://www.britannica.com/science/history-of-science/The-rise-of-modern-science>, Date Published: January 23, 2015, Access date: August 15, 2016.

<sup>4</sup> Cohen (2012), p. 159.

In the 17<sup>th</sup> century, European natural knowledge underwent a drastic transformation, changing the modes of acquiring knowledge about nature. Three seminal factors were involved in this transformation from the medieval age to the revolutionary period of the 16<sup>th</sup> and the 17<sup>th</sup> century:

- 1- The rise of mathematics
- 2- Belief in an accurate natural order, which could be traced in every detail
- 3- The shift from metaphysical analysis of the essence of things to the empirical study of facts, causes, and effects<sup>5</sup>.

A tendency towards experiments, inductive methods of reasoning and calls for objectivity emerged. Numerous pioneers worked to avoid arbitrary claims and dogmatic certainty.

This process was completed by Francis Bacon's (1561-1626) reform toward a fact-finding, practice-oriented science. Bacon, together with René Descartes (1596-1650), put an end to the era of obscure Aristotelian philosophizing by advocating an experimental approach.<sup>6</sup> Before Bacon, Aristotle's general principles based on observation and reasoning were extensively accepted. However, in the 17<sup>th</sup> century scientists needed more precise and critical methods in order to observe facts and make conclusive findings. Bacon made one of the great contributions to modern thought by differentiating the deductive rationalism of scholastics with inductive observational methods.

In a deductive valid argument, if the premises are true, then the conclusion should be true as well. In an inductive inference, premises will lead to a conclusion that can be, in some cases, a general law or principle<sup>7</sup>. Bacon's contribution was to exhibit the general principles of reasoning, so that scientists could consciously test their generalization and deliberately look for possible exceptions and to reject or modify them. This process of "induction" is still the dominant approach of modern science.

Through empirical fact-finding methods, Bacon placed an emphasis on the importance of discovering the secrets of nature for the welfare of human kind.<sup>8</sup> He was the one responsible for a conception of human dominance over nature. One of the products of Baconian thinking was a

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<sup>5</sup> Alfred North Whitehead: *Science and the Modern World*, Cambridge, 1953, p. 49.

<sup>6</sup> Cohen (1994), p. 22.

<sup>7</sup> Carl G. Hempel: *Philosophy of Natural Science*, New Jersey, 1966, p. 10.

<sup>8</sup> Whitehead (1953), pp. 53-4.

confidence in the power of science and optimism about the role this new science could play in improving the human condition. Although innovative science claimed to conform to the core message of Christianity, and discovering nature considered a fulfillment of the divine calling<sup>9</sup>, by 1700 modern natural science had displaced religion from its focal status.

In the course of the Renaissance (14<sup>th</sup> -17<sup>th</sup> centuries), inspired by the Hermetica<sup>10</sup>, the concept of man radically changed so that the cosmos was viewed as a network of magical forces with which man could operate. This new active conception of man was a key factor in the birth of early modern science, mainly because of Francis Bacon's notion of man as an operator and science as a utilitarianism action. He clearly expressed that scientists should not passively speculate on nature, rather nature can be the subject of manipulation<sup>11</sup>. Religious reformation and scientific development were two aspects of the historical revolt, which was the dominant intellectual movement of the later Renaissance. The appeal of the origins of Christianity, and Francis Bacon's appeal to efficient causes were two sides of one progression of thought<sup>12</sup>.

Another figure who made a profound change in the history of science was Descartes. Although Descartes' name is immortal in mathematics for the graphs of equations, which are still called Cartesian coordinates, he is regarded as the father of modern philosophy, because of the questions he raised and problems he created. In his main work *Meditations on First Philosophy*, he substitutes the Aristolian philosophical question of "what is real" with the new question of "what we can know". In his book *The Discourse on Method*, he introduced a new method of recognizing valid knowledge called "methodical doubt" which entailed two steps: first, doubt everything that can be doubted; second, do not accept anything as known unless it can be established with absolute certainty.

Another development in this time allowed science to be independent of such philosophical debates. One of the immediate consequences of applying mathematics to explain the natural phenomena was the assumption that natural elements can explain the forces of nature. This means that natural forces dominate each natural phenomenon that they do not need anything other than observable nature to be understood. The other assumption was that nature is composed of matter,

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<sup>9</sup> Cohen (2012), p. 584.

<sup>10</sup> The Hermetic corpus or Hermetica are texts of ancient wisdom dated to the 2<sup>nd</sup> and 3<sup>rd</sup> century AD written in the form of a dialogue in which a teacher tries to enlighten a disciple. In these texts, man is conceived as a marvel, with a divine origin, who can dominate nature.

<sup>11</sup> Ibid., pp. 292-4

<sup>12</sup> Whitehead (1953), p. 10.

anything that has the property of space and time. These assumptions made it possible to study an isolated aspect of nature without concerning the whole. The circle of scientific thought was closed by this mechanistic theory of nature, and the realm of physics separated from philosophy<sup>13</sup>. This experimental treatment of natural phenomena and the application of science for useful purposes, together with the emancipation of the natural sciences from philosophy constitute a coherent set, which are all elements of the early modern approach<sup>14</sup>.

In the 17<sup>th</sup> century, the reformulation of scientific concepts was radical enough to warrant the name “revolution.” At about the same time, science became an organized social activity. Before this era, it is difficult to distinguish scientists from philosophers. In the late 17<sup>th</sup> century a group of individuals whom we label scientists today, emerged. They were engaged in the organized societies and scientific groups with the same pursuit<sup>15</sup>. The word “science” derives from the Latin word “Scientia,” or knowledge, which appeared before the 1840’s. Isaac Newton’s (1642-1727) masterpiece on motion and gravity, published in 1687 under the title of *Mathematical Principles of Natural Philosophy*, uses this term.

After Newton, something new was happening in natural philosophy and the term *nova scientia* or the “new knowledge” was frequently used in intellectual circles<sup>16</sup>. Newton’s role in the development of new science is not limited to the mathematical sciences. In 1704, he published *The Optics*, in which he revealed his ideas on experimental physics. He suggested how one should examine a subject in order to discover its hidden properties and how developing hypotheses and experimentation could help lead to a coherent theory. This book served as a model for investigating physical phenomena during the 18<sup>th</sup> and the 19<sup>th</sup> century.

At the turn of the 18<sup>th</sup> century, only isolated individuals around Europe pursued mathematical science, a kind of fact-finding experimentalism. By 19<sup>th</sup> century, and especially after the French Revolution (1789-1799) when the borders between European nations were more fluid, the scientific revolution accelerated as well<sup>17</sup>. The enthusiastic commitment to the progress and the hope that careful observation and experimentation could lead to improvements in industrial production characterized the 18<sup>th</sup> century. This discourse resulted in public support for science and

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<sup>13</sup> Ibid., pp. 61-64.

<sup>14</sup> Cohen (1994), p. 246.

<sup>15</sup> Richard Westfall: “The Construction of Modern Science”, in *History of Science*, George Basalla (Eds.), Cambridge, 1977, p. 105.

<sup>16</sup> Williams (2015).

<sup>17</sup> Cohen (2012), p. 723.



the founding of many public schools. Among the greatest was the *École Polytechnique* in Paris, which was established in 1794 as the first modern school committed to incorporating science in the service of France. Establishing such technical schools continued in the 19<sup>th</sup> and 20<sup>th</sup> centuries and helped the global spread of modern European science<sup>18</sup>.

## 2-1-2- Modern Era

The 17<sup>th</sup> century also witnessed a long-lasting influence in the history of science developed by Immanuel Kant (1724-1804). For the first time Kant clearly provided a distinction between the issues that science could deal with and those that it could not. Providing a self-understanding of 17<sup>th</sup> century classical science, Kant believed that the shift from aimless observation to conscious experimentation is what made new science so different from previous conceptions of nature. With Kant, this criterion became a philosophical *priori* construction of what science is all about.<sup>19</sup>

Kant asserted that the human has two distinguishable faculties of mind: a conceptual or intellectual faculty and a sensible or intuitive faculty. These two cognitive faculties are both essential for our representations, have an objective content and should be united in case of knowledge<sup>20</sup>. Although his main intention was to conciliate scientific causality with free ethical will, his ideas served to identify true science and establish a solid ground for the further innovation.<sup>21</sup> With Kant, we move into an entirely different epoch of human cognition. Kantian philosophy distinguishes between a noumenal world of things-in-themselves, which are beyond space and time and therefore unknowable, and a phenomenal world of our sensory experience, that the law of causality will hold. In fact, a phenomenal world consists of materials that have been studied in mechanistic philosophy. All that remains, according to Kant, are the particles outside of our mind, and are therefore inaccessible<sup>22</sup>.

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<sup>18</sup> Williams (2015).

<sup>19</sup> Cohen (1994), p. 26.

<sup>20</sup> Michel Friedman: *Kant and the Exact Sciences*, Cambridge, USA, 1992, p. 98.

<sup>21</sup> Cohen (1994), p. 25.

<sup>22</sup> Hans Eichner: "The Rise of Modern Science and the Genesis of Romanticism", *PMLA*, vol. 97, no. 1, pp. 8-30, 1982, p.11.

In 1794, Johann Gottlieb Fichte (1762 – 1814) rejected the existence of matter and instead replaced it with a world that is purely mental in his *Wissenschaftslehre*. He is known as the founding father of German idealism. Fichte solved a difficult question of the relationship between matter and mind, because he asserted that there is no matter and our mind has invented it<sup>23</sup>. Inspired by this innovative idea, Friedrich W. J. Schelling (1775-1812) introduced a coherent philosophical system known as Romanticism. In his works on *der Naturphilosophie* (1797-98), he developed a historical explanation for the development. By “temporalizing” Fichte’s dialectic, he created an evolutionary cosmogony. Up until this time, it was taken for granted that whatever is not perfect must have been created by a more perfect being, as the universe is the creation of “God”. Schelling’s monumental achievement was suggesting the “higher” perfection develops from the less perfection or the “lower”. The world was not once created by a supreme being, rather it is growing and becoming. He also substituted this assumption about the world with a “Great Engine”, who needs a creator for an organic evolving system<sup>24</sup>.

One of the most significant features of the Romantic period was the replacement of a mechanical philosophy by an organic view of the universe. This was just the beginning of a powerful movement at the turn of the century, a reaction to enlightened absolutism and industrial revolution. Unlike mechanical philosophy that seeks to explain all phenomena by casual determination and the motion of particles, Romantic philosophy tended to explain them by free will and mental consciousness or unconsciousness<sup>25</sup>. By placing an emphasis on emotion, and individualism, Romanticism affected many aspects of intellectual life like literature, art and acted as a decisive factor in religious revival. It was also the source of inspiration in the emergence of political movements like Liberalism, Radicalism, and Nationalism.

Romantic historicism was another development that was the direct result of the concept of an evolutionary cosmos. As a consequence of accepting the changing universe, the Romantics denied the notion of unchanging human nature as well. From the beginning of the new scientific revolution by Copernicus and Galileo, the world was explained rationally in terms of the laws of nature, and these laws were constant through time and space. It seemed natural that human essence should also be timeless, and even a great thinker such as Francis Voltaire (1694-1778) conceived of morality as eternal and uniform in all human society. In contrast, Friedrich Schlegel (1772-

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<sup>23</sup> Ibid., p. 14.

<sup>24</sup> Ibid., p. 15.

<sup>25</sup> Ibid.

1829), another representative of the Romantics, suggested the concept of temporal, local, and individual morality. This development paved the way for the notion of man-made artificial constitutions in politics<sup>26</sup>.

Relying on the notion that by using reason we can know whatever is knowable, one of the properties of the classicist episteme was to apply the assumptions and methods of the natural sciences to all fields of knowledge, including the arts and humanities. In contrast, Romanticism proposed that irrational faculties of mind, such as intellectual intuition or imagination, could attain those truths that really matter<sup>27</sup>. Although the Romantics never wholly denied reason, the Romantic science did not belong to what we define today as fact-finding experimental sciences. In this respect, Romanticism railed against the dominant approach to the science, and had a lasting impact particularly on arts and humanities. This movement faded away as the century passed on, especially after the emergence of reactionary philosophies like Positivism.

### **2-1-3- 19<sup>th</sup> century**

In the course of the 19<sup>th</sup> century, Romanticism was one out of three events that changed the face of Europe. The others were the Industrial Revolution and the French Revolution. Beginning with the introduction of steam power in Britain, the Industrial Revolution consisted of major changes in agriculture, manufacturing, and transportation during the late 18<sup>th</sup> century and early 19<sup>th</sup> centuries. Drastic advances in technology that completely changed the conditions of human life considered marked the 19<sup>th</sup> century<sup>28</sup>. The French Revolution also made a profound impact, as it introduced fundamental changes in the definition of the rights of Man and of the Citizen. It resulted in radical shifts in political organization, such as the abolition of feudalism. The progress in scientific fields like biology, geology, and zoology were remarkable, but the most exciting scientific achievement was the Darwinian theory of evolution<sup>29</sup>.

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<sup>26</sup> Ibid., p. 16.

<sup>27</sup> Ibid., p. 17.

<sup>28</sup> Whitehead (1953), pp. 119-120.

<sup>29</sup> Ibid., p. 42.

In order to clarify what made modern science distinguishable from the antecedent system of knowledge and from Romanticism, I shall explain the epistemic implication of scientific enterprise and the characteristics of modern science as they appeared in the 17<sup>th</sup> century onwards. Each ideal scientific investigation should contain four stages:

- Observation and recording of facts
- Analysis and classification of these facts
- Inductive derivation of generalization from these facts
- Further testing of the generalizations

Hypotheses should not be made during the first two steps in order to avoid bias, which would jeopardize the objectivity of the inquiry.<sup>30</sup> By its very nature, an observation is performed by an individual. However, to make it truly communal it must lose this individuality. To become a scientific observation, it must not only be reported to somebody else, it must also be extracted from the elements peculiar to the particular observer<sup>31</sup>. Scientific objectivity is safeguarded by the principle that while hypotheses and theories may be freely proposed, they can be accepted as the body of scientific knowledge only if they pass critical scrutiny. In other words, the interests of scientific objectivity are safeguarded by the demand for an objective validation of conjectures<sup>32</sup>. Science is not interested in defending certain conceptions against all possible evidence. It is rather prepared to give up or modify whatever hypothesis was previously accepted, to a well-confirmed system of empirical statements<sup>33</sup>.

Modern science admits just the authority of nature, not any other authorities, no matter how great they may be. It does not even acknowledge the authority of the reasons of the investigator. A scientist should adapt to the data observed in nature, and should give priority to his discoveries rather than his rational expectations. In other words, critical empiricism conquers rationalism in modern science<sup>34</sup>. The novelty of new science is its passionate interest in detailed facts with equal devotion to abstract generalization. Another characteristic, which differentiates new science from

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<sup>30</sup> Hempel (1966), p. 11.

<sup>31</sup> Ibid., p. 87.

<sup>32</sup> Ibid., pp. 16-17.

<sup>33</sup> Ibid., p. 40.

<sup>34</sup> Reijer Hooykaas: "The Rise of Modern Science: When and Why", *British Journal for the History of Science*, vol. 20, no. 4, pp. 453-473, 1987, p. 455.

previous science, is its universality. Modern science was born in Europe, but it explores everything, everywhere<sup>35</sup>. Finally, the last step in each scientific inquiry is testing the results. Later in the 19<sup>th</sup> century, Positivists asserted that all authentic knowledge has to be capable of verification<sup>36</sup> and that the only authentic knowledge is science.

The first half of the 19<sup>th</sup> century was a period of hope and a new appeal for change. As the century came closer to its end, Francis Bacon's dream of mastering nature for the sake of humankind seemed to be coming true. Science was speedily progressing on all fronts. Cumulative advances in science were opening new avenues of thought. People were eager to know more about the world. The public was supportive of scientific initiatives. Literacy rates were increasing gradually and universities and laboratories were generating a comprehensive outlook of the universe. Nevertheless, this appeal towards science did not last long.

In the second half of the 19<sup>th</sup> century, Europe witnessed the creation of nation-states, first in Italy and Germany and later among other ethnic groups. This development changed the balance of power in Europe and resulted in two world wars in the 20<sup>th</sup> century (1914-18 and 1939-45), in which tens of millions of people were killed, more than in any other period in the history of mankind. With the end of pre-modern empires like the German, Austro-Hungarian, Russian, or Ottoman, the model of the nation-state had disseminated throughout Europe and had transformed the political landscape of the continent. Another alteration was the emergence of an international communist movement accelerated by the October Revolution in Russia (1917). In the late 1920's, the world economy experienced a massive crisis known as the Great Depression, by which world trade fell by two thirds. As a consequence of this economic depression, Liberalism and Democracy were discredited and many nations in the world fell into the hands of dictators and authoritarian regimes, most notably Hitler and the Nazis in Germany (1933).

While European thinkers began to criticize the philosophical cornerstones of European morality and extreme optimism of the achievements of science for human prosperity, Iran and other countries in the Middle East and Asia began to acquire new science and translate the intellectual contributions of Europe. Russia played an important role in conveying Western culture and science into Iran as a channel for Iranian exposure to the West. In 1829, a political mission traveled to St. Petersburg. Amīr Kabīr (1807-1852), who later became Prime Minister of Iran and is known as

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<sup>35</sup> Whitehead (1953), p. 3-5.

<sup>36</sup> John Ziman: *Real Science; What it is, and what it means*, Cambridge, 2001, p. 85.

Iran's first reformer, accompanied this group at the age of 22. They spent eleven months in Russia and witnessed the industrial, educational, and cultural advancements that had made Russia a prominent model among its Asian neighbors. The number of schools in St. Petersburg (185) and Moscow (166) left a great impression on the members of the mission, along with the special schools for girls and for the deaf and blind. The members of the Iranian delegation in this journey were entirely affected by these schools and also by the University of Moscow and the methods used for the instruction in the science.

Apart from political relationships, individual visits to the towns near the Iranian border such as Baku and Tiflis, which had reputations as cultural centers, paved the way for learning about a new civilization. Some of the most important intellectual figures even immigrated to these towns, to be able to have access to the latest scientific and mental achievements. Mīrzā Fat‘alī Ākhūndzāde (1812-1878) and ‘Abd al-Raḥīm Ṭālibof (1834-1911) lived in Russia and became acquainted with the European science through Russian society. Istanbul and Cairo were two other destinations for Iranians who desired to learn about this new science. Providing a general overview of the conditions in the contemporary Middle East, to which Iranians had more cultural contacts, sheds light on the period in which European science was incorporated into Iranian society.

## 2-2- Middle East

The Islamic world experienced a Golden Age of scientific advancement from the 8<sup>th</sup> to the 13<sup>th</sup> century, a period of flourishing success in the reception and enrichment of Greek mathematics and natural knowledge that later inspired the European Renaissance. Rational sciences, like natural philosophy and logics, were mostly practiced in the 9<sup>th</sup> century, under the impact of *Mu‘taẓilleh*, a rational theological school of thought. This was particularly active during the reign of the Abbāsīd caliph, Hārūn al-Rashīd, who supported scientific institutions<sup>37</sup>. This was an era devoted to the

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<sup>37</sup> For more on Islamic science in the Middle Ages see Ḥossein Nasr: *Science and Civilization in Islam*, Massachusetts, 1968; S.M. Ziauddin Alavi: *Muslim Educational Thought in the Middle Ages*, New Delhi, 1988; for views on the controversial issue of scientific status of Muslims after the 10<sup>th</sup> century, see Dimitri Gutas: "Islam and science; a false statement of the problem", *Islam and Science*, vol. 1, no. 2, 2003.

accumulation of knowledge from all over the world, particularly the translation and transmission of ancient Greek knowledge<sup>38</sup>.

By the decline of the Abbasid Empire in the 10<sup>th</sup> -11<sup>th</sup> century, scientific institutions lost their prominence. While Islamic society enjoyed further developments in philosophy, science remained in the realm of theology. Muslim scholars were unaware of the scientific revolution in Europe, where natural sciences and philosophy were increasingly divided from theological education.<sup>39</sup> After this period, superiority in scientific developments gradually shifted from the Islamic world to Europe.

Rational schools of thought, most importantly *mo'tazilism*<sup>40</sup>, which were deeply influenced by Greek philosophy, became marginalized by the advent of anti-philosophical movements like the *ash'arism* school which became dominant throughout the Islamic world. The most influential voice among *ash'ary* philosophers was Abu Ḥāmid al-Ghazālī (1058-1111), who decisively denounced philosophers and scholars for their efforts to discover, inquire and innovate in his famous book *Tahāfat ol-Falāsafeh* (The Incoherence of the Philosophers). Because everything in nature is subject to God's will and nothing happens apart from God, to search for the causes of and reasons for natural phenomena is incompatible with Islamic teaching. In the *ash'ary* point of view, the world is a series of events willed by God, and God's will is entirely free. Ghazālī's book was a definitive response to the proponents of rational thought and *ash'ary* philosophers frequently referenced this work in later centuries.

After Ghazālī, philosophy was rarely a subject of study, with the exception of some Shiite territories. The undermining of Muslims' interest for scientific inquiry and the disappearance of all scientific activities dates back to around 1500<sup>41</sup>. The reasons and roots for the success of the *ash'ary* school of thought and the decline of philosophical inquiry is not the question of this study. Rather, its consequences and impact are the primary concern.

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<sup>38</sup> Jürgen Renn: *The Globalization of Knowledge in History*, Based on the 97<sup>th</sup> Dahlem Workshop, Berlin, 2012, pp. 298-9.

<sup>39</sup> Dimitri Gutas: "Avecina and His Heritage; the Golden Age of Arabic Philosophy", *Acts of the International Colloquium, 8-11 September 1999*, edited by Jules Janssens and Daniel De Smet, Leuven, 2002, p. 90.

<sup>40</sup> For more information on the rational tradition of Islam, see Farhād Daftary: *Intellectual Traditions in Islam*, Chapter 4 written by Moḥsen Maḥdī, London and New York, 2001 and Seyyed Ḥossein Nasr: *Science and Civilization in Islam*, Cambridge, 1968.

<sup>41</sup> Cohn (1994), p. 410.

In Islamic tradition, according to the source of acquisition, knowledge is divided into transmitted sciences (*'ulūme naqlīyeh*) and rational sciences (*'ulume 'aqlīyeh*). The former defined the knowledge transmitted basically from God, through revelation to his messenger. In this regard, sacred texts attributed to God and the Prophet are considered authentic and absolute knowledge. These texts are assumed to be the literal words of God, so they cannot be the subject of criticism. Rather, they should be studied precisely in order to discover the true meaning within. For more than 1400 years, Muslims dedicated many disciplines to the interpretation of the sacred texts<sup>42</sup>.

From the 11<sup>th</sup> to the 14<sup>th</sup> century in Iran, Iraq and Anatolia, Turkic dynasties like the Seljuks institutionalized the transmission of Koranic sciences in religious schools, known as the *Madrassa*. The Seljuq vizier Nizām ol-Mulk founded these schools, which became known as *Nezāmī-yi*<sup>43</sup>. These schools were mostly financed by endowments (*vaqf*) of local rich believers and elites. Across the Middle East from Morocco to India, the *madrassa* provided accommodation and a well-defined curriculum to learn religious knowledge for the students who sought a pious way of life.<sup>44</sup>

The 19<sup>th</sup> century had a major impact on the Middle East in terms of its economic and political relationship with Europe<sup>45</sup>. Islamic hegemony was gradually reduced from the second half of the century onwards. Traditional Islamic institutions and the *'ulamā* lost their previous prominence. Many regions in the Islamic world were colonized by Britain or France. Through the colonial system or other methods of exchange between countries, new military equipment, a new health system, vehicles, industrial production, and finally new science found their way into the Middle East. Influenced by European reforms, new educational schools were established all over the Islamic world, from North Africa to South Asia<sup>46</sup>.

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<sup>42</sup> Renn (2012), p. 296-7.

<sup>43</sup> Nasr (1968), p. 71

<sup>44</sup> Renn (2012), p. 300.

<sup>45</sup> For a detailed investigation of the 19<sup>th</sup> century industrial revolution and its impact on the world economy see Jack A. Goldstone: "Efflorescences and Economic Growth in World History; Rethinking the "Rise of the West" and the Industrial Revolution", *Journal of World History*, vol. 13, No .2, pp. 323-389, 2002; two sources for a comprehensive history of the Middle East in the modern era are: James Gelvin: *The Modern Middle East*, Oxford, 2005, and Bernard Lewis: *The Middle East; a Brief History of the Last 2,000 Years*, New York, 1995.

<sup>46</sup> A classical example of historical study of science is George Basalla's work explaining the patterns of diffusion of European science in non-European countries. In an article in *Science* (1967, vol. 156, pp. 611–622), he reveals his model of three phases of development of science outside Europe, which involves first the scientific investigation by Europeans around the world, second, scientific activities done by European states, in bringing science to the region under their domination, and finally indigenous societies establishing their own independent scientific institutions.



In colonized regions like Russian Central Asia, India, and North Africa, governments urged people to learn the language of the colonizers in order to be able to access European knowledge<sup>47</sup>. New European science was mostly introduced to the Islamic world by Christian missionary schools. Though they had little success in converting their students, they were the initial vehicles for transmission of new science into the region. Religious minorities also helped to establish the first modern universities, like the Syrian Protestant College in Beirut founded in 1866<sup>48</sup>. After the invasion of Egypt under Napoleon in 1798, traditional Islamic education in North Africa was drastically substituted for European-style education<sup>49</sup>. New schools were established all over this region to educate people and in particular to train teachers. A notable example was the 1872 founding of the Dār ol-‘Ulūm in Cairo, which later became Cairo University.

Newspapers were the other source of enlightenment about new science, which shaped a new public sphere by borrowing from European media and translating into Arabic. The first Arabic newspaper was published in Egypt in 1828. From the second half of the 19<sup>th</sup> century onwards the number of magazines and newspapers increased, first in Syria, Lebanon, and Egypt and later in the other countries. Egypt was also home to a European-inspired cultural renaissance, known as al-Nahda, which had appealing cultural reforms and helped the proliferation of the press and other publications. This movement, which spread through the Arabic-speaking world, changed the conception of knowledge in the Middle East<sup>50</sup>. Iranians also found Egypt a fruitful environment and those in exile found the freedom to publish their books and articles there.

In the 18<sup>th</sup> century, Great Britain colonized India and English scientists began to discover the “new” continent<sup>51</sup>, collecting and classifying the plants and the animal life, and publishing their findings in European journals<sup>52</sup>. The East India Company brought new medicine and engineers and established large-scale projects to map the country, its resources, and carry out ethnographic studies of the indigenous people. Some native Indians became acquainted with new science through their association to these expeditions, but during the first decades of colonial rule, the Indian government

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<sup>47</sup> Bernard Lewis: *The Middle East; A Brief History of the Last 2,000 Years*, New York, 1995, p. 311.

<sup>48</sup> Aaron Segal: “Why Does the Muslim World Lag in Science?”, *Middle East Quarterly*, pp. 61-70, 1996, p. 62.

<sup>49</sup> Dale F. Eickelman: “The Art of Memory; Islamic Education and Its Social Reproduction”, *Comparative studies in Society and History*, vol. 20, no. 4, pp. 485–516, 1978, p. 487.

<sup>50</sup> Renn (2012), p. 303.

<sup>51</sup> For more on Muslim intellectual activities in India in the 18<sup>th</sup> century see Jamal Malik: “Muslim Culture and Reform in 18th Century South Asia”, *Journal of the Royal Asiatic Society*, vol. 13, no. 2, 2003, pp. 227–243; and Syed Masroor Ali Akhtar Hāshemi: *Muslim Response to Western Education; A Study of four Pioneer Institutions*, New Delhi, 1989.

<sup>52</sup> George Basalla: “The Spread of Western Science”, *Science*, vol. 156, pp. 611–622, 1967, p. 613.

had no particular plan to introduce new science to the population. The foundation of new schools or the adaptation of new science and other cultural aspects of Europe were a reflection of the demands and priorities of the colonial state. Three universities were established in 1857 in Calcutta, Madras and Bombay, but the first modern national school, the Dār al-‘Ulūm Madrasa, was founded in 1866 in the North Indian town of Deoband in the model of a British college<sup>53</sup>.

However, the first standardized reforms appeared in the Ottoman Empire. Sulṭān Selīm III (1789-1807) and Sulṭān Maḥmūd II (1808-1839) laid the foundation for many of these reforms. The *Tanzīmāt movement*, or period of reformation in Turkey, was initiated under the reign of Sulṭān ‘Abdul Majīd I (1839-1861)<sup>54</sup>. During the rule of Selīm III, new European ideas first penetrated the empire through military training and technology. Maḥmūd II opened some new-style schools, most importantly Makteb-i Ma‘ārif and Makteb-i ‘Ulūm-i Edebī-yi, for the training of government staff and translators. He intended to create a new system of education an initiative continued by his successor ‘Abdul Majīd I. The Chancellor of ‘Abdul Majīd I, Reshīd Pāshā, was one of the most important minds behind *Tanzīmāt*.

Although Sulṭān ‘Abdul Majīd I, Chancellor and minister of education, emphasized the balance between religion and secular instruction, the opposition of the ‘*ulamā* against a new educational system in Turkey was so intense that the relationship between the new and traditional institutions became increasingly hostile. In such an environment, al-Afghānī widely disseminated the concepts of Pan-Islamism and the Islamic revival. Though al-Afghānī did not coin the term, Pan-Islamism left an impression on many. It was in fact the founder of the Young Turks movement, Namik Kemal (1840-1888), who was the first to use this term<sup>55</sup>. The idea of unity of Muslim nations was itself inspired by the concept of nationalism<sup>56</sup>, which at this time was so successful in unifying people in Italy and Germany against their enemies<sup>57</sup>. Benefiting from this concept, the Young Turks became advocates of founding a constitutional government in the early 20<sup>th</sup> century, simultaneous to the decline of the Ottoman Empire. They left a significant mark on the eventual

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<sup>53</sup> Renn (2012), pp. 349-352.

<sup>54</sup> For more information about *Tanzīmāt* see Bernard Lewis: *The Emergence of Modern Turkey*, Oxford, 1968 and Niyazi Berkes: *The development of Secularism in Turkey*, Montreal, 1998.

<sup>55</sup> Nikki Keddie: *Roots of Revolution: An Interpretive History of Modern Iran*, Connecticut, 1981, p. 188.

<sup>56</sup> To find information about new political concepts in Islamic countries see Ḥamid Enāyat: *Modern Islamic Political Thought*, Hampshire, 1982; Hesham Sharabi (Eds.): *Theory, Politics and the Arab world*, New York, 1990.

<sup>57</sup> Lewis (1995), pp. 313-14.

reform movement in Turkey, led by Mustafā Kemāl Atātürk (1881-1938), the founding father of modern Turkey later in the 1920's.

Turkey, as a Muslim state and neighbor of Iran, in many ways served as an example of reform. The Turkish reforms of the *Tanzīmāt* (1839-1878) left an important imprint on the situation in Iran. Amīr Kabīr traveled to Erzurum in the Ottoman Empire in the mid 1840's, and lived there for four years and became acquainted with the idea of reforms. Many other Iranian visitors had an underlying assumption that if Turkey, with its similar history and culture, could break away from this backwards condition, so too could Iran. They saw Turkey as a model for action.

## 2-3- Iran

Iran, like other Islamic countries, lagged behind in scientific inquiry and innovation and did not benefit from the achievements in Europe. As a result, Iranians were ignorant of the enlightenment movements and the renaissance when new empirical sciences were about to emerge in Europe after the 17<sup>th</sup> century. Although there was a trend among Iranians to follow traditional rational science in Neẓāmī-yi schools, it is beyond the scope of this study. Rather I will only examine Iranian encounters with new European science. During the Safavid dynasty (1501-1736), Iranians began to establish political relationships with European states and showed interest in acquiring new military technologies. To compete with their enemies, it was vital to adopt new military methods and tools. Beyond this motivation, they had no intrinsic interest or curiosity in European knowledge and thought.<sup>58</sup>

The earliest Iranian encounters with new developments in European civilization can be found in the travelogues written in the Safavid period. Orūj Beyk Bayāt (1560-1605) is one of the first Iranians who mentions European technologies while describing the differences between “the new world” and “the Iranian” one. He was strongly impressed by European industrial achievements and in his travelogues, he pays lots of attention to what “they” have that “we” Iranians do not.<sup>59</sup>

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<sup>58</sup> ‘Abdulhādi Ḥāeri: *Nokhostīn Royāroyi-hā-yi Andīshegarān-I Irāni bā do Royi-yi Tamadone Borzhūāzī-yi Gharb* (First Encounters of Iranians with two faces of European Bourgeois Civilization), Tehran, 1999, p. 144.

<sup>59</sup> *Ibid.*, pp. 161-164.

‘Abd al-Latīf Shūshtarī (1758-1805) the writer of the famous book *Tohfat al-‘Ālam*, showed his vast knowledge of the new European civilization by asserting that compared to the new science, Iranian knowledge was totally vain and nonsensical. He believed that the argumentation and reasoning of the new science were solid. When introducing the astonishing achievements of Newton, he attributed European scientific progresses to the respect that kings were holding for the scientists.<sup>60</sup> Another important travelogue was written by Mīrzā Abol-Ḥassan Khān Īlchī (1776-1846), an aristocrat and famous diplomat. In 1809 as the ambassador of Iran, he visited the United Kingdom and prepared a book from notes of his experience living for 18 months in London. He called his book *Ḥeirat Nāme-yi Sofarā* (Letter of amazement of the ambassadors). He explained enthusiastically everything he observed in Europe and expressed his astonishment of European society. He was not alone in this sentiment as these early encounters could best be described as feelings of perplexity and wonder.

In the first half of the 19<sup>th</sup> century, most Iranians were still unaware of the scientific revolutions of the 17<sup>th</sup> century and the advances that had resulted from it. For them Europe was an alien culture that one could occasionally travel to in order to observe these foreign advances. Military clashes with Russia revealed the vulnerability of the Iranian army against new methods and technologies of warfare and emphasized to them the necessity to incorporate this new European science. One of the first individuals who realized the need for changes was Abbās Mīrzā (1789-1833), Crown prince of Fat‘alī Shāh (1772-1834). He was the commander-in-chief of the army and a pro-modernist, who realized that Iran was not prepared to confront Europeans and other powerful states on the battlefield. Iran needed modern weapons, which at the time were in the possession of European states.

In order to modernize the army Abbās Mīrzā founded a weapon factory in Tabrīz and sent students to Europe<sup>61</sup> to study military sciences, engineering, medicine, and languages<sup>62</sup>. Mīrzā Šāleḥ Shīrāzī (1790-1845) was among the first students and the most famous one. He wrote a

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<sup>60</sup> Ibid., p. 274.

<sup>61</sup> A comprehensive study on the history of sending Iranian students to Europe is Muḥammad Farhād ‘Atāī’s doctoral thesis: *The Sending of Iranian Students to Europe, 1811-1906*, in University of California, Near Easter Studies department, Berkeley, 1992; also see Ḥossein Morādinezhad: “Pazhoheshi darbāre-yi Ferestādane Dāneshjo be Khārej; Dar dore-yi Qājār va Pahlavī” (A Survey on Sending Students to Abroad; in the Qājār and Pahlavī Period), *Name-yi ‘Olūme Ejtema‘ei*, vol. 4, pp. 90–115, 1974; and one of the first sources is: Mojtabā Minavī: “Avalīn Kāravāni Ma‘refat” (The First Caravan of Knowledge), *Yaghmā magazine*, vol. 6, no. 7, Tehran, 1953.

<sup>62</sup> Muḥammad Sālār Kasrāei: *Chāleshī Sonat va Modernite dar Iran; Az Mashrūti tā 1320* (Challenges of Modernity and Tradition in Iran, from the Constitutional Revolution till 1320), Tehran, 2000, p. 67.

travelogue about his journey to Europe<sup>63</sup> and although he was there to educate himself in European science and languages, there was no discussion on science or scientific institutions in his book. Instead, he was more interested in European architecture, clothing, furniture, and the etiquette of their parties.

French thinker Comte De Gobineau (1816-1882), a diplomat who spent some years in Iran (1885-1858; 1861-1863), discussed the experience of Iranians returning after their studies abroad at European universities in his famous book *Les religions et les philosophies dans l'asie central*. He asserted that Iranian perception of European thought is entirely different from the original, and in fact, they make their own version. He declared that these individuals lose their faith in religion without achieving any fruitful consequences of this shift in the mentality; and this change only decreases their intellectual ferment<sup>64</sup>. He himself introduced Descartes' most important book, *Discourse on the Method* to Iranians, suggesting Mollā Lālezār to translate it into Persian<sup>65</sup>. De Gobineau believed that Descartes, more than other thinkers, embodied European thinking characteristics and asserted that there is no similarity in ideas between Descartes and contemporary Asian or Islamic philosophers. Therefore, it had the potential to influence a new mindset<sup>66</sup>. This book was the first translation, albeit a poor one, of a new philosophical book in 19<sup>th</sup> century Iran<sup>67</sup>.

In the middle of the 19<sup>th</sup> century, economical and structural changes like the telegraph, a modern postal service, the construction of new roads, the publication of newspapers and the importation of foreign goods changed drastically the face of Iranian society. With the local economy undermined and increased communication in international trade, merchants considered Europeans to be their competitors<sup>68</sup>. Before this era, there was no sign of hostility towards foreigners, especially Europeans who, according to their own travelogues, could have easily participated in worships and lamentations in mosques. Many Christian missionaries could build

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<sup>63</sup> Shirāzī, Mīrzā Sāleh: *Safarnāmeḥ* (Travelogue), Tehran, 1984.

<sup>64</sup> Comte De Gobineau: *Les religions et les philosophies dans l'asie central*, Persian Translation Muḥammad 'Alī Farahvashi, in: <http://www.bayanic.com/showPict.php?id=mazaheb&ref=0&err=0&curr=0>, Access date: 25.11.2015, pp. 111-116.

<sup>65</sup> Karim Mojtahedi: *Āshenāei-yi Iranian bā Falsafe-hā-yi jadīd*, Tehran (Iranian acquaintance with new Philosophies), 2000, p. 76.

<sup>66</sup> De Gobineau (2015), p. 111.

<sup>67</sup> To read more about Gobineau and philosophy in Iran, see Karim Mojtahedi: "Falsafe-hā-yi Irani-Islami be Revāyate Cont Dogobineau" (Iranian-Muslim Philosophies, Narrated by Comt De Goubinou), *Tārīkhe Mo 'āṣer*, no.23, pp. 205-228, 2002.

<sup>68</sup> Yervand Ābrāhāmian: *Iran between two Revolutions*, Translated into Persian by Firūzmand, Tehran, 2013, p. 76.

schools and publish their books without confrontation with Muslims. Not considering or appreciating the unintended socio-economic consequences of European penetration in Iran, European writers in this period took it for granted that hostility against Westerners was one of the inherent aspects of Iranian culture at the end of 19th century<sup>69</sup>.

At this time, the dominant political structure of Iran was feudalism; the king had practically no power on the provinces and he was only the ruler of the capital city. The head of the greatest tribe governed each respective province. In an era in which 80 percent of the world's population was under the control of a colonial system, Iran was one of the few countries that never became colonized, in spite of its favorable geopolitical location. However, because of the feudalistic structure, Russia and Great Britain managed to infiltrate the most important tribes respectively in the north and the south of Iran. Thus, Iran remained in a semi-colonial situation until 1925, when Reżā Shāh (1878-1944) founded the new national state. It was only then that the influence of Britain and Russia in the country diminished.

### **2-3-1- Dār ol-Fonūn**

After a period of reformation at the time of the crown prince Abbās Mīrzā, the second phase of reforms began with Amīr Kabīr (1807-1852). He was the prime minister of Nāṣir ad-Dīn Shāh (1831-1896) and the history of higher education in the new era began with him<sup>70</sup>. Traveling as an Iranian envoy to the Russian empire, Amīr Kabīr was fascinated by the new political institutions and modern schools and universities in Moscow. Upon his return, his position as chancellor allowed him to initiate the establishment of a new-style school, the so-called Dār al-Fonūn. Founded in Tehran in 1851, this school was the first of its kind in Iran.

The school admitted 105 students and the main areas of instruction entailed military sciences, medicine, natural sciences, technology, history, geography, and fine arts<sup>71</sup>. Because of the negative reputation of both Russia and Britain in parts of Iran, Amīr Kabīr used Austrian

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<sup>69</sup> Ābrahāmian (2013), p. 92.

<sup>70</sup> For more information about Amīr Kabīr see Fereydūn Ādamīyat: *Amīr Kabīr va Iran* (Amīr Kabīr and Iran), Tehran, 1969; Muḥammad ‘Alī Akbarī: *Mīrzā Taqī Khāni Amīr Kabīr dar Tarāzū-yi Tanqī-yi* (Judgments about Mīrzā Taqī Khāni Amīr Kabīr), Tehran, 1995 and Abbās Eqbāl Āshtiyāni: *Mīrzā Taqī Khān Amīr Kabīr*, Tehran, 1961.

<sup>71</sup> Reżā Ārāsteh: *Education and Social Awakening in Iran*, Leiden, 1962, p. 21.

teachers for this school<sup>72</sup>. The first group of students graduated from Dār ol-Fonūn in 1858 and began their careers in the political administration. Those who studied medicine and painting later became the court physicians or court painters<sup>73</sup>. E‘temād al-Saltaneh (1843-1896) was the most famous disciple of the school and highly trusted by the king. Later he traveled to Europe and wrote a book<sup>74</sup> on innovative technologies in Europe, which during the Qājār period found their way to Iran. Graduates of Dār al-Fonūn constituted the key figures of the coming political revolution in Iran.

Dār al-Fonūn was a gateway through which new disciplines and various ideas and concepts entered Iran and challenged the established points of view. One of the physicians who came to Iran to teach at the Dār ol-Fonūn was Jacob Eduard Polack (1818-1891), whose book (*Letters from Persia*) is an important contemporary account of the school. Considering the fact that the 19<sup>th</sup> century is known as the century of great epidemics, namely cholera, typhus and yellow fever, the Iranian interest in learning new medicine was predictable<sup>75</sup>. However, scientific medicine was already introduced through European military and diplomatic missions during the Safavid period. To protect themselves from local diseases, Europeans brought physicians with them and built hospitals wherever they intended to live<sup>76</sup>. Only through Dār ol-Fonūn could Iranians begin to acquire this medical knowledge.

Malkam Khān (1833-1908) first introduced the telegraph to Iran, and the teachers of Dār ol-Fonūn helped to spread the use of this technology. Another attractive technology brought about by this school was photography, which became a branch of study in the chemistry department. Although photography itself was introduced earlier (Nāṣir ad-Dīn Shāh was fascinated by this

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<sup>72</sup> For more information about Dār ol-Fonūn and other schools see Maryam Ekhtiyār: *Dār ol-Fonūn, Educational Reform and Cultural Development in Qājār Iran*, PhD thesis, in New York University, Near Eastern Languages and Literatures, New York, 1994; Hossein Maḥbubi Ardakāni: *Tārīkhi Mo‘assesāti Tamadonī-yi Jadīd dar Iran* (The History of New Civilizational Institutions in Iran), Tehran, 1992; Eqbāl Ghāsemi Puyā: *Madāres-i Jadīd dar dori-yi Qājārī-yi; Bānīyān va Pīshrovān* (New Schools in Qājār Period; Founders and Pioneers), Tehran, 1998 and Maqsud Farāsatkāh: *Sargozasht va Savāneḥe Dāneshgāh dar Iran* (History and Events of the University in Iran), Tehran, 2010.

<sup>73</sup> Ekhtiyār (1994), p. 183.

<sup>74</sup> Muḥammad Ḥassan Khān E‘temād al-Saltaneh: *Alma‘āser val-Āsār* (Achievements and Results), Be kushishi Iraj Afshār, Tehran, 1984.

<sup>75</sup> To find more about the history of medicine in Qājār period see Cyrus Shāyeq: *Who is Knowledgeable is Strong: Science, Class and the Formation of Modern Iranian Society, 1900-1950*, California, 2009.

<sup>76</sup> Ekhtiyār (1994), p. 220.

technology and brought back a camera from his travels in Europe)<sup>77</sup>; now Iranians could discover the scientific process of this technology and become a popular activity.

Some other skills served to be essential to the teaching that occurred at Dār ol-Fonūn, such as printing and translating of European texts. The school needed to instruct some individuals to fulfill these tasks. Those responsible for translating proper texts for the students included Europeans with knowledge of Persian, Christian Iranians and those students who had learned a foreign language, most notably the Forūghī brothers: Muḥammad ‘Alī and Abul-Ḥassan<sup>78</sup>. After 1871, foreign languages study entered the curriculum of the Iranian schools. Translating European books of history inspired Iranian intellectuals and introduced to them a new concept of historiography. Newton and his novel ideas were introduced to Iranians by the publication of an article in 1861, written by I‘tezād al-Salṭaneh (1819-1880), the minister of education. In 1870 Mīrzā Taqī Anṣārī Kāshānī (1840-1901), teacher of medicine at Dār ol-Fonūn, translated some parts of Darwin’s main work *On the Origin of the Species*.

Despite all the excitement that Dār ol-Fonūn caused, Amīr Kabīr made many enemies, mainly as a result of new reforms in the Qājār monarchy, but also for his modernist approach. His most powerful enemy was the Queen Mother, who seduced Nāṣir ad-Dīn Shāh to dismiss the chancellor. Amīr Kabīr was killed just ten days after the opening ceremony of Dār ol-Fonūn. Jacob Polack, one of the Austrian instructors invited to teach medicine in Dār ol-Fonūn, described the situation: “we reached to Tehran on the 24<sup>th</sup> of November 1851; nobody came to welcome us and we were coldly greeted. The atmosphere has changed so quickly in a short time<sup>79</sup>”.

Along with the assassination of Amīr Kabīr, Iranians’ initial attempts at establishing a new-style university was for many reasons unsuccessful. The inner circle of the monarchy was concerned about the influence the school would have in training a new generation who would call for greater reform in the government and country. They convinced Nāṣir ad-Dīn Shāh that the new school instructs people against the authority of the king<sup>80</sup>. Despite a decline in the Shāh’s support for the new school, its cultural impact was profound, through the training of the next generations of reformists, and also through introducing European ideas and sciences. Much of this information

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<sup>77</sup> Abbās Millāni devoted a chapter of his book *Lost Wisdom, Rethinking Modernity in Iran*, Washington DC, 2004, to Nāṣir ad-Dīn Shāh travels to Europe and his reaction to modern technologies and thoughts.

<sup>78</sup> I will explain about them in Chapter 3-6.

<sup>79</sup> Jacob Edward Polack: *Iran va Iranian* (Iran and Iranians), Translated into the Persian by Keikāvūs Jahāndāri, Tehran, 1982, p. 207.

<sup>80</sup> Yaḥyā Dolat Abādi: *Ḥayāti Yahyā* (Life of Yaḥyā), in 4 Volumes, Tehran, 1992, vol.1, p. 326.



was transmitted through books, which were initially translated for the students as textbooks but later were published for the public<sup>81</sup>. By publishing new teaching materials of *Dār ol-Fonūn*, a new dialogue was created in Iranian society. The readers were divided into two groups based on their opinions of Europe. One group was suspicious of Europeans' colonial intentions of spreading their sciences and believed that new knowledge was in contradiction to Islamic instruction. On the other hand, the other group was optimistic about the impact of new science on the development of society and saw no contradiction between science and religion.

These debates largely occurred outside of Iran. Nāṣir ad-Dīn Shāh 's strict policy on freedom of speech forced many intellectuals to leave the country and live in exile. Therefore, the center of political activities of the opposition moved to some other countries, most importantly the Ottoman Empire, India, Egypt, the Caucasus, Britain, and France. Iranians in exile used the opportunities of these different environments to publish newspapers critical of the dictatorship in Iran. For instance, *Akhtar newspaper*, published in Istanbul from 1875 for nearly twenty years<sup>82</sup>, was a distinguished one, for which Āqā Khān Kermānī<sup>83</sup> and his life-long comrade Shaikh Aḥmad Rouḥī (1856-1896) provided some articles. Some of the famous intellectuals from inside Iran like the famous liberalist Yousef Khān Mostashār od-Dowle (1823-1895) also cooperated with this newspaper, which at this time had many advocates who referred to themselves as *akhtari*.

Another significant journal was *al-'Orvat al-Voṣqā*, whose chief authors were Jamāl ad-Dīn al-Afghānī<sup>84</sup> (1838/9-1897) together with his fellow Muḥammad 'Abdū<sup>85</sup> (1849-1905). They both advocated for the Islamic union and published this journal weekly in Arabic in Paris in 1884 and later they continued with the same content under the title of *Ḥabl ol-Matīn* in Calcutta in 1893, with the editorship of Shaikh Yaḥyā Kāshānī (1873-1929). Three important newspapers had also been published in Cairo, including: *Ḥekmat*, the first Persian journal in Egypt which was published

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<sup>81</sup> To read more about translation and its function in this period, refer to: Omid Āzādibougār: "Modernization and Translation into Persian", *Target, International Journal of Translation studies*, vol. 22, Issue. 2, pp- 298–329, 2010.

<sup>82</sup> Edward Brown: *A Literary History of Persia*, in 4 Volumes, London, 1909, p. 334.

<sup>83</sup> I devoted one chapter to his thoughts and works, chapter 3-2

<sup>84</sup> Chapter 3-4 is devoted to his writings.

<sup>85</sup> Intensively affected by Afghani's ideas, he was known as the founder of Islamic Modernism in Egypt. To read more about him see for example: Charles Adams: *Islam and Modernism in Egypt*, Cairo, 1933; Elie Kedourie: *Afghānī and 'Abdūh: An Essay on Religious Unbelief and Political Activism in Modern Islam*, London, 1966 and Mark Sedwick: *Muḥammad 'Abdūh*, Oxford, 2010.

from 1892 until 1911 by Mīrzā Mehdī Khān Tabrīzī<sup>86</sup>, a graduate of medicine, *Ṣorayā* in 1898 and *Parvareh* in 1900, both by ‘Alī Muḥammad Khān Sheibāni Kāshānī<sup>87</sup>.

The other influential newspaper called *Qānūn*, was published in 41 Volumes by Malkam Khān in London in 1890. Malkam Khān was a leading intellectual who was extremely influential on the formation of new opinions in Iran. He wrote a treatise called *Ketābche-yi Gheiybī* (Occult manual) in order to advise the Shāh and encourage him to make political reforms, as he had come to the conclusion that the secret of European progress was their law and order. Despite the fact that he considered these outcomes of European progress as the cause of their progress, he was nevertheless one of the most influential figures in Nāṣir ad-Dīn Shāh’s and Moḥammad Taqī Shāh’s (1853-1907) reign<sup>88</sup>. His small treatise made a great impact on the introduction of concepts of political discourse, like legalism and constitutionalism, into Iran.<sup>89</sup> This work was the most important political book in the second half of the 19<sup>th</sup> century in Iran and had a vast number of readers among intellectuals and the middle class.

Another work that is worth to be mentioned here is the famous title *Sīyāḥatnāmeḥ-yi Ebrāhim Beig* (The Travelogue of Ebrāhim Beig), written by Zein al-‘Ābedīn Marāgheh-ī<sup>90</sup> (1840-1910), which had a profound effect on encouraging people to criticize the status quo of Iran<sup>91</sup>. Other distinguished books of this period that played an important role in the emerging discourse in Iran, are *Maktūbāt-i Kamāl od-Dowle*, written by Mīrzā Fat‘alī Ākhūndzādeh *Se Maktūb* and *Ṣad Khaṭābe*, by Kermānī and *Kitāb-i Aḥmad* by Ṭālibof Tabrīzī. Each of these three titles deserve to be studied in greater detail, therefore, I devoted a chapter to each of them.

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<sup>86</sup> Yaḥyā Ariyanpūr: *Az Ṣabā tā Nimā; Tārīkhe 150 Sāl Adabe Fārsi* (From Ṣabā to Nimā; 150 years History of Persian Literature), in 2 Volumes, Tehran 1972, vol. 1, pp. 251-252.

<sup>87</sup> Brown (1909), p. 334.

<sup>88</sup> From 1848 till 1907.

<sup>89</sup> For more information about Malkam Khān see Hamed Elgar: *Malkam Khān; Zendeḡī va Āṣāre Oo* (Life and Works of Malkam Khān), Translated by Jahāngir Azīmā, Tehran, 1991; Esmāeīl Rāeīn: *Mīrzā Malkam Khān; Zendeḡī va Kushish-hā-yi Sīyāsi-yi U* (Malkam; His Life and Political Endeavor), Tehran, 1974; Fereydūn Ādamīyat: *Andīshe-yi Taraqī va Ḥokūmati Qānūn* (The Idea of Progress and the Reign of Law), Tehran, 1972; Karīm Mojtahedi: *Āshenā-yi Iranian bā Falsafe-hā-yi jadīd* (Iranian Acquaintance with New Philosophies), Tehran, 2000.

<sup>90</sup> Known also as Ṭūṭī Marāgheh-ī

<sup>91</sup> Fereydūn Ādamīyat: *Fekre Āzādī va Moqadami-yi Nehzati* Mashrūteh (The Idea of Freedom and Preparation for Constitutional Movement), Tehran, 1961, pp. 127-136.

## 2-3-2- The School of Political Sciences

After the foundation of Dār ol-Fonūn many new-style schools were established, for instance Maktabe Moshīriye, or Madrese-yi Roshdiyeh, Mozafariye, Sharaf, Sa'ādāt, Dānesh, Adab, Kamāl, .... European missionaries also founded many schools in the second half of the 19<sup>th</sup> century. The first decades of the next century saw the establishment of 76 missionary schools for girls and boys across the country<sup>92</sup>. The most influential school was the School of Political Sciences, established in 1898 by Naşrollāh Khān Moshīr od-Dowle (1840-1907), the Iranian foreign minister. The schools' founding after the death of Nāşir ad-Dīn Shāh was a response the country's need to implement laws and to train diplomats for the ministry of foreign affairs. In the four years of studying in this school, students would have studied history, geography, Persian literature, French, jurisprudence, and international law<sup>93</sup>.

Some of the most notable students of the school who all later became famous political activists included Muḥammad 'Alī Forūghī (1875-1942), 'Abdullāh Mostoufī (1879-1951), 'Alī Akbar Sīasy (1896-1990), 'Alī Akbar Dekhodā (1879-1956), Muḥammad Mossadegh (1882-1967) and two sons of Moshīr od-Dowle; Mīrzā Ḥassan Khān (1872-1935) and Mīrzā Ḥossein Khān (1875-1948)<sup>94</sup>. The establishment of this school came just eight years before the constitutional revolution in Iran was responsible for bringing about new political concepts to the Iranian discourse. The School of Political Science, together with some newspapers like *Qānūn*, *Akhtar*, *Şorayā*, *Parvaresh* and *Ḥabl ol-Matīn*; provided the ideas and conceptions for political activists and caused the growth of interest in political reforms, which all culminated in the constitutional revolution<sup>95</sup>.

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<sup>92</sup> Kasrāei (2000).

<sup>93</sup> To find more information on this school see Changiz Pahlavān, *Rishe-hā-yi Tajadod dar Iran, Madresi-yi , 'Olūme Siyāsi va Resāle-yi Hoqūqe Asāsi* (The Roots of Modernity in Iran; School of Political Science and Treatise of Basic Rights), Tehran, 2003.

<sup>94</sup> Pahlavān (2003), pp. 4, 19.

<sup>95</sup> Aḥmad Kasravī: *Tārīkhe Mashrūteh-yi Iran* (History of Constitution of Iran), Tehran, 1984, p. 39.

### 2-3-3- Constitutional Revolution

In 1892 both Iranian intellectuals and members of the middle class carried out a vast protest against Tobacco trade concessions in Iran, which Nāṣir ad-Dīn Shāh gave to an English businessman, Gerald Talbott. Their demonstration convinced the Shāh to cancel the Tobacco contract. It was good preparation for the coming protests, which culminated in the constitutional revolution. After the tobacco uprising, Nāṣir ad-Dīn Shāh began to limit political freedom and turned against sending students to Europe or developing new schools in Iran. He also banned some important newspapers like *Akhtar* and *Qānūn*<sup>96</sup>. After the assassination of the Shāh in 1896, Iran enjoyed a political revival. As a result, many new newspapers and schools emerged and the number of texts and other media discussing progress, reform, and civilization dramatically increased.

A chain of disasters like cholera, famine and the rising of the food prices as a consequence of the war between Russia and Japan added fuel to the fire of social unrest. Finally, in August 1906 Moẓfar ad-Dīn Shāh agreed to establish a parliament. In December the same year he signed the constitution. He died just five days later and his son, Muḥammad ‘Alī (1872-1925), became his successor<sup>97</sup>. The number of newspapers and magazines increased from six to one hundred after the founding of the national parliament,<sup>98</sup> most of which carried optimistic and nationalistic titles such as *Progress*, *Awakening*, *Unity*, *Hope*, *New Era*, *Humanity* and *Fatherland*. After many years of mandatory silence, they felt free to express their ideas in the newspapers.

Unlike his father, Muḥammad ‘Alī Shāh was not satisfied with the political reforms or with the intellectuals’ intention to use the power of the parliament to accomplish their appealing reforms. He desired to follow his grandfather’s (Nāṣir ad-Dīn Shāh) policy in narrowing the scope of practice for the social actors. In June 1908, he ordered the bombardment of the parliament. Some members of the parliament were killed and the parliament was closed. Afterwards, many schools were destroyed and a curfew announced in Tehran. People in other cities began to object and finally the protestors reached Tehran and the Shāh’s civil war failed. A group of five hundred individuals composed of members of the disbanded parliament, rebels and some liberal aristocrats constituted a committee that decided to take Aḥmad, the twelve-year-old son of Muḥammad ‘Alī Shāh, as the new king, and they issued the order to form the second national parliament.

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<sup>96</sup> Ābrāhāmian (2013), p. 95.

<sup>97</sup> Ibid., pp. 102-109.

<sup>98</sup> Ibid., p. 110.

In the course of the constitutional revolution and the years after, the three concepts of freedom, nationalism and progress, all major ideals, became intermingled with each other. Each one related to the others and their final aim was the same: to develop Iran and move it in the direction of more advanced nations. In the years after the revolution (1909-1911), one of the most influential newspapers was *Iran-i No*, the official organ of the Democratic Party (*Hezbe Ādamīyūn*) in Iran. The chief editor and founder of the party was Muḥammad Amīn Rasūlzādeh (1884-1955). He was born in Āzərbayjan and studied political philosophy and was the writer of three treatises about socialism. The key feature of the *Iran-i No newspaper* was to introduce Iranians to the ideas of Karl Marx. The newspaper also began to criticize the class system of Iranian society and the discrimination against non-Muslims<sup>99</sup>.

### **2-3-4- Rezā Shāh's Reforms**

In the years following the constitutional revolution, Iran experienced a period of turmoil and confusion. The capital city was controlled by the reformists but the state was so fragile that it could hardly govern other cities. There was no hegemonic power in the country and some tribes began to revolt. There was also the threat of Russia and Great Britain in some provinces<sup>100</sup>. In 1921 Rezā Khān, a 42 years-old commander of the Cossack Brigade, came to Tehran with 3000 soldiers and the support of Gendarmerie officers, British military advisors and some reformists. They succeeded in staging a coup of the government in Tehran and finally in 1925 Rezā Khān pronounced himself the new king of Iran. He claimed that he would end the internal chaos, create social changes, save

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<sup>99</sup> Dāriush Homāyun: *Šad Sāl Keshākeh bā Tajadod, Tehran* (Challenging with Modernity in a Century), 2007, pp. 16-30.

<sup>100</sup> For more information about the constitutional revolution see Aḥmad Kasravī: *Tārīkhe Mashrūteh-yi Iran* (History of Constitution of Iran), Tehran, 1984; Fereydūn Ādamīyat: *Ideology-yi Nehzate Mashrūteh* (Ideology of the Constitutional Movement), Tehran, 1985; Janet Afary: *The Iranian Constitutional Revolution, 1906-1911*, Columbia, 1996; Mangol Bayāt: *Iran's First Revolution, Shī'ism and the Constitutional Revolution of 1905-1909*, New York, 1991; Mehdi Malekzādeh: *Tārīkhe Enqelābe Mashrūtiyate Iran* (History of Constitutional Revolution in Iran), Tehran, 2005; Venessa Martin: *Islam and Modernism, Iranian Revolution of 1906*, London, 1988; Māshā'allah Ajoudāni: *Mashrūteh-yi Irani* (Iranian Constitution), Tehran, 2004 and Ervand Ābrāhāmian: *Iran between two Revolution*, Tehran, 2013.

the country from foreign occupation and institute a period national resurrection<sup>101</sup>. This was exactly what reformists were waiting for, so he succeeded in attracting the support of many of the intellectuals and benefited from their accompaniment.

In the years between the constitutional revolution and when Reżā Khān came to the power (1907-1925), significant journals that reflected the voices of reformists included *Kāveh*, *Iranshahr*, *Nāme-yi Farangestān*, and *Āyandeh*. Seyyed Ḥassan Taqīzādeh established the *Kāveh journal* in Berlin together with a group of notable Iranian scholars in Europe in 1916, with the aim to strengthen nationalism<sup>102</sup> in Iran by writing articles about Iranian history and literature. Ḥossein Kāzemzādeh published *Iranshahr* in Berlin from 1922 to 1927, with an emphasis on the national consciousness. These two journals are the subject of my investigation and are examined in separate chapters. Other notable journals contain: *Nāme-yi Farangestān* by Moshfeq Kāzemī (1902-1977) in Berlin (1922-1927), *Āyandeh journal* by Maḥmūd Afshār (1893-1983) from 1925 to 1926 in Tehran, all with the intention to preserve national unity in Iran<sup>103</sup>.

In the first years of Reżā Shāh's reign, he enjoyed the support of the reformists in two domains; first in the construction of a modern and powerful army for Iran in order to conserve the national unity; and second in the development of a public education system, which was the main concern of the intellectuals. Because of the authoritarian nature of his reign, he gradually lost support amongst a major portion of the intellectuals.

The era of reform and modernization in Iran began with Reżā Shāh. He had huge dreams to change the face of Iran. Among all of the civil reforms carried out by him, the educational reform was most remarkable. According to Ābrahāmian, the number of elementary schools in 1925 was 648 and when Reżā Shāh handed over the kingdom to his son, it had reached to 2336; and the number of high schools increased from 47 to 351. The increase in the number of secondary schools occurred simultaneously with a process of urbanization in the country and with it came the need for more educated persons. Higher education also experienced dramatic changes. In addition to the

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<sup>101</sup> For more information about Reżā Khān see Cyrus Ghani: *Iran and the Rise of the Reżā Shāh: From Qājār Collapse to Pahlavi Power*, London, 2001; Gholām Reżā Afkhami: *The Life and Times of the Shāh*, California, 2008; Nikki Keddie: *Qājār Iran and the Rise of Reżā Khān 1796-1925*, costa mesa California, 1999 and Eervand Ābrahāmian: *Iran between two Revolutions*, Tehran, 2013

<sup>102</sup> Keivāndokht Gahāri devoted her book to the roots of nationalism in Iran and the role these journals played in the establishment of this concept: *Nationalismus und Modernisierung in Iran in der Periode zwischen dem Zerfall der Qajaren-Dynastie*, Berlin, 2001.

<sup>103</sup> For more information about these journals, refer to: Ābrahāmian: *Iran between two Revolutions*, Persian trans. 2013, pp-140-155; Edward Browne: *Literary History of Persia*, Volume 4: Modern Times (1500-1924), Cambridge, 1959.

increase in the number of higher educational institutes and students, starting in 1925 the state decided to send 100 students per year to European universities<sup>104</sup>.

This increase in the number of educational institutions had an important impact on altering the face of Iran, because these institutions had produced a huge number of graduates who were employed as officers in the new government's administration, or as teachers, doctors, lawyers or technicians. The result was the emergence of a new social class of educated people who were added to the small group of the intellectuals and together, they made the middle class, which played an important role in the coming events in Iran.

### **2-3-5- Establishment of the University of Tehran**

Opened in the 1925, the American college of Alborz incorporated the following departments: biology, chemistry, economics, education, literature, philosophy, social sciences, and medicine. The American school was founded in 1891 and many other missionary schools already existed in the country, devoted to teaching new science. In 1836, there were only three missionary schools but the number increased to 58 by 1851. The reason for their popularity was not a desire to convert to Christianity, but rather they wanted their children to receive better treatment than in *maktabs*, and to be educated in a new-style school<sup>105</sup>.

But Alborz was not a national university and after Dār ol-Fonūn, the University of Tehran was considered as the second university of Iran, established by the order of Reżā Shāh in 1934. With 25 faculties and 32,000 students, the University of Tehran is now the biggest university in Iran and one of the biggest in the Middle East. This university was created by merging existing faculties at this time since it was believed that having homogeneous educational strategies in all the faculties would make the higher education more efficient<sup>106</sup>. In 1931 'Abdul Ḥossein Teimortāsh (1883-1933), secretary of the court, sent 'Issā Şadīq A'lam (1894-1978) to America to research new universities in Western countries and propose a plan for establishing a modern university in Iran.

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<sup>104</sup> Ābrāhāmian (2013), pp. 180-182.

<sup>105</sup> Ārāsteh (1962), pp. 117-119.

<sup>106</sup> Tehran University Press: *Barresī-yi Angīze-ha-yi Ījād va Seire Tārīkhī va Takāmole Dāneshgāhe Tehran* (Motivations, History and Development of Tehran University), 1973, p. 34.

By the efforts of ‘Alī Asghar Ḥekmat (1892-1980), the minister of education, the proposal of Sadīq A‘lam was confirmed in the parliament in 1934. These institutes emerged: Dār al-Fonūn, school of political science, school of medicine, higher school of agriculture and urban industries, Zafar- school of agriculture, school of art, school of architecture, school of law and several other schools. The new university began its work consisting of six faculties including literature and social sciences, law and political sciences, medicine, natural sciences and mathematics, theology and Islamic sciences, and technology<sup>107</sup>. Another significant institute that should be mentioned is Farhangestān-i Zabān va Adabiyāt-i Fārsī (The Academy of Persian Language and Literature), established in 1935, with the aim to preserve Persian language from change and transmutation.

In the period after the establishment of the University of Tehran, various intellectual trends emerged in the country. One figure in particular was controversial. Aḥmad Kasravī (1890-1946) was a radical writer who was active in politics throughout his life, as well as one of the most eminent intellectuals and translators of Western thoughts in Iran. Directly or indirectly, he was involved in the decision-making concerning the acquisition of new European science and establishing modern scientific institutions in the late 19<sup>th</sup> century and in the beginning of the 20<sup>th</sup> century. Kasravī was a social and religious reformist and the most outspoken intellectual who was opposed religious superstition. He was also a nationalist and a pioneer in criticizing Western modernity, and gave a spiritual and ethical credit to the East, which was regarded as backward and resistant to change. Kasravī provoked many intellectuals and young activists during his lifetime and long after his assassination in 1946. His profound influence can be traced in the works of some reputable individuals like Aḥmad Fardīd (1909-1994), Fakhroddīn Shādemān (1907-1967), Jalāl Āle Aḥmad, ‘Alī Sharī‘atī (1933-1977) and Khomeinī (1902-1989)<sup>108</sup>. He was unsuccessful in producing a lasting reform within the established religious orders in Iran, but he wrote many books such as *Āyīn (Religion)* in 1932 and *Varjāvand Bonyād (Valuable Foundation)* in 1943, which were widely read.

In the next decades, Iranian intellectuals contemplated deeper and more precise meanings concerning the relation of science and religion or modern science and traditional knowledge. For example, the article by Moḥit Ṭabāṭabāei (1902-1993) in *Dīn o Dānesh (Religion and Science)* in

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<sup>107</sup> Ārāsteh (1962), pp. 25-6.

<sup>108</sup> Muḥammad Tavakoli Ṭarqī: “Tajadode Ekhteraei, Tamadone ‘Ārīyatī va Enghelābe Roḥānī” (Voluntary Modernity, Borrowed Civilization and Spiritual Revolution), *Iran-nameh*, Special Issue on Aḥmad Kasravī, vol. 20, no. 1-2, Spring and Summer, pp. 195-235, 2001, p. 197.



1965; Taqīzādeh's and Muḥammad 'Alī Forūghī's books and later 'Abdul-Karīm Sorūsh (1945-) devoted many articles and books to this subject. Although they began to raise some new questions, they discuss under the same discursive order and in all their statements about the European science there are some implicit presumptions, considered to be obvious. These presumptions can be traced back to the initial arguments of the first generations of Iranian intellectuals. In chapter three, I am going to reveal the results of my analysis on some of the most influential texts written by them.

## **Chapter 3**

### **Analysis of the Texts**

*Maktūbāt-i Kamāl od-Dowle*

By Mīrzā Fat‘alī Ākhūndzādeh (Ākhūndov)

**3-1-1- Biography**

Mīrzā Fat‘alī Ākhūndzādeh was born in the town of Nukha in 1812. His father, Mīrzā Muḥammad Tagī was the headman of Khāmeneh, a town near Tabrīz. Mīrzā Fat‘alī was born from his second marriage; since his mother was unable to cope with her husband’s first wife, she left with her son for a village in Qara Dāgh<sup>1</sup>. She lived there with her uncle, Ākhūnd Hājj ‘Alī Asghar, who became Mīrzā Fat‘alī’s mentor. In 1832, he took him to Ganjeh to study logic and Islamic jurisprudence. However, despite the efforts of his uncle, Mīrzā Fat‘alī was not destined to become a clergyman.

While studying in Ganjeh he met Mīrzā Shafī‘ (1794-1852), the Azarbāyjānī mystic, poet and calligrapher who had been accused of holding mystical and atheistic beliefs. Mīrzā Fat‘alī had originally intended to study calligraphy with Mīrzā Shafī‘, but his teacher made a lasting effect on him by introducing him to rationalism and mysticism and undermining his belief in Islam and the Shī‘a clergy. In 1834 Mīrzā Fat‘alī went to Tbilisi, where he was to spend the rest of his life. Due to his knowledge of the Russian language, he began to work as a translator for Oriental languages in the Russian chancellery. In Tbilisi, Ākhūndzādeh found himself surrounded by an intellectual and the cultural environment, which was completely different from that of Nukha and Ganjeh. The encounter with European philosophy, political thought, literature, and drama opened a new stage of his intellectual development.

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<sup>1</sup> Qara Dāgh is the name of a mountainous area in North West of Iran, which today called Arasbārān.

Ākhūndzādeh experienced three stages of intellectual activities. At first, he intended to influence people as a playwright, through the six comedies he wrote between 1850 and 1855. In his preface to the plays, Ākhūndzādeh declared that his aim as a playwright was social and didactic. By presenting superstitious and corrupted characters on-stage, he hoped to enlighten his audience<sup>2</sup>. As an author of stage plays in the European style, Ākhūndzādeh was a pioneer of modern Asian theatre, and his importance lies not just in his leadership, but also in his use of new techniques and his skills as a storyteller.

In the second stage, which began in 1858, he devoted himself to social activities instead of playwriting. He was convinced of the power of education to transform society, and declared that in order to accelerate the propagation of modern education a literate society had to be cultivated. Convinced the complicated structure of the Arabic alphabet would be an obstacle for literacy, he was the first one in the Islamic world to propagate a reform of the alphabet. In his *Alefbā-yi Jadīd va Maktūbāt* (The New Alphabet and the Letters), written in 1857<sup>3</sup>, Ākhūndzādeh argues that the existing deficiencies in Arabic script was the basic cause of the high rate of illiteracy among Arabs, Iranians and Turks. Above all, an alphabetical reform would simplify the method of teaching Arab, Persian and Turkish, leading to a substantial increase in the rate of literacy among people in the Middle East and Central Asia. In 1863, Ākhūndzādeh travelled to Istanbul in order to convince the Ottoman government to adopt his proposed alphabet. By 1872, however, he lost his hope of winning the support of either the Ottoman or the Iranian government for the introduction of a new alphabet.

For fifteen years, he tried unsuccessfully to conciliate his concept of reform within Islam to the ‘*ulamā*, by avoiding a general abandonment of the Arabic script. As an alternative, he proposed a new alphabet, which still would resemble the old script. Having failed in his efforts, however, he lost his patience and finally revealed his anti-religious and anti-Arab sentiments. In fact, he became one of the earliest and most outspoken atheists to appear in the Islamic world, and in his writings, in which he began to question the usefulness of, and even attack, traditional Islamic values and customs. He was also a precursor of Iranian nationalism, who in this role, profoundly affected his followers, among them Mīrzā Āqā Khān Kermānī.

Ākhūndzādeh’s third major literary venture, entitled *Maktūbāt-i Kamāl od-Dowle*, was undertaken in 1865. It consisted of a series of fictitious letters exchanged between two imaginary

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<sup>2</sup> Fereydūn Ādamīyat: *Andīshehā-yi Mīrzā Fat‘alī Ākhūndzādeh* (Ākhūndzādeh’s Ideas), Tehran, 2005, pp. 54-58.

<sup>3</sup> It was published in Baku in 1963.

princes, in which he set out his materialist view of the world and submitted Islam to a harsh and hostile criticism. In the following, his conception of “science” will be analyzed<sup>4</sup>.

### 3-1-2- About the Book

The three letters of an Indian prince Kamāl od-Dowle to his Iranian prince friend Jalāl od-Dowle, together with Jalāl od-Dowle’s replies, is undoubtedly Ākhūndzādeh’s most important philosophical and political work. In order to protect himself against the indignation this work was liable to arouse he claimed that he was not the author, but merely the translator of the correspondence written in the Persian original into Turkish, and that it was the purpose of this translation to expose and refute the heretical views of the correspondents. Acting as the mouthpiece for Ākhūndzādeh, Kamāl od-Dowle propagates the author’s social and political views, which grew out of two fundamental convictions. First, political despotism, religious schools and dogmas were absolute evils, for they stood against human reason, rational principles, and modern scientific thinking. Second, human progress could only be possible through a critique of traditional religious beliefs, values, and customs, and the adoption of modern ideas and institutions. Writing to a trusted friend, Mīrzā Malkam Khān, Ākhūndzādeh predicted that the cause of Islam would be lost after the publication of the letters of Kamāl od-Dowle, and that his reformed alphabet would then automatically be accepted<sup>5</sup>.

Although the original text of the book was written in 1860, Ākhūndzādeh added a substantial amount of materials many years after the first part of the book had been completed. He tried to send the appendices along with the *Maktūbāte Kamāl od-Dowle* to certain readers. During the author’s lifetime, the fame of the letters seems to have been limited to those individuals, chiefly his friends residing in Iran, to whom he had sent handwritten copies. Nevertheless, the text was widely read after the author’s death, and indirectly played an influential role in the modernization of Iran among the next generation of intellectuals inspired by his writings.

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<sup>4</sup> For his biography see Fereydūn Ādamīyat: *Andīshehā-yi Mīrzā Fat‘alī Ākhūndzādeh* (Mīrzā Fat‘alī Ākhūndzādeh’s Ideas), Tehran, 2005; Hamed Elgar: “Ākhūndzādeh”, *Iranica Encyclopaedia*, pp. 735–36, 1985; and Mehrdād Kiā: “Mīzrā Fat‘alī Ākhūndzādeh and the Call for Modernization of the Islamic World”, *Middle Eastern Studies*, vol. 31, 1995.

<sup>5</sup> The letter dated 2 June 1871, in *Alefbā*, pp. 234-35,

Technically, the treatise began with a list of nineteen European terms. The author explains that since it was difficult to translate these words accurately into any spoken language of the Islamic world, he saw it was necessary to explain and elaborate on the meaning of each term<sup>6</sup>.

### **3-1-3- Meaning of the Text, Isolated from the Context**

#### **3-1-3-1- Semantic Episodes**

In those paragraphs in which Ākhūndzādeh directly writes about science, some semantic episodes can be distinguished. These significant statements, which formulate the structure of his thoughts, are divided into two sections. First, he attempts to demonstrate the falsity of Iranian beliefs:

- Vicious religious doctrine make secular progress impossible
- Religion and supernatural activity are false
- Science can prove the falsity of religion and superstition
- Iranians misunderstand the relationship between modern science and old wisdom

Second, his proposed remedy:

- There is a necessity to get rid of vicious religious doctrine
- The remedy lies in the propagation of new science among the people
- The '*ulamā*' are an obstacle for the awakening of the masses
- Prioritizing reason over blindly following authority
- Achieving certainty with human senses

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<sup>6</sup> These terms and their meaning were copied exactly by Mīrzā Āqā Khān Kermānī in the first pages of his book *Se Maktūb*, without citation of the original author.

### 3-1-3-2- Focal Point

It seems the strongest emphasis lies in his idea of the “vicious doctrines as the obstacle of secular progress” which therefore can be regarded as the focal point of the text. This statement implies that the fruit of European science is material progress, while Iranian knowledge does not render any help to secular progress. Ākhūndzādeh implicitly uses the dichotomy of secular and divine knowledge; he is convinced that the remedy for Iran’s backwardness lies in the adoption of European science, and that religious faith is the obstacle to approach this goal. He has written this book to assert the falsity of religious doctrines. In his early writing, he discussed the change from the Arabic alphabet in order to facilitate general literacy. However, because of the opposition of the ‘*ulamā*, he wrote this book to attack them. All the other semantic episodes in this book can be derived from this proposition. He clearly explained his intention in the preface to this the book:

“To protect the sovereignty of our nation and to eliminate the danger of an invasion by foreigners, it is necessary in this time, that intellectuals examine a strategy to prevent the abjection of captivity and the lack of liberation and independence. This abjection can only be prevented by the dissemination of science among all people, and to encourage their patriotism, like the leading nations in Europe. And this ideal will never be achieved without destroying the fundament of religious beliefs, which has blinded people and blocked worldly progress. The author of *Kamāl od-Dowle* is also a liberal and the follower of progress and civilization”.

"عقلای ملت را در این عصر واجب است که به جهت اقتدار ملتی و حراست وطن از تسلط و تغلب ملل و دول بیگانه در تدارک رد آن گونه ذلت که عبارت از اسیری و فقدان آزادی و استقلال ست، بوده باشند و تدبیر رد آن نوع ذلت منحصر است به انتشار علوم در کل اصناف ملت و کاشتن تخم غیرت و ناموس و ملت دوستی و وطن پروری در مزرع ضمیر ایشان، چنان که ملل قادر فرنگستان الحال بدین صفت موصوفند و این مراد هرگز تیسرپذیر نخواهد شد مگر به هدم اساس عقاید دینی که پرده بصیرت مردم شده، ایشان را از ترقیات در امور دنیویه مانع می آید. مصنف نسخه کمال الدوله نیز در این عقیده است یعنی لیبرال و از سالکان مسلک پروقره و طالبان سیویلیزه است."<sup>7</sup>

Ākhūndzādeh uses similar terms with a synonymous meaning: superstition, delusion, vicious doctrine, myth, nonsense, delirium, imaginary, void and absurd in order to mark Iranians beliefs and also to repeatedly comment that those imaginary creatures and phenomenon such as miracles, the supernatural, magic, angels and devils, pixies and fairies, elixirs and oracles are false and fictitious.

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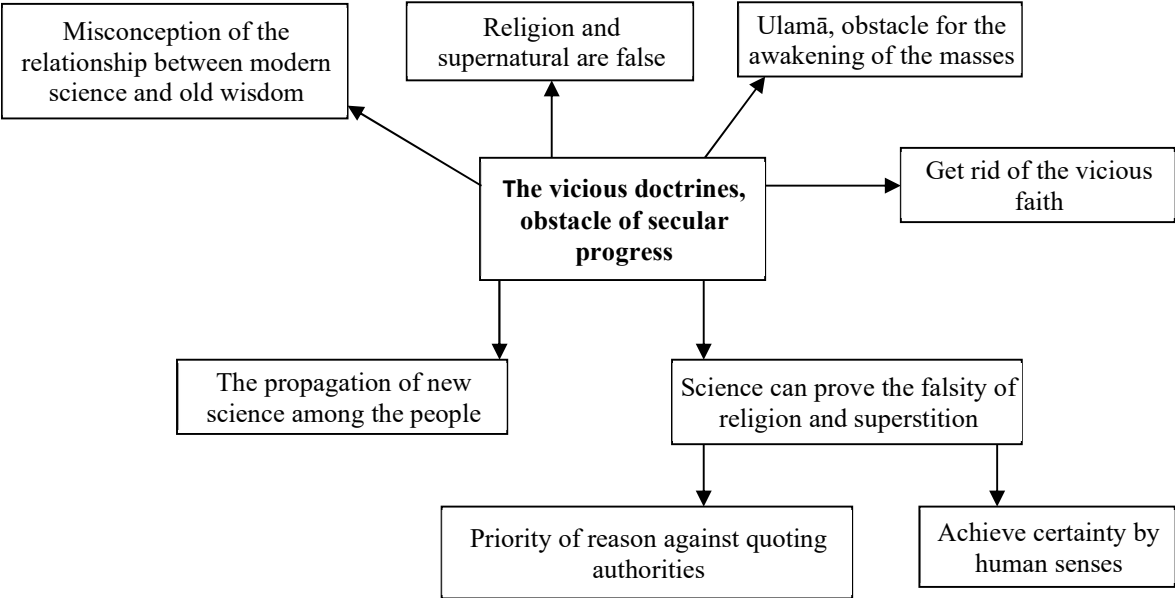
<sup>7</sup> Mīrzā Fat‘alī Ākhūndzādeh: *Maktūbāte Kamāl Od-Dowle* (The Letters of Kamāl od-Dowle), Cologne, 1985, p. 6.

One of the important aspects of this text is this insistence on the liberation of Iranians from vain beliefs as a result of the propagation of science. For him, Iranians live like savages and barbarians; they are the servants of political despotism and dogmatism, and if they only were aware of the falsity of religion and superstition, they would get rid of these beliefs and of those who profit from their ignorance.

Another important aspect of the text is the glorification of Iran's pre-Islamic past, when the Persian Empire was in its heyday. Ākhūndzādeh was one of the first pan-Iranists, who intended to provoke people by reminding them of that golden age. On the other hand, he complains about Iranian's superstitious beliefs and tries to demonstrate that they are wrong.



**3-1-3-3- Semantic Structure**



### 3-1-4- Meaning of the Text with Respect to the Context

#### 3-1-4-1- Description of the New Science

Ākhūndzādeh considers science to be subject of evolution, which means science is evolving during the time. Accordingly, he states that in pre-Islamic Iran, science was in its primary stages of progress<sup>8</sup>. For him science consists of everything that can be explained by rational explanation. All the other claims that stand against human reason are invalid. Here he uses reason and science together (*'aql va hekmat*), as if they are one thing. He portrays religious beliefs as vain and absolute nonsense. On the contrary, new science is described as the truth (*mossallam*) and certain fact (*qat'ī*). He believes that science gives us decisive criteria for judgement. By using it, nobody can fool the people:

“As long as science is not propagated and until people are unable to use science as a tool to recognize right from wrong, every day a new Bāb<sup>9</sup> will be emerge and a new chaotic situation will be created that makes people wander and be miserable<sup>10</sup>”.

“مادام که علم رواج ندارد و مادام که به واسطه علم مردم قابل نیستند که حق را از باطل فرق دهند، هر روز یک باب ظاهر خواهد شد و به عالم فتنه و آشوب خواهد انداخت و خلق را سرگردان و بدبخت خواهد کرد.”<sup>11</sup>

The text does not give us a clear definition of civilization, and it renders a simplistic perception of the function of science in the process of civilization in Europe. Ākhūndzādeh declares that European civilization is the result of a propagation of science, but his explanation of how science can help a society to develop, is ambiguous. For him science can prove religious beliefs false and if the people understand the absurdity of these beliefs, they would no longer obey the propagators

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<sup>8</sup> Ākhūndzādeh (1985), p. 11.

<sup>9</sup> Bāb, (door, gate, entrance): a term of varied application in Shī'ism and related movements. It is applied differently in several sects to a rank in the spiritual hierarchy, either as conceived in transcendent terms or as actually manifested in the religious system on earth. D. M. MacEoin: “BĀB (1)”, *Encyclopaedia Iranica*, <http://www.iranicaonline.org/articles/bab-door-gate-entrance>, date of publication 1988, date of access: March 21, 2014.

<sup>10</sup> He lives in a time where Bābī's faith is flourishing and in a short time, many individuals claimed to be Bāb and Bābī faith itself is splitted into two sects Azalīs and Bahā'īs.

<sup>11</sup> Ākhūndzādeh (1985), p. 60.

of such ideas, of political despots and fanatic 'ulamā. For him, liberty from despotism and dogmatism is the final destination of an ideal society.

He wants cultivate a literate society as soon as possible and considers alphabet reform as a tool to facilitate this process of mass awakening, while he thinks that the training of people is urgent for achieving an advanced civilization and progress. Yet, he does not offer any definition of civil society or development. Maybe he himself had an ambiguous understanding of these concepts. For instance, in the following passage, he commits a paralogism, when he explains his suggestion for the reformation in the country. Ākhūndzādeh says:

“If you Iranians were aware of the joy of liberty and human rights, you wouldn't tolerate such a slavery and abjection. You may inquire in science and may try to establish Freemasons<sup>12</sup>, and you may hold meetings and try to achieve a union. Your abilities are more than the despot is, and you are greater in the number. You just need empathy and union. And if this happens, you may do something! This may release you from the nullified thoughts and the oppression of the despot. Alas! This may not come to fruition without science; and science would not be achieved, except with progression, and progression might not come to exist, except with liberty, and liberty might not be possible, unless with freedom from false thoughts. Unfortunately, your religion and believes are the barriers to the liberty”.

“ای اهل ایران! اگر ترا از نشأه آزادیت و حقوق انسانیت خبردار میبودی، به اینگونه عبودیت و به این گونه رذالت متحمل نمیگشتی، طالب علم شده فراموش خانه ها گشادی، مجمع ها بنا می نمودی، وسائل اتفاق را دریافت میکردی، تو در عدد و استطاعت به مراتب از دیسپوت زیادتری، برای تو فقط یکنلی و یکجهتی لازم است، اگر این حالت یعنی اتفاق به تو میسر میشد برای خود فکری میکردی و خود را از قیود عقاید پوچ و از ظلم دیسپوت نجات میدادی. چه فایده این حالت برای تو میسر نمیشود مگر با علم و علم حاصل نمیکردد مگر با پروقره و پروقره صورت نمیبندد مگر با لیبرال بودن و لیبرال بودن نمیشود مگر با رستن از قید عقاید. چه فایده مذهب تو و عقاید تو به لیبرال بودن مانع است.”<sup>13</sup>

European thinkers like the outspoken Francis Voltaire left an impression on Ākhūndzādeh, and his perception of the world. He assumes that everybody who is able to read will likewise be impressed by these inspiring texts. This statement reveals his simplistic rationale: he believes that having information about new ideas will result in a change of mentality. He underestimates the power of the resistance against new ideas. Yet, his argumentation on the vital role of literacy in the development of the country became an important element in Iranian discourse, and it remains important even today. He alone is not responsible for the notion of education playing a prominent role in changing peoples' minds. As he explains the reaction of a man when asked about literacy:

<sup>12</sup> Farāmūshkhāne: Ḥassan 'Amīd: *Farhang-e Fārsī-e 'Amīd*, Tehran, 1985.

<sup>13</sup> Ākhūndzādeh (1985), p. 22.

“I saw a gentleman, and started a discussion with him. I asked him, what Persian or Arabic books have you read? He answered that I am not literate and I thank God that I did not get education, for the literate often lose their faith and fall into ruin. There is no point in asking this fool, how can you prove your claim?”

“فرد متشخصی را دیدم، نزدیکش رفته و بنای صحبت می گذاردی. میپرسی از کتب فارسیه و عربیه چه خوانده ای؟ جواب میدهد که من سواد ندارم و حمد میکنم به خدای خود که به من سواد نصیب نکرده، چون که اغلب صاحب سوادان بداعتقاد میشوند و به ضلالت می افتند. حالا بیا از این کودن بپرس که تو به چه دلیل این قول خود را به ثبوت میرسانی؟”<sup>14</sup>

Indeed, both Ākhūndzādeh and this man agree on the impact of literacy, but they are different in their assumptions about what could be considered truth (*ḥaq*) and how ignorance (*Zolmat*) can be defined.

### 3-1-4-2- Principles of the New Science

Ākhūndzādeh makes a distinction between religion and science, in terms of verifiability, and notes that scientific claims can be proven, unlike religious propositions in which one should simply have faith<sup>15</sup>. I will translate this passage completely, because it is helpful to understand his whole discourse:

“Up to today, we were wrong in recognizing between the truth and the invalid cognition, because we always equate two inconsistent subjects as one thing: science and the faith. For example, science says that Napoleon-I exist. In this case, faith is not necessary, since this claim is certain based on scientific data. Any proposition which requires no proof or cause to be valid, or the proof is certain, can be regarded as a scientific proposition; this has nothing to do with faith. On the other hand, according to the information from our religious leaders we believe that Moses struck the rock with his stick, and the water flowed from it. This proposition needs reason to be proved, but the reason -if there is any reason; could not be conclusive. We should believe in it by faith, and not according to the science. But our religious leaders are regarding such propositions as science. They attribute the term science

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<sup>14</sup> Ibid., p. 56.

<sup>15</sup> Ibid., p. 74.

to the interpretation of *hadis*, theology, and so on. They place some sciences like physics, mathematics, geography, astronomy<sup>16</sup> and others, in the same category”.

”خطای ما تا امروز در شناختن حق از باطل از این رهگذر است که ما همیشه دو قضیه مغایره را یک قضیه می‌شماریم. یکی از آنها علم است و دیگری اعتقاد. مثلاً علم حکم میکند که ناپالیون اول بود. در این باب دیگر اعتقاد هرگز لزوم ندارد چونکه قضیه مبنی بر علم قطعی است و هر قضیه که محتاج به دلیل و ثبوت نباشد و یا اینکه دلیل و ثبوت قطعی باشد علم است، دخل به اعتقاد ندارد. از طرف دیگر بنا بر اخبار اولیای دین، ما اعتقاد میکنیم که حضرت موسی عصای خود را بر احجار زده چشمه ها جاری شد. این قضیه محتاج به دلیل است و دلایلش هم اگر باشد به هیچ وجه قطعی نمیتواند شد. باید از روی اعتقاد نه از روی علم به آن باور کنیم ولیکن اولیای دین ما همین نوع قضایا را نیز از اقسام علوم می‌شمارند. چنانکه می‌گویند علم تفسیر احادیث و علم کلام و امثال آنها و بعد از آن فیزیک و ماتماتیکا و جغرافیا و نجوم و امثال آنها را نیز از علوم تعداد میکنند.”<sup>17</sup>

Ākhūndzādeh criticizes established thoughts and insists on the privilege of reason. In this respect he is an exception among his other contemporary intellectuals, which whether from fear or because of the true belief, they comment cautiously about the religion. For Ākhūndzādeh, there is no sacred text, and one can think critically about everything, including religion. Unlike the other conservative intellectuals, he severely criticizes tradition. According to him:

“To understand my comments, you should consider the pure reason as the evidence, rather than the quotation. Religious leaders prefer quotation to the reason and for thousand years they have abandoned reason for their own benefit, and kept it in jail forever”.

” برای فهمیدن مطالب من باید تو عقل صرف را سند و حجت داشته باشی و نه نقل را که اولیای دین ما آن را بر عقل مرجح شمرده اند و چند هزار سال است به واسطه اغراض نفسانیه عقل را از درجه شرافت و اعتماد انداخته و در حبس ابدی نگاه داشته اند.”<sup>18</sup>

He makes a very important point: there must be a distinction between reason and the authority of predecessors. His emphasis on this issue shows the paradoxical situation of intellectuals in Iran. Coping with difficult questions, those who had religious beliefs gave priority to the religion and considered predecessors as authoritative references, even if it stood against the reason. In contrast, Ākhūndzādeh promotes liberty and states that a liberal is a person who is free from all the vain beliefs and may only accept what reason confirms, and may not believe in anything without rational proof, even if a prophet says it is so<sup>19</sup>. He also points out:

“As long as you and your co-religionists are not aware of the natural sciences and astronomy, and as long as you don’t know any scientific principle to deliberate about miracles and

<sup>16</sup> He uses the term “Nojūm” as the science of the stars and it is not clear what kind of astronomy he had in his mind.

<sup>17</sup> Ibid., p. 74.

<sup>18</sup> Ibid., p. 33.

<sup>19</sup> Ibid., p. 9.

impossible phenomena, you and them may always believe in such a delusion and may remain in ignorance forever”.

”مادام که تو و هم مذهبیان تو از علم طبیعت و نجوم خبردار نیستید و مادام که به دانستن خوارق عادات و معجزات از ممتنعات در دست تو و هم مذهبیان تو یک قاعده علمیه نیست، تو و ایشان همیشه به این قبیل موهومات باور خواهید کرد و همیشه در جهالت باقی خواهید ماند.”<sup>20</sup>

He continues by explaining a scientific principle, which he applies to support his argumentation about the falsehood of the religion. He admits he could not teach natural sciences or astronomy in a single book, but somehow, he can explain scientific rules. He theorizes about materialism in the absence of God, and insists that this is a prerequisite to the understanding of the natural sciences and astronomy. Finally, he concludes that imaginary creatures do not exist in reality<sup>21</sup>. But then, he makes a contradictory statement:

“We can see that this world exists! So, this existence spontaneously exists on its own rules. It means it doesn’t need other existences to exist; in this way we are agree with those who believe in the unity of existence, like: ‘Abd al-Raḥmān Jāmī, Shaykh Maḥmūd Shabestārī and the European thinkers: Xenophon, Petrarch and Voltaire. We claim that the entire universe is a unit, authoritative and a perfect potentiality”.

”ما میبینیم که این عالم موجود است، پس این موجود یا خود به خود موجود است با قانون خود، یعنی در وجود خود به یک وجود اجنبی دیگر محتاج نیست، در آن صورت ما متفق میشویم با یک گروه از قائلین وحدت وجود مثل عبدالرحمان جامی و شیخ محمود شبستری و کسنوفان (گزنفون) و پطراق (پترارک) و ولتر فرنگی و میگوییم که کل کائنات یک قوه واحده و قادره و کامله است.”<sup>22</sup>

In this sentence, Ākhūndzādeh gathers a bunch of philosophers from different schools and ideas, and asserts that all of them share the notion of “the unity of existence” (*waḥdat wujūd*). The list consists of: Shabestārī, a Persian Sufi poet of the 14<sup>th</sup> century, Jāmī, another Sufi poet of the 15<sup>th</sup> century, along with Xenophon, Greek historian and student of Socrates, Voltaire, a French enlightenment writer and finally, Petrarch, an Italian scholar and poet of Renaissance Italy, who was one of the early humanists. By combining all these contradictory schools of thought, he reveals a lack of understanding in their diversity and that he has a limited knowledge of Classical and European philosophical development.

He equates the materialist concept of pantheism, with panentheism. Pantheism, introduced by the 17<sup>th</sup> century philosopher Baruch Spinoza, holds that the divine is synonymous with the

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<sup>20</sup> Ibid., p. 33.

<sup>21</sup> Ibid.

<sup>22</sup> Ibid., 34.

universe. But in panentheism, God is viewed as the eternal animating force behind the universe. While pantheism asserts that “All is God”, panentheism goes further to claim that God is greater than the universe<sup>23</sup>. In Islamic philosophy several Sufi saints and thinkers, primarily Ibn Arabī, held beliefs that were somewhat panentheistic<sup>24</sup>, and both Jāmī and Shabestarī were his followers.

This statement by Ākhūndzādeh is a very important step in the formation of the discourse on the new science. Ākhūndzādeh considers new philosophies in Europe and what is considered mysticism in Islamic culture to belong to the same intellectual school. Considering the fact that he had a profound influence on the next generations of intellectuals, one can appreciate how these conceptualizations had great longevity amongst his followers and even his opponents.

It is clear from Ākhūndzādeh’s discussion over the absence of a creator for the universe that he was aware of the European intellectual debates of that time, but at the same time, he conceives of materialistic arguments as synonymous with the mystical definition of the unity of existence. This shows his superficial conception of these two epistemologies. Moreover, he argues that unlike scientific claims, religious propositions cannot be proven: we accept them in faith; but later, he tries to prove the non-existence of God by a logical argumentation. With regard to his comments about God, we can find many contradictions; for instance, he clearly states that there is no God, only the power of nature exists, but in another paragraph, he refers to the will of God.

One of his presuppositions of science is that one should accept only what can be observed by the five human senses, and those human senses would determine the confines of achievable science<sup>25</sup>. He denounces Iranian ignorance about obvious phenomena in the world; those phenomena that can be seen or touched by every human being. Ākhūndzādeh argues that Iranians are preoccupied with the imaginary creations, like heaven and hell! He says:

“By organs that have been created in your body, you would not able to know more. You have just five senses, and by these five senses, you would not understand the essence and the truth of the soul, as you do not know what the light is... you and your nation, can only well describe hell, and learn about the elf and devil; while they are imaginary and delusive. You would not attempt to recognize electricity, which is visible and is an apparent issue, and the whole world

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<sup>23</sup> John Culp: “Panentheism”, online source: <http://plato.stanford.edu/entries/panentheism/>, date of publication March 19, 2014, date of access March 19, 2014.

<sup>24</sup> Mehdi Aminrazavi: *Mysticism in Arabic and Islamic Philosophy*, online source: <http://plato.stanford.edu/entries/arabic-islamic-mysticism/>, date of publication 2009, date of access March 20, 2014.

<sup>25</sup> Ākhūndzādeh (1985), pp. 34, 49.

knows about it. Because it is of no use, it would not bring you to heaven or nor rescue you from hell”.

"با آلات و اسبابی که در وجود تو خلق شده است زیاده بر این نمی تواند دانست. در تو فقط 5 حواس هست... حالا تو با حواس پنجگانه قادر به حقیقت و ماهیت روح نیستی چنان که نمیدانی شعاع چیست... تو و ملت تو فقط جهنم را خوب وصف میتوانی کرد و جن و شیاطین را خوب میتوانی شناخت چون که وجود آنها خیالی و موهومی است. الکتریسیست که امری ظاهر و در پیش چشم شماسست و تمام عالم از آن خبردار است، شما به دانستن آن اقدام نمیکنید. برای آن که چه مصرف دارد؟ الکتریسیست که شما را به بهشت نخواهد برد و از جهنم خلاصی نخواهد داد."<sup>26</sup>

### 3-1-4-3- Relation between the New and the Old Science

As a conclusion to the previous section, I would say that he was aware of the basic premise of science and European conceptions of knowledge. Therefore, he denies the existence of indigenous knowledge, because for him science is a form of true knowledge, subject to verification, that depends neither on the metaphysical nor on unfounded assumptions.

Criticizing the Iranian perception of science and blaming the ‘*ulamā* for such a futile perspective, Ākhūndzādeh also criticizes the differentiation between secular (material) science and divine (immaterial) science. According to him, there is no divine science at all. This statement is very important, since he is revealing some insight into a significant proposition in Iranian discourse at that time. The advantages of new European science were clearly undeniable, so Iranian scholars suggested that the superiority of Iranian science is the knowledge about the life hereafter. This divine science is of greatest importance, and all the other sciences of the material world are useless, because they could never guarantee someone’s acceptance to heaven. For him:

“All the Iranians assume that they are the most knowledgeable nation in the world, because they possess the science of the life hereafter; and except for this science, all the other sciences are futile. I hear repeatedly from the people in Tabriz that Europeans really made overall progression in secular science, but they are not aware of the divine science and are living in darkness”.

"کل اهل ایران چنین ظن میکنند که در عالم دانانتر از ایشان طایفه ای نیست. به جهت این که از علم آخرت گویا ایشان بهره ور هستند و جز علم آخرت علوم دیگر بی فایده و عبث است. مکرر از اهل تبریز میشنوم که میگویند فرنگی ها واقعا در علوم صوریه یعنی دنیویه ترقی کل کرده اند؛ چه فایده در علوم معنویه یعنی دینی در غفلت و ظلمت میباشد."<sup>27</sup>

<sup>26</sup> Ibid., p. 48.

<sup>27</sup> Ibid., p. 23.



His comment on this false conception of science implies the traditional definition of science in Iran, which is to “have information or be aware of something”, rather than observing or discovering it. From Ākhūndzādeh’s explanation, it is evident that Iranians believed in the impossibility of studying about the other world, or gathering information about the divine knowledge. They believed that this knowledge is just accessible through sacred texts, it is not achievable by observing or studying, rather it is something that must be learned from their predecessors<sup>28</sup>.

He defines science as searching the natural world by the human senses and using reason to verify the findings. He insists on using human senses to observe what is observable and to derive facts about this observation. It is evident from Ākhūndzādeh’s comments about science that there were no active scientific activities in Iran at that time, rather some nonsense so-called science. Every time he argues about science, he has European science in mind. According to his definition of science, which necessitates the use of reason, there could be no science or scientific discussion in Iran.

### **3-1-4-4- Scientific Disciplines and the Humanities**

Ākhūndzādeh does not mention indigenous science in Iran or its different categories. He is also silent about new scientific disciplines and their confines in Europe. In a few cases, he names natural sciences like physics, mathematics and geography, but his statements shows that the subjects of these sciences are not clear to him. In the next passage, he equates physics with wisdom (*hekmat*) and defines it as the study of substances and plants, and suggests that natural science is devoted to the study of animals. In conclusion, the study of living things is the duty of the natural scientist, but plants are considered inanimate objects, placed in the field of physics. He specifies:

“In the Europe, the knowledge about the essence and the feature of the substances, the inanimate objects, and the plants is called the science of physics, which means wisdom. And the knowledge about the essence and the feature of animals defined as the natural sciences, which has been developed in this time by the research of European philosophers”.

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<sup>28</sup> Only the Prophet Muḥammad, Imāms, and their representative clergies have knowledge beyond human understanding.

"معرفت ماهیت و خاصیت عناصر و جمادات و نباتات که در اصطلاح فرنگستان آن را علم فیزیکا تعبیر میکنند یعنی علم حکمت و معرفت ماهیت و خاصیت حیوانات که آن را علم یستستو<sup>29</sup> تعبیر میکنند یعنی علم طبیعت در این عصر به واسطه تتبعات و تحقیقات فیلسوفان فرنگستان به نوعی تکمیل به هم رسانیده است."<sup>30</sup>

His definition of a philosopher is also noteworthy, as he holds new philosophers in Europe as synonymous with the old definition of the wise man (*hakīm*)-one who knows everything and is the master of all the sciences. He determines:

"A philosopher knows all the rational sciences and the reason of the wisdom of the subjects regarding to their nature, and is aware of the depth of all things, and doesn't believe in miracles or the supernatural... According to the Westerners, there is nobody wiser and more perfect than a philosopher".

"فیلسوف، منظور کسی است که کلیه علوم عقلی را دارا و سبب حکمت اشیاء را بر وفق طبیعت دانا و در عمق طبیعت هر چیز آگاه و بینا بود. و معجزات و خارق عادات و ... را باور ننماید. به اصطلاح اهل فرنگستان از فیلسوف وجودی کاملتر و آدمی عاقل تر نیست."<sup>31</sup>

In this way, a philosopher, philosophy and the related fields of studies incorporate the knowledge of other sciences such as biology, chemistry, physics, etc. This once again indicates that he had no clear conception of the new scientific disciplines in Europe and the confines of the philosophical deliberation. Ākhūndzādeh does not discuss the humanities in his book, with the exception of political science. The following paragraph shows that he had the idea of a scientific field, one focused on human relations and management practices. As he reports:

"The despot kings have no tendency to learn the science of governing and politics, as well as educating these sciences to their heirs. They assume that if these sciences were necessary, they and their ministers would have known them better than the Europeans... Iranian governors, even the despots, are not keen to learn these sciences".

"سلاطین دیسپوت نه خودشان علم اداره و پولیتیکه را تحصیل میکنند و نه به وارثان خودشان در آن علوم تربیت میدهند و چنین خیال میکنند که علم اداره و پولیتیکه به عمل سلطنت لزوم ندارد و اگر لزوم هم داشته باشد، ایشان و وزرای ایشان این علوم را از جد فرنگی هم بهتر میدانند... امرای ایران بلکه کل اهل ایران حتی خود دیسپوت به تحصیل هیچ یک از علوم راغب نیستند."<sup>32</sup>

<sup>29</sup> Russian translation for natural science.

<sup>30</sup> Ibid., p. 49.

<sup>31</sup> Ibid., p. 8.

<sup>32</sup> Ibid., p. 23.

### 3-1-4-5- The relation between Science and Religion

As I explained before, Ākhūndzādeh called himself an atheist, so it is predictable that he considers religion to contradict science. He intends to draw our attention to science as a criterion to disprove religious beliefs. The very first scientific rule he explains, is to demonstrate that there is no God, and take this rule as a prerequisite for understanding the natural sciences. He says:

“Teaching natural science and astronomy to you and to the others is not possible in a letter, but somehow the scientific rule can be explained. Hopefully all of you understand”.

"علم طبیعت و علم نجوم را تعلیم کردن به تو و سایرین در مکتوب ممکن نیست اما قاعده علمیه را به نوعی تقریر میتوان کرد  
یحتمل که فی الجمله از آن بصیرت حاصل کنید."<sup>33</sup>

He mentions many examples from religious books and from oral statements of mullahs in mosques, and asks his audience to judge these statements, which he calls absurd. He devotes many pages to reject the idea of a perfect supreme being, using a materialistic argument. Here is a short part of his reasoning:

“The substances are “self-existent<sup>34</sup>” in their essence, and the universe which is a set of all the substances, similarly requires no cause. The universe essentially would not be thought as a “possible existence<sup>35</sup>”, nor be considered as it requires a cause, otherwise we would face an endless chain of cause and effect. This is a fact and those who believe in it are atheists”.

"ماهیت اشیا واجب الوجود است و کاینات که مجمع اشیاست مستلزم سبب نیست و کاینات را من حیث الماهیه ممکن الوجود نمی توان شمرد و محتاج به سبب نمیتوان انگاشت والا تسلسل در برابر چشم است. حقیقت این است که بیان شد. صاحبان این عقیده را آتالیست مینامند."<sup>36</sup>

He clearly admits:

“Religion and the faith are in contradiction with science and wisdom. If an individual has faith and believes in religion, he is not a scientist or a wise man, and if he has knowledge and wisdom, he cannot be a religious and faithful... On one hand, religious leaders strongly emphasize that humans should not leave the faith, in order to avoid being deprived of the afterlife and everlasting bliss. On the other hand, European philosophers are shouting that humans should get rid of barbarism and ignorance. If one obeys the religious leaders,

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<sup>33</sup> Ibid., p. 33.

<sup>34</sup> Or “necessary being”: a being, which depends only on itself for its existence.

<sup>35</sup> A being that its existence depends on a former being.

<sup>36</sup> Ibid., p. 75.

undoubtedly, he would be deprived from the light of science and civilization, as we Iranians are now. And if one obeys the European scientists, in that case, the hope of the heavenly life would be lost. Good for those who can bring these two contradictory states together. But I think it is impossible. Up to today we (Iranians) preferred the religious leaders' advice, and if from now on, our preference remains the same, our situation will never change and terrestrial progress is inconceivable for us".

" دین و ایمان با علم و حکمت متناقضند. اگر آدم دین و ایمان داشته باشد، عالم و حکیم شمرده نمیشود و اگر علم و حکمت داشته باشد، دین دار و مومن نخواهد بود. از یک طرف اولیای دین اسلام با شدت تمام تاکید میکنند که ما دین و ایمان را باید ترک نکنیم، تا این که از امید حیات اخروی و سعادت سرمدی محروم نشویم. از طرف دیگر علما و حکمای یورپا فریاد میزنند که ما باید از عالم بربریت و وحشیت و جهالت بیرون بیاییم. اگر به حرف اولیای دین اسلام گوش بدهیم باید لامحاله از انوار علوم و سیویلیزاسیون محروم بشویم چنان که هستیم. و اگر به حرف علما و حکمای یورپا گوش دهیم، در آن صورت امید حیات اخروی خودبه خود زایل میشود. خوشا به حال کسی که این دو حالت متناقضه را در خود جمع تواند کرد. اما به نظر من محال می آید. تا امروز ترجیح ما به حرف اولیای دین بوده است و اگر بعد از این نیز همین ترجیح باقی باشد، حالت ما هرگز تغییر نخواهد یافت و ترقی برای ما در دنیا از ممتنع است."<sup>37</sup>

Arguing that there is no God, rather the unity of existence, Ākhūndzādeh comes to an interesting conclusion. He notes that if there is no God, and all parts of the world are parts of a single whole, then no specific particle would ask the other particles to obey it<sup>38</sup>. This means that because there is no supreme creature, to whom others should obey, all humans are equal and deserve equal rights. His argument implicitly results in a political issue, which is justice for all. He perfectly uses this conclusion for his political aim in the writing of this book.

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<sup>37</sup> Ibid., pp. 75-76.

<sup>38</sup> Ibid., p. 35.

## *Se Maktūb and Ṣad Khaṭābe*

By **Mīrzā Āqā Khān Kermānī**

### **3-2-1- Biography**

Mīrzā Āqā Khān Kermānī, an outstanding representative of the first generation of secular nationalists, was born in 1854/5 in Bardasīr, a village near Kermān. He received a traditional education in Persian and Arabic languages, literature, grammar, rhetoric, logic, mathematics, jurisprudence, history, and theology. At the age of thirty, he left his native province –and, after three years he spent in Isfahān, Tehran, and Mashhad, he went to Istanbul, where he stayed for the remaining ten years of his life. During his sojourn in Istanbul, Mīrzā Āqā Khān became acquainted with Western science and thought, and wrote almost all his works there. Working as a teacher and book copyist, Mīrzā Āqā Khān lived in poverty all his life. Nonetheless, he devoted much time and energy to political activism. After a restless life, at the age of forty-three, he was executed in Tabrīz in July 1896 for his alleged involvement in the assassination of Nāṣir ad-Dīn Shāh by the hand of an alleged Bābī sympathizer closely associated with Afghānī.

Mīrzā Āqā Khān was a pioneer in the dissemination of modern philosophy and Western thought in Iran, while he was also familiar with both new and traditional indigenous knowledge. During his rather short life, he undertook a number of ideological changes; starting as a writer of

traditional literature, then exploring Bābīsm<sup>1</sup> for some time, then turning into an Azalī<sup>2</sup> and writing a number of treatises in the Azalī vein. After his arrival in Istanbul, affected by his new semi-European environment he acquainted himself with new ideologies and literary styles and finally, with the arrival of his eventual mentor and collaborator, Seyyed Jamāl ad-Dīn al-Afghānī in the city, he finally became a champion of Pan-Islamism.

His works cover a remarkable range of subjects and issues and he was interested in all scientific disciplines. Literary, historical and philosophical thought were the main concerns he dedicated himself to. While his ideas were often confused and inconsistent, his notion about Iranian nationalism provided the ideology and energy for the discourse of the “Constitutional Revolution” which was to happen a decade after his death (1905-1907)<sup>3</sup>.

### 3-2-1-1-Writings

Among numerous publications, some published posthumously, five works are of particular interest for the analysis of his perception of European science.

#### 1- *Takvīn va Tashrī‘* (Genesis and Canonization)

*Takvīn va Tashrī‘* deals with his conceptions of philosophy. It was never published and was only distributed among close friends of Mīrzā Āqā Khān in a few manuscripts. Due to this very limited availability, this text played no significant role in the formation of the modernist discourse in Iran, and despite the thematic affinities between this book and the subject of this study, it is not part of my text corpus to analyze.

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<sup>1</sup> Bābī faith was a new religion which emerged in mid-19<sup>th</sup> century Iran, founded by ‘Alī Muḥammad Shirazi who later called himself Bāb and claimed to be the gate to the twelfth Imam of Shī‘i faith. The Bābī movement later became separated from Islam. Its followers considered Bāb to be the predecessor of their religion and named this new religion the Baha’i faith.

<sup>2</sup> In 1860, a split occurred in the Bābī community and the followers of Sobḥi-Azal called themselves Azalīs.

<sup>3</sup> For his biography see Fereydūn Ādamīyat: *Andīshe-hā-yi Mīrzā Āqā Khān Kermānī*, (Mīrzā Āqā Khān Kermānī’s Ideas) Tehran, 1978; Mangol Bayāt: “Āqā Khān Kermānī”, *Iranica Encyclopaedia*, 1986; and Ghaffār Abdullāhī Matānaq: “The Role of Istanbul-Resident Iranians in the Development of Pan-Islamism Ideology”, (Case Study: Mīrzā Āqā Khān Kermānī & Shaykh Aḥmad Rūḥī), *Asian Culture and History*, vol. 5, 2013; Dabestāni Kermānī: “Mīrzā Āqā Khān Kermānī”, *Yaghmā*, no.2, 1949, pp. 255-59; no.3, 1950, pp. 82-87.

2- *Hasht Behesht* (Eight Paradises), 1892, Istanbul.

*Hasht Behesht* is a Bābī metaphysical treatise inspired by Western and Muslim philosophical and theological concepts. It was written in Istanbul in collaboration with Shaykh Aḥmad Rūḥī, with an order from Ottoman officials, and with some certainty, it would be dated to 1892. Although the authors state that their intention to elaborate and analyze religious and philosophical concepts of Bābīsm<sup>4</sup>, they have, in fact, added ideas inspired by modern Western secular thought.

3- *Īnshā' Allāh, Māshā' Allāh* (God Willing, Well Done)

Another treatise, *Īnshā' allāh, Māshā' allāh*, in which Mīrzā Āqā Khān's earlier Azalī affiliation is clearly obvious was written as a discussion about two common terms in Islamic societies: *Īnshā' Allāh* and *Māshā' Allāh*. In this text, he criticized the fatalism and the passivity of Muslim societies as the result of believing in destiny.

4- *Haftado do Mellat* (Seventy two Nations)

*Haftado do Mellat*, an essay based on a translation of *Le Café de Surate* written by French author Bernadin de Saint Pierre (1737-1814), to which Mīrzā Āqā Khān added some of his own ideas. Written in the style of a fictitious debate among followers of different religions in India and Iran, the core issue of this text is the unity of all religions and the encouragement to avoid disputes. The final message of the book is a universal invitation to tolerance and compassion. In writing this book, Mīrzā Āqā Khān aimed at the awareness and the liberation of the masses, together with the wish for unification of the Islamic world. But the corruption of the ruling Ottoman sultanate and kings of Iran, as well as the conservative and passive nature of Seyyed Jamāl al-Dīn al-Afghānī, of whom he was once a follower, led him to criticize religion and its role in society.

5- *Se Maktūb* (Three Letters), 1908, Tehran, and *Ṣad Khaṭābe* (Hundred Lectures), 1925, Tehran

In Istanbul, he was the author of *Akhtar*, but his essays in this newspaper were anonymously published, therefore they could not be distinguished among the other essays. Mīrzā Āqā Khān's last two pieces of writing, *Se Maktūb* and *Ṣad Khaṭābe*, belonged to this time, in which he

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<sup>4</sup> It should be noted that Bābīs claimed that their *sharī'a* is proper for everyone all around the globe, because their doctrine was the fruit of collecting the commonalities of religions and they even used the results of new scientific research to create a religion with the mission of promoting peace and happiness for humankind.

experienced a new phase of his intellectual life. These two books were in fact two volumes of one book. Influenced by Ākhūndzādeh, in this book he propounded Iranian nationalism, and examined the history of ancient Iran with a new historiographical methodology. Mīrzā Āqā Khān denounced the Arab invasion of Iran and believed that the introduction of Arab culture into the country was the root of all corruption in Iranian society. Imagining the glorious ancient empires of Iran, he, together with Ākhūndzādeh, can be seen as the first Pan-Iranists in a modern context.

### **3-2-2- About the Book**

*Se Maktūb* and *Ṣad Khaṭābe* are about Iranian history, following 19<sup>th</sup>-century European natural science and socio-anthropological theory. They are written in the form of letters from a fictional Persian prince living in India, to another fictional prince in Persia. Despite the titles, the first volume contains one letter, and the second one includes forty-two letters. There are many resemblances between *Se Maktūb* and Ākhūndzādeh's book of the same title: *Maktūbāt-i Kamāl od-Dowle* or shortly *Se Maktūb*; though with major differences. We do not know the exact date of the publication of this book, but it is evident that it was written in Istanbul, in a time during which he was strongly influenced by Ākhūndzādeh and al-Afghānī. Ha was aware of their writings and quoted literally some of the paragraphs of their works without referring to the original source, mostly from *Se Maktūb* written by Ākhūndzādeh, and from an essay entitled *Favāyedi Falsafeh* written by al-Afghānī.

The assumed audiences for this book were those intellectuals who shared a similar opinion with Mīrzā Āqā Khān on the necessity of acquiring Western science in order to fulfill reforms in Iran. However, his book was read by many people with various intellectual tendencies and provoked a range of reactions. Some parts of *Ṣad Khaṭābe* were published in the *Habl ol-Matīn* newspaper in Calcutta, but its publication was discontinued due to criticism towards Mīrzā Āqā Khān and accusations of heresy.



### **3-2-3- Meaning of the Text, Isolated from the Context**

#### **3-2-3-1- Semantic Episodes**

Selected paragraphs in which Mīrzā Āqā Khān argues about the new science and the situation of science in Iran can be categorized in terms of semantic episodes into two groups. The first part contains his perception of the European science and civilization:

- The truth can be found through an exploration of nature
- A rejection of irrational thought is the result of discovering the unknown
- Investigating how nature functions is the reason for European progress
- Progress means using science to achieve welfare and self-sufficiency
- Language is vital for the awakening of a nation

The second part consists of a description of the Iranian status quo, in comparison to that of the West:

- Iranian's knowledge is futile
- Indigenous knowledge is inconsistent with reason
- Old books are incomprehensible and meaningless
- The *'ulamā* are ignorant
- Passivity is the result of fatalism
- Iran had a glorious past that Arabs destroyed

#### **3-2-3-2- Focal Point**

Among the semantic episodes, "Inconsistency in reason and indigenous knowledge" represents the key meaning: all other episodes are from this proposition. For Mīrzā Āqā Khān, progress and civilization in European countries are the result of discovering the secrets of nature and using knowledge for the benefit of mankind. He maintains that knowledge is achievable by means of

human senses and the final proof is reason. This is the difference between European science and Iranian knowledge. Reason has no place among Iranian scholars (*hokamā*). Due to the dominance of superstition and ignorance, Iranians have filled their books with useless and incomprehensible matters. He declares that superstition is the result of a fear of the unknown, and a lack of reasoning leads to doubt even in obvious and tangible phenomena.

Some terms have been widely repeated in the text, including reason, science, nature, progress, civilization, nation, welfare, delusion, superstition, fatalism, futility, and ignorance. There are also some concepts in the text which are frequently used with different synonyms and carrying very negative or very positive meanings. For example, Mīrzā Āqā Khān has a very positive attitude towards new European science and civilization and he is optimistic about the philosophy of human progress. On the other hand, the text is highly negative about Iranian society and about indigenous knowledge and it considers them stuck in superstition and stagnation.

One of the key concepts in the text is the utility of science for the welfare and the prosperity of humankind. The achievements of European science make European nations independent and self-sufficient and it enables them to provide comfort and a civilized life. In contrast, Iranian knowledge is futile does not provide practical assistance to people in improving their lives. He emphasizes repeatedly that the books of Iran contain only vain imaginations, which have no benefit to the community as a whole. Another important episode in Mīrzā Āqā Khān's discourse is the unawareness of Iranians and their scholars about the new order of the world and the revolution in every aspect of life that emerged with the introduction of modern science. He denounces religion and religious scholars for the delusions that they are teaching to the people and blames them for a lack of logic and reason within Iran's intellectual sphere.

Understanding the concept of the "nation" in Mīrzā Āqā Khān's mental world is vital because it reveals his perception of the humanities. This aspect is one of the most important ones in his writing. He uses the term "nation" whenever he wants to refer to humanity in general, and I will come back to this term later. For Mīrzā Āqā Khān, acquiring new European science is necessary for the prosperity of a nation, and it is philosophers and intellectuals' duty to awake and provoke the nation through the power of literature. From this point of view, language plays an important role in the process of civilization. Language should be easy to understand and capable of stimulating and inspiring the masses and should be able to arouse them to take action for their own sake.

Mīrzā Āqā Khān provides no evidence to support his claims and it seems that provocation is the intention rather than the awareness or the evaluation. He wants to inspire the readers by telling them about the magnificent ancient empires of pre-Islamic Iran, in which everything was in its perfect way. He believes that if the country had not been occupied by Arabs, Mughals or other invaders it may have continued its progress and undoubtedly be at the same place of Europe in terms of science and civilization. He suggests the best mission for intellectuals, including himself, is to influence people through passionate speeches and texts, and persuade them to make sacrifices for the prosperity of their country and the progress of civilization. He specified at the very last paragraph of *Se Maktūb*:

“In fact, the biggest aim and the supremely divine character of humanity is to leave a good reputation forever. I do expect from your willpower and the power of patriotism, which naturally exist amongst Semitic<sup>5</sup> peoples, to undertake upheaval and revolution in Iran. And by the electric power of your literature and that liberal potency I know you have, release these torpor people from the humiliation and captivity of the fanatic ‘*ulamā* and the oppressive rulers, and make them free”.

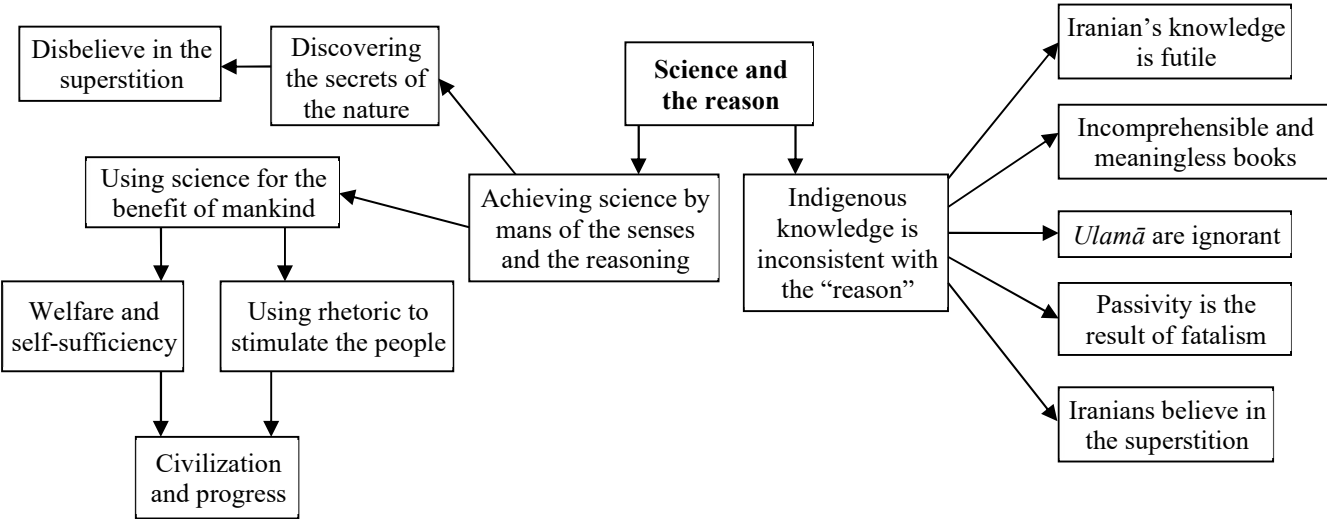
“و بزرگترین مقصد و مرام جان زین در واقع آن صفت الوهیت که اعلیٰ صفات آدمیت است همین است و بس که تا ابدالآباد اسم نیک خود را به سیادت و آقایی و بزرگواری در صفحه روزگار باقی و پایدار دارد و از همت مردانه و قوت پاتریوت که دست قدرت در طبیعت سامی گذارده توقع دارم که دفعتاً شانژمانی در ایران نموده رولوسیونی برپادارید و این زنده به گور شده های ایران را به قوه الکتریک لیتراتورهای خودتان به آن قدرت لیبرال که در حضرت عالی سراغ دارم از قبر ذلت و قد اسارت این علمای فاناتیکی و این سلاطین و حکام و دیسپیوت های بی متاماتیکی مستخلص و آزاد دارید.”<sup>6</sup>

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<sup>5</sup> It is not clear why he uses the term “Semitic” to remind his audiences about the racial roots, because he insisted on the non-Arab roots of Iranians in the pre-Islamic period. Yet, it is evident that at the time of writing of this book, the Arian race was yet unknown.

<sup>6</sup> Mīrzā Āqā Khān Kermānī: *Se Maktūb*, Tehran, 1908, p. 328.

### 3-3- Semantic Structure



### 3-2-4- Meaning of the Text with Respect to the Context

#### 3-2-4-1- Description of the New Science

Mīrzā Āqā Khān describes European science as the reason for civilization and the evolution of technology, as well as the motive for discovering the unknown. He considers new science as a basis for human dignity, and a tool for the eradication of oppression. Possessing this knowledge will release Iranians from praying and making vows. New science can also eliminate superstitions, as it is the light and means of reaching prosperity and welfare.

According to his main motivation for the writing of this book, which is the idea of Pan-Iranism, he believes that the remedy for the national stagnation is to acquire European science and technologies. As I will show later, science is conceived to be a complete version of an old practical wisdom that Iranian scholars possessed in the pre-Islamic period. In that time, they searched for knowledge with very primitive empirical methods, and observed nature to gather information, for instance in astrology<sup>7</sup>. For Mīrzā Āqā Khān, Iranians in the pre-Islamic period were progressing and the great empires of Iran had created a civilized society. He blames foreign invaders and especially Arabs for destroying the magnificent empire of the Persians, and trapping them in the current disastrous situation. He restates that with Arabs came the influence of their corrupted behavior and superstitious ideas and Iranians subsequently lost their curiosity and reasoning. Furthermore, it was the Arab invaders who burned the great libraries of Iran and destroyed all the Iranians' scientific books<sup>8</sup>.

It is evident that the “occident” was an entirely strange world for Iranians. In their encounters with Europe, initial impressions consisted of the most visible aspects of European life, for instance beautiful buildings, streets, vehicles, clothing, cuisine, and the like. Like the others, Mīrzā Āqā Khān also noticed the visible aspects, as his definition of civilization reveals:

“The difference between civilized and barbaric nations is only one point: a civilized nation is a nation which provides all its necessaries and stuffs, within its own country, and if the

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<sup>7</sup> Mīrzā Āqā Khān Kermānī: *Ṣad Khaṭābe*, Tehran, 1925, p. 38.

<sup>8</sup> Idem., (1908), pp. 172-3.

natural facilities are not available, they prepare the means of the living and the pleasure by the power of science and action. They even go further than basic needs, and make themselves and their nation comfortable and leisured. Therefore, a small island like London which does not have enough resources for half a million people, manages to do such a master work and by the power of science and action of Britons, now, three million people are living in this small city, in a high level of convenience, pleasure and comfort. Above all, they made the whole world dependent to themselves. As you can see, this is the result of science and action, and also this is the meaning and the profit of civilization”.

“فرقی که مابین ملت متمدن و وحشی است همین یک نکته است که ملت متمدن آن ملتی را میگویند که تمام لوازم و مایحتاج زندگی خود را در خود مملکت و شهر خویش آماده و فراهم نماید و هرگاه در مملکتشان آنقدرها استعداد طبیعی نباشد، به قوت علم و قدرت عمل لوازم معاش و اسباب انتعاش خویش فراهم آورده یا اینکه بهتر از لازم را قایم مقام آن ساخته و خود و ملت خود را از هر جهت آسوده و فارغ میدارند، چنانچه جزیره کوچک لندن ابدأ استعداد طبیعی آنرا ندارد که یک کرور آدم در آنجا تعیش و زندگانی نمایند ولی به قوت علم و قدرت عمل انگلیسی هاست که در این محل خورد و جزیره صغیر هنری به کار برده اند که حالا سه میلیون نفس بلکه زیاده در آن شهر به کمال فراغ بال تعیش و کامرانی و راحت زندگانی میکنند. سهل است یک دنیا را محتاج خویش نموده اند. این است حاصل علم و عمل و معنی تمدن و فائده آنکه ملاحظه میفرمایید.”<sup>9</sup>

Mīrzā Āqā Khān enumerates two benefits of new science; first, it provides the basic necessities for a better life and for human welfare. The second profit of new science is that it results in the discovery of causes of natural phenomena, and in this way, it helps to diminish the fear of the unknown. The more a nation is civilized, the more it requires the achievements of science to provide comfort and prosperity. He defines science as “finding the benefit and the disadvantage”, and believes that European scientists to some extent are successful in finding what is advantageous to human beings<sup>10</sup>. He defines Iranian indigenous knowledge as pointless and useless knowledge. On the contrary, he believes that Western science is beneficial and helps facilitate a better life for humankind. He names some of these facilities, such as hotels and streets, hospitals and factories<sup>11</sup>.

Mīrzā Āqā Khān emphasizes the ecological factor that force society to develop its lifestyle. He believes that complexity of life and variety in technology in European nations encourage them to think about these issues and challenges. The fruit of this contemplation is the development of industries, as well as the evolution of science, unlike Iranians whose simplicity in daily life and necessity would not stimulate this kind of thinking and creativity.

Because of the ideological hostility to Arabs, whenever Mīrzā Āqā Khān wants to compare European and Iranian society in terms of complexity of civilization, he attributes all the negative

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<sup>9</sup> Kermānī (1925), p. 12.

<sup>10</sup> Ibid., p. 63.

<sup>11</sup> Ibid., p. 116.

characteristics to Arab influence. He argues that Arab culture at the time of the conquest of Iran was so primitive and humble that they were not in need of sciences like economics, political science, history, philosophy, and chemistry, or advanced technologies like architecture, engineering and agriculture. That is why these sciences did not evolve in the countries under Arab domination, and this is the reason why they had ruined the knowledge and technologies of the Persian empires, which dated back eight thousand years<sup>12</sup>. In the following statement, he reveals his expectation of the advancement of science:

“The methods of trading, the increase in wealth, progress of a nation and the greatness of the state are entirely unknown, even to the greatest ‘*ulamā*. The most urgent issues for the nation and state of Iranians today comprise the search for the improvement of industries, to promote commerce and business, edification, moderating the government, the reform of public opinion, and the improvement of living and communicating. And I am amazed that in all the books of the ‘*ulamā*, jurists and mystics there is not even one word about the needs of the nation and reform of the state”.

"راه تجارت و ازدیاد ثروت و ترقی یک ملت و بزرگی یک دولت به بزرگترین علمای ایران پوشیده و پنهان است و آنقدر که امروزه ملت و دولت ایران احتیاج به دانستن وسائل ثروت و تکمیل صنایع و ترویج معامله و تجارت و تشدید اخلاق و تعدیل حکومت و اصلاح و عقاید عامه و تسهیل معیشت و معاشرت دارند،... و عجب اینکه تا حال در احتیاجات ملت ایران و اصلاح دولت ایشان در تمام کتب فقها و حکما و عرفای آنان نوشته نشده است."<sup>13</sup>

### 3-2-4-2- Principles of the New Science

Mīrzā Āqā Khān, influenced by European thinkers such as Jean Jacques Rousseau (1712-1778) and René Descartes, gives priority to the community over the individual<sup>14</sup>, but unlike them, the concept of individuality is not comprehensible for him. Without understanding this concept, he instead uses the term “nation” in its place. This is clear from his statement, “discovering nature will result in progress and welfare for a nation”. By using the word “nation”, Mīrzā Āqā Khān emphasizes the collective nature of human beings. In his perception, cognition of the human being as the object of science is not the case; rather a nation would recognize itself just in a comparison

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<sup>12</sup> Ibid., pp. 113-8.

<sup>13</sup> Ibid., pp. 176-7.

<sup>14</sup> Morteżā Rāvandi: *Tārīkhe Tahavolāte Ejtemā'ei* (History of Social Evolution), Tehran, 1975, p. 435.

to the “other”. In his two volumes: *Se Maktūb* and *Şad Khaṭābe*, he always uses the term “nation” as the object in a search for knowledge. He never uses the term “human”; rather he is talking about the “Iranian nation” in relation to an ideal nation based on European models. For him, questions of identity and existence are a matter of the relationship between the “self” and the “other”.

He believes that due to the nature of people it is obvious that they would seek to discover the truth of nature and use that knowledge to their advantage. He thinks that a nation would naturally strive for survival and for a better life, therefore search to find the use and harm in things. According to his discourse, “human” as the subject of the cognition is not significant, rather the “nation” and its collective wisdom is the subject of deliberation, and the object would be natural phenomena. The only exception is biology, medicine and psychology, through which human beings could be the object of the scientific examination, which are harmful or useful for human health. Treating a nation as a living organism, it is evident that Mīrzā Āqā Khān believes every living creature has a strategy of survival and that the goal of science is to enable a nation to survive.

In his opinion, the efforts of Western scientists are aimed to serve their nations, and leave a good name after their death<sup>15</sup>. Assuming that all scientific endeavor must be goal-oriented, Mīrzā Āqā Khān reveals his own intellectual framework, which induces him to perceive European scientific efforts in the old epistemology. For him, the concern of science should not be knowledge for knowledge’s sake, but a scientist’s service of society. It is also the final aim of all science to discover the secrets of God in nature. The perfect science, as Mīrzā Āqā Khān asserted, comprises three aspects:

- 1- Inquiring about the origin of things and their creation
- 2- Explaining the present state of things and why
- 3- Predicting the future and causality of things

Despite European efforts to discover the natural world, or in other words, discover the reasons for the present situation of things, science is not yet perfect. It is evolving and maybe someday in the distant future, all three aspects of science will be revealed to mankind. He comments:

“European scientists have only done research about those issues that are related to human welfare and its survival, and ignored the other subjects which have no use for human life”.

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<sup>15</sup> Kermānī (1908), p. 197.



"لهذا در فرنگ آنقدر که در زندگانی متمدنانه خود محتاج به دانستن نفع و ضرر زندگی و حیوه خویش بوده اند دایره علم را وسعت داده اند ولی در چیزهایی که دانستن آنها شرط حیوه و زندگی آنان نبوده نه علم بدانها حاصل کرده، نه درصدد تحقیق آن برآمده." 16

Mīrzā Āqā Khān repeats these remarks in *Se Maktūb*, but this time based on the definition provided by mysticism. Criticizing Iranian and Indian for neglecting "logic" and for their superstitious beliefs, he points out that the subject of mysticism is the unity of being and the understanding of the past, present and future of all things<sup>17</sup>. It seems that for him, perfect science is what the old wisdom identifies. New science only deals with one aspect of understanding the world: explaining the present state of the things. Therefore, it would only be a branch of the old wisdom. New science is limited to the acknowledgement of natural phenomena and harnessing the power of nature for the sake of humanity. In spite of many benefits of new science, scientists can only tell us about the present state of things. They have no assertion about the metaphysical world thus, new science is defective but at the same time neutral and helpful. New science is assumed to be neutral, because regardless of the epistemological assumptions (for instance whether God exists or not<sup>18</sup>), European scientists are successful in their understanding of the mechanisms of nature.

Whenever he is talking about science, he is referring to the natural sciences; those based on reasonable and strict mathematical rules, which seek proof in the real world. For him, old methods of deliberating about natural phenomena are inconsequential, unlike the precise methods utilized by European scholars, which lead to beneficial results. From Mīrzā Āqā Khān's point of view: the basis of "science" is "perception" and the basis of perception is human senses, and since the beginning of creation, humans began to search the natural world as if they were reading the book of God and searched for the reasons and causes by means of the senses<sup>19</sup>. It shows that observing natural phenomena is not something new but something human beings have always done. The only difference he makes for new science is that the European science is more matured and evolved.

In Mīrzā Āqā Khān's text, new science is a subdivision of a broader knowledge about the world, whether physical or metaphysical. There is no contradiction between the old science and what new science seeks; the second one is a subdivision of the first one. Accordingly, Mīrzā Āqā Khān's perception of the modern science is only conceivable through the frame of the old wisdom.

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<sup>16</sup> Kermānī (1925), p. 62.

<sup>17</sup> Idem., (1908), p. 113.

<sup>18</sup> Idem., (1925), p. 50.

<sup>19</sup> Ibid., p. 61.

Since he never speaks about the possible difference between the new and the old science, it strengthens this assumption that the features and specifications of the new science are ambiguous to him. He considers new science just as a new version of the old practical wisdom. In fact, his lack of discussion about the premise of science and its principal presuppositions paved the way for identifying these two different epistemologies as the same. It is a very important element in the formation of the discourse about new science in Iran, since he influenced the next generation of intellectuals. In the next chapters, I will continue deliberating about this element in some of the later writings.

### **3-2-4-3- Relation between the New and the Old Science**

As I explained before, the focal point in Mīrzā Āqā Khān's text is the compatibility of reason with indigenous knowledge. To illustrate the degree of stagnation in Iran in compared to Europe, he uses some very severe terms about Iranian knowledge such as delusive, nonsense, unintelligible, causing confusion, unclear assignments, waste of time, corruption of the mind, pointless, absurd, futile, and irrational.

It appears that his perception of reason is “to rely on reasoning and logic”, rather than imitate predecessors. He informs the reader that the basis for the study of the real world are absolute mathematical laws, together with perceptions that can be achieved by means of human senses. This statement reveals his acknowledgement of what he had heard from European scholars about new scientific methods in the natural sciences and the optimism towards creating certainty in the natural sciences.

Mīrzā Āqā Khān explains his conviction that Iranian science is obscurantist: first of all, Iranian scholars have mixed up Greek, Indian, Arabic and Iranian philosophy and created a new hybrid system, full of contradictions. Second, there is a lack of reasoning and logic in their claims, and third, there is a lack of attention to the world of reality<sup>20</sup>. He is one of the exceptional authors who made clear the reasons for this assertion, while the other intellectuals of his time do not seem to have felt the need to explain why the traditional knowledge in Iran is so nonsensical. Possibly,

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<sup>20</sup> Kermānī (1908), pp. 107-9.

they took it for granted that their audience would agree about the meaninglessness of indigenous knowledge and consider it a shared assumption.

The “logic” (*‘elm-i manteq*), he says, is an instrument to distinguish between right and wrong and forms a substantial basis for the human sciences. He criticizes Shaykh Aḥmad Aḥsa’i<sup>21</sup>, for he declared “logic” unlawful. Mīrzā Āqā Khān states that if one bans logic, he can make any assertions without need to prove them. He believes that this is exactly what happens for the followers of Shaykh Aḥmad Aḥsa’i; they would accept any vain and irrational statement<sup>22</sup>. He continues:

“My objection is not acceptable for them, because I speak according to logical rules and logic is not a criterion for them, rather it is a “sin”. The reason also cannot certify their assertions, for them it is no problem! A verification of reason is not required. Because according to the assumption that logic is unlawful and reason is not a criterion, every impossible in the world would be possible. All the nonsense could be truth and every lie could be fact”.

“اعتراض ما برایشان صحیح نیست چراکه ما با قاعده منطق سخن میگوییم و منطق میزان نیست و حرام. عقل هم تصدیق فرمایشات ایشان را نکند نکند، چه میشود تصدیق عقل که مناط و حجت نیست. به این قاعده که منطق حرام باشد و تصویف عقل هم مناط نباشد هر محالی در عالم ممکن و هر باطلی حق و هر دورگی راست است.”<sup>23</sup>

It is evident from his statement that a human being should only accept what can be verified by reason. He holds that Westerners are living in the light because of science, while Iranians are in darkness. For him, it is apparent that Iranians are mistaken and unable to see the reality of the natural world. He repeats his comparison between the knowledge taught to a young child in Europe, and the knowledge of a great Iranian philosopher. He believes that there are some obvious reasons for the natural phenomena that a child in Europe would understand, but a philosopher in Iran would not<sup>24</sup>. Even more extremely, he says:

“They do not even have as much ability to reason as a four years old child, which is inherently a philosopher. If they did, they would not disdain the machinery of the power of God, because all the current advancements in Europe are derived from thinking about this amazing machinery”.

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<sup>21</sup> Shaykh Aḥmad Aḥsā’ī (1753–1826) was the founder of a 19th-century Shī’ī school in the Persian and Ottoman empires, whose followers are known as Shaykhīs. He condemned rational deliberation and reasoning, as a source of knowledge.

<sup>22</sup> Ibid., p. 176.

<sup>23</sup> Ibid., p. 177.

<sup>24</sup> Ibid., p. 116.

"این ارواح را به قدر طفل چهارساله که فیلسوف فطری است، قوه متفکره حاکمه و عاقله معتدل نبوده والا دستگاه قدره الله آنقدر حقیر و پست نمیشمردند و حال اینکه تمام ترقیات حالیه اروپا از تفکر در این دستگاه حیرت افزا پیدا شده."<sup>25</sup>

Mīrzā Āqā Khān maintains that Western scientists have contemplated about “the power of nature” for years and still are amazed by it, but Iranian religious experts (*‘ulamā*), scholars (*ḥokamā*) and poets (*sho‘arā*) like Ghazālī, Mollā Ṣadrā and Hāfez<sup>26</sup>, had condemned the earthly world. No matter whether God exists, as the religions are saying, or whether the world has no creator, as the materialists claim, the only thing that matters is the power of nature and the need to discover it<sup>27</sup>.

“All mullahs, theologians and jurists, are encouraging people to leave the real praxis and to ignore the real phenomena of divine nature, they don’t know what they are doing! In all Iranian’s indigenous sciences, there is not even a simple discovery, such as in what temperature we can melt Iron. And there is no benefit in all their schools, there is just quarreling and yelling and controversy”.

"آنهمه آخوند و ملا و طلبه و فقیه... همواره مردم را به ترک عادت حقیقه و آثار واقعیه طبیعت الهیه دعوت میکنند و خودشان هم نمیفهمند چه گه میخورند. در تمام علوم معموله ایران به قدر کشف مجهول جزئی که آیا آهن را به چه درجه از حرارت میتوان آب کرد نیست. و جز فریاد و جنجال و لج و جدال و قیل و قال، یک ذره و یک متقال فایده در آنهمه مدرسه نبوده و نخواهد بود."<sup>28</sup>

### 3-2-4-4- Scientific Disciplines and the Humanities

His reference to Western thought reveals a fair knowledge of Western ideas, a familiarity, which he acquired in Istanbul. Each time that he comments about various scientific disciplines that developed in Europe he compares them to Iranian knowledge and issues. Comparing the issues that European philosophers are supposed to think about with the so-called “useless issues” that Iranian scholars are busy with, implies his perception of the subjects of the humanities. For example, he realizes some responsibilities for a philosopher such as finding methods to increase the wealth of a nation, eliminating poverty, eradicating oppression and injustice of the monarchy or prejudice of the clergies, and establishing a new order of morality<sup>29</sup>. By this list, he declares the most urgent

<sup>25</sup> Idem., p. 49.

<sup>26</sup> It seems he consciously names these three territories: *‘ulamā*, *ḥokamā* and *sho‘arā* to emphasize that this is the general trend in the intellectual atmosphere.

<sup>27</sup> Ibid., 49-50.

<sup>28</sup> Idem., (1908), p. 105.

<sup>29</sup> Idem., (1925), p. 173.

issues that Iranian thinkers should contemplate. In fact, he determines the subjects that can be discussed in the field of philosophy and therefore he directs the discourse in a specific way, in which the number of issues and terms that one can use are limited. Arguing about the ignorance of Iranian 'ulamā about the new science, Mīrzā Āqā Khān says:

“Today all the Iranian scholars and all of their sciences are involved in the purification from uncleanness, as if there is nothing more important than this issue.... Nation's right, monarchy's rights, state's right, living right, business right, right of ethics and honor are entirely unknown to them, and chemistry, economics, politics, anatomy, climatology, geology, astronomy, science of progress and commerce, industry, and professions, and many other scientific disciplines are unfamiliar to them”.

“امروزه تمام مشاعر و مدارک علوم ایرانیان مشغول طهارت از نجاست است، گویا مسئله مهم تر از این وجود ندارد... حقوق ملت، حقوق سلطنت، حقوق دولت، حقوق معیشت، حقوق حیات، حقوق شرف و فضیلت، حقوق تجارت، حقوق بزرگواری و اخلاق، کلا طرا نزد جناب ایشان مجهول است و علم کیمی و شیمی و اکنومی، پولیتیک و علم تشریح و تکوینات ارضی و جوی و فلکی و ثروت و علم ترقی ملت و ازدیاد مواد تجارت و حرفت و صنعت و کرور کرور شئونات و شعب علوم همه در محضر آن جناب نامعلوم است.”<sup>30</sup>

By enumerating these sciences, he wants to specify those sciences that are necessary in order to be able to reform Iran. But among them he mentions the science of progression and an increase in commerce. It seems that the mechanism of progress and industrialization in Europe is a mystery to him and he tries to explain it by envisioning a scientific discipline, which studies progress in Europe. Comparing the advantages of European science and the futility of indigenous knowledge, Mīrzā Āqā Khān used the term “natural philosophy” to discuss the practical achievements of the science:

“I wish you have tried like a European scholar, using natural philosophy to at least create ice; that is delightful like a cool breeze in the summer”.

“ای کاش مانند یک طلبه فرنگستان از حکمت طبیعی استخراج ساختن یخ مصنوعی کرده بودید که در هوای گرم تابستان لذت تسنیم میدهد.”<sup>31</sup>

In *Se Maktūb*, he asserts that not only did the Arabs destroy Iran they ruined the origins of science and corrupted Iranians' minds in a way that causes doubt even in the sensible and tangible phenomena. For example, today one of the most obvious sciences is geography, and that the Earth simply can be explored by observation. But the greatest 'ulamā believe that the Euphrates River

<sup>30</sup> Ibid., p. 114.

<sup>31</sup> Idem., (1908), p. 51.

originates from the fingers of Imām ‘Alī in heaven, simply because Majlesī<sup>32</sup> quoted it from Imām Ṣādeq<sup>33</sup>.

Mīrzā Āqā Khān uses geography as an example for those sciences whose object can be observed and whose hypotheses can be tried experimentally. He argues that in Iran, in contrast, Iranian scholars wrote dozens of books to interpret and reinterpret geographical locations mentioned in the Qurān. Instead of simply looking for the actual places in the real world, they created legends about them<sup>34</sup>. He provides an example and comments about two mysterious cities mentioned in the Qurān: Jābolsā, and Jābolghā. He says that the Arabs had not seen these cities, thus they created myths about them. They believed that in fact these are two cities in the southeast (Zābūlestān) and north (Māzandarān) of Iran<sup>35</sup>. In another statement, he explains various scientific disciplines that used to be taught in the Iranian schools and points out the subject of each one:

“Alas! All those scholars and their books, even cannot serve their nations like a physics textbook in the schools of Paris. Now I describe their sciences. Arabic grammar and rhetoric; the result of these sciences were nothing but the deterioration of the students’ mother tongue, -The science of jurisprudence and methodology, genealogy and traditions (*ḥadīṣ*); having knowledge of these sciences did not help to go even one step further from savagery to civilization, and the only result is the obsession and doubt of everything. The outcome of jurisprudence was to learn to scheme, conspire, lie, spoil the wealth of the people and disregard the rights of the nation. Wisdom and mysticism are of no use, they are only adding to the vain imagination and causing controversies and baseless illusions and defamation to God or the prophet”.

اما افسوس که تمام آن علما و کتب بهقدر یک مختصر کتاب فیزیک و یک طفل مکتب پاریس بهملت خویش خدمت نکردند. اینک ما تشریح علوم ایشان را میکنیم. علوم صرف و نحو و معانی بیان در عربی، نتیجه این علوم برای ملت ایران جز خراب کردن زبان ایشان نبود. علم فقه و اصول و انساب و احادیث، در سایه این علوم یک قدم ملت ایران از وحشیگری به مدنیت قدم ننهاد، نتیجه فقط وسواس و شک و شبهه در هر چیز شد. نتیجه اصول آموختن حیل و دسیسه های شرعی و دغلهها و طرح ریزی های مسئله ها در خوردن مال مردم و ضایع کردن حقوق ملت شده. علم حکمت و عرفان و تطبیق بیان این و آن، جز افزودن اوهام و تولید مجادله و اشکالات بی پایه خیالات چرس مانند یا افترا بر خدا و رسول چه فایده دارد.<sup>36</sup>

<sup>32</sup> Muḥammad Bāqir Majlisī (1627-1698) was an influential jurist and a distinguished ḥadīṣ collector of the late Safavid period in Iran. His famous book *Bahār al-Anvār* (Oceans of Light) in 110 Volumes, is one of the most important references for ḥadīth in Shī‘ī Islam. For more information see Abdul-Hādī Ḥāerei: “Majlisī”, *Encyclopaedia of Islam*, Second Edition, edited by: P. Bearman, Th. Bianquis, C.E. Bosworth, E. van Donzel, W.P. Heinrichs. Online source: [http://dx.doi.org/10.1163/1573-3912\\_islam\\_SIM\\_4746](http://dx.doi.org/10.1163/1573-3912_islam_SIM_4746), date of access: 16 November 2016

<sup>33</sup> Kermānī (1908), p. 187.

<sup>34</sup> There were many scientists working in the field of Geography at the time, and Kermānī simply ignored them! Maybe he was not aware of their existence or maybe he consciously ignored them in order to attack the ‘ulama’s vain claims.

<sup>35</sup> *Ibid.*, pp. 102-3.

<sup>36</sup> *Idem.*, (1925), p. 115.

Mīrzā Āqā Khān Kermānī was inspired by Voltaire, the French historian and philosopher, who is famous for his advocacy of freedom of religion, freedom of expression, and separation of church and state. Like Voltaire, Mīrzā Āqā Khān believes that it is the duty of outspoken thinkers to bring about changes in society through the power of literature. He asserts that poesy<sup>37</sup> provided necessary motivation for civilization and progression in the Europe. For him Poesy means making meaningful and picturesque phrases that describes the status of a nation, for others to learn, and to inspire their ambition, effort and awareness.

He declares that Poesy developed and matured in Europe; philosophers like Voltaire and poets like Shakespeare (1564 - 1616) apply outstanding ideas, tales, or scientific facts, and bring them into order and create some elegant expressions. He maintains that this art in Iran is being used for the beggary, prate, and eulogy<sup>38</sup>. He mentions that Iranians do not understand the power of language to modify the ethics of a nation, and its utility for the revival of a country. Rather, they assume that every poet who speaks in a more complicated and obscure manner is the greater poet<sup>39</sup>. He suggests that the introduction of science and great ideas are entirely under the influence of language, thus if a language is easy to understand, it will accelerate the process of mass awakening<sup>40</sup>.

Explaining the importance of language in civilization, Mīrzā Āqā Khān perceives the Persian language to be corrupted and incomprehensible, because of the influence of Arabic. Thus, a child who spent many years learning Arabic and Persian literature is unable to read and write, neither in Persian nor in Arabic. Arguing that the only way to convey science is through text, Mīrzā Āqā Khān blames the Arabic language and the difficulty to read and write in this language for the lack of science and knowledge among Iranians. He claims that the main purpose of writing and speaking is to learn and to understand, and that the European scholars make an effort to present their statements in a simple and concise manner, in order to be comprehensible for ordinary people. Language simplicity will facilitate dissemination of knowledge among the masses. For him wisdom is the human soul and the body of wisdom is language. The meaning cannot emerge without words

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<sup>37</sup> Poesy is exactly the word he uses in the text. In the introduction, he explains that he uses some French terms because it is difficult to translate them into Persian, so he provides definitions for each term.

<sup>38</sup> Idem., (1908), p. 131.

<sup>39</sup> Ibid., p. 133.

<sup>40</sup> Ibid., p. 134.

and letters<sup>41</sup>. He then concludes that for centuries Arabic was the scientific language in Iran, and that the difficulties of learning it slowed the process of progress.

He claims that mistranslation from Greek to Arabic caused misunderstanding of the ancient Greek science. For example, due to the translation of *algebra*, it was considered to be a kind of science, which helps to find a solution for each unknown<sup>42</sup>. He also thinks that chemistry is the main reason of European progression, but Iranians underestimate its importance. He states that chemistry was even misunderstood during the translation from Greek to Arabic in the early Islamic period. Muslim scholars mistakenly thought that the purpose of *alchemy* was to convert copper and lead to gold and silver. Iranian scientists spent many years and lots of money only to get nothing. He believes this is the result of ignorance as well as reading Arabic texts. Only if they had seen the original books written by ancient Greeks or modern European scholars, they might have understood that converting one metal to another is impossible<sup>43</sup>. This statement also implies the assumption that ancient Greek knowledge and modern European science are one in the same “science”, which has evolved over time.

### 3-2-4-5- Relation between Science and Religion

In his first intellectual period, Mīrzā Āqā Khān Kermānī had a tendency to Azalī’s ideology and advocated Assadābādī’s ideas on the necessity of an Islamic revival. In his second intellectual period he became disenchanted with religion and criticized it. However, he still thought in terms of Islamic philosophy, because he had an incomplete understanding of European philosophy as an alternative paradigm. He blames the ‘*ulamā* and Islamic scholars for their meaningless discussions and irrational claims.

“In fact, science and reason have always been at odds with religion, especially in those nations that the laws of *Sharī’a* are not compatible with nature; therefore, simultaneous to the development of science in a nation, religious belief would diminish”.

“در واقع علم و دانش و عقل و بینش هماره مخالف دین و کیش بوده است خاصه در آن ملت که قانون شریعت بر وفق طبیعت ایشان نهاده نشده است از این رو در هر ملت قوه علم و حکمت زیاده میشود، به همان درجه از اعتقادات مذهبی ایشان میکاهد.”<sup>44</sup>

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<sup>41</sup> Ibid., pp. 313-4.

<sup>42</sup> Ibid., p. 323.

<sup>43</sup> Ibid., pp. 9-10.

<sup>44</sup> Idem., (1925), p. 102.



Affected by European natural philosophy in the 19<sup>th</sup> century, Mīrzā Āqā Khān defines the nature of a nation according to the biological and ecological requirements of that nation, like a living organ that fights for its survival. He reviews various religious and political thoughts, in different historical periods in Iran, in terms of their benefits for the survival of the nation and for the development of the quality of living. He stresses the role that religion or politics are playing in provoking a nation, either by encouraging people to provide a better life or preoccupying them with metaphysical myths and lies. In his opinion, these two social institutions are responsible for determining the future of a nation<sup>45</sup>. He criticizes Islam and the ‘*ulamā* throughout these two books, but in *Se Maktūb* he specifies that he is in fact critical of all religions:

“Do not think that I prefer the other religions over Islam and I consider their ideas to be right, I beg you this is not true; today all the religions contain false myths and fictions, and some rules against reason as well as laws against human rights”.

“گمان نکنی که من سایر ادیان را بر دین اسلام ترجیح میدهم یا اعتقاد ایشان را صحیح میدانم، به جان تو اگر چنین باشد، امروز تمام مذاهب و ادیان عالم پر است از افسانه های دروغ و قصه های خنک بی فروغ و قواعد مخالف عقل و قوانین مضییع ملت.”<sup>46</sup>

Indeed, these statements should not be regarded as his position, because in some other parts of his book, he defends Islam, and argues that certain beliefs have been wrongly attributed to Islam. Whether these contradictory statements are the result of the problematic situation of tackling the new epistemology of Europe, or because of his fear from fanatic opposition; the outcome is the same: no discussion of the true essence of European thought, and a disability to recognize its differences with the other kinds of knowledge in history.

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<sup>45</sup> Ibid., pp. 42-50; and (1908), p. 190.

<sup>46</sup> Idem., (1908), p. 113.

*Safīneh-yi Ṭālibī, yā, Kitāb-i Aḥmad*

&

*Masā'il al-Ḥayāt*

By ‘Abd al-Raḥīm Ṭālibof Tabrīzī

### 3-3-1- Biography

‘Abd al-Raḥīm Ṭālibof Tabrīzī was born in Tabriz in 1834 to a middle-class family of craftsmen. At the age of sixteen, he moved to Tbilisi, where he was to spend the greatest part of his life; he only returned to Iran when he was 67 years old and spent his last years in Tehran and Tabriz. In Tbilisi, he attended European style schools to acquire knowledge of modern science and went on to start a successful career in business.

As a wealthy man, he became a distinguished personality both in Tbilisi and Iran and his home became a meeting place for intellectuals, writers, and politicians. Like many other 19<sup>th</sup> century Iranian intellectuals, contemporary European ideas inspired Ṭālibof. He had an eager interest in modern science and created a comprehensive library in his home. At the age of 55, he retired from business and devoted his life to writing and translation, mostly on popular science. In 1899, he went to Tehran. Seven years later, he was elected as a representative of Tabriz in the national assembly. He died five years later.

Ṭālibof was a pioneer in the promulgation of popular science in Iran, and made introducing the achievements of modern science to Iranian society his personal mission. He wrote his works with the dual aim to raise awareness amongst the masses, and to motivate the political elite to establish European style schools. While criticizing the colonial policies of Russia and Britain in Iran, he stated that acquisition of new teaching methods and the adaption of modern science was the only way to develop and civilize the country and to achieve its independence from other countries. He was known as a patriot and even Moẓafar ad-Dīn Shāh held him in high esteem. In his works, he frequently mentioned European scientists and quoted famous thinkers such as Jeremy Bentham (1748-1832), Voltaire, Rousseau, Ernest Renan (1823-1892), Kant and Nietzsche. His work constituted a starting point for numerous other writers and his thoughts continue to influence contemporary thinking about European science<sup>1</sup>.

### 3-3-1-1- Writings

Ṭālibof had written a number of works that were widely read. *Kitāb-i Aḥmad*, a popular scientific book, became his most renowned work. In addition, he dealt with social and political issues, for instance in *Masālek al-Moḥsenīn*, a treatise in which he formulated his political ideas. In the field of politics, *Īẓāḥāt dar khosos-i Azādī* and *Masā'il al-Ḥayāt* are his most important works. The former was based on John Stuart Mill's *On Freedom*, while in the latter work, he expounded on European concepts of human rights and social law. The most important source of his scientific information were Russian books on the natural sciences along with translations of works of European thinkers. Ṭālibof's most important works are:

1- *Nokhbe-yi Sepehrī*, 1893, Istanbul

2- *Safīneh-yi Ṭālibī, yā, Kitāb-i Aḥmad*, 1894, Istanbul

3- *Physic yā Ḥekmat-i Ṭabī'ī*, 1894, Istanbul

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<sup>1</sup> For more information about him see Fereydūn Ādamīyat: *Andīshehā-yi Ṭālibof Tabrīzī*, Tehran, 1984; Cyrus Masrūrī: "Ṭālibof, 'Abd al-Raḥīm", *Encyclopaedia Iranica*, 2014; Rashid Yāsemī: "Ṭālibof va *Ketābe Aḥmad*", (*Ṭālibof and Ketābe Aḥmad*), *Iranshahr magazine*, vol. 5-6, pp. 283-297, Tehran, 1923.

- 4- Translation of: *New astronomy, by Flammarion*<sup>2</sup>, 1894, Istanbul
- 5- Translation of: *Letter of Marq̄ue second Caesar*, 1895, Istanbul
- 6- *Masālek al-Moḥsenīn* (The Manner of the Righteous), 1905, Cairo
- 7- *Masā'il al-Hayāt* (Life's Issues), 1906, Tbilisi
- 8- *Īzāḥāt dar khosos-i Azādī* (Explanations about Freedom), 1907, Tehran
- 9- *Sīyāsat-i Ṭālibī*, (Ṭālibī 's Politic), 1911, Tehran

*Safīneh-yi Ṭālibī yā, Kitāb-i Aḥmad*, hereafter referred to *Kitāb-i Aḥmad*, was the first popular science book in Iran aimed at a wide range of readership and played an important role in the mediation of modern science in Iran. Therefore, this chapter will focus on the influence of this work on the perception of European science among Iranians.

### 3-3-2- About the Book

The first volume of *Kitāb-i Aḥmad*<sup>3</sup> written between 1890 and 1892 was published in Istanbul in 1894; the second volume appeared a year later. The popularity of the book is confirmed by the fact that it saw several reprints, in and outside Iran. As the first Iranian book on popular science, it was used in schools in Tabriz and later in other places as wells. With regard to the necessity to teach modern science in a simple way to ordinary people, the book takes the form of a dialogue between the author and his fictitious son Aḥmad. In this dialogue, Aḥmad would ask a question about new phenomena which the author would explain to him and the assumed audience, i.e. the uneducated and ignorant people in Iran. The title of the book *Safīneh-yi Ṭālibī* hints at Ṭālibof's intention and indicates that he was confident about his position in society and had enough self-esteem to educate people. In his book, he uses the term *Safīneh* (Ship), which in this case means a vehicle to save people from a storm.

*Kitāb-i Aḥmad* consists of two volumes and twenty-two chapters, in which each chapter is devoted to a specific topic, for example the description of exotic plants and animals, new inventions

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<sup>2</sup> Nicolas Camille Flammarion (26 February 1842 – 3 June 1925) was a French astronomer and author. He was a prolific author of more than fifty titles, including popular science works about astronomy, several notable early science fiction novels, and works on psychology and related topics.

<sup>3</sup> *Safīneh-yi Ṭālibī, yā, Kitāb-i Aḥmad*, in 2 Volumes, Istanbul: Matba'-i Akhtar, 1894.

in Europe, world history, and geography. In order to make the book more appealing and easy to understand, he narrates tales about Aḥmad's daily life and adventures. Inspired by the success of the first two volumes, he wrote a third volume of *Kitāb-i Aḥmad* titled *Masā'il al-Ḥayāt*<sup>4</sup> twelve years later, in which he continued his previous conversation with his son, in which he extended the subject of his conversation to social and political issues. Aḥmad is no longer a seven-year-old boy, but rather a grown-up young man who is well educated and can himself inform his father about inventions and discoveries. The father is proud of his son and confident that young talents like Aḥmad will be able to make his dreams for a civilized, independent country come true<sup>5</sup>.

In one chapter of his book, Ṭālibof translates the constitution of Japan<sup>6</sup> and explains each article to his audience, as he assumed, they would be confronting these concepts for the first time. An examination of the titles of the chapters in all three volumes show the subjects that most interested him. The single chapters of the first volume are as follows:

- 1- Worship of God, Mecca and major religions; languages
- 2- Iranian and European schools; circus and training animals
- 3- Ingredients of pencil, paper, graphite, ink
- 4- The value of time, Zoroastrians, fire and matches, phosphorus, thermal power
- 5- Nowrūz, exotic animals such as the walrus, dogfish, sea lion, and octopus
- 6- Microscopic particles and germs, museums, Iron and Bronze Ages, mummification
- 7- Geographical maps, Egyptian pyramids, coffee, tea
- 8- Air and its components, famous monuments of the world like the Eiffel tower in Paris and the Great Wall of China.
- 9- Nan tree, bananas, the production of synthetic colors, the continent of America, the spherical shape of the Earth
- 10- The conversion of the lunar and Gregorian calendar, photography, wells and groundwater, amber
- 11- Water, boiling and freezing, objects and gravitation, particles, barometric pressure, weight and volume
- 12- Gas and its discovery, burning and gasworks, magnetism, Sweden and Norway

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<sup>4</sup> *Masā'il al-Ḥayāt*, Tbilisi: Matba'-'i Ghayrat, 1906.

<sup>5</sup> Ṭālibof (1906), pp. 15-18.

<sup>6</sup> At the time, Japan was seen as a successful model of modernization and development among non-European countries.

- 13- The baobab tree, Mexico; glasses; burial rites in Japan; George Washington
- 14- Military affairs and warfare, hail, meteorology, wind, heat, light, electricity
- 15- Wonders of the animal world such as the large number of butterfly eyes; cameras, pearls, Thomas Edison, telegraph, and telephone
- 16- Bees, spiders, ants, scorpions; blood circulation; railways; the invention of the steam engine, electricity, chemistry
- 17- Numbers, measurement instruments; mercury, gold and gilding; metals and electricity
- 18- Silk fabrics, gas balloon; sound and how a telephone works

**Volume II:**

- 1- Patriotism, the economic collapse in Iran; boiling and evaporation; soap factory making; freezing ice
- 2- Making botanic gardens; new transportation systems in America; the deficiencies of the Iranian education system; finding a cure for diseases
- 3- Barometric pressure, forces of adsorption and desorption, the clock, the metric system
- 4- The meaning of Law and wealth; European kings, wars and governance; the discovery of x-rays

As the list shows, the content of Ṭālibof's book does not follow any systematic order, and the issues are put together incoherently. Each chapter begins with telling a story about Aḥmad's daily life, where a simple incident will initiate a question from the child, which offers the author the opportunity to provide an explanation for his son as well as his audience. Ṭālibof is not interested in a categorization of related topics. Although he had a library with scientific books at home, which could have been used to organize the content of this book, he is apparently fascinated by each individual scientific discovery or invention. That the classification of the various disciplines of science and the relation between these fields is unknown to him will be demonstrated in the following.

### **3-3-3- Meaning of the Text, Isolated from the Context**

#### **3-3-3-1- Semantic Episodes**

The most important semantic episodes in the text can be divided into two parts. At first, in Ṭālibof's opinion there are several beneficial aspects of modern science:

- Modern science is useful is needed all over the world
- The validity of scientific claims can be proven
- Scientists deserve respect
- The European education system is perfect
- Science in Iran is nothing but a collection of legends

Secondly, his interpretation of the function and aims of science and of the defections he attributes to the new science:

- The aim of science is to discover the secrets of God
- New scientific discoveries will confirm the power of God
- Human senses are limited, so modern science will always be defective
- The study of humans by humans is inherently defective, so we have to resort to religion

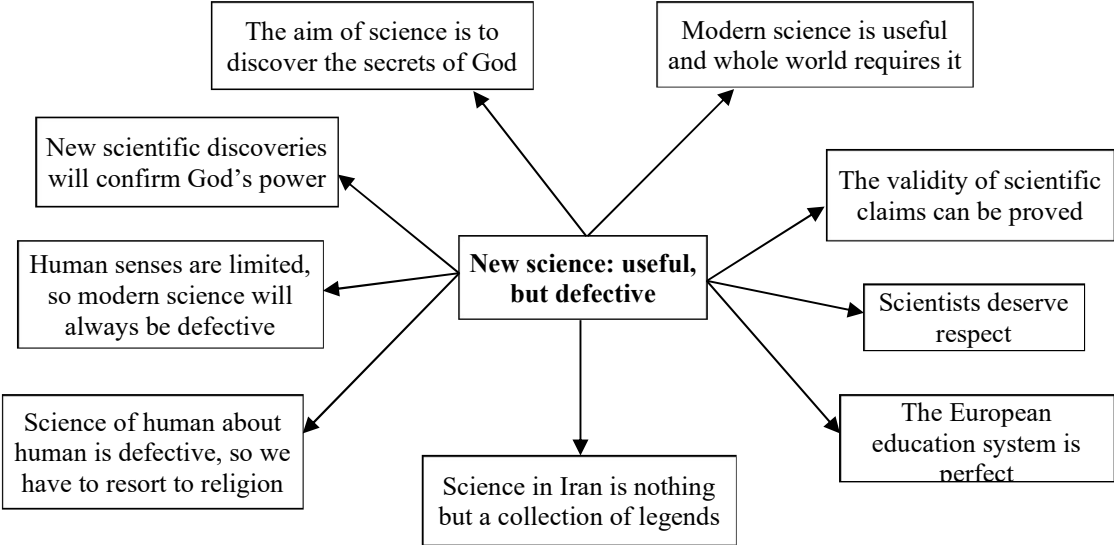
#### **3-3-3-2- Focal Point**

Ṭālibof is an exemplary representative of that group of Iranian intellectuals who wished to acquire modern science for the reform of their country. At the same time, he criticized these very science for its lack of attention to the spiritual aspects of the world. Throughout his book, he speaks about the usefulness of science for human life, but believes that human knowledge will never be perfect, because human senses are limited, and that the world is constantly changing, so that a proper recognition is impossible. Finally, God knows us better than we do ourselves, and thus the human

mind will never be able to attain a proper knowledge of God, no matter what progress science may achieve. This is the central thesis of in Ṭālibof's book, that modern science is useful, but defective.



**3-3-3-3- Semantic Structure**



### 3-3-4- Meaning of the Text with Respect to the Context

#### 3-3-4-1- Description of the New Science

In the preface to his book, Ṭālibof clearly states his purpose in writing *Kitāb-i Aḥmad*:

“In this era, in which the light of awareness encompasses the world, I decided to write a book for the sake of patriotism and in the form of a dialogue, including an introduction to new science and technologies, true news and antiquities; narrated by a child, that can be applied by students and can increase the understanding of beginners. Maybe it will help to enlighten the minds of Iranians at the early stages of their education, and will prepare them for a higher technical education in the future”.

“این بنده،... در این عصر که انوار معرفت روی زمین را فراگرفته... به جهت ملتخواهی خواست کتابی به عنوان سنوال و جواب که حاوی مقدمات مسائل علم و فنون جدید و اخبار صحیح و آثار قدیمه باشد از زبان اطفال در لباسی که متعلمان را به کار آید و مبتدیان را بصیرت افزاید ترتیب بدهد. شاید بدین واسطه ذهن ابنای وطن در ابتدای تعلیم فی الجمله باز و روشن شده، در آتی از برای تعلیم فنون عالییه مستعد شوند.”<sup>7</sup>

Assuming that new scientific concepts should be taught in the simplest way possible, the style of his books are a review of attractive and odd phenomena around the world presented to a curious boy. Throughout all three volumes, Ṭālibof expresses his amazement about the wonders of nature or human inventions, and it seems that, from his point of view, only these weird topics are worth discussion as an introduction of science to Iranian society. By narrating extraordinary phenomena, he would attain his aim to strike people’s curiosity, as well as to affirm God's infinite power, the ultimate source of all these wonders<sup>8</sup>. He believes in the provability of modern science and trusts in the claims of science:

“You judge new information on the basis of your immature and imperfect reason. Sometimes you will deny it due to your extreme ignorance. You are only a child, but most of our elite clearly deny what is against their personal profit or beyond their blind comprehension, and they will label it as absurd and nonsensical. While science fights to prevail, even if it is in

<sup>7</sup> Ṭālibof (1984), vol. 1, preface, p. 2.

<sup>8</sup> Ibid., pp. 123, 132, 133, 157, 176, 217; Idem., (1906), vol. 3, p. 15

opposition to the belief of the best scholars, it is better to be silent, than to deny, no matter what you hear”.

“آنچه میشنوی فقط میزان صحت و سقم او عقل نابالغ تست. این است که گاهی از غایت جهل منکر میشوی. تو که طفلی، بیشتری از رجال وطن ما نیز تا مطلبی مخالف نفع شخصی یا خارج از حیطه میزان فهم قاصر خودشان شنیدند بی تحاشا منکر میشوند و بیهوده و بی اصل و بی معنی می‌شمارند. حال آنکه علم با عقلهای کامل و بالغ نیز می‌ستیزد تا غالب شود، پس هر چه بشنوی جای انکار، سکوت بهتر است.”<sup>9</sup>

In this comment, through Aḥmad he speaks to readers who would deny new information, alleges that there are many unknowns and wonders of the world and one should be open-minded to learn about exotic phenomena. It also reveals the degree of his confidence in scientific data.

He admires European education and training systems and frequently compares them with the faulty system of education in Iran. He postulates that the advanced system of education, that provided the opportunity to train people and prepare them to build up their country, was the cause for European progress. When outlining the benefits of new educational systems, he compares them to a factory whose final products were courteous and knowledgeable human beings<sup>10</sup>. He uses extravagant examples to demonstrate the efficiency of this system, like training children and even animals in a circus to enable the latter to perform incredible and amazing tricks<sup>11</sup>.

Although he supports the acquisition of Western technologies by Iranians, he strongly criticizes European states for their colonial goals and their economic domination of the world, stating that Europe made the whole world dependent on their goods, thus bringing other people under their control. At the same time, he blames Iranians for their imitation of European culture and customs<sup>12</sup>.

“Due to ignorance, Iranian fools go anywhere, see anyone, and emulate it; and forget their own clothes, language and customs, because they do not love their fatherland”.

“از شدت جهل جهال ما مثل بوزینه به هر جا رفتند هر کس را ببینند مقلد او میشوند، لباس و زبان و رسوم و عادات خودشان را فراموش مینمایند زیرا که به وطن خود محبت ندارند.”<sup>13</sup>

In this statement, Ṭālibof mentions those things he regards worth preserving: clothing, language, and customs. While continuously repeating the necessity to adopt European-style schools and

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<sup>9</sup> Idem., (1984), vol. 1, p. 217.

<sup>10</sup> Ibid., vol. 1, pp. 10, 20, 72, 81, 102, 236.

<sup>11</sup> Ibid., vol. 1, p. 25.

<sup>12</sup> Ibid., vol. 2, pp. 103, 105, 113.

<sup>13</sup> Ibid., vol. 2, p. 106.

factories, he obviously considers European science and technology to be urgently needed. On the other hand, he identifies “tradition” as something valuable, which should be preserved.

In his desire to invigorate progress in his country, he emphasizes the importance of “time”, and identifies a prominent difference between European and Asian societies. For him, Europe is developing quickly because Europeans know the value of time and therefore try to fulfill every task in a minimum amount of time. They train both their children at school and their specialists in the university in a short time. Unlike Iranian that passively waste their precious time<sup>14</sup>. He is obviously impressed by European diligence and the speed of change in their societies, and therefore assumes that they know the value of time.

Division of labor was another amazing aspect of European societies for those Iranians who visited Europe for the first time. Since this new order of the social structure was unknown to them, the only explanation authors like Ṭālibof could imagine is that European patriotism, devoting themselves to the good of their country, was responsible for their productive economies and law and order; otherwise there could be no reason for such perseverance<sup>15</sup>.

Ṭālibof regards the scientific and industrial progress of 16<sup>th</sup>-century Europe as a natural trend in history and compares it to the achievements of past civilizations like ancient Greece. For him, the new era in the 19<sup>th</sup> century is the continuation of an inevitable development that every civilization would experience<sup>16</sup>. He is unable to differentiate between past and present. He does not appreciate fundamental changes in European societies and their break from the past, and actually the time for talking about this issue has not coming yet.

He is also incapable of understanding the mechanisms of industrialization and modernization in Europe. It should be noted that this was epistemologically impossible, and Europeans themselves only began to analyze these developments at the end of the 19<sup>th</sup> century, for instance in the efforts of Emile Durkheim, Karl Marx and Max Weber.

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<sup>14</sup> Ṭālibof (1984), vol. 1, pp. 25, 181, 183; vol. 2, p. 104.

<sup>15</sup> Ibid., vol. 2, p. 92.

<sup>16</sup> Ibid., vol. 1, pp. 181-182.

### 3-3-4-2- Principles of the New Science

We can note a number of key terms, which he employs in his writings on science: scientists, discovery, unknown, Iranian, human being, and God. This set of words and semantics compels him to form a limited set of concepts. He regards scientists as people who are agents in the discovery of unknown phenomena and regards human beings as those who use scientific findings for a better life. He regards Iranians as those who should learn about this new science as soon as possible in order to be able to employ it for national progress. Finally, he considers God as the power behind everything unknown.

Language does not give him the ability to speak about semantics beyond these boundaries. Any discussion on the nature of knowledge is absent from his discourse. He attributes all human understanding of the world to a specific group of people, which he obviously separates from the rest of the mankind. He divides people into three groups: civilized Westerners, laggard Asians (including Iranians), and scientists. The last group has no nationality, they belong to all the humanity, and it is their duty to explore the universe and to discover the unknown world. The result of their efforts belongs to humanity, and therefore they deserve respect.

At numerous points in his books, he praises the endeavours of scientists. In addition to the acknowledgement of the power of God, these efforts will provide welfare for human societies, and everyone will benefit from their findings<sup>17</sup>. His way of talking about scientists gives no chance for either himself or his readers to be a scientist themselves, as if he and the readers of his books are not supposed to discover the world, but rather they should simply consume the scientific information. His statement reveals that he equates science with information<sup>18</sup>. He does not expect Iranians to explore the world, to reflect about things or to produce knowledge, but rather tries to persuade them to learn about European discoveries and to use them for their own benefit.

For Ṭālibof, new science is an accumulation of facts verifiable by simple experiments, which reveal God's secrets and can be applied for human interests. Modern science is something beyond our access and an object, which is necessary to be informed of, and to enjoy its benefits<sup>19</sup>. In fact he is silent on the definition, methodology, and prerequisites of modern science, because in his discourse scientific production is the task of a third party: "scientist", while the others are

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<sup>17</sup> Ibid., vol. 1, p. 157.

<sup>18</sup> Ibid., p. 157; Idem., (1906), p. 15.

<sup>19</sup> Idem., (1906), p. 25.

simply using it. Even when he is talking about Aḥmad, who is a representative of Iran's new generation, he expects him to learn European science and apply this new knowledge in order to construct factories and mines with the intention of gaining independence from European markets, resources, and influence.

He specifies the ability to prove something as one of the most important aspects of modern science and repeatedly insists that everyone can carry out an experiment with very simple tools to verify the authenticity of a scientific claim<sup>20</sup>. In the following paragraph, he talks about a handbook of botany, composed by Western scientists with great efforts, but which is now accessible for everybody. It seems that the aim of all those scientific efforts is to create the awareness of the existence of various plants and species, a task he equates with the efforts of patriotism:

“Today, you can find a book on botany at a low price in each bazaar, so that every poor man can afford it, and by reading it, every beginner can understand the meaning of serving the country, which is just the publication of information and dissemination of awareness; and also the reputation of those<sup>21</sup> who suffered doing this holy duty”.

"اکنون در سر هر برزن و بازار کتاب علم نباتات را به چند دینار می فروشند که هر فقیری بخواند و هر مبتدی بتواند از خواندن او معنی خدمت وطن را که فقط نشر اطلاعات و تکثیر معارف و ضمناً نیکنامی کسانی که در ایفای این وظیفه مقدسه رنج برده اند دریابد."<sup>22</sup>

By numerous examples, he intends to demonstrate that human senses are defective, and then concludes that we cannot discover all the secrets of the nature, so that many things will remain unknown forever. There are, for instance, senses like smell, which are far more developed in animals than in men, or the use of iron (in a Seismograph) which can sense an earthquake from a long distance, something a man could not accomplish! He specifies some attributes to objects or living things that humans lack. Therefore, just like human senses, human knowledge will always be limited<sup>23</sup>. Ṭālibof acknowledges that in some cases scientists manage to discover invisible phenomena such as electricity or magnetic fields, but suggest that these phenomena were discovered by accident, and their discovery cannot be generalized for all fields of science:

“Attributing specific privileges to man is an exaggeration that Christians have made in the belief of Jesus's divinity. While man is inferior in talents from plants and substances...None

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<sup>20</sup> Idem., (1984), vol. 1, p. 192.

<sup>21</sup> Scientists

<sup>22</sup> Ibid., vol. 1, p. 133.

<sup>23</sup> Ibid., vol. 1, p. 39; Idem., (1906), pp. 29-35.

of man's discoveries until today, are the results of his reason or deliberation. Ewite,<sup>24</sup> an Englishman, found steam power from a moving kettle's lid, Albert<sup>25</sup> by the dissection of frogs, discovered electric power. After achieving the basis, they built railways".

"تنها بشر را به مقام امتیاز خصوص کشیدن غلوی است که نصارا در الوهیت مسیح میکند، حال آنکه بشر در استعداد از نبات و جماد پایین تر است... هرچه تا امروز بنی آدم کشف نموده هیچ کدام ثمر عقل او نیست ناشی از فکر و تامل او نبود. اوایت انگلیسی از حرکت سر دیگ جوشنده قوه بخار را فهمید، آلبرت از تشریح غوک، زدن قوه الکتریک را کشف نمود بعد از آن که اساس به دست آمد راه آهن ساختند."<sup>26</sup>

### 3-3-4-3- The Relationship between Old and New Science

In some cases, Ṭālibof traces the history of a scientific discovery back to ancient Rome or even earlier times, and states that modern day discoveries had their roots in these earlier findings. For centuries, Europe was in a state of stagnation, but it had reawoken and continued on, progressing on the path already paved by the achievements of ancient science<sup>27</sup>. Like other intellectuals of his time, Ṭālibof considers the history of science as a continuous line of progression, which eliminated any possibilities of understanding modern European science as something revolutionary. He explains modern science with the use of two key terms: information (*ma'lomāt*) and awareness (*ma'refat*), which for him signify the assumption that the data provided by modern science is supposed to be certain.

"In the near future, the light of awareness will illuminate our country too, and in every district, several schools will open and the present schools, which only teach fables, will disappear".

"چندی نمیگذرد که انوار معرفت به مملکت ما نیز می تابد در هر محله مکاتب متعدده باز میشود و مکتب افسانه امروزی از میان میرود."<sup>28</sup>

<sup>24</sup> He is most likely referring to James Watt, (1736–1819) who was a Scottish inventor and mechanical engineer whose improvements to the steam engine were fundamental to the changes brought by the Industrial Revolution.

<sup>25</sup> It is not evident who Albert is, since electricity was discovered by Luigi Aloisio Galvani (1737–1798) who was an Italian physician, physicist and philosopher. In 1780, he discovered that the muscles of dead frogs' legs twitched when struck by a spark. Another Italian physician Alessandro Giuseppe Antonio Anastasio Volta (1745–1827) was an Italian physicist known for the invention of the battery in the 1800's.

<sup>26</sup> Ṭālibof (1906), p. 30.

<sup>27</sup> For example, in vol. 1, pp. 189, 197.

<sup>28</sup> Ṭālibof (1984), vol. 1, p. 25.

He uses the term legend to describe Iranian knowledge and conceptualizes modern science as a tale about astonishing places, creatures and natural phenomena, with the difference that in this case these stories are true, compared to the narrative in Iran of a mythical world. He says:

“My knowledge, and the knowledge of people like me seems to become useless and turned to legend; but what Aḥmad knows can nowadays be employed by him and others, the entire world needs that information. We did possess sufficient information at a time when the needs of people and the exchange between nations was minimal. But Aḥmad can make porcelain from our soil, or convert our stones into crystals, our desert sand into glass... whatever nature has hidden in the ground, he can dig it out and use it for the augmentation of public wealth. What can I say, I am embarrassed for the information I have, for what I know for sure, is that I do not know anything”.

"آنچه من و امثال من میدانیم معلوماتی است که از حیز انتفاع عصر افتاده و جزو افسانه شده، آنچه آقا احمد میداند امروز به کار خود و دیگران برمیخورد همه دنیا محتاج آن معلومات است. معلومات ما وقتی کافی بود که احتیاج مردم اینقدر وسعت نداشته مرادده ملل با این تقریب خارج تصور نبود. اما احمد میتواند از خاک ما چینی بسازد سنگ ما را بلور کند ریگ صحرای ما را شیشه نماید... هر چه طبیعت در ناف زمین گذاشته پنهان نموده همه را درآورد مصرف نماید و به ثروت عمومی بیفزاید. چه بگویم بنده از معلومات خود منفعلم آنچه میدانم این است که هیچ نمیدانم."<sup>29</sup>

Because none of the writers in Ṭālibof's time referenced their quotations, this concept was literally unknown. It was accepted that the author said so, as if the narrator was in a position that gave him the right to say anything without the obligation to verify it. This is the position of a storyteller. It does not matter whether the narrator exaggerate or is not honest in some parts; the aim of a story is to please and to entertain his audience. His choice of issues also confirms this: the most exotic and astonishing issues are most prominent. He makes a deliberate attempt to entertain the audience.

In some parts of his book<sup>30</sup> Ṭālibof asks his son about certain scientific facts to test his memory, for instance by memorizing details about plants or countries. Simply knowing information and memorizing it is regarded as a privilege, even a virtue. It is exactly what people expect from a *ḥakim*, a person who knows everything. Due to the longstanding tradition of oral transmission of knowledge, Iranians are not accustomed to write down their knowledge, while those who can memorize texts, enjoy great respect.

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<sup>29</sup> Idem., (1906), p. 49.

<sup>30</sup> For example, vol. 1, pp. 79-80.



### 3-3-4-4- Scientific Disciplines and the Humanities

Tālibof gives us an indication that he has a clear vision of different scientific disciplines. He mentions names and definitions of several fields of studies and their practical benefit for human life, such as archeology<sup>31</sup>, geography<sup>32</sup>, economy<sup>33</sup>, agriculture<sup>34</sup>, military science<sup>35</sup>, history<sup>36</sup>, meteorology<sup>37</sup>, science of political economy<sup>38</sup> and also physics, chemistry and mathematics.

He shows a great passion for geography, because a better knowledge of other places can lead to a better understanding of Iran and her position in the world. Therefore, he explores different countries, their languages, food, religions, customs, architecture, plants, and animals; in short, whatever is unfamiliar to him and his readers. For him, economy is a strategic science, since he insists on the necessity of being independent from European countries. To attain this objective, Iranians need to recognize the latent resources of their country. The employment of economics would enable them to exploit their natural resources and to increase their national wealth<sup>39</sup>. This mentality exemplifies in the following passage:

“Until now, the literal meaning of wealth is in fact unknown in our country, so is its truth. Money is a convertible form of metal; one can change it into livelihood. Gold and ... can be stolen. It is evident that none of these things could be the soul of civilization, but only a medium of exchange. Thus, wealth is a talent, like science and independency, and should be durable and not subject to events. Some are in the natural form of grains and fruits; some should be converted into a livelihood. The soul and manager of civilization is called wealth”.

"فی الحقیقه تا کنون در وطن ما معنی لفظ ثروت مجهول بوده تا چه رسد به حقیقت ثروت. نقد یعنی فلزی که وسیله مبادله است، او را بدهی در عوض مایحتاج بگیری. طلا و ... را میشود دزدید. معلوم است که اینها هیچ کدام روح عالم تمدن نیستند بلکه اسباب یا وسیله مبادله هستند. پس ثروت عبارت است از استعداد، یعنی علم و استقلال، یعنی مصون از تصرف حوادث ایام و امتداد زمان بودن. بعضی در صورت طبیعی مانند حبوبات و اثمار و برخی به صورت مایحتاج آوردن آنها. ثروت را روح و مدیر عالم تمدن میگوییم."<sup>40</sup>

<sup>31</sup> Idem., (1984), vol.1, p. 62.

<sup>32</sup> Ibid., p. 72.

<sup>33</sup> Ibid., p. 112.

<sup>34</sup> Ibid.

<sup>35</sup> Ibid., p. 144.

<sup>36</sup> Ibid., p. 146.

<sup>37</sup> Ibid., p. 149.

<sup>38</sup> Ibid., vol. 2, p. 132.

<sup>39</sup> Ibid., vol. 1, pp. 181, 183; vol. 2, pp. 92, 96, 103, 125, 132, 133, 136; Idem., (1906), pp. 49, 130, 131.

<sup>40</sup> Idem., (1984), vol. 2, p. 133.

Ṭālibof writes about human rights and human relations in society in comparison to the West. He alleges that a perfect version of human law exists in the Islamic tradition. This conclusion terminates any further questioning and contemplation on the essence of humanities in European society. A quest for knowledge about Westerners does not constitute a subject of discussion, in fact examining humans as the object of knowledge is epistemologically impossible. Ṭālibof believes that in the field of humanities there was nothing to learn from Europeans, since the sacred texts of Islam were more comprehensive than any text written by men <sup>41</sup>. One of the most important premises about humanities is the assumption that human beings are not able to access knowledge about humanity, while God knows us better than ourselves. Although the inconceivability of human sciences is not explicitly discussed in Ṭālibof's books, it is postulated.

Despite his silence about man as a subject, he mentions the term "humanity" in the following paragraph, where he attempts to criticize educated Iranians who after their return from Europe would abandon their own culture and instead constantly speak of humanity:

"Some pan-Westerners are so negligent and rude that they spent government money to learn foreign languages in European schools and then assume that they are well-educated. When they return to their country, instead of disseminating information and showing empathy to their people, they denounce the national customs and religion. They consider gambling and drinking the most important aspects of "civilization" and constantly repeat their dedication to humanity".

" بعض فرنگی مآبان چنان بی مبالات و بی ادبند که مبلغی پول دولت را خرج نموده و در مکاتب فرنگستان از تحصیل السنه خارجه به خیال خودشان تربیت شده اند بعد از مراجعت به وطن خود عوض نشر معارف و تالیف قلوب هموطنان، آداب و رسوم مذهب ملی را تقبیح مینمایند، قماربازی و شرابخواری را جزء اعظم "سیویلیزاسیون" میدانند و تکیه کلامشان همیشه قسم به انسانیت است!"<sup>42</sup>

In another paragraph<sup>43</sup>, he denounces Westerners for praising humanity, and claiming that this notion came from Christianity, which ascribed a divine nature to Jesus. These two statements are very important, since they reveal his understanding of humanity, which was influenced by his social and intellectual environment. Possibly this debate is a consequence of Islamic theological polemics against Christianity, which assumed that humanism was a consequence of the exaggeration of

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<sup>41</sup> Ibid., pp. 113, 125, 126.

<sup>42</sup> Ibid., p. 125.

<sup>43</sup> Idem., (1906), p. 29.

man's position towards God in Christian theology. It appears that Tālibof's rejection of humanism did stem from the same source. In contrast, in Islam, humility and obedience towards God are regarded as virtues. Considering this context, an ideological resistance against the notion of humanism has been formed.

### 3-3-4-5- Relation between Science and Religion

Tālibof was a religious man, who saw no contradiction between science and religion. Rather, he regarded modern science as a theological practice. In fact, he is quite enthusiastic about the former and attempts to reconcile both concepts. For him, one can discover and observe the power of God in every part of nature<sup>44</sup>. He suggests that the new alphabet is completely in accordance with law, and that those fanatic Muslims who regard the alphabet as un-Islamic are wrong. He states:

“The opponents reject the reform of the alphabet and the new system of education, which is in accordance with nature and law because they are in contradiction to those legends they themselves regard as virtue.... Students in the new schools by the age of nine are familiar with the history of the country, the compulsory rules and practices of religion and an introduction to geometry, mathematic, geography, physics, chemistry, and literature in several languages, and graduate at the age of fifteen with an education in the science of law and economy. But our seventy-year-old scholars are still busy with changing the order of the words on the topic of purity<sup>45</sup>”.

“آنان که تغییر الفبا و وضع تعلیم "زبری" را که طبیعی و شرعی است، منکر بودند محض این است که نقض فضائل افسانه خوانی آنهاست.... متعلمین مکاتب جدید در نه سالگی تاریخ وطن و قواعد تکالیف واجبه ی امر دین و مقدمات علم هندسه و حساب و جغرافی و فیزیک و کیمیا و ادبیات را بالسنه چند آشنا هستند، و در پانزده سالگی علم حقوق و علم حیات (اکنوم یا اکونوم) را کامل تحصیل نموده فارغ میشوند. ولی طلاب هفتاد ساله ما هنوز در باب طهارت مشغول تغییر عبارت هستند.”<sup>46</sup>

His practical view on modern science as a tool for development and praise of efforts to understand the world as a theological practice consequentially became a major part of the dominant discourse in Iran until today<sup>47</sup>. One important consequence of this view is the assumption that there is no

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<sup>44</sup> Idem., (1984), vol. 1, pp. 22, 54, 85, 149, 150.

<sup>45</sup> Ritual purity in Islam.

<sup>46</sup> Ibid., vol. 2, p. 93.

<sup>47</sup> Ibid., p. 133.

contradiction between science and the belief in God as the creator. Ṭālibof claims that Europeans are misguided to deny the existence of the immaterial world, and with the continuous progression of scientific discoveries, they would in the end rather confirm the existence of the spiritual world and confess the power of God. He admits:

“It is apparent, that after fifty years many secrets will be revealed to man, so that he will be aware of the unity of being and will discover the world of spirits within the material world. Then, he will realize that the universe is transmitting vastly in every fraction of time, that millennia in our time would not be enough to understand and recognize them. This means that a complete understanding of the world is beyond human reason and knowledge. Then he will confess his insufficiency before the Lord -the creator and moderator of this tremendous system”.

"اینقدر باید دانست که بعد از پنجاه سال برای آدمی اسرار زیاد کشف میشود، وحدت ماهیت را میداند، عالم ارواح را در میان عالم اجساد پیدا میکند، بعد از آن دریابد که استحالہ کاینات در هر لمحہ چندان ممد حدوث و تغییرات است که برای فهمیدن و دانستن آنها عمر هزارسالہ ما کافی نیست یعنی مطلق احاطہ او از تحت عقل و علم بشری بیرون است. آن وقت در پیشگاه کبریایی ناظم و مدیر این بساط عظیم و دستگاہ کبیر سر عجز و اعتراف بہ سجدہ میگذارد." 48

Ṭālibof is convinced that human science is in a state of progression, but at the same time the world itself is in a state of constant change; therefore, man will never gain a full understanding of the mechanism of the universe. He also takes it for granted that scientists will finally prove his religious presumptions about creation and spirituality. This statement however, is contradictory: on the one hand, Ṭālibof emphasizes the limits of human reason, while on the other hand he predicts a never-ending progression of scientific discoveries.

In *Masā'il al-Hayāt*, Ṭālibof discusses the limitations of human reason<sup>49</sup> and cites a number of examples to demonstrate these limitations, such as the notion that the human eye is not able to see what microscopes can. Probably he was aware of the issues raised by Kant in the “Critique of Pure Reason”, and it is also very likely that Ṭālibof’s argumentation was affected by theological debates of Muslim philosophers of his time. No matter whether these arguments were his personal comments or something he had heard, his conclusion is significant. While Kant’s theories moved philosophy beyond the debate between rationalists and empiricists and marked a turning point in European thinking, Ṭālibof’s case suggests that the same argumentation can lead to an entirely different conclusion. He postulates that the limitations of human reason prove the existence of a

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<sup>48</sup> Idem., (1906), p. 48.

<sup>49</sup> Ibid., pp. 34-37.

powerful and omniscient God, and that human reason will never be able to enter the realm of divine knowledge. He maintains that human reason is limited by nature, in order to acknowledge the glory of God and worship him. For that very reason, God has sent prophets to guide mankind, and that is the ultimate aim of the creation of man<sup>50</sup>.

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<sup>50</sup> Ibid., pp. 37-8.

*Maqālat-i Jamālī-yi*<sup>1</sup>  
&  
*Resāleh dar Radd-i Neicherī-yi*<sup>2</sup>

**By Seyyed Jamāl ad-Dīn al-Afghānī (Assadābādī)**

### **3-4-1- Biography**

Although his actual birthplace has been much-debated<sup>3</sup>, most sources agree that Seyyed Jamāl ad-Dīn al-Afghānī was born in Assadābād, near Hamedān in Iran in 1838/9. Preliminary education began under his father, and at the age of 12, he went to Tehran where he received the regular *Shī'i* Islamic religious studies and attended the most famous mujtahids' courses. His father took him to Najaf, Iraq, to continue his studies in traditional Islamic disciplines, in addition to history and astronomy. He impressed his colleagues with his quick learning and eloquence, and developed a reputation for his ability to debate.

When he was only 16, he began his journey around the world. First, he stopped for a year in India. It seems likely that the strong anti-British sentiments voiced by Afghānī throughout his career had their origins in his experience there. It was there that he had his first contact with Western education. After spending some time in Kabul, Cairo, and Mecca, he went to Istanbul in 1869, then the center of Muslim power. In 1869-70 the secularist reform movement known as

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<sup>1</sup> *Jamāl al-Dīn's Essays*.

<sup>2</sup> *The Refutation of the Materialists*.

<sup>3</sup> Giving the fact that he himself frequently changed his name and his place of birth, some sources have mentioned Afghānistān as the country of his birth, for example: Charles Adams: *Islam and Modernism in Egypt*, 1933, Cairo.

Tanzīmāt was in its final years, and Afghānī moved in Tanzīmāt circles. He became a member of the reformist Council of Education, and at the opening ceremony of a new university he gave a series of lectures about westernizing reform, urging Muslims to awaken from their long sleep of neglect and to emulate the “civilized nations” of the West. His lectures gave local ‘ulamā an easy target to attack the westernized educational system. They influenced the Ottoman government to dismiss the university head and to expel Afghānī late in 1870. From Istanbul, he returned to Cairo, where he stayed from 1871 to 1879, accomplished some of his most fruitful works and devoted himself to teaching. His chief disciple Muḥammad ‘Abdūh, and a series of other young intellectuals were among the founders of the first political newspapers in Egypt and active in the early Egyptian nationalist movement. From 1875, Afghānī entered directly into Egyptian nationalist and anti-British politics. Continuing his public attacks on France and England, he was expelled from Egypt to India in 1879. Afghānī’s stay in Egypt was longer and his direct political-educational role greater than anywhere else. In India Afghānī went to Hyderabad, and stayed there for two years, continuing to write and teach. In this period, he wrote his most famous work titled *The Refutation of the Materialists*<sup>4</sup> and a series of Persian articles.

He left India for Paris, stopping briefly in London, and in both cities wrote newspaper articles, mainly against the British occupation of Egypt. His famous *The Answer of Jamāl ad-Dīn to Renan*, was published in France. From 1886 to 1892, Afghānī spent his time traveling between Iran, Russia, and England and finally received an invitation from a member of the Ottoman court that asked him to come reside in Turkey. He lived in Istanbul until his death of cancer in 1897<sup>5</sup>.

He is best known as an ideologist of pan-Islam and Islamic reform and had a profound influence in all the Middle Eastern countries of his time, particularly on the nationalist movements in Egypt and Iran. He formed a comprehensive discourse, which produced a huge amount of energy for Muslim nationalists and intellectuals and created an ideology that still inspires Muslims today<sup>6</sup>. His combination of a reformed Islam and anti-imperialism continues to have widespread appeal. His works were frequently published and have been read by millions of people in Muslim countries

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<sup>4</sup> For ease of reading, I will use English translations for titles of his works.

<sup>5</sup> For his biography see Mīrzā Lutfallāh Assadābādī: *Sharḥe ḥāl va Āṣār-i Seyyed Jamāl ad-Dīn Assadābādī ma ‘rūf be Afghānī* (Biography and Works of Seyyed Jamāl ad-Dīn Assadābādī), Berlin, 1925; Nikke Keddie: *Seyyed Jamāl ad-Dīn al-Afghānī; A Political Biography*, Berkeley, 1972; and Sadr Wāseghi: *Seyyed Jamāl ad-Dīn Ḥosseinī Pāyi Gozāri Nehzat-hā-yi Islami*, Tehran, 1969.

<sup>6</sup> For a good introduction to his ideas see Nikke Keddie; *An Islamic response to Imperialism, political and religious writings of Seyyed Jamāl ad-Dīn al-Afghānī*, Berkeley, 1968; and Albert Hourani: *Arabic Thought in the Liberal Age, 1798-1939*, London, 1962, pp. 109-129.

and countless books and articles were written in approval or rejection of his ideas. I chose to analyze his perception of science because of his pervasive influence on the elite and on the masses and for the role his works played in the formation of discourse about science.

### 3-4-2- Writings

Alongside his numerous speeches and essays, his main works include:

1- *Maqālat-i Jamālī-yi*, (Jamāl al-Dīn's essays), 1883, Calcutta

In Hyderabad in 1880-81, Afghānī wrote a series of Persian essays for an intended audience of Indian reformist Muslims. Six articles were published in the *Mo'allem-i Shafiq journal*, and the rest of them were his lectures; together reprinted in Urdū and Persian in various editions of *Maqālat-i Jamālī-yi*. Major themes in these essays are nationalism, the benefits of science and attacks of pro-British reformers.

2- *Resāleh dar radd-i Neicherī-yi*, (The Refutation of the Materialists), 1881, Mumbai

This book was also written during his stay in Hyderabad and the term *neicherī-yi* derives from "Nature", meaning followers of nature or as Afghānī puts it *tāyefe-yi neicherī-yi*, were the followers and assistants of the Westernized Sir Seyyed Aḥmad Khān (1817-1898) in India. In fact, his attacks were directed at the pro-British Aḥmad Khān, rather than against materialism. Although Afghānī uses this term to encompass all the schools and thinkers, he assumes they share the same ontological presuppositions. This treatise, according to Keddie<sup>7</sup>, has often been interpreted as a defense of Islam, but its argumentation is not religious, rather pragmatic, and political. Afghānī notes that religion has the practical values of tying together a community and keeping men from evil. In the very first paragraph of the essay, he determines Materialists' aim and the outcome of spreading their ideas in a society, and this is his main message<sup>8</sup>:

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<sup>7</sup> Nikke Keddie: "Afghānī, Jamāl al-Dīn", *Encyclopaedia Iranica*, vol. I/5, 1983, pp. 481-486.

<sup>8</sup> For quoting Afghānī's statements, I used Keddie's translation in her book: *An Islamic response to Imperialism, political and religious writings of Seyyed Jamāl ad-Dīn al-Afghānī*, Berkeley, 1968.



“The basic aim of this *neicherī-yi* sect<sup>9</sup> is to abolish religion and lay the foundations of corruption and communism among all peoples. The only results of their views are the ruin of civilization and the corruption of the social order<sup>10</sup>”.

"مقصود اصلی این طایفه نیچریه رفع ادیان و تاسیس اساس اباحت و اشتراک است در میانه همه مردم... به غیر از فساد مدنیت و تباهی هیئت اجتماعی نتیجه دیگری بر آراء اینها مترتب نخواهد گردید."<sup>11</sup>

To incite hatred among his audience, he charges Materialists with spreading moral corruption. Frequently in his book he mentions sexual freedom in the Western countries, or as he puts it “to share the women,” as an immoral practice. He is well aware of the sensitivity of the audience on the issue of Islamic ethics in general and on women in particular.

### 3- “The Answer of Jamāl ad-Dīn to Renan”, *Journal des Débats*, 18<sup>th</sup> May, 1883, Paris

This essay was originally published in French, as a response to a lecture by Ernest Renan on “Islam and Science”. Afghānī disagrees with Renan about the incompatibility of Islam with science and assumes that all the nations will experience evolution and development. He points out that no people immediately accepted science or philosophy in their earliest stages<sup>12</sup>. In this issue, Afghānī presents himself as an advocate of philosophy and modern science and strongly criticizes Islam for suppressing science, free thought and progression. Since Afghānī’s written and spoken French was imperfect, and this article was apparently written in Arabic then translated into French, some sources claim that apart from the key argumentation, it is probable that some parts were added by the translator and could not be Afghānī’s original statements<sup>13</sup>.

### 4- *al-‘Orvat al-Vothqā*, Arabic newspaper, 1884, Paris

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<sup>9</sup> Keddie applies the term “Sect” as equivalent to *Tāyefe*, and it should be noted that Afghānī uses this term (*Tāyefe*) for a school of thought.

<sup>10</sup> Nikke Keddie: *An Islamic response to Imperialism, political and religious writings of Seyyid Jamāl ad-Dīn al-Afghānī*, Berkeley, 1968, p. 131.

<sup>11</sup> Seyyid Jamāl ad-Dīn al-Afghānī: *Resāleh dar radd-i Neicherī-yi*, (The Refutation of the Materialists), Mumbai, 1881, p. 5.

<sup>12</sup> Keddie (1968), p. 86.

<sup>13</sup> For an example of this argument see Karim Mojtahedi: *Seyyed Jamāl Assadābādī va Tafakkor-i Jadīd* (Seyyed Jamāl and the New Thoughts), Tehran, 1984; Seyyed Hadī Khosroshāhī: *Defa‘ az Seyyed Jamāl ad-Dīn Ḥosseini* (Defending Seyyed Jamāl ad-Dīn Ḥosseini), Tehran, 2012; and Ḥamid Enāyat: “Correspondent with Renan”, *Rāsekhūn*, online source: <http://rasekhoon.net/article/print/656039>, date of access 20 Dec 2012.

In 1884, together with Muḥammad ‘Abdūh, he began publishing an Arabic newspaper in Paris named *al-‘Orvat al-Voṣqā*, through which Afghānī gave his first public expression to the view most associated with him, pan-Islamism. He called for a return to the original principles and ideals of Islam and for unity among Muslims as a means against the increasingly aggressive West.

He wrote two other books:

- *Tatimmāt al-Bayān fī Tārīkh al-Afghān*, 1901, Cairo
- *Khāterāt-i al-Afghānī (in Turkey, between 1892 and 1897)*, Istanbul

Among all his works, he discussed science in particular in *Jamāl ad-Dīn essays* and *The Refutation of the Materialists*. Therefore, these two books are the sources of my investigation about Afghānī’s conceptual framework. Two essays in *Jamāl ad-Dīn’s essays* were relevant, including:

- “Resāle dar Ta‘līm va Tarbiyat”, (Lecture on Teaching and Learning), lecture in Albert Hall in Calcutta, 8<sup>th</sup> November 1882
- “Favāyedi Falsafe”, (The Benefits of Philosophy), *Mo‘allem-i Shaftiq journal*, no.10, August 1881

In an initial review of his writings, one can see only contradictions. For example, in the *Answer to Renan*, he presents himself as an intellectual, rational, liberal and appealing to the Western audience. On the contrary in *The Refutation of the Materialists* or the articles published in *al-‘Orvat al-Voṣqā*, his statements are full of rhetorical exaggeration and imprecision. Keddie suggests that Afghānī’s contradictory statements are the result of his practice of *taqīyyi*, or precautionary dissimulation of his true beliefs, as he uses quite different arguments for an elite audience of intellectuals versus a mass audience<sup>14</sup>. Some scholars even doubt his real faith in Islam<sup>15</sup>. On the other hand, those who try to defend the image of Afghānī as a pioneer of Islamic reform attribute his anti-religious rhetoric in the “Answer to Renan” to defective translations. Mojtahedi<sup>16</sup> supposes that Afghānī was a pragmatist, whose writings are result-oriented, which considers the actual situation of his audience, rather than the ideal.

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<sup>14</sup> Keddie (1968), p. 9.

<sup>15</sup> Like Elie Keodurie: *Afghānī and ‘Abdūh: An Essay on Religious Unbelief and Political Activism in Modern Islam*, London, 1966; and also, Josep Puig Montada: “al-Afghānī, a Case of Religious Unbelief?”, *Studia Islamica*, 2005, no. 100/101, pp. 203-220.

<sup>16</sup> Mojtahedi (1984), p. 95.

In the case of Afghānī, because of his tendency to hide his real intentions, and considering the fact that he presented different arguments depending on the readership, it is very difficult to read his mind and interpret his true thinking. The aim of this research is not to understand his very complex character through his writings nor his political and social activities, nor is it to analyze Afghānī's intellectual context. There are many scholars who investigated him as a prominent figure in the contemporary history of the Middle East like Keddie, Kedourie, Mojtahedi, Hourani, and Pakdaman (Nateq).

Here I chose him not as a political or social figure, but as the writer of some texts that played an important role in forming the discourse about the relation of Islamic and Western science. Thus, despite Afghānī's precautionary dissimulation, I wonder: what do the texts themselves tell us, isolated from the hidden motives of its author. It should be noted that what he produced was convincing enough to turn to the dominant discourse in Muslim societies at the time and remain until today.

### **3-4-3- Meaning of the Text, Isolated from the Context**

#### **3-4-3-1- Semantic Episodes**

Afghānī's opinion about science can be summarized in the following semantic episodes:

- There is no difference between Western and Islamic science
- Philosophy is the spirit of science
- Philosophical spirit is missing from Muslim communities
- Muslims do not take proper advantage of science
- Muslims should acquire science from other nations
- In acquiring science, ontological differences should be considered
- Denying the existence of God will lead to the corruption of a community

### 3-4-3-2- Focal Point

Despite all the contradictions at first glance, by looking deeper, I found that same conceptual structures and presuppositions are implicated in both texts. Throughout the texts, Afghānī intends to praise science for its benefits for human society without mentioning which science he has in mind. In fact, he never uses the terms old or new science or Western and Islamic science. He even criticizes Muslim philosophers for their differentiation between Western and Islamic science, since he believes such a division does not exist, because science does not belong to any nation or country, rather it belongs to humanity<sup>17</sup>. This is the focal point of his arguments, which enables us to understand his mental paradigm.

Insisting at the same time on the positive aspects of scientific progress and negative aspects of stagnation, he uses many synonyms for these two concepts frequently. For instance:

Progress: perfection, light, clarity, strength, insight, prosperity, appreciation, humanity, vision, utopia, technician, wisdom, well-being, livelihoods, civility, pleasures, absolute bliss, movements, reason, dignity and superiority, new inventions, a changing world.

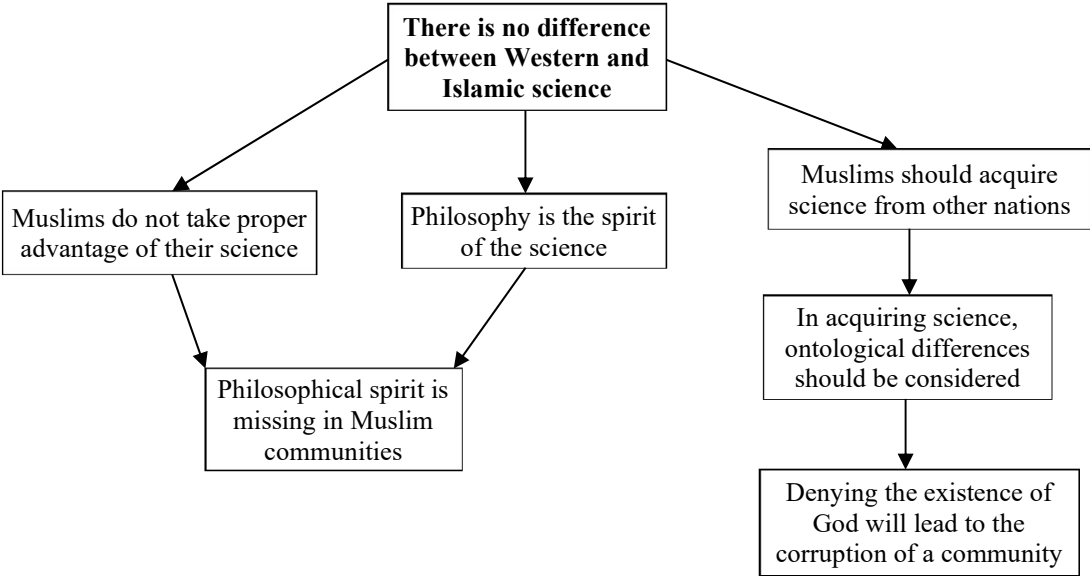
Stagnation: deficiency, imperfection, weakness, failure, darkness, degradation, ignorance, delusions, superstitions, prejudices, false, long sleep, fantasies, corruption, blindness, negligence, absolute unknown, hallucinations, ambiguous words, beggar, misery.

Because of the frequency of these two concepts and their synonyms, they can be recognized as two important aspects of the texts. To inspire and provoke the audience, he deliberately compares an ideal situation to a miserable situation and uses an exaggerated picture in which Muslims are stuck in misery, for neglecting new science and technologies.

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<sup>17</sup> Seyyid Jamāl ad-Dīn al-Afghānī: *Maqālat-i Jamālī-yi*, (Jamāl al-Dīn's essay), Calcutta, 1883, p. 50.

**3-4-3-3- Semantic Structure**



### 3-4-4- Meaning of the Text with Respect to the Context

#### 3-4-4-1- Description of the New Science

Like his other works, in *Jamāl ad-Dīn's essays* and *The Refutation of the Materialists*, Afghānī's main intention is to persuade Muslims to reform Islamic societies. He tries to show the case of the Islamic golden age as an ideal type, from which Muslims can learn many lessons. For he believes that the Qurān was humanity's first teacher, which awakened the Arabs from ignorance and created a philosophical spirit among early Muslims. This philosophical vision paved the way for acquiring knowledge from other nations and respectively, caused scientific advancements in Islamic lands. He admits:

“In that precious book (Qurān), with solid verses, He (God) planted the roots of philosophical sciences into purified souls, and opened the road for man to become man”.<sup>18</sup>

در آن گرامی نامه به آیات محکمه جرائیم فنون حکمیه را در نفوس مطهره نهاد و راه انسان شدن را به انسان وانمود.<sup>19</sup>

Philosophy is a key element in his discussion about the science, therefore understanding his perception of philosophy is fundamental for grasping the rest of his work. In the first paragraph of “The Benefits of Philosophy”, he clearly states that philosophy is the same as “*ḥekmat*”<sup>20</sup>. The other synonyms he uses for philosophy include *fonūn-i ḥakamī-yi* (philosophical arts), *ma'refat* (cognition), *baṣīrat* (insight), *ḥarakat-i fekrī-yi* (Intellectual movements). He defines philosophy as knowledge that illuminates the moral life for mankind:

“Philosophy is the escape from primal nature into the wide arena of human feelings. It is the replacement of the darkness of bestial superstitions with the light of natural intelligence; the transformation of blindness and lack of insight into clear-sightedness and insight. It is salvation from savagery and barbarism, ignorance and foolishness, by entering into the

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<sup>18</sup> Keddie (1968), p. 114.

<sup>19</sup> Afghānī (1883), p. 25.

<sup>20</sup> Ibid., p. 23.

virtuous city of knowledge and skill. In general, it is man becoming a man and living the life of sacred rationality. Its aim is human perfection in reason, mind, soul, and way of life<sup>21</sup>”.

”فلسفه خروج از مضیق مدارک حیوانیت است به سوی فضای واسع مشاعر انسانیت و ازاله ظلمات اوهام بهیمیه است به انوار خرد غریزی و تبدیل عمی و همش است به بصیرت و بینایی و نجات است از توحش و تیربر جهل و نادانی به دخول در مدینه فاضله دانش و کاردانی و بالجمله صیوررت انسان و حیات اوست به حیات مقدسه عقلیه و غایت آن کمال انسانی است در عقل و نفس و معیشت.”<sup>22</sup>

He considers knowledge as a body in which every single science has an organic relation to the other. Like every other organ, this body also needs a soul. The presumed soul of knowledge for him is philosophy. Philosophy is a vision through which all the other sciences are recognized and if only Muslims possessed this guiding soul, they could enjoy a desirable outcome from other sciences as well. As an example, he mentions the case of the Ottoman and Egyptian states, in which after sixty years of establishing European style schools they gained no benefit, because of the lack of philosophical vision<sup>23</sup>. In “Lecture on Teaching and Learning” he emphasizes:

“I may say that if the spirit of the philosophy can be established in a community, undoubtedly their philosophic spirit would call for the acquisition of all the sciences, even if that community did not possess one of those sciences which have a specific subject. The first Muslims had no science, but thanks to the Islamic religion, a philosophic spirit arose among them and owing to that philosophical spirit, they began to discuss the general affairs of the world and human necessities. This was why in a short time they acquired all the sciences with specific subjects, and they translated them from Syriac, Persian, and Greek into Arabic<sup>24</sup>”.

”می‌توانم بگویم که اگر روح فلسفی در يك امتی یافت بشود با آن که در آن امت علمی از آن علوم که موضوع آنها خاص است نبوده باشد بلاشک آن روح فلسفی آنها را بر استحصال جمیع علوم دعوت می‌کنند. مسلمان صدر اول را هیچ علمی نبود لکن به واسطه دیانت اسلامی در آنها يك روح فلسفی پیدا شده بود و به واسطه آن روح فلسفی از امور کلیه عالم و لوازم انسانی بحث کردن گرفتند و این سبب شد که آنها جمیع آن علوم را که موضوع آنها خاص بود از سریانی و پارسی و یونانی به زبان عربی ترجمه نموده در اندک زمانی استحصال نمودند.”<sup>25</sup>

He argues that science and technology are vital to the mastery of nature and that Muslim scholars should obtain them. He believes that in an era in which powerful European states conquer the world, whose power derives from science, Muslims need science in order to reinforce their societies

<sup>21</sup> Keddie (1968), p. 110.

<sup>22</sup> Afghānī (1883), p. 23.

<sup>23</sup> Ibid., p. 48.

<sup>24</sup> Keddie (1968), p. 105.

<sup>25</sup> Afghānī (1883), p. 49.

against the West. In order to be independent in producing knowledge, Muslim philosophers should spread an inquiring spirit. They should ask questions about the new instruments invented by Europeans and deliberate about their causality and mechanisms. In the concluding paragraph of “The Benefits of Philosophy,” Afghānī actually advises his audience:

“Is it not necessary for a philosopher, and even for every intelligent man who is dissatisfied with ignorance, not to be content with heedlessness? Is it not a defect for a person that his thought does not move so as to seek causes? Is it not a fault for a percipient sage not to learn the entire sphere of new technologies and inventions and fresh creations, when he has no information about their causes and reasons, and when the world has changed from one state to another and he does not raise his hand from the sleep of neglect?<sup>26</sup>”

" آیا نه لازم است بر حکیم بلکه بر هر عاقلی که به جهل راضی نشود و به غفلت خورسند نگرند؟ آیا نقص نیست انسان را که فکرش از برای طلب اسباب حرکت نکند؟ آیا عیب نمی‌باشد از برای عالم دانا و حکیم بینا که جمیع عالم را فنون جدید و اختراعات نو و انشآت تازه فراگرفته باشد با وجود این او را از علل و بواعت آنها هیچگونه خبری نباشد و عالم از حالی به حالی دیگر متحول شده باشد و او سر از خواب غفلت بر ندارد؟"<sup>27</sup>

He also mentions the new advancements and inventions that Muslims use in their daily life without asking about their mechanics or technology. Thus, by “changing the world from one state to another” he means tangible changes in equipment and infrastructure. Also, in defining science, Afghānī expresses the advantages of science. The very first advantage he points out is to achieve political and military power for the state. By giving some examples of the powerful empires in the history, he ends his argumentation, admitting the superiority of the Western states:

“The Europeans have now put their hands on every part of the world. In reality this usurpation, aggression, and conquest has not come from the French or the English. Rather, it is from science, which manifests its greatness and power everywhere. Ignorance had no alternative to prostrating itself humbly before science and acknowledging its submission<sup>28</sup>”.

"این فرنگی‌ها که اکنون به همه جای عالم دست انداخته‌اند، واقعا این تطاول و این درست‌درازی و این ملک‌گیری نه از فرانس بوده است و نه از انگلیز، بلکه علم است که هر جا عظمت و شوکت خود را ظاهر می‌سازد و جهل در هیچ جا مجاره ندیده مگر آنکه سرخود را به خاک مذلت در پیشگاه علم مالیده اعتراف بر عبودیت خود نموده است."<sup>29</sup>

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<sup>26</sup> Keddie (1968), p. 122.

<sup>27</sup> Afghānī (1883), p. 30.

<sup>28</sup> Keddie (1968), p. 102.

<sup>29</sup> Afghānī (1883), p. 47.



As a politician, he summarizes the result of acquiring science to their political outcome, and without further discussion, he concludes that this is the preeminence of the science. The second benefit of science he identifies is an increase in the wealth of a nation:

“If we study the riches of the world, we learn that wealth is the result of commerce, industry, and agriculture. Agriculture is achieved only with agricultural science, botanical chemistry, geometry, and mathematics; and commerce is based on agriculture and industry... Thus, every government for its own benefit must strive to lay the foundation of the sciences and to disseminate knowledge<sup>30</sup>”.

" اگر بر غنا و ثروت عالم نظر کنیم خواهیم دانست که غنا و ثروت نتیجه تجارت و صناعت و زراعت است و زراعت حاصل نمی‌شود مگر به علم فلاح و کمتری (شیمی) نباتات و هندسه و صناعت حاصل نمی‌شود مگر به علم فیزیک و کمتری و جراثیم و هندسه و حساب، و تجارت مبنی بر صناعت و زراعت است... پس هر حکومتی را لازم است از برای منفعت خود در تاسیس علوم و نشر معارف بکوشد." <sup>31</sup>

### 3-4-4-2- Principles of the New Science

Attempting to theorize the relation between different fields of science, Afghānī assumes that “each science has a special subject and deals with nothing but the necessities and accidents of that special subject<sup>32</sup>,” and continues arguing that:

“If we observe well, we will learn that each one of these sciences whose subject is a special matter is like a limb in the body of science. Not one of them can maintain its existence individually and separately, or be the cause of benefit for the human world. For, the existence of each of these sciences is related to another science, like the relation of arithmetic to geometry<sup>33</sup>”.

"اگر ما خوب ملاحظه بکنیم خواهیم دانست که هر یک از این علوم که موضوع آنها امریست خاص به منزله عضوی است از برای شخص علم و هیچ یکی از اینها منفردا و منفصلا نمی‌تواند که حفظ وجود خود را نماید و موجب منفعت از برای عالم انسانی بشود چون که هر یکی از این علوم در وجود خود مربوط به علم دیگر است مانند ارتباط حساب به هندسه." <sup>34</sup>

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<sup>30</sup> Keddie (1968), p. 103.

<sup>31</sup> Afghānī (1883), p. 48.

<sup>32</sup> Keddie (1968), p. 103.

<sup>33</sup> Ibid., p. 104.

<sup>34</sup> Afghānī (1883), p. 48.

In this regard, each of these special sciences is a useful and valuable particle of the whole body of knowledge. It is appropriate for Muslims today to learn them from other nations, but at the same time, they need a philosophical spirit to identify the relationships between these different sciences. In other words, it is the duty of Muslim philosophers to philosophize about the ontological<sup>35</sup> issues and about science as a whole to establish a philosophy of science of their own. His differentiation between special sciences and philosophy convinced me that he borrowed his definition of science and its categorization<sup>36</sup> from Islamic philosophy, particularly from Avicenna<sup>37</sup>, not from new European science. Afghānī declares:

“A science is needed to be the comprehensive soul for all the sciences, so that it can preserve their existence, apply each of them in its proper place, and become the cause of progress in each one of those sciences. The science that has the position of a comprehensive soul and the rank of a preserving force is the science of philosophy or *ḥekmat*, because its subject is universal. It is philosophy that shows man human prerequisites. It shows the sciences what is necessary. It employs each of the sciences in its proper place<sup>38</sup>”.

"پس علمي بايد كه آن به منزله روح جامع كلي از براي جميع علوم بوده باشد تا آن كه صيانت وجود آنها را نموده هر يكي از آنها را به موارد خود بكار برد و سبب ترقي هر يكي از آن علوم گردد و آن علم كه به منزله روح جامع و به پايه قوت حافظه و علت مبقيه بوده باشد آن علم فلسفه يعني حكمت است زيرا آن كه موضوع آن عام است و علم فلسفه كه لوازم انساني را بر انسان نشان مي‌دهد و حاجات به علوم را آشكار مي‌سازد و هر يك از علوم را به موارد لائقه خود به كار مي‌برد."<sup>39</sup>

Afghānī’s main argument in this passage is that philosophy can determine a general vision for all sciences and that Muslims should be independent in philosophy, so that they themselves define the purpose of each single science. However, special sciences—or what he calls limbs of the body of science—can be obtained from the other countries, as the early Muslims had done. He insists on the revival of a philosophical spirit among Muslims in order to contemplate general issues. This comment may show that he has correctly realized the importance of philosophy in his discussion

<sup>35</sup> He never uses the term ontology, but it is implied.

<sup>36</sup> For categorization of Islamic sciences and their relations see Seyyid Ḥossein Nasr: *Science and Civilization in Islam*, Translated into the Persian by Aḥmad Ārām, Cambridge, USA, 1968, pp. 45-48; and A. Y. al-Ḥassan (Eds.): *The Different Aspects of Islamic Culture*, vol. 4, pp. 111-131, UNESCO publishing, 2001.

<sup>37</sup> Keddie believes that Afghānī was profoundly affected by Avicenna (Ibn-Sīnā) and other medieval Muslim philosophers. He found that this philosophy would be useful as the basis for an indigenous ideology that could bring about reform and self-strengthening in Muslim lands. It exalted reason above literalist revelation, and has always been used to devote Aristotelian rationalism; thus could equally be used to convince Muslims that the Qurān and Muslim tradition can enjoy modern science as well. (1968, p. 18)

<sup>38</sup> *Ibid.*, p. 104.

<sup>39</sup> Afghānī (1883), p. 48.

of the philosophy of science and respectively the premise and methods of cognition. But in the following sections, it seems he does not have a philosophical epistemology in his mind. Apparently, philosophy for him is the application and utility of various scientific disciplines according to the needs of the contemporary Islamic societies, in order to strengthen them.

Throughout the text, he views science from his own vision. Given the fact that he is silent about modern science and respectively about its possible differences to the indigenous science, he considers both as the same thing, without inquiring about the principles or premises of science. Elaborating about science everywhere in his works, he mentions the purposes and the final aims of knowledge, not the ways of knowing or the validity of knowledge.

### **3-4-4-3- Relation between the New and the Old Science**

He admits that science is evolving through time<sup>40</sup>, so one should not stick to a particular predecessor's ideas, and he particularly names Islamic philosophers for their imperfection. Denouncing Muslim philosophers for confining themselves to ancient Greek knowledge, Afghānī argues that Muslims considered Greek and Roman books as the source of pure science and their philosophers as the possessors of absolute reason, therefore accepted their words without scrutiny and followed them completely. He states:

“Muslim philosophers disregarded the fact that the philosophical sciences like the other sciences and arts, have achieved their aim through the succession of ideas and the development of perceptions. India was the first origin of all these subjects, and from there they moved to Babylonia and from Babylonia to Egypt. From Egypt they moved to the lands of the Greeks and Romans. In each transmission, they acquired a new form and received a fresh adornment. They were transferred from one state to another, just as the germs of plants and animals are transformed from a state of imperfection to perfection. The Greek and Roman philosophers contributed nothing new to those subjects save a few doctrines and some minor opinions; however, since they did not explicitly mention the name of their teachers, the

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<sup>40</sup> Ibid., pp. 26-7.

Islamic philosophers believed they had brought these subjects from the concealment of non-existence into the world of existence<sup>41</sup>”.

”حکمای مسلمان از این غافل شدند که علوم فلسفه چون سایر فنون و صنایع بتلاحق افکار و تتابع آراء بدان پایه رسیده است و اول پیدایش اساس جمیع آن فنون هندوستان و از آنجا به بابل و از بابل به مصر انتقال کرد و از مصر به بلاد افریقا و روما رفت و در هر انتقالی هیئت جدیدی اکتساب و در هر رحلتی پیرایه نوی استحصال نموده، از حالتی به حالت دیگر منتقل گردید. چنانچه جراثیم نباتات و حیوانات از حالت نقص به کمال متحول می شود و حکمای افریقا و روما را در آن فنون به غیر از چند آراء زهیده و اقوال معدوده چیز دیگری نبود و لکن چون آنها اسامی اساتده خود را مصرحا ذکر نکردند حکمای اسلام را چنان گمان شد که این فنون را از کتب عدم بلاسابقه به عالم وجود آورده اند.”<sup>42</sup>

Here again Afghānī emphasizes that philosophy does not belong to a particular nation and that it is a universal knowledge which has been transferred from one place to another and evolved over time. He never mentions Western science and just defines science as a general knowledge belonging to humanity. All the information he gives us about the definition of the science or scientific disciplines are a reflection of Islamic medieval philosophy, as if he could not perceive conceptions of science outside of an Islamic framework. It reveals that he could not have had any idea about the epistemological revolution of Western science experienced during the history of thought.

Even in the following passage, he criticizes Muslim philosophers for differentiating between Islamic and Western science<sup>43</sup>, since he does not see any difference. Philosophy for him is a universal knowledge, which asks general questions about the entire world. He announces that:

“The strange thing of all is that our ‘*ulamā*’ these days have divided science into two parts. One they call Muslim science, and one European science. Because of this they forbid others to teach some of the useful sciences. They have not understood that science is that noble thing that cannot be attributed to a nation, and cannot be distinguished by anything else rather by itself. Rather, everything that is known is known by science”.

”و عجبتر از همه اینها آن است که علمای ما درین زمان علم را بر دو قسم کرده اند یکی را می گویند علم مسلمانان و یکی را می گویند علم فرنگ و از این جهت منع می کنند دیگران را از تعلیم بعضی از علوم نافع و این را نفهمیدند که علم آن چیز شریفی است که به هیچ طایفه نسبت داده نمی شود و نه چیزی دیگر شناخته نمی شود بلکه هر چه شناخته می شود به علم شناخته می شود.”<sup>44</sup>

Another instance for his unfamiliarity to Western thought is his argumentation in attacking materialism in *The Refutation of the Materialists*. In this essay, he blames materialists for destabilizing society and for the dispersion of people. This is the same feeling of Muslims who

<sup>41</sup> Keddie (1968), p. 116.

<sup>42</sup> Afghānī (1883), p. 27.

<sup>43</sup> Ibid., p. 50.

<sup>44</sup> Ibid.

deal with Western achievements: confused in their explanation of the new situation, and as a psychological reaction to the new complex condition, they prefer the earlier system of thought, thereby denying the new order. Describing the Materialist impact on the decline of civilization, one of the historical examples he provides is the case of France. France was progressing, but intellectuals such as Rousseau and Voltaire promoted new ideas, which caused a degeneration of the people in this country:

“After the Romans, France was the only nation that elevated the banner of science and skill in the continent of Europe. They became the civilizers of all the European people. ... Until, in the eighteenth century, Voltaire and Rousseau claimed that they wanted to remove the superstitions and enlighten minds. These two men exhumed the grave of Epicurus<sup>45</sup> and revived the old bones of naturalism. They overthrew duty, and sowed the seeds of corruption and communism. They considered manners and customs as superstitions, and maintained that religion is the inventions of men of deficient reason.... The corrupt *neicheri* teachings of these two persons caused the corruption of manners, hatred, and division in belief, which in fact can unite the members of a nation. Gradually each group of followers of different beliefs and divergent sects became occupied with themselves; and they turned their backs on general welfare. For that reason, their broad influence began to diminish, both in the West and in the East<sup>46</sup>”.

“امت فرانسوايه آن يگانه امتی بود که در قطعه يورپ بعد از رومانين رفع علم و دانش و کاردانی نموده موجب تمدن همه امم فرنگ گرديد... تا آنکه در قرن هجدهم از ميلاد مسيح ولتير و روسو به اسم رافع الخرافات و منورالعقل ظهور کردند و اين دو شخص قير اپيکور را نيش کرده عظام باليه ناتوليسمی را احيا نمودند و تکاليف را برانداختند و تخم اباحت و اشتراک را کاشتند و آداب و رسوم را خرافات انگاشتند و ادیان را اختراعات انسان ناقص العقل پنداشتند. ... و تعليمات فاسده نيچريه اين دو شخص سبب آن شد که فساد اخلاق و تفرق کلمه و اختلاف مشارب احاد آن امت را فراگرفت تا اينکه رفته رفته هر طایفه ای از اصحاب آراء مختلفه و مشارب متباينه به خود مشغول گرديد و از منافع عامه اعراض کرد و از آن سبب نفوذ خارجيه ايشان چه در غرب بوده باشد چه در شرق روی به نقصان آورد.”<sup>47</sup>

He separates believing in materialism from European achievements in science and industry, as if science and technology are value neutral, and enlightenment thinkers, by means of promoting the idea of naturalism, have followed particular political interests. This shows that the West and its epistemological developments as well as the history of science are unknown to him. In his perspective, science is a series of human achievements, which have tangible results in improving

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<sup>45</sup> Greek Philosopher who lived from 341 BC to 270 BC.

<sup>46</sup> Keddie (1968), p. 159.

<sup>47</sup> Afghānī (1881), pp. 44-5.

human welfare. He includes scientific disciplines when he talks about the increasing demands of people in a community, including:

“Cultivation, bioscience, veterinary science, geometry, trigonometry, surveying, arithmetic, algebra, surgery, physiology, the special features of drugs and the manner of their composition, astronomy, geography, navigation, mineralogy, geology, physics, mechanics, hydraulics, meteorology and chemistry<sup>48</sup>”.

In one case, when he is encouraging Muslim scholars to learn the new technologies and inventions and to think about their causes and reasons; he implicitly compares old science with new science. He describes new science as the matters that are absolute and evident. Nevertheless, he leaves no more comments on this issue:

“Isn’t it a mistake for a percipient sage not to learn about the sphere of the new technologies and inventions and about fresh creations? The world is changing from one state to another, while he has no information about the causes and reasons of this development and is not going to awake from negligence? Is it worthy of a scholar that he speaks in absolute ignorance and does not know what is definitively known? He is able to split a hair over imaginary essences, but lags behind in the knowledge of evident matters?<sup>49</sup>”

“آیا عیب نمی‌باشد از برای عالم دانا و حکیم بینا که جمیع عالم را فنون جدید و اختراعات نو و انشآت تازه فراگرفته باشد با وجود این او را از علل و بواعت آنها هیچگونه خبری نباشد و عالم از حالی به حالی دیگر متحول شده باشد و او سر از خواب غفلت بر ندارد؟ و آیا لایق است محقق را که سخن‌ها در مجهول مطلق براند و معلوم مطلق را نداند، و در ماهیات موهومه موشکافی‌ها کند و از معرفت امور ظاهره باز ماند؟<sup>50</sup>”

Since he does not ascribe science to nations, and sees nothing wrong with acquiring science from other countries, he reminds Muslims of the golden ages of early Islam and that the translation of Greek literature initiated a great period of progress in the Islamic world. At the same time, he warns them of the different ontological basis between Islamic and Greek philosophy. As an example of Muslim carelessness in understanding and interpreting Greek, he mentions that:

“The second aspect [of the imperfection of the Islamic philosophers] is the intrusion into the philosophic subjects in those books of, chiefly, the theological subjects of the Sabaeans<sup>51</sup>. The reason for that was that the Greeks and Romans were Sabaeans in religion, having faith in the celestial bodies and stars, and they believed in numerous Gods. Therefore, they inserted

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<sup>48</sup> Keddie (1968), p. 111.

<sup>49</sup> Ibid., p. 122.

<sup>50</sup> Afghānī (1883), p. 30.

<sup>51</sup> Afghānī uses this word for Greek and Roman polytheism.

their beliefs into the tablets of philosophy with artificial proofs, ornamented words, embellished statements, beautiful explanations, glorious speeches and agreeable convictions. They regarded them to be the real problems of philosophy<sup>52</sup>”.

”وجه ثانی مخلوط بودن مسائل فلسفیه آن کتب است، غالباً به مطالب کلامیه صائبین و سبب آن این است که اغریقین و رومانیین صائیبی المذهب بودند و به افلاک و کواکب ایمان، و به آلهه متعدده اعتقاد داشتند. لهذا معتقدات خویش را به ادله مموهه و به کلمات مزوقه و به اقوال مزینه و به بیانات محسنه و به خطابیات شیرین و اقناعیات دلپذیر درج الواح فلسفه نمودند و آنها را مسائل حقه حکمت انگاشتند.”<sup>53</sup>

By pointing out differences between Islamic philosophy and Greek philosophy such as believing in one God in the former and believing in more than one God in the latter, Afghānī criticizes the ignorance of the early Muslims. He advises Muslims to study the contributions of the ancient Greeks cautiously, and to move beyond it.

### 3-4-4-4- Scientific Disciplines and the Humanities

He clearly establishes a distinction between humanities and science. According to Afghānī, science and technology are instruments of achieving comfort and welfare for humanity and that it is the duty of philosophy: to provide the ethical principles to construct a moral society. He suggests:

“The primary cause of the majority of sciences, knowledge, and arts is the perfection of the quality of human life. After achieving some comforts in his life, mankind has turned his attention towards his soul. He realized that the perfection of his livelihood and the sources of bodily comfort, when accompanied by the corruption of manners and bad habits, would be entirely defected... Philosophy helped to distinguish virtuous characteristics from vicious habits, so that spiritual perfection might be achieved through human’s refinement and purification. The human has invented the art of the rectification of morals (*tahzīb-i akhlāq*) in order to control his soul and safeguard the holy virtues of it<sup>54</sup>”.

”علت اولای جل علوم و معارف و صنایع کمال در معیشت است و انسان را پس از آسایش اندکی در معیشت نظر توجه به جانب نفس خویش افتاده، دانست که کمال معیشت با فساد اخلاق و تمامی اسباب راحت بدنیه با سوء ملکات باطنیه عین نقصان است... و لهذا به قوه فلسفه، اخلاق فاضله را از ملکات رذیله تمیز داده تا آنکه تجلیه و تخلیه او را کمال نفسانی حاصل گردد و از برای مراقبه نفس خویش و محافظت ملکات مقدسه بر آن فن تهذیب الاخلاق اختراع نمود.”<sup>55</sup>

<sup>52</sup> Keddie (1968), p. 117.

<sup>53</sup> Afghānī (1883), p. 27.

<sup>54</sup> Keddie (1968), p. 111.

<sup>55</sup> Afghānī (1883), p. 24.

He does not articulate what he means by “human”: Westerner, Muslim or humanity in general? It is probable that he assumes a shared history for all nations, each of which follows the same path, according to the intrinsic human nature of seeking a more comfortable life followed by the establishment of moral rules. In another comment, he provides us with his perception of philosophy:

“It is philosophy that makes the human understandable to the human, and reminds the human nobility, and shows the right way to him<sup>56</sup>”.

"فلسفه است که انسان را به انسان می‌فهماند و شرف انسان را بیان می‌کند و طرق لائقه را به او نشان می‌دهد."<sup>57</sup>

In these statements, he makes it clear that his idea of philosophy’s aim is to realize the superiority of humankind and is to establish an ethical basis. Here Afghānī identifies areas for philosophical contemplation, which are entirely rooted in his background in Islamic tradition and mysticism. In defining philosophy, he specifies the items that reason deals with under the guidance of the philosophical spirit (*hekmat*)<sup>58</sup>:

- Its own genesis and true nature
- The causes of perceptions
- The basis of mental faculties and their relations with bodily sensations
- The relation of the mind and spirit to the body
- The differences in character among peoples and the circumstances of the rise and fall of civilizations, science, learning, and talent
- The causes of law and the reasons for legislation
- The origin of the universe, its sources and material, its accidents and incidents, and its causes and effects
- The causes of attraction and repulsion, and action and reaction of the parts of the universe
- The cause for the formation of the germs of plants and animals, the conditions of their transformation into organized bodies and into solid forms and the purpose of their existence

Apparently, many presuppositions exist in his definition of philosophy, for example that there is a purpose to the existence of plants and animals. He even identifies the possible answers to the

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<sup>56</sup> Keddie (1968), p. 105.

<sup>57</sup> Afghānī (1883), p. 49.

<sup>58</sup> Ibid., p. 24, Translation into the English by Keddie (1968), p. 112.



determined issues. Furthermore, his imagination of *ḥekmat* comes from Islamic philosophy, in which the *ḥakīm* possesses all branches of knowledge.

In “Lecture on Teaching and Learning” Afghānī claims implicitly that Islamic sciences are beneficial for Muslim societies but Muslim philosophers do not learn these sciences properly, therefore they are unable to take advantage of them in practice. He criticizes methods of teaching and goals of learning Islamic sciences, for he believes that the educational system is unable to train individuals to use these sciences in real life for Muslim society:

“As the relationship between the preeminence of the philosophy and the science has been explained, I want to mention the quality of teaching and learning among Muslims that these days the education is entirely useless in Muslim society<sup>59</sup>”.

“چون مراتب علوم و شرف فلسفه معلوم شد اکنون می‌خواهم اندکی سخن در کیفیت تعلیم و تعلم مسلمانان بگوئیم. پس می‌گوئیم مسلمانان در این زمان در تعلیم و تعلم خود هیچ فایده ملاحظه نمی‌کنند.”<sup>60</sup>

Then he continues defining some of the Islamic sciences like rhetoric, logic, *ḥekmat*, jurisprudence and *sharī‘a*, arguing that these sciences are inherently useful for practice in society, but the methods of teaching are problematic. He does not question traditional science in Muslim countries rather he criticizes the methods of learning and their practice. He defines *ḥekmat*:

“*Hikmat* is the science that deals with the state of external beings, and their causes, reasons, needs, and requisites. It is strange that our ‘*ulamā* vaingloriously call themselves sages, and despite this they cannot distinguish their left hand from their right hand, and they do not ask: who are we and what is right and proper for us? They never ask the cause of electricity, the steamboat, and railroads... Shame on such a philosopher, shame on such a philosophy!”<sup>61</sup>

“علم حکمت آن علمی است که بحث از احوال موجودات توجیه می‌کند و علل اسباب و لوازم و ملزومات آنها را بیان می‌کند و عجیب آن است که علمای ما از روی فخر خود را حکیم می‌نامند و با وجود این دست چپ خود را از دست راست نمی‌شناسند و نمی‌پرسند که ما کیستیم و چیستیم و ما را چه باید و چه شاید و هیچگاه از اسباب این تار برقی‌ها و اگنیپوت‌ها و ریل‌گازها سوال نمی‌کنند... خاک بر سر این گونه حکیم و خاک بر سر این گونه حکمت.”<sup>62</sup>

It is evident that for him, everything surrounding the scholar can be a matter of speculation. Afghānī uses *ḥakīm* or ‘*ālem*<sup>63</sup> as synonyms of scientist, both of which he applies for Muslims and ancient Greeks. Furthermore, he equates these terms with philosopher, and uses them in different places

<sup>59</sup> Keddie (1968), p. 105.

<sup>60</sup> Afghānī (1883), p. 49.

<sup>61</sup> Keddie (1968), p. 106.

<sup>62</sup> Afghānī (1883), p. 49.

<sup>63</sup> And in plural form: *ḥokamā* and ‘*ulamā*.

with the same meaning. Another Islamic science that he praises and identifies as a subject and application is the science of principles or *sharī'a*:

“The science of principles consists of the philosophy of the *sharī'a*, or philosophy of law. In it are explained the truth regarding right and wrong, benefit and loss, and the causes for the promulgation of laws. Certainly, a person who studies this science should be capable of establishing laws and enforcing civilization. However, we see that those who study this science among the Muslims are deprived of understanding the benefits of laws, the rules of civilization, and reform of the world<sup>64</sup>”.

"علم اصول عبارت است از فلسفه شریعت یعنی فیلوزوفی آف لا که در آن علم حقیقت، صحت و فساد و منفعت و مضرت و علل تشریح احکام بیان می‌شود و البته یک شخص که این علم را بخواند می‌بایست که قادر شود بر وضع قوانین و اجرای مدنیت در عالم و حال آنکه ما می‌بینیم که خوانندگان این علم در مسلمانان محروم هستند از دانستن فوائد قوانین و قواعد مدنیت و اصلاح عالم."<sup>65</sup>

Again he mentions *sharī'a* together with philosophy of law, as if they are both the same. Naming logic, *hekmat*, jurisprudence and *sharī'a* alongside with their Western equivalent represents his misunderstanding of the differences between them.

### 3-4-4-5- Relation between Science and Religion

He defends Islamic sciences such as jurisprudence, logic, and *hekmat* and at the same time, believes Muslims cannot enjoy their benefits because of defective training methods. For example, he asserts:

“Islamic jurisprudence contains all the domestic, municipal, and state laws. Thus, a person who studies jurisprudence would be able to become the prime minister of the realm or the chief ambassador of the state. While after studying this science, Iranian jurists are unable to manage even their own households and they are still proud of their foolishness<sup>66</sup>”.

"علم فقه مسلمان حاوی است مرجمیع حقوق منزلیه و حقوق بلدیه و حقوق دولیه را، پس می‌یابد شخصی که متوغل در علم فقه شود لائق آن باشد که صدر اعظم ملکی شود یا سفیرکبیر دولتی گردد و حال آن که ما فقهای خود را می‌بینیم بعد از تعلیم این علم از اداره خانه عاجز هستند بلکه بلاهت را فخر خود می‌شمارند."<sup>67</sup>

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<sup>64</sup> Keddie (1968), p. 107.

<sup>65</sup> Afghānī (1883), p. 50.

<sup>66</sup> Keddie (1968), p. 106.

<sup>67</sup> Afghānī (1883), p. 49.

At first, it seems he is criticizing Islamic science, but by looking deeper into his remarks, we find that he criticizes deliberately the Muslim scholars in order to patronize them for the reformation and for strengthening their societies against Western states. He sees no contradiction between European and Muslim science and maintains that the laws of nature and philosophical points of view are all axioms or self-evident truths, and the religion of Islam could never diverge from this. This statement again implies his lack of knowledge about science in Europe. In fact, he sees the new science from the Islamic philosophical framework:

“The laws of the nature, geometric proofs, and philosophical demonstrations are self-evident truths. Thus, someone who says, “My religion is inconsistent with self-evident truths,” has inevitably passed judgment on the falsity of his religion<sup>68</sup>”.

"قواعد طبیعیہ و براہین ہندسیہ و ادلہ فلسفہ از جملہ بدیہیات است، پس کسی کہ بگوید کہ دین من منافی بدیہیات است پس لامحالہ حکم بر بطلان دین خود کردہ است." <sup>69</sup>

He also admits that:

“How very strange it is that Muslims studying those sciences that are ascribed to Aristotle with the greatest delight, as if Aristotle were one of the pillars of the Muslims. However, if the discussion relates to Galileo, Newton, and Kepler, they consider them as infidels. The father and mother of science is the proof, and proof is neither Aristotle nor Galileo. The truth lies where there is proof, and those who forbid science and knowledge with the intention to safeguard the religion of Islam are really the enemies of this religion. The Islamic religion is the closest religion to science and knowledge, and there is no incompatibility between science and the foundation of the Islamic faith<sup>70</sup>”.

"چہ بسیار تعجب است کہ مسلمانان آن علومی کہ بہ ارسطو منسوب است آن را بہ غایت رغبت می‌خوانند گویا کہ ارسطو یکی از اراکین مسلمان بودہ است و اما اگر سخنی بہ کلیلو و نیوتون و کپلر نسبت دادہ شود آن را کفر می‌انگارند. پدر و مادر علم برہان است و دلیل نہ ارسطو است و نہ کلیلو حق در آنجاست کہ برہان در آنجا بودہ باشد و آنها کہ منع از علوم و معارف می‌کنند بہ زعم خود صیانت دینت اسلامیہ را می‌نمایند آنها فی الحقیقہ دشمن دینت اسلامیہ هستند نزدیکترین دین‌ها بہ علوم و معارف دینت اسلامیہ است و هیچ منافاتی در میانہ علوم و معارف و اساس‌های دینت اسلامیہ نیست." <sup>71</sup>

Naming three natural scientists, Galileo, Newton, and Kepler, in the same context as Aristotle reveals that for Afghānī natural science is value neutral and does not contradict religion. The reason that he insisted on the compatibility of science and Islam, is that he had no idea what changes

<sup>68</sup> Keddie (1968), p. 108.

<sup>69</sup> Afghānī (1883), p. 50.

<sup>70</sup> Keddie (1968), p. 107.

<sup>71</sup> Afghānī (1883), p. 50.

science truly brought about. The only factor he realizes as the difference between Western and Muslim scientists is that some of the Western scientists deliberately deny creationism. In his treatise, *The Refutation of the Materialists*, he tries to explain the disadvantages of refuting the existence of God for human society. He has no opposition to other aspects of science though, because he finds them beneficial for human well-being.

His only problem with materialists is the refutation of God, and he has no information about other materialistic discussions and arguments. Afghānī brings together the names of thinkers from discordant schools of thought, like Democritus (c. 460 BC - c. 370 BC), Epicurus, Darwin, Voltaire, Rousseau, and others. It seems that pointing out several names altogether could simply be an attempt to show his vast knowledge, without proposing any coherent argument from their various contributions.

He declares that European scientists<sup>72</sup> are incapable of uncovering all the secrets of the world, and this is evident in their constantly changing ideas. By scientists here, he means those materialists who do not believe in creationism and are seeking to discover the secrets of nature by denying the power behind all phenomena. Afghānī intends to show divisions and disorganization in their ideas, by expressing different opinions and conflicting visions of European natural scientists. This statement shows his inexperience with the mechanisms of the active intellect in dealing with crises<sup>73</sup>. He asks Darwin questions, then answers the questions himself and concludes that Darwin sees no other solution than to express frustration. Afghānī claims that the human mind seems to have gone far beyond the issues that go beyond his incomplete intellect. Those issues are only within the power of God. He goes even further and claims that their theories cannot stand up to hard questioning.

He solves these problems with the notion of a creator who is responsible for all natural phenomena. Belief in a creator would explain everything and this would reduce the mental burden of the problem. European scientists are confused and bewildered in his view, but the answer to everything is in the hands of believers in Islam. This belief gives its holder a confidence and alleviates his psychological burden. In short, his argumentation is an emotional reaction to a new, unknown situation.

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<sup>72</sup> Afghānī never refers to them as scientists, rather he calls them *neicheries*.

<sup>73</sup> Afghānī (1881), pp. 7-13.

## Majalleh-yi *Kāveh*

By Seyyed Ḥassan Taqīzādeh

### 3-5-1- Biography

Seyyed Ḥassan Taqīzādeh, the founder of *Kāveh*, was an outstanding and influential Iranian politician and diplomat during the Qājār and Pahlavī dynasties. He was born in Tabriz in 1878 and under the influence of his father who was a well-known clergy he studied Islamic sciences in the first phase of his intellectual development. He spent seventeen years in Najaf and became a member of the clergy there. In returning to Tabriz, Taqīzādeh secretly studied French and from 1893 to 1901, together with his friend Moḥammad ‘Alī Tarbiyat (1877-1940) began to study natural sciences, such as astronomy, physics, and medicine<sup>1</sup>. Learning English in an American school in Tabriz for two years enabled him to read philosophical and scientific books and increased his interest in European science and thought.

In his autobiography, he explains that in this period of his life he eagerly studied books written by reformists from Egypt, Turkey, and Iran, and all the works of Ṭālibof and Malkam Khān, as well as the articles in famous newspapers such as *Akhtar*, *Ṣorayā*, and *Ḥekmat*<sup>2</sup>. By increasing

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<sup>1</sup> Iraj Afshār and EIr: “Taqīzādeh, Seyyed Ḥassan i. To the end of the Constitutional Revolution”, *Encyclopaedia Iranica*, online edition, 2016, available at <http://www.iranicaonline.org/articles/taqizadeh-sayyed-hasan>, date of access 08 February 2016.

<sup>2</sup> Ḥassan Taqīzādeh: *Zendegī-yi Ṭūfānī, Khāterat-i Seyyed Ḥassan Taqīzādeh* (Tempestuous Life; Memories of Seyyed Ḥassan Taqīzādeh), Be Kushishi Iraj Afshār, Tehran, 1989, p. 26.

the interest in new ideas and modernism, a progressive young generation formed many groups in Tabriz. Taqīzādeh joined one that included the authors and editors of reformist newspapers, and they went on to found a bookshop called Ketābkhāne-yi Tarbiyat. Other than providing new European, Arabic, and Turkish books, this bookshop became a meeting place for reformists and modernists in Tabriz<sup>3</sup>. In 1904, Taqīzādeh and his close friend, Tarbiyat, spent one year traveling between Istanbul, Cairo, Tbilisi, Baku, and Erevan, and became acquainted with many intellectuals, who devoted their work to modernity and political reforms.

Returning from his journey, he began to write articles on the necessity of acquiring European science and civilization, and to reform Iran. His famous statement is “Iran should be outwardly, inwardly, in body and in spirit, Westernized<sup>4</sup>”. These articles together with his passionate speeches made him a prominent figure among reformists. He actively participated in the Constitutional Revolution (1906-7) and became a member of the newly founded parliament as the representative of Tabriz<sup>5</sup>. From this period onwards, he became a secular enlightened politician and continued his endeavor to establish a constitutional state in Iran. By the end of the Qājār dynasty, he became one of the counselors of the new king, Reżā Shāh and served in different positions like parliamentarian and minister, as well as ambassador to England and France. Taqīzādeh is one of the most controversial figures in the contemporary history of Iran, and played an important role in the modernization of the country. He died in 1970 in Tehran<sup>6</sup>. The following is a list of some of his books:

- *Tārīkhe ‘Ulūm dar Islam* (History of Science in Islam), 2001, Tehran
- *Mānī va Dīne ū* (Mānī and his Religion), 1957, Tehran
- *Zendegī-yi Ṭūfānī, Khāterat-i Seyyed Ḥassan Taqīzādeh* (Tempestuous Life, The Memories of Seyyed Ḥassan Taqīzādeh), Be Kushishi Iraj Afshār, 1989, Tehran
- *Enqelābe Mashrūtiyat dar Iran* (Constitutional Revolution in Iran), 2000, Tehran
- *Az Parvīz tā Changīz* (From Parvīz to Changīz), 1931, Tehran

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<sup>3</sup> Ibid., pp. 29, 35.

<sup>4</sup> *Kāveh Journal* (1920), vol. 36, p. 1.

<sup>5</sup> Afshār (2016)

<sup>6</sup> For more information about his life see Mojtabā Minavi: *Taqīzādeh; Naqde Ḥāll* (Taqīzādeh; Criticism of Status Quo), Tehran, 1972; and *Iran name: Special Issue on Seyyed Ḥassan Taqīzādeh*, vol. 21, no. 1-2, Spring and Summer, 2003, containing articles by Ḥomā Kātuziān: “Seyyed Ḥassan Taqīzādeh; Three lives in one lifetime”; Jamshid Behnām: “Taqīzādeh and the Problem of Modernity”; Ḥossein Bahmanyār: “*Kāveh* and the Challenge of Iranian Renaissance”; Mehdi Mohaqeq: “Acquaintance with Taqīzādeh”.

### 3-5-2- About the Journal

Frustrated by a lack of political reform in Iran a decade after the unsuccessful Constitutional Revolution (1905-1907), Iranian intellectuals sought to focus their efforts on mass enlightenment. The outcome was an increasing number of periodicals and newspapers in the major cities of Iran as well as in Istanbul, Paris, and Berlin, by Iranians living in exile.

Taqīzādeh, one of the most outspoken reformists in this period for his opposition of Muḥammad 'Alī Shāh, was forced to leave the country. In 1915, when he was in the United States, the German government invited him to Berlin, and supported his activities against internal despotism in Iran, as well as foreign invaders<sup>7</sup>. Gathering a group of reputable Iranian scholars, he launched the journal *Kāveh*. Iranians considered Germany to be the only country that could free Iran from the domination of Great Britain and Russia, and mutually, the German government funded this journal for the purposes of voicing propaganda in support of Germany in World War I<sup>8</sup>.

*Kāveh* was published in two series between 1916 and 1922, and was usually printed in double-column format on pages of newspaper size (35 × 27 cm), and it held the title of *rūz-nāmeḥ* (newspaper). *Kāveh* is the name of the legendary hero of ancient Iran who rose against Zaḥḥāk, the bloodthirsty despot. The front page of the journal portrayed Kāveh arousing the people and raising the banner of rebellion. The editorial board of the journal in the lead article of the first issue announced explicitly their inspiration to publish the journal as well as their reason to name it *Kāveh*:

“The only desire of Iranians in exile is to witness Iran prove once again that its national spirit is not yet dead, and by a passionate movement, once more raise the flag of Kāvīān (freedom) against the Russian dragon, and abolish the roots of deadly oppression to the nation”.

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<sup>7</sup> A comprehensive study on *Kāveh* and two other Journals which were published in 1920s in Berlin has been done by: Keivandokht Qahari: *Nationalismus und Modernismus in Iran in der Period zwischen dem Zerfall der Qajaren-Dynastie und der Machtfestigung Rezā Schāhs, Eine Untersuchung über die intellektuellen Kreise um die Zeitschriften Kāveh, Iranshahr und Āyandeh*, Berlin, 2001; also you can refer to: Tim Epkenhaus: *Die iranische Moderne im Exil; Bibliographie der Zeitschrift Kāveh*, Berlin 1916-1922, Berlin, 2000 and Jamshid Behnam: *Berlin-i-ḥā, Andīshmandān-i Irani dar Berlin, 1915-1930* (Berliners; Iranian Thinkers in Berlin, 1915-1930), Tehran, 2000.

<sup>8</sup> Behnām (2000), pp. 13-21.

"ایرانیان دورافتاده را فقط آرزو و حسرت آن است که ببینند بار دیگر ایران ثابت بکند که روح ملی او هنوز نمرده، به یک جنبش پرشور و غیررانه یک مرتبه دیگر درفش کابانی بر ضد ازدهای روسی بلند شود و ریشه ستم ملت کُش بر انداخته گردد."<sup>9</sup>

The orientation of *Kāveh* in its first series, between 1916 and 1919, remained essentially political. Most of the journal's articles were devoted to the war news and reviews, and sometimes included literary articles. Taqīzādeh, Muḥammad-‘Alī Jamālzādeh<sup>10</sup> and Muḥammad Qazvīnī<sup>11</sup> produced most of the content for the journal. Other than these individuals who were also editorial board members of the journal, the remaining contributors included Ezzat-Allāh Hedāyat, Abul-Ḥassan ‘Alavi, Ebrāhīm Purdāvūd (1886-1968), Ḥossein Kāzemzādeh Iranshahr and Rezā Tarbiyat, most of whom were Taqīzādeh's comrades in political campaigns. This group of Iranian intellectuals can be considered the very first group who actually experienced direct contact with European society. Beside traditional studies, most of them were familiar with one or two European languages and studied at European universities, and were fairly acquainted with Western culture and civilization.

In its new post-war series (1920-21), with the end of German support of the journal, the editors transformed *Kāveh* into a cultural-historical journal. In this new series, according to Taqīzādeh, *Kāveh* became an entirely new journal of mostly scientific, literary, and historical articles. The authors of the journal had a special interest in Oriental studies<sup>12</sup> and some of them like Taqīzādeh, Jamālzādeh, Qazvīnī and Iranshahr, were personally acquainted with famous German orientalists. Articles published *Kāveh* introduced and reviewed some of the works of European orientalists about Iran. Most of the editorials were written by Taqīzādeh himself, Jamālzādeh came second in frequency, and according to Afshār "during the whole six years of *Kāveh*'s lifetime, the two of them contributed about 80 percent of the writing and translating for the paper"<sup>13</sup>.

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<sup>9</sup> *Kāveh Journal* (1916), vol. 1, p. 1.

<sup>10</sup> Muḥammad ‘Alī Jamālzādeh Isfahani (1892, Isfahan– 1997, Geneva), son of Seyyed Jamāl ad-Dīn Vāez, famous clergy and one of the influential individuals in the Constitutional Revolution in 1905-1907, was a prominent Iranian intellectual and a pioneer of modern Persian short story writing. He is best known for his unique style of humor.

<sup>11</sup> Muḥammad Ghazvīnī (Tehran, 1874-1949) was a well-known scholar in Iranian culture and literature. At the time, Taqīzādeh invited him to join them in Berlin. He was cooperating with Edward Brown, studying old Persian manuscripts in Paris.

<sup>12</sup> The term "Oriental studies" dates back to the ethnological or linguistic studies of European scholars on the "other" civilizations in the East in the 19<sup>th</sup> century. For more details on the first attempts of Europeans to study Asian countries, see Jürgen Osterhammel: *Die Verwandung der Welt; Eine Geschichte des 19. Jahrhundert*, München, 2009.

<sup>13</sup> Iraj Afshār: "*Kāveh Newspaper*", *Iranica Encyclopaedia*, vol. XVI, Fasc. 2, 2013, pp. 132-35.



The journal was distributed in Europe as well as Iran. The journal's readership included people who read Persian in India, the Ottoman Empire, and the Caucasus, as well as orientalists and Iranians living in Germany. However, most of the readers were in Iran itself, because without its distribution in Iran, *Kāveh* would not have been viable as an independent journal in Germany during the postwar period. Finally, *Kāveh* was closed down due to financial problems, in March 1922.

*Kāveh* was the most influential and outstanding journal of its kind at this time. It still ranks as one of the most instructive and rich Persian journals Iranian exiles had ever produced. It advocated modernity along Western lines and was known as an important source for the ideology of archaism and nationalism, which played an important role in the creation of Iranian consciousness and national identity<sup>14</sup>.

### 3-5-2-1- Selected Articles

As mentioned before, during the first series of *Kāveh* from January 1916 to August 1919 (issues 1-35), the main concern of the authors was political, such as news about World War I. Given the topic of my research, in order to examine the perception of Iranian intellectuals about new science in Europe, there are no relevant issues in the first series. The only exceptions are two articles, the first one under the title of "Military Power" which discusses the science of war in Europe in comparison to Iranian military circumstances. The second one, "The best European books about Iran"; which is an introduction to a series of articles, reviewing European orientalists' books. The author explains why European scientists care about the study of oriental societies, including Iran. I will elaborate on this article later in detail, as it contains some important points regarding the

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<sup>14</sup> For more information on the *Kāveh* journal see Iraj Afshār: "Kāveh Newspaper", *Iranica Encyclopaedia*, vol. XVI, Fasc. 2, 132-35, 2013; Jamshid Behnām: *Berlanī-hā; Andīshmāndan-i Irāni dar Berlin*, (Berliners; Iranian Thinkers in Berlin, 1915-1930), Tehran, 2000; Ḥassan Taqīzādeh: *Zendegī-yi Tūfānī, Khāterat-i Seyyed Ḥassan Taqīzādeh*, (Tempestuous Life; Memories of Seyyed Ḥassan Taqīzādeh), Be Kushishi Iraj Afshār, Tehran, 1989; Muḥammad Āsemi: "Kāveh-yi Berlin va Kāveh-yi Munich", *Iran-nameh*, Special issue on Iranian journalism, Volume XVI, Maryland, 1997; and Edward Browne: *Literary History of Persia*, Volume 4: Modern Times (1500-1924), Cambridge, 1959; Bāgher 'Āqeli (ed.): *Mashahīri Rejāli Iran*, (Iranian Famous Figures), "Seyyed Ḥassan Taqīzādeh" by Muḥammad 'Alī Jamālzādeh, 301-342, Tehran, 1991; Tim Epkenhans: *Die iranische Moderne im Exil. Bibliographie der Zeitschrift Kāveh, Berlin 1916-1922*, Berlin, 2000.

author's perception of humanities as a science. Other non-political articles in the journal are as follows:

- "Kāvānī Flag; on the history and the journal appellation", 1916, vol. 1
- "National Kurdish poems", 1916, vol. 4
- "Jamshīdī's *Norūz* and *Norūz*", written by Prof. Dr. W. Geiger, 1916-5, vol. 6
- "Adīb al-Mamālek; biography of a poet on the occasion of his death", 1917, vol. 20
- "Rezā Abbāsī, Iranian painter", vol. 23
- "European best books about Iran; (preface)", 1918, vol. 25
- "European best books about Iran: *The five great monarchies of the ancient Eastern World*, (1871), by George Rawlinson", 1918, vol. 28
- "European best books about Iran: *Ancient Studies about Iran*, (1871), by Fredrick Spiegel", 1918-29, vol. 30
- "Persian oldest poem; after Islamic period", 1919, vol. 35
- "European best books about Iran: *Sassanid Empire*, (1907) by Arthur Christiansen", 1919, vol. 35

The list clearly reveals the authors' attitude to Persian language and history. The second series of the journal was by all accounts devoted to science, history, and literature. The lead article of the first issue in this series published on January 22, 1920 emphasizes the scholarly nature of the forthcoming series, announcing that *Kāveh* henceforth would be very different from the wartime version:

"*Kāveh* newspaper was born out of war, therefore its mode was proper to the war time; and now by the end of the war and the arrival of an international peace, *Kāveh* also ends its war period and begins a period of peace...In fact, it will become a new journal of mostly scientific, literary, and historical articles. Its main objective would be to promote European civilization in Iran, to fight fanaticism, to help preserve the national sentiment and unity, to struggle for preservation and purification of Persian language and literature and safeguard them from the dangers and maladies that threaten them, and to the best of our ability, to support its internal and external freedom".

"روزنامه کاوه زانیده جنگ بود و لهذا روش این روزنامه نیز با موقع جنگ متناسب بود و حالا که جنگ ختم شده و صلح بین المللی در رسید، کاوه نیز دوره جنگی خود را ختم شده میداند و به یک دوره صلحی شروع میکند... در واقع روزنامه تازه ای میشود که مندرجات آن بیشتر مقالات علمی و ادبی و تاریخی خواهد بود و مسلک و مقصدش بیشتر از هر چیز ترویج تمدن

اروپایی است در ایران، جهاد بر ضد تعصب، خدمت به حفظ ملیت و وحدت ملی ایران، مجاهدت در پاکیزگی و حفظ زبان و ادبیات فارسی از امراض و خطرهای مستولیه بر آن و به قدر مقدور تقویت به آزادی داخلی و خارجی آن".<sup>15</sup>

The journal also included reports on the cultural activities of the Iranian community in Berlin. Regardless of lead articles about general issues and some reports from Iran, the journal articles can be categorized into three fields with the following titles:

#### 1- Literature:

- Famous poets of Iran (Ferdowsī, Daqīqī, Abu Shakūr Balkhī)
- Persian language progress in a century
- Pahlavi's poems and old Persian poems
- Four Persian language courses
- Test of translation: comparing a thousand-year-old text with a contemporary one
- Abjad Hovaz; Arabic alphabet
- Shāhnāme
- Source of eloquent Persian language
- Old Iranian poems

#### 2- History:

- The Great Wall of China
- Bolshevism in ancient Iran: Mazdak
- Iran in Anūshīravān's period
- A letter from the Sassanid period
- The Kūh-i-Nūr, Daryā-yi-Nūr (Mountain and sea of light's diamond)
- Tehran (history of the city)
- Famous figures in East and West (Jamal ad-Din, Prince Krapotkin, Seyyed Aḥmad Khān, Karl Marx, Martin Luther)
- *Norūz* and the Iranian calendar
- Attila's catastrophe (Asian invasion over Europe)
- Ancient Iranian music; Sassanid period
- Journalism in 13<sup>th</sup> century Iran

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<sup>15</sup> *Kāveh Journal* (1920), vol. 36, pp. 1-2.

- Old city of Mumbai
- Alexandria's school; a chapter of Greek civilization

## 2- Science:

- Science and technology in Germany
- Nobel Prize
- Dialectic of day and night (in 5 issues)
- Miracles of science in the West and marvels in the East
- Different visions: Indian and Greek conceptions

It is evident that the last category provides the raw material for my analysis and I will discuss them later. There are also some paragraphs available in the editorial notes or lead articles, in which the authors reveal their perception of science by discussing the status quo of Iran and suggesting remedies for social problems and plans for reformation. I collected those paragraphs in which they directly discuss science to find the focal point and main implicit ideas. Since most of these articles were written by Taqīzādeh or under his editorship and considering the fact that the name of the writer of the lead articles is not mentioned, the whole journal can be considered as a single text and these lead articles can be seen as a representative of the journals' discourse.

### **3-5-3- Meaning of the Text, Isolated from the Context**

#### **3-5-3-1- Semantic Episodes**

Categorizing semantic episodes in selected paragraphs shows that the authors mainly emphasize the points below:

- European science is undoubtedly superior to Iranian science
- European science is the absolute truth and our science is ignorance
- We must humbly learn European science and civilization

- We should adopt European civilization and just preserve Persian language
- Having information on the history of Iran motivates people for change
- Public education should be promoted
- Public education is the vital issue in Iran, not political reform

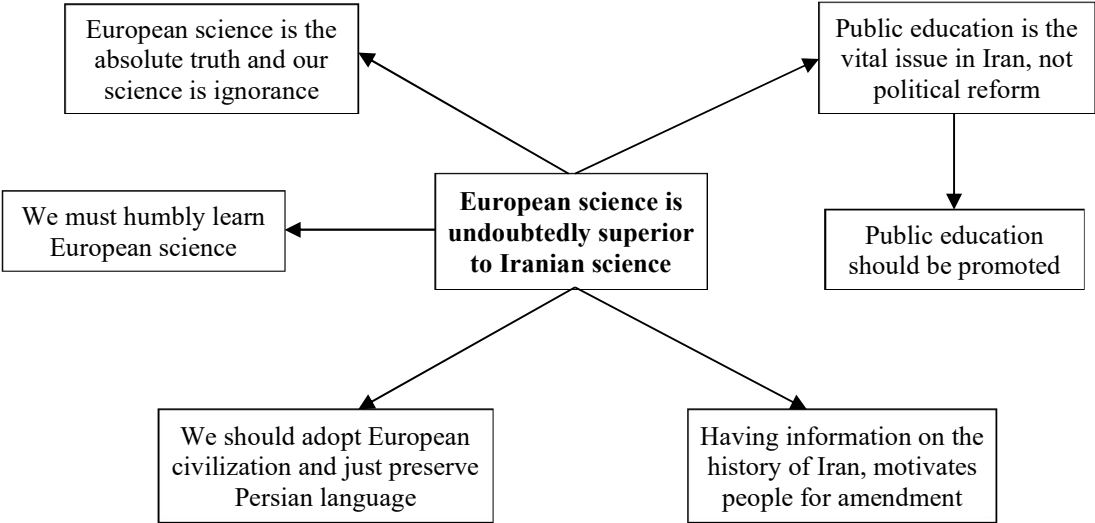
### **3-5-3-2- Focal Point**

The privilege of European science over Iranian science is an implicit presumption among all semantic episodes, and the other statements derive from it. The necessity to acquire European science is a core concept repeated throughout the journal's articles. Therefore, the most urgent task is to raise the literacy rate and to teach science, this way the country will begin the process of progression. Hence, I can say that laying the foundation of public education or propagation of knowledge among people is the main idea in *Kāveh*, and the main goal of the authors is to convince their readers to concentrate all social efforts towards this. By public education (*ta'lim-i 'omūmī*) they mean, training people and manipulating them in a way that they participate enthusiastically in the process of progression and reformation of the country.

Because of the mission that the authors of the journal define, they tend to guide Iranians the right way. Due to their superior social status as a group of well-educated, political elite living in Europe, they address their audience with an elitist voice, knowing better than illiterate, unaware people inside of the country do. Because of their access to European sources of knowledge, they considered themselves in a position to realize the faults of Iranian society and to suggest remedies for them. Throughout the text, the authors speak like teachers to students.

Concepts, which are frequently repeated by various synonyms including attainment, learning, teaching, studying, generalization, promotion, propagation, and progression, can be considered as the most important aspects of the text.

**3-5-3-3- Articulation of Semantics**



### 3-5-4- Meaning of the Text with Respect to the Context

#### 3-5-4-1- Public Education

Many times in the journal, the authors enumerate urgent actions necessary to lead the country towards civilization and progress. Public education is always on the top of the list and the rest of the practices come respectively after that. The list below shows their proposed steps for public education, in one of the articles<sup>16</sup>:

- 1- Political activists and social reformers should convince people of the necessity of public education in their speeches.
- 2- Establishing commissions that rigorously follow the propagation of science and literacy
- 3- Establishing new schools
- 4- Establishing libraries
- 5- Publishing useful books
- 6- Sending Iranian students to Europe to learn new science, a major component of these students should study pedagogy, in order to facilitate teaching new science in Iran

They remind readers of the experiences of Japan and Bulgaria, in which public education accelerated the process of progress:

“The only way to traverse this extremely long distance to civilization, in a fraction of time, is the one that two nations in the last century have passed, in the Near East and the Far East and practically showed the result of it. One of the two nations is Japan and the other is Bulgaria, which are in a semi-civilized situation. Yet, due to the great job they did, and in a few years, they have sent hundreds of students to Europe and America, established many schools, propagated public education in their country, and managed to join the civilized countries, as quick as jumping”.

"تنها چیزی که به واسطه آن این راه دور و دراز تا قافله تمدن در اندک زمانی به طور فوق العاده و به سرعت طی الارض میشود طی کرد، همان وسیله ای است که در قرون اخیره دو ملت در شرق نزدیک و شرق اقصی آن را اختیار کرده و عملاً نتیجه آن را نشان دادند. یکی از آن دو ملت ژاپن است و دیگری بلغار که از حالت نیم متمدنی که داشتند به واسطه اقدام عظیمی

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<sup>16</sup> Ibid., (1921), vol. 51, p. 5.

که کردند و در چند سال چندین صد شاگرد به ممالک اروپا و آمریکا فرستاده و مدارس زیاد تاسیس و تعلیم عمومی را در مملکت منتشر کردند، مملکت خود را به سرعت پریدن به ممالک متمدنه رسانیدند.<sup>17</sup>

In providing solutions for the problems of Iran, the authors speak confidently and firmly, using adverbs that convey certainty. For instance in the next paragraph, the author uses the expression “philosophy of progress and civilization”, to prove validity of his proposed remedy for the country. By using words such as “certain” or “undoubtedly”, he wants to leave no room for doubt about his suggestion. He declares:

“For those who studied the philosophy of progress and the civilization of nations properly, it is certain that rescuing Iran from current misery would only be possible if the public is educated. This means that the one and only way of survival, reform, and progress is promoting literacy among the public. All the other accomplishments, of any kind, are slight and ineffective reforms that are of no use in rescuing the country. As if they are like lemon juice, that patient would use them as a temporary pain killer or to eliminate anxiety”.

" برای آنانکه درست در فلسفه ترقی و تمدن ملل غور کرده اند مسلم است که نجات ایران از مذلت حالیه و تمدن و ترقی آن ملک بلاشک بسته به تعلیم عمومی است و بس، یعنی انتشار سواد خواندن و نوشتن در میان عامه فقط و فقط راه نجات و اصلاح و ترقی است و تمام اقدامات و تشیئات دیگر از هر قبیل اصلاحات جزئی و بی اثری هستند که محال است مملکت را نجات بدهند و همه حکم شربت آب لیمو را دارند که مریض برای تسکین و رفع اضطراب آنی بدانها رجوع میکند.<sup>18</sup>

The journal takes it for granted that everybody would agree that the definite way to save the country is to learn “European Science”. They argue that in order to achieve this aim, the first step is to decide clearly whether Iranians need to establish new universities or elementary schools. In other words, in acquiring new science, Iranians face an important question: which one is the most urgent step towards civilization, expanding public education, or higher education? The text knows the answer:

“This issue has been discussed already in many countries which recently began their process of progress, and maybe it is not necessary for the pioneers of progress in Iran to discuss it again. In spite of certain numerous benefits of both educations, the majority of scholars in this field believe that the main benefit and the secret of progress lies in the public education, and that literate people in a country can promote the base of social progress and accordingly polytechnics can be established as well. In such a situation that people are ignorant and the

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<sup>17</sup> Ibid., (1921), vol. 51, p. 2.

<sup>18</sup> Ibid.



darkness of foolishness and illiteracy dominate them, how could a group of perfect scholars be able to fulfill their fine dreams against all the ignorant masses?"

"این فقره پیش از این در خیلی از ممالک که تازه قدم به خط ترقی گذاشته بودند مذاکره و مباحثه شده و شاید لازم نباشد پیشروان ترقی ایران در این موضوع دوباره اجتهادات و مباحثات کنند. با وجود مسلمیت فواید فوق العاده هر دو نوع تعلیم عقیده اغلب حکما و علمای این فن آن است که اصل فایده و سر ترقی در تعلیم عمومی است و باسواد شدن عامه مردم مملکت پایه ترقی اجتماعی آن را بالا میبرد و تولید دارالفنون هم میکند، ورنه با جهالت عامه و استیلائی ظلمت نادانی و بیسوادی بر انبوه ملت، یک دسته اشخاص عالم و کامل به چه معجزه در مقابل یک دنیا عوام جاهل خیالات خوب خود را پیش توانند برد؟"<sup>19</sup>

Emphasizing the privilege of public education over higher education, or establishing elementary schools rather than universities, reveals the fact that the authors of the journal regard science as an instrument to achieve progress. They are suggesting that we need to teach it to all people in order to reap the benefits of science.

Their desire to generalize and publicize this knowledge is responsible for their tendency to simplify science and in some cases reduce it into comprehensible information in the newspapers and elementary school books. Considering the fact that they were confronted with a vast amount of scientific ideas and had no cognitive instrument to understand them, it is understandable why they simplified the new science. They speak about the country's demand at the time. The authors speak from the point of view of politicians, who use science as a synonym for power and consider science as an instrument for manipulating the society in order to bring about improvement and development:

"Science and power of a single individual would not provide a nation with strength, for this purpose the majority of people should support those eminent persons with consent. Having a few great geniuses in a nation does not confirm advancement of that nation. Rather, an advanced nation is a nation, in which all the people cooperate with their elite".

"علم و قدرت اشخاص منفرد به تنهایی نمیتوانند استحکام یک مملکتی را فراهم آورد و برای این مقصود اکثریت ملت باید به طیب خاطر پشتیبان قوای منفرد بزرگ مزبور باشد. وجود بزرگان چند و نوابغ معدود در میان یک قوم دلیل علو تمدن آن قوم نتواند بود بلکه همراهی و پیروی عموم ملت را بر بزرگان دلیل و حاکی علو تمدن آن قوم باید دانست."<sup>20</sup>

The set of words and terms which were used to speak about science are limited to: school, library, translating, acquiring, teaching, and training. All discussions and arguments are based upon these terms. What is absent in their discussion, is the science itself. The mechanism of cognition in new European science is not the subject of its argumentation, rather the methods of acquiring this science is their concern.

<sup>19</sup> Ibid., p. 5.

<sup>20</sup> Ibid., (1920), vol. 36, p. 9.

Speaking of public education, the journal does not mention what should be taught to the public, and in fact, it is silent about the essence and nature of new science and its principles of understanding the world. In the authors' eyes, European knowledge is undoubtedly something we need to possess, in order to get rid of superstition and to strengthen the country and catch up to more advanced countries. However, knowledge is not the subject of their argumentation. The authors employ the term acquirement (*taḥṣīl*) alongside with science, which shows their conception of new science, as new information necessary to know.

The slogan of the journal is “propagating European civilization”, and this point is at the heart of all the articles. To publicize new civilization, people should be literate and should be able to read European texts. Indeed, here, Europe is a “text” that should be read, not even a subject of knowledge. It is rather a handbook to guide people gradually for practice. An example is given in this comment:

“The latest scientific research in a specific field which is prevalent in Iran is actually what was believed fifty years ago in Europe, and now has dramatically changed. Our sages have gone backwards compared to the current science of Europe. In medicine, they are often twenty to thirty years ahead! In chemistry fifty years, in history eighty years, and in philosophy a hundred years. The main reason is the lack of regular and constant translation of new European books and the absence of scientific lectures, as well as the reliance of educated people on their prior knowledge, meanwhile in Europe, new lines of science and knowledge constantly appends the existing ocean, and new springs are being found”.

“آنچه در ایران به عنوان آخرین تحقیقات علمی در یک مسئله منتشر است چیزی است که پنجاه سال قبل در اروپا گمان میکردند و اغلب حالا تغییر فاحشی در آن روی داده. در علم طب اغلب بیست سی سال، در علم شیمی پنجاه سال، در علم تاریخ هشتاد سال و در فلسفه صدسال معلومات اشخاص با اطلاع ما عقب تر از علم امروزه فرنگ است و عمده جهت آن نبودن ترجمه منظم و مستمر از کتب جدید فرنگ و دایر نبودن خطابه های علمی و اکتفای هر شخص تحصیل کرده به همان سرمایه علمی قدیم خودش است در صورتیکه انهار جدیدی از علم و معرفت در اروپا دائماً بر اقیانوس موجود میریزد و چشمه های تازه ای پیدا میشود.”<sup>21</sup>

Regardless of whether there were any scientists in Iran working in the fields he mentions above, or what he means by “our sages”, this paragraph, like other cases in the journal, implies the assumption of the necessity to learn new science. By stating that science in Iran is backward compared to Europe, they are not stating that Iranian scientists are backward in their research, rather that they are not informed about new scientific achievements. This position suggests research

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<sup>21</sup> Ibid., (1921), vol. 50, p. 1.

and global discovery is the task of European scientists and Iranians should only try to learn the latest results of European efforts and enjoy the fruits of their knowledge.

Their suggestion to translate European books and establish libraries in Iran also implies their desire to transport sources of information into Iran. In an article about science and technology in Germany, the author quotes Hermann Diels<sup>22</sup> about public libraries:

“Dr. Hermann Diels asserts about public libraries that “in order to propagate present civilization and for evolving different kinds of technologies and professions, science should not be imprisoned in the polytechnics. In contrast, science should be spread out in the streets and bazaars, so that every worker can learn something. Since our civilization needs everyone to benefit from science, in order to be able to properly manage their own lives”. Today every single worker should be aware of steam power and electricity, to the best of their ability. Scientific education is not limited to a specific class of the society, and cannot be inherited from ancestors, it is not inheritable. It was seen frequently in the history that skilled individuals, mostly emerged out of the inferior class of the nation”.

"دکتر هرمان دیلس درباره کتابخانه های عمومی بسیار صحیح گفته است: "به جهت تعمیم تمدن حالیه و برای تکمیل کردن انواع صنایع و حرف، لازم و واجب است که علوم فقط در محوطه دارالفنونها محفوظ و مقلد نماند، بلکه برعکس باید علوم را بیرون ریخت و به کوچه و بازار پاشید تا هر کارگری را هم از آن نصیبی برسد، چه تمدن امروزی لازم میدارد که هرکسی برای حسن اداره زیست و حیات خود از عناصر و عوامل علوم بهره مند باشد." امروز هر ادنی کارگری باید از قوه بخار و برق به قدر مقدور باخبر و مستحضر باشد. تحصیل کردن علوم به یک طبقه از ملت مخصوص و منحصر نیست و به طور وراثت نیز از اجداد نمیرسد و قابل انتقال نیست. به شهادت تاریخ همیشه مکرر دیده شده است که اشخاص کافی و متبحر اغلب از میان طبقات پست ملت بروز و ظهور کرده است."<sup>23</sup>

That is what they have learned from Hermann Diels: spreading science out into the streets. In the case of Iran, one crucial element was missing: an institution for science had yet not been created, so there was no opportunity to spread science out to the public. Therefore, the whole country becomes a peripheral zone for European scientific institutions.

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<sup>22</sup> They do not give any information about the identity of Dr. Diels. It is likely that they are talking about Hermann Alexander Diels, a German Classics scholar (1848-1922).

<sup>23</sup> *Kāveh Journal* (1920), vol. 36, p. 8.

### 3-5-4-2- The History of Ancient Iran

The number of articles devoted to the history of ancient Iran shows the interest of the journal's writers in the archaeology and history of Iran. In this respect, *Kāveh* was the first journal that exposed these topics to a broader audience. In many passages, they speak about the importance of history, for progress in Iran. In a series of articles about European books on Iran, the journal introduced some prominent works of orientalists and in the prelude to this series, the author leaves us some important clues about his perception of oriental studies. Reminding the readers of the glorious history of ancient Iran, the author argues that having knowledge about the past will make Iranians proud and will invigorate progress and development:

“The main reason for today's unfavorable social situation is ignorance about relics, progresses and the civilization of ancient Iran. We believe that if Iranians are aware of their ancestors' history, it is impossible to be disappointed and feeble, or, to blame their country, or not to feel honorable and proud. For training people politically, ethically, and for spiritual serenity, the best way is to teach them their ancient civilization's history, especially for a nation like Iran which withstood thousands of years of various denominations and solemnly preserved its Iranian soul, and produces all these amazing works in many scientific and technological fields”.

"سبب عمده وضع زیان آور اجتماعی امروز همانا بی اطلاعی از اوضاع و آثار و ترقیات و وضع تمدن زمان گذشته ایران است. به عقیده ما هر ایرانی که از تاریخ اجداد خود به خوبی باخبر بوده باشد ممکن نیست که ناامید و سست بشود، از مملکت خود عیب جوئی بکند و خود را سربلند و مفتخر نشناسد. برای دادن یک تربیت سیاسی و یک متانت معنوی و اخلاقی برای افراد ملت، بهترین راهها یاد دادن تاریخ مدنیت قدیم آن ملت است، به خصوص ملتی مانند ایران که چندین هزار سال در میان استیلاهای گوناگون به سر برده و با کمال متانت روح ایرانییت خود را حفظ نموده و این همه آثار حیرت بخش در بسیار از رشته های علوم و صنایع و فنون از خود به یادگار گذاشته است."<sup>24</sup>

We can vividly trace a pan-Iranian tendency in this statement, as well as a nationalist ideology, which provides energy for Iranian endeavors in the modernization of the country and bridging the gap to the advanced countries. This is a significant element in the discourse of the journal and shows that the authors' considerations of the studies done by orientalists about Iran had an ideological origin. In fact, this is the ideology that decides between knowledge to be acquired and knowledge to be neglected. For instance, throughout the journal we do not see any article devoted to any other branches of the humanities.

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<sup>24</sup> Ibid., (1918), vol. 25, pp. 13-14.

In contrast, in a lead article very likely written by Taqīzādeh, one can see his insistence on the negative side of Iranian history. The author frequently comments about the inferior position of Iran compared to Europe, particularly in the context of the ancient Greeks. According to him, the awareness of authentic history will avoid exaggeration about the past. This point of view shows particularly in the last issues of the journal, which includes the assumption that Iranians should humbly learn everything from European civilization:

“Iranians think that they had an excellent and illustrious civilization in the past, like Greece. When they face facts of science and positive history, they will see that Iran did not help much global science and progress, and like all nations of the globe, owed mostly all they had to Greek science and civilization—the land of wisdom and grace... Maybe then, they confess to their poverty and ignorance, and with a fair humbleness get ready to learn lessons from the current civilized world. They begin to learn science, customs, and humanity, and leave their old honors and try to acquire today’s virtues”.

"ایرانیان خیال میکنند که آنها در گذشته یک تمدن عالی و درخشان مانند تمدن یونان داشته اند. و قتیکه حقایق علمیه و تاریخیه مثبت در جلو آنها گذارده شود خواهند دید که ایران به علم و ترقی دنیا کمک خیلی زیادی نکرده و مانند همه ملل عالم در اغلب آنچه هم که داشته مدیون تمدن و علم یونان — آن سرزمین معرفت و فیض- بوده است... شاید آنوقت است که ایرانی به فقر و جهل خود اقرار کرده به تواضع منصفانه در حوزه درس تمدن دنیای متمدن حاضر شده و علم و آداب انسانیت را فرا میگیرد و افتخارات قدیمه را دور انداخته به کسب فضایل امروزه میکوشد."<sup>25</sup>

He argues that Iranians, like other oriental societies, particularly the “Young Turks” reformist movement in Turkey, counterfeit their history to exaggerate the magnitude of their originality. They build up their history, and create their own appealing version of it, to relieve their hurt pride. This point of view is in contrast with the idea of provoking a nation by reminding them about the greatness of their past. In the next paragraph Taqīzādeh shows that for him, oriental studies is an objective science that reveals knowledge and information about the past, regardless of what is appealing for Iranians. Emphasizing the bias of Iranian knowledge, he mentions a remarkable point and explains his perception of the concept of objectivity in science:

“One of the worst mistakes is to mix up sensation, fantasy or prejudice with true science. And unfortunately, this is the case with naive nations who newly became patriots and particularly often want to intertwine their patriotism with science and find scientific reasons for their national claims, but always confuse science and infecting that free, humanistic, international, pure light with the bias of ethnic honor”.

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<sup>25</sup> Ibid., (1920), vol. 42, p. 3.

"یکی از بدترین غلط کاریها مخلوط کردن حسیات و هوس و تعصب است در علم حقیقی و این فقره بدبختانه در ملل خام و تازه چرخ است که به جاده ملت پرستی می افتند زیاد دیده میشود و مخصوصا اغلب وطن پرستی خود را میخواهند در علم داخل کرده و دلایلی از علم برای مدعیات ملی خود پیدا کنند ولی همه جا علم را مشوب کرده و آن نور آزاد و انسانی بین المللی و پاکیزه را به تعصبات مفاخرت اقوام تاریک میکنند."<sup>26</sup>

He considers European historiography as true science, or even qualifies it as free, human, and pure light, which is exempt from bias. Rebuking oriental nations for their ignorance about this new aspect of science, he reveals his perception of historiography as an objective science. He observes the tendency of oriental nations to exaggerate their past and believes that they have no clue about scientific objectivity, so they expect European scientists to collect and write what they desire:

"It is one of the strangest symptoms of the disease among our scholars that they evaluate European scientists' knowledge and wisdom by the degree they express their admiration for us. For these people, European scientists and tourists, which comment about ancient Iran or its history, literati and poets have to compliment us. And if one of them as a scientist had an objection or criticized us or our ancestors, probably he is a mercenary or ignorant".

"یکی از عجیب ترین تجلیات این مرض در میان فضلائی ما آن است که میزان علم و فضل علمای فرنگ را نسبت به مدح و قدح آنان از ما میسنجند. به عقیده این اشخاص علما و سیاحین فرنگ که در باب ایران قدیم یا تاریخ آن یا ادبا و شعرای آن حرفی میزنند مجبورند ما را مدح و ثنا کنند و اگر یکی از آنها در مقام تحقیق عالمانه ایرادی گرفته و تنقیدی از ما یا یکی از گذشتگان ما کرد، لابد مغرض است و یا جاهل."<sup>27</sup>

It is noteworthy that in both negative and positive attitudes of Iranian history, one element is implicit in their statements; they believe that Iranians can learn from history, whether it make them feel pride or they believe that their ancestors were not amongst the most civilized ancient societies. In both cases, being informed about the past will provoke progression among people. It means that the authors of this journal regard history as a story, which ought to give Iranians some moral lesson. In spite of valid knowledge European orientalists are bringing up, the final aim of history is to learn from the trial and error of their ancestors. In the next paragraph, the author of "Best European Books about Iran," believes that history and archeological research, other than admiration of an old nation, have another function as well, which is following the ancestors' example:

"Thanks to their (European) efforts, today we know how our ancestors lived, spoke, prayed, and what did they leave us in Bīsotūn, Naqshi Rostam..., and what lessons they left for us".

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<sup>26</sup> Ibid.

<sup>27</sup> Ibid.

"در سایه تدقیقات اینهاست که امروز ما میدانیم پادشاهان پیشین و نیاکان دیرینه ما چه زندگی داشتند. چطور حرف میزدند، چگونه پرستش میکردند و در کتیبه های بیستون و نقش رستم و... چه چیزها برای ما یادگار گذاشته و چه درسهای عبرت به ما داده اند." 28

Through historical achievements, we are able to find out what lessons they left for us as their heritage. This statement is reminiscent of storytelling, especially fables, that each story should teach a lesson to the audience. For him history plays the same role. The cognition of humans is not the matter of concern and there is no hint in this article to it. Explaining why they sought after European sources on the history of Iran, the author of "Best European Books about Iran" notes that through European research on Iran we can learn about our history, since there is no valid knowledge about the past in Iranian indigenous sources. He admits:

"Many of these (European) scientists know Iran better than us, and their knowledge about the history and relics and the circumstances of society, religion, science and technology of our ancestors is exceedingly more than ours. For example, there is not even one person in Iran who is familiar with old Persian languages, Pahlavi, Sanskrit, or Avestā, or has proper information and knowledge of them. While in Europe, for each of these languages, several professional scholars exist".

"بسیاری از این فضلا و هنرمندان درباره مملکت ایران بیشتر و بهتر از ما اطلاع دارند، و قوف آنان بر تاریخ گذشته و بر آثار باقیه و اوضاع اجتماعی و دینی و علمی و فنی اجداد ما به مراتب زیادتر است. مثلا در ایران یک نفر پیدا نمیشود که آشنا به زبان فرس قدیم و زبان پهلوی و سانسکریت و اوستا بوده باشد و یا در آن باب اطلاعات و معلومات صحیح کافی داشته باشد. در صورتیکه برای هر یک از شعبه های این السنه چندین علمای متخصص مدقق در اروپا هست." 29

In trying to explain the reasons why European scientists chose Iran as their object of research, the author identifies civilization and cultural achievement. He praises the glorious civilization of ancient Iran. For example, in the following paragraph, the author suggests:

"Books and some other old stories and legends that European have heard about the wealth of this country and the greatness and power of its kings, produced a great enthusiasm among Europeans to get to know this old country, whose name was mentioned in the history of all nations".

"کتاب و پاره ای حکایات و روایات و افسانه های دیگر که از دیر زمان در خصوص ثروت این مملکت و عظمت و اقتدار سلاطین آن گوشزد اروپاییان گردیده، یک میل و رغبت زیاد به شناختن این کشور قدیم که در تاریخ همه ملل نامی از آن برده شده در مردم فرنگ حاصل کرده بود." 30

<sup>28</sup> Ibid., (1918), vol. 25, p. 13.

<sup>29</sup> Ibid.

<sup>30</sup> Ibid., (1918), vol. 25, p. 12.

Unable to propose another reason, he has no clue of human science, how human beings can be the object of knowledge. Again, this is an example of a lack of appreciation for the humanities and the lack of questioning the differences between European science and their own expectations. Trying to explain causes for the European interest in oriental societies, in the coming paragraph the author alleges European imperialist goals as another stimulus to study oriental societies, which are the subject of colonization. However, he confirms that the will to discover the truth about past civilizations is the major motivation of the majority of scientists:

“Some people in the Middle East assume orientalist and those scholars who study oriental issues tend to guide their own states to dominate and colonize oriental countries in pursuit of a cruel and shameful policy. Many of them defend their government’s policy in eliminating the independence of oriental countries. Therefore, instead of being at the service of humanity, they are the cause of misery and decline of independence in small nations. From our point of view, although such political fanatics are not scarce among orientalists, the majority are those who serve research of science and technology, and discover the truth and scrutinize ancient civilization. In addition, the contributions of orientalists were so great and beneficial to humanity that it overshadows a few malicious feelings and prejudices”.

"به عقیده بعضی از مشرقیان سیاست مشرب این مستشرقین و علما و متتبعان مسائل شرقی دولتهای متبوع خودشان را در استیلا و تسخیر ممالک مشرق و در تعقیب یک سیاست ظالم و شرم انگیز رهنمایی کرده اند. و بسیاری از آنان مدافع سیاست دولت خود در به هم زدن استقلال ممالک شرق شده اند و بدین جهت به جای خدمت به عالم انسانیت، مایه بدبختی و زوال استقلال ملت‌های کوچک گردیده اند. در نظر ما اگرچه این قبیل اشخاص اهل سیاست و متعصب در میان فضلا و ادبا و شرق شناسان نایاب نیست ولی اکثریت با آنهایی است که تدقیقات و تتبعاتشان از روی خدمت به علوم و فنون و محض کشف حقیقت و تدقیق آثار مدنیت می باشد. علاوه بر این خدمتهای این شرق شناسان آنقدر بزرگ و فایده بخش به عالم انسانیت بوده است که پاره ای احساسات بدخواهانه و متعصبانه چندان فر معدود را در تحت الشعاع میگذارد."<sup>31</sup>

Criticizing European states for their colonial approach is not something new, but it was already a significant element in the dominant discourse in Iran. This time, the author expresses his opinion about the orient as the object of knowledge, not the subject of oppression. He admits that no matter what inspires scientists to discover and study oriental societies, the outcome is advantageous. Furthermore, by announcing that oriental studies help uncover the truth about oriental civilization; he declares again that science is objective.

In their first encounter with European science, Iranian intellectuals paid special attention to oriental studies, as it played an important role in inciting patriotism. It helped to develop the ideology of nationalism: a factor that became an important element in the formation of discourse

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<sup>31</sup> Ibid., p. 13.



about new science in Iran. It should be mentioned that unlike natural sciences, in the humanities the object of knowledge can be affected by the observer or by the results achieved in that particular field of science. A very good example is Oriental Studies, in which the studied individual sees himself in the mirror portrayed by an orientalist. Achievements in this field of study can change his self-definition. In fact, he is not a passive object and can contribute to the process of discovering and producing knowledge. Furthermore, orientalists' comments can further encourage nationalism.

In Oriental Studies, the relationship between the subject and object is reciprocal; on the one side the object, which is a nation, attributes European scientists' wonder of new discoveries, to the glory of its own civilization, and uses the result of scientific researches to reconstruct its identity. On the other side, European scientists can be attached to the object of their study, by receiving positive feedback and by being respected for their efforts in introducing that particular civilization to humanity. The object began to speak; it expressed its delight at being the object of knowledge and that it deserves investigation and recognition.

### **3-5-4-3- Relation between the New and the Old Science**

The journal began to compare European science and Iranian knowledge in a series of articles called "Dialectic of day and night". In these articles, they wrote about various topics, including zoology, philology and linguistics, geology, astronomy and geography. Due to an unknown reason, they stopped writing about it after five issues.

In these articles, the authors compared European scientific writings alongside the work of medieval Islamic scholars, and printed them in the paper, hoping that the readers see the differences between the two. For example, in the very first issue under the title of "Dialectic of day and night", without any explanation, the journal published a paragraph on how European zoologists describe a monkey, and in the next page a paragraph on how an old Islamic source describes a gorilla (*nasnās*). The only comment, the author left in the footnote expresses that:

"Hereof, in most issues of the journal, we will publish a piece of European science, as "Westerner", and if possible, its' equivalent from the same science and same subject, from our own sciences meaning Arabic or Iranian, as "Eastern".

"در این باب در اغلب شماره ها قسمتی از علوم اروپایی به عنوان "غربی" و نظیر آن در صورت امکان از همان علم و راجع به همان موضوع از علوم خودمان یعنی عربی و ایرانی به عنوان "شرقی" درج میشود.<sup>32</sup>

In the next issue, they compensated this short explanation, and gave a report on their aim to write these series of articles. The author declares:

"Under the title, we will compare enlightened thoughts of Europe today, and dark thoughts of the East which still exist in Iran. According to received letters, we found that most people, even well-educated individuals, misunderstood our real purpose and some of them assumed that we are regarding the East as essentially imperfect, and the West, naturally privileged, and that from the distant past, our 'ulamā were wrong and ignorant. It is apparently too far from our view; we know very well that in medieval era, science was excellent in the East in any level, and some scholars like Bīrūnī and Ibn Khaldūn emerged from the East. However, this honor cannot hide today's shame, because science and knowledge in our society has not changed since the medieval era, but in the West, it has dramatically evolved and spread universally, while we are stuck to superstitions and medieval beliefs".

"در تحت این عنوان ما قیاسی در میان عقاید علمی نورانی اروپای امروزی و عقاید ظلمانی مشرقی امروزی یا قدیمی که امروز نیز در ایران باقی است میکنیم. به واسطه مکاتیب وارده، ما مطلع شدیم که اغلب مردم و حتی فضلاء قوم مقصود حقیقی ما را درست نیافته اند و بعضی گمان کرده اند که ما می خواهیم بگوییم اصلاً مشرق زمین را نقص ذاتی و مغرب را مزیتی جلی است که حتی از قدیم الایام علمای ما در خطا و غفلت بوده اند. محتاج به توضیح نیست که این خیال خیلی از منظر ما دور است بلکه ما خوب میدانیم که در قرون وسطی علم به هر درجه که بود در مشرق بالنسبه درجه عالی داشت و کسانی مانند بیرونی و ابن خلدون از آنجا ظهور کرده بودند. لکن این شرافت و افتخار باز نمیتواند مانع ننگ امروزی بشود که درجه علم و معرفت در میان ما به همان حال قرون وسطی مانده و در مغرب زمین صد هزار درجه بالا رفته و دنیاگیر شده، در صورتیکه ما هنوز پیرو همان خرافات یا اطلاعات ناقص قرون وسطی هستیم."<sup>33</sup>

As the title of the series suggests, the authors are speaking of two contradictory entities, which are incomparable: day and night, Western and Eastern sciences. The author declares implicitly his reason to choose this title, by giving the example of the old tradition of dialectic (*monāzereh*) poets of Iran. Dialectic was in fact a debate between two or more poets about the nature of something in the form of question and answer. It could happen that poets discussed an obvious or ridiculous issue just to show off their ability to debate, which might have ended in sophistry. He mentions:

"If the dialectic is just for poetry and for the pedantic entertainment, it is harmless, but if someone without using poetic metaphor and imagination actually tries to discuss a preference between day and night, and comment on an obvious issue, people would laugh at him.

<sup>32</sup> Ibid., (1920), vol. 39-40, p. 6.

<sup>33</sup> Ibid., vol. 48, p. 4.

However, these days we see people arguing seriously on the preference of European and Iranian sciences, customs and affairs; one says, Europeans are well advanced in medicine, but they can't reach our scholars in syntax, somebody else says, Russians have plenty of artillery, but it is impossible that they can shoot like Qashqāi or Shāhsavan people. Apart from this, poetry is ours and Europeans do not have proper poetry”.

“اگر این نوع مناظره ها منظوم و محض صنعت شعری و برای تفریح ذوق ادبی باشد زیبایی ندارد ولی اگر حقیقه و با نثر عاری از پیرایه خیالی و بدیعی کسی بخواهد در ترجیح روز و شب به همدیگر بحث و مطلب بدیعی را نظری کند مورد تمسخر و مضحکه واقع شده و بر عقل او مردم میخندند. لکن در این زمانه در ایران اغلب دیده میشود که مباحثه و مجادله جدی در ترجیح علوم و آداب و عادات و شئون اروپایی و ایرانی جاری میشود، یکی میگوید بلی فرنگیها در طب خوب ترقی کرده اند اما در علم نحو به پایه علمای ما نمیرسند، دیگری گوید روسها توپ زیاد دارند ولی مثل شاهسون و قشقایی محال است نشانه بزنند. از همه گذشته شعر که مخصوص خودمان است و فرنگی شعر درستی ندارد.”<sup>34</sup>

If someone doubts the superiority of Western science, people may laugh at him. For the authors it is evident that Western science is incomparable to Iranian indigenous knowledge. The author continues denouncing such an argument by writing:

“To give an answer to these fictions in one word, it should be said that Iranians are hundred thousands of miles behind the European civilized nations. Materially and culturally, in science and literature, in art and industry, in music and poetry, in habits and customs, in life and death, in body and soul, in management and politics, in working and perseverance. Iranians should preserve their own nationality including race, language, and history, and they should follow European countries and acquire their progresses and civilization, without questioning and without meaningless theories. And they should unconditionally adopt Western civilization”.

“برای آنکه به یک کلمه به همه این افسانه ها جواب بدهیم باید بگوئیم که ما ایرانیها یعنی به طور هیئت اجتماعی ماده و معنی، در علم و ادب، در صنعت و ذوق، در موسیقی و شعر، در عادات و آداب، در زندگی و مردگی، در جسم و روح، در اداره و سیاست، در پشت کار و کارکردن از ملل متمدن فرنگ صد هزار فرسنگ عقب مانده ایم و باید میلّت خودمان را یعنی نژاد و زبان و تاریخ خودمان را نگاهداشته پشت سر فرنگیها بدویم و ترقیات و تمدن آنها را بدون چون و چرا و بدون اجتهادات بی معنی اخذ بکنیم و بلاشرط تسلیم تمدن مغرب بشویم.”<sup>35</sup>

Although the author does not explain his selected pieces of European or Eastern sciences, the title itself proposes the superiority of European science over indigenous science. Moreover, his selected passages reveal to what conclusion he wants to lead his readers. In other words, despite claiming that it is the readers' job to judge, he expresses his personal point of view by his selection. The

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<sup>34</sup> Ibid., (1920), vol. 41, p. 3.

<sup>35</sup> Ibid.

majority of passages under the title of Eastern sciences are quoted from *Āṣār al-Belād*<sup>36</sup> and *Jame' al-Ma'gul val-Mangūl*<sup>37</sup>. Probably there were some other books which dealt with the subject scientifically or rationally, for instance those books which were taught in the natural wisdom seminary schools, especially in Isfahan. However, the author picks up this book, maybe because of unawareness, or because he wants to exaggerate the backwardness of indigenous science. This book could confirm his argumentation: European science is as enlightened as day, and Iranian science is as dark as night. Given the fact that both main writers of journal, Taqīzādeh and Jamālzādeh, were sons of clergy and received proper religious education during their childhood, they were quite familiar with the main religious resources.

I will quote selected paragraphs about European science in the first issue that contains a quite normal description of a monkey written by 'Ezzat ol-llāh Hedāyat, without mentioning which European sources had been used to collect this information. In the last part of the article about monkeys, the author says:

“There has been a lot of discussion whether monkeys are able to speak or not. Undoubtedly, monkeys have different voices by which they can express themselves. This issue compelled an American professor named Garner to do a series of studies. In spite of the efforts of zoologists today, there has not been a monkey who can talk like a human. From a scientific point of view, a speaking monkey cannot exist, because the forehead - which is the center of rationality and reason -, is small and dented in monkeys. This is the reason why a monkey's intellect is less than a human. Since intelligence and perception are the sources of speaking and the monkey doesn't have this ability, or what professor Garner considers speaking, is nothing than various voices that all the evolved animals are able to produce and since the monkey is one of the most evolved animals, he can produce more voices and better sounds”.

"در مسئله اینکه آیا میمونها زبانی دارند و با هم حرف میزنند یا نه خیلی مباحثات شده است. در این شکی نیست که میمونها دارای صداهای مختلفی هستند که به توسط آنها میتوانند حسیات خود را بفهمانند و همین مسئله باعث تحقیقات بی پایان استاد آمریکایی موسوم به گارنر شده است، ولی تا امروز با وجود تمام زحماتی که استادان فن حیوان شناسی کشیده اند، دیده نشده که میمونی بتواند مانند انسان سخن براند و از نقطه نظر علمی هم مسئله سخن گفتن میمون نزدیک به صواب نیست. چونکه پیشانی که مرکز فهم و کیاست و کارهای عقلی است در میمون به کلی کوچک و عقب رفته است و دلیل است بر اینکه فهم و کیاست میمون نسبت به انسان خیلی کم است و از آنجاییکه منشاء نطق هم همان فهم و کیاست و ادراک است و لهذا این قوه هم در میمون نیست و آن زبان میمونها که استاد گارنر از آن سخن میراند چیز دیگری نیست جز اصوات مختلفه ای که هر حیوان

<sup>36</sup> The book was written in Arabic by Maḥmūd Ghazvīnī in 1275 about the geography of the world. Its complete name is *Āṣār al-Belād va Akhbār al-'Ebād*, (Relics of Countries and News of Individuals). It was translated into Persian during Nāṣir ad-Dīn Shāh's reign.

<sup>37</sup> The author does not say who wrote this book. I could not find any book with this title. Probably he means the book written by Soleiman Ibn Muḥammad published in Eqypt in 1929, titled *Jame' al-Ma'gul val-Mangūl; Sharḥe Jame' al-Oṣūl le Aḥādīṣ al-Rasoul*.

تکمیل شده ای کم یا بیش دارد و چون میمون کاملتر از حیوانات دیگر است لهذا در میمون فرقی مابین این اصوات بهتر و بیشتر است.<sup>38</sup>

To make a comparison, he designates a paragraph from *Āṣār al-Belād va Akhbār al-'Ebād* written in 1275 in Arabic, that was translated to Persian during Nāṣir ad-Dīn Shāh's reign. This description clearly is meaningless and the author aims to prove that these statements are nonsense. This book and maybe the other sources as well, contain separated narrations from various individuals, which were orally transmitted from one person to another. For example, in the next paragraph about the gorilla:

“In ‘Ommān and ‘Adan there are many gorillas. It is an animal like a half-human. It has one hand, one foot and one eye and his hand is on his chest. He speaks Arabic and people hunt and eat it. An Arab once said that, ‘I entered Shaḥr (a region between ‘Adan and ‘Ommān) and settled in the house of a distinguished person. I asked him about gorillas, he said we hunt and eat them, and they have a half-human body, and have one hand and one foot and also all the other organs are in half”.

"نسناس در نواحی عدن و عمان بسیار است و آن جانوری است مانند نصف انسان که یک دست و یک پا و یک چشم دارد و دست او بر سینه او باشد و زبان عربی تکلم کند و مردم آنجا او را صید کرده میخورند. یکی از اعراب حکایت کرد و گفت به شحر (ناحیه ایست میان عدن و عمان) وارد شدم و پیش یکی از بزرگان آنجا منزل نمودم. پس درباره نسناس از او پرسیدم گفت ما او را صید کرده میخوریم و او حیوانی است مانند تن انسان و یک دست و یک پا دارد و همچنین تمام اعضای دیگر نصفه است."<sup>39</sup>

Those paragraphs, quoted from Persian or Arabic texts, share the same pattern. Both of them are presenting information in the form of a narration. All the narratives belong to the same style, always beginning with the following sentence: it has been said that one day a person asked another person an assumed question and he in response tells a story from his observation or what a third person had observed. In this regard, the more narratives ones knows the more wisdom he has.

In the same issue of the journal, the author quotes the meaning and roots of some words using European texts, like *zindīq* (Heterodox), Tājik and *manjanīq* (Mangonel) and in each case he mentions the name of the scientists who investigated that word. For example, the word Tājik is quoted from Marquart, a German linguist, who also mentions the meaning of the same words according to Persian or Arabic texts. In the following passage, the author enthusiastically

<sup>38</sup> *Kāveh Journal* (1920), vol. 39-40, p. 6.

<sup>39</sup> *Ibid.*

designates linguistics as a science, and expresses his amazement about its achievements, of which Iranians are completely unaware:

“Scientists in the field of linguistics in Europe have made such advancements just like what European scientists have done in industrial sciences, through which some miracles have emerged. Every group of scientists in these fields is busy studying a branch of languages. For example, some are studying Chinese, some Sami (such as Arabic, Syriac, Hebrew) and a group for Hindi, and others for Mongolian and Turkish. Moreover, a group of them known as “Iranists” in Europe, meaning Iranologists, are busy with language, vocabulary, grammar, etymology, history, literature, religions and customs of Iran and Iranian ethnic groups. And this group made great efforts researching these various branches of science about Iran and have reached such a degree of progression in this science; that our scientists and literati who are unaware of European sources, have no more wisdom than a peasant in Lorestān or Qaraja Bāgh<sup>40</sup>”.

“علمای علم زبان شناسی در فرنگ در تحقیق زبانهای دنیا پایه علم را به همانجا برده اند که علمای علوم صنعتی فرنگستان درباره ترقی صنایع کارکرده و معجزاتی به ظهور آورده اند. علمای این علم دسته دسته هر کدام به یک شعبه از زبانها اشتغال دارند، مثلا جمعی به زبان چین و دسته ای به زبانهای سامی (عربی و سریانی و عبرانی و غیره) و گروهی به زبانهای هندی و قسمتی به زبانهای مغولی و ترکی اشتغال دارند. یک جمع نیز که در فرنگ آنها را “ایرانیست” یعنی ایران شناس گویند مخصوصا با زبان و لغات و نحو و صرف و علم اشتقاق و تاریخ و ادبیات و مذاهب و عادات و آداب ایران و اقوام ایرانی نژاد مشغولند و این دسته در تحقیق این فنون مختلفه از علوم راجع به ایران زحمات فوق العاده کشیده و پایه علم را در این زمینه به قدری بالا برده اند که علما و ادبای ما که از مآخذ فرنگی اطلاعی ندارند در مقابل این علوم بیشتر از لر پیشکوه و یا دهاتی قراجه باغی فضلی ندارند.”<sup>41</sup>

In this series of articles, like in the rest of the journals, acquiring knowledge means becoming informed about scientific achievements in Europe. For instance, in explaining new astronomy the author implicitly states that it is enough for people to be aware of the results of scientific achievements, and that the scientific methods and principles by which they succeeded in discovering new information are not the matter of concern. Rather, this is the job of European scientists, and these kinds of complicated issues are not presented for the public. He admits:

“... This was a brief introduction to the thoughts of true European scientists about the grandeur of the universe and huge distances between celestial objects. It should be mentioned that this information is disseminated among people in Europe and in addition to learning them at school, they can listen to the astronomers’ lectures in scientific speeches. By paying

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<sup>40</sup> These two regions are known to be amongst less developed regions in Iran and the author mentions them with an ironic tone, as examples for ignorant people.

<sup>41</sup> Kāveh Journal (1920), vol. 39-40, p. 7.

small prices, they can observe and enjoy the sky with big telescopes. Logical argumentation and scientific description, using natural, sensational, and geometrical reasons only appears among scholars and astronomers”.

“... این بود مختصری از عقاید علمای حقه اروپا در باب عظمت عالم و دوری مسافت اجرام آسمانی و باید بگویم که این عقاید در میان عامه مردم اروپا منتشر است و علاوه بر آنکه در مدارس می خوانند، عموماً در مجالس خطابه های علمی نیز که منجمین ترتیب میدهند میشوند و برای تماشای آسمان با دوربینهای بزرگ مردم فرنگ با چندشاهی میتوانند بروند و ببینند و حظ ببرند و فقط براهین استدلالی و شرح علمی این مسائل از روی دلایل طبیعی و حسی و هندسی در حوزه علما و منجمین طرح میشود.”<sup>42</sup>

He believes that even educated people in Iran are not aware of these new achievements, or what he calls illuminated facts, and admits that European science is based on natural and sensational reasons and in the case of astronomy, geometrical reasons. By citing a piece from the popularly known *Tarīkh-i Ṭabarī* about the eclipse, he summed up the article, by commenting that:

“Some of our semi-Westerner scholars or semi-clergy Westerners ignore the illuminated facts of today’s science in the world, they spent their whole life interpreting the imagination of Abū Ḥurayre<sup>43</sup> and adjusting it to science, to extract some meaning from it”.

“بعضی طلاب نیمه فرنگی مآب یا فرنگی مآبان نیمه آخوند که حقایق نورانی علم حالیه دنیا را گذاشته و به تأویل خیالات ابوهریره و در تطبیق آنها با علم و معنی درآوردن از آنها عمری صرف میکنند.”<sup>44</sup>

For him, those who cannot deny tremendous achievements of European science, and at the same time cannot leave religion, seek old books to trace back the roots of this new science in Iranian or Islamic books. The author criticizes their efforts in merging science with religious texts. Despite his disagreement with the possibility of adjusting such contradictory ideas, he shares the same thoughts: he and his opponents are insisting on the duality of religion and science, in this way they are reconstructing propositions limited to the central argument of whether science and religion are compatible or not. So instead of discussing scientific principles, they never really leave the realm of theology.

In his argumentation about the differences between European science and Iranian knowledge, he does not raise any question about the nature and essence of new science in Europe; rather we can only see admiration and exaggeration about the preference of this new science. He presumes that this new science is evidently the absolute truth, therefore it should be preferred, but

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<sup>42</sup> Ibid., (1920), vol. 48, p. 6.

<sup>43</sup> He was a companion of the Islamic prophet Muḥammad and is noted as the most prolific narrator of traditions from the prophet, the number of which is estimated to be 3,500. (*IE2*: vol. I, p. 129)

<sup>44</sup> Ibid., p. 8.

he does not give us any reason for his claims. The only implied reason for preferring new science is its functionality in empowering European nations. The authors of the journal belong to the class of political elite, and this factor played an important role in directing their discourse in a way that put political achievements first, so the political goals distract them from talking about science itself.

### 3-5-4-4- Scientific Disciplines and the Humanities

One of the differences between a journal and a book is that a journal is a living text! A journal, unlike a book, can respond to its readers in the next issues and has a reciprocal relationship with its audience. In the next passage, the author tries to elaborate more about what was said in the previous articles. Because the journal frequently criticized the extreme attention people paid to politics as the lone cure for the country's illnesses, some newspapers in Iran concluded that *Kāveh's* editors are against political reforms and that they believe political actions to be inadequate. In response to this critique, the editors insist on the importance of public education over focusing all endeavors on political activities, and proposes that Iranians preferably should study natural sciences instead of political and social sciences.

“Our intention is to prove the importance of industrial and natural sciences and pedagogy. In case Iranians really want to send one hundred students to Europe and graduate them in order to turn them back to serve their fatherland; we recommended sixty persons out of these hundred study pedagogy, which means to learn how to teach. And thirty persons to natural and industrial sciences and only make ten persons study governmental sciences”.

"مقصود ما اثبات زیادی اهمیت علوم صنعتی و طبیعی و علم تربیت است که اگر واقعا ایرانیها بخواهند صد نفر محصل به فرنگ فرستاده و آنها را فارغ التحصیل کرده به وطن خودشان عودت دهند و مملکت را از ثمرات تحصیلات ایشان مستفید و بهره مند سازند، به عقیده ما خوبست شصت نفر از این صد نفر را بگذارند علم تربیت فراگیرند، یعنی پیشه معلمی بیاموزند و سی نفر دیگر به علوم صنعتی و طبیعی بگمارند و فقط ده نفر به علوم دولتی مشغول کنند."<sup>45</sup>

This statement is in harmony with the journal's focal point, which is prioritizing public education for the development of the country. This is one of the few cases in which the author comments about scientific disciplines. Nevertheless, he gives us no more explanation on how he understands these fields of science.

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<sup>45</sup> *Kāveh Journal* (1921), vol. 56, p. 4.



To investigate the authors' conception of scientific disciplines, I review two relevant articles: the first one titled "Different visions: Indian and Greek concepts" is written by an unknown author and includes a comparison between Indian and Greek philosophical points of view. In the footnote, the author explains why he chose the Persian term of *bīnesh* as an equivalent for "conception". He writes:

"For the French word "conception", the German word "Weltanschauung" may be the best word to convey its philosophical meaning. And as a philosophical term probably it means insights about the universe and the soul. As an equivalent to "conception" we use the Persian word, *bīnesh*, which means ways of thinking, perception, and opinion of everybody about the truth of the changing world".

"برای کلمه فرانسوی Conception که شاید بهترین کلمه برای فهمانیدن معنی فلسفی آن کلمه آلمانی Weltanschauung و به اصطلاح حکمی شاید نظیر بصیرت در آفاق و انفس توان گفت، ما کلمه بینش فارسی را استعمال کردیم و مقصود از آن طریقه تفکر و تصور و نظر هر کسی است در حقیقت امور این عالم کون و فساد."

He argues that every person, due to physical characteristics and the environment in which he grew up, together with his life experiences, would have a unique and different mindset, and continues:

"There is a significant difference between two classes of people or two nations. Between various nations, racial and climate differences are also included. Finally, among scholars from two distant lands, the difference between their conceptions is even more. Above all is the variety of visions, which exists since olden times between Eastern and Western nations. This difference is indeed a difference in their ways of perception and finding existing facts, and in the styles of statement and argumentation. In this respect, we can say that the spiritual condition or mental practice, which produces Eastern philosophy, had a spiritual base; and the one, which produces the Western thought, is basically, material. The first one is guided by illusion, beauty, fantasies, and a supernatural journey, and the second one follows reason, rational logic, analogy, and argumentation."

"در میان دو طبقه مردم یا دو ملت اختلاف خیلی بیشتر است و در مورد دوم تأثیرات نژادی و آب و هوا نیز دخیل است. بالاخره در میان حکما و علمای دو قطعه خیلی دور دنیا اختلاف فهم و نظر باز هم بیشتر است. بالاتر از همه این اختلافات فرق بینشی است که از قرون قدیمه میان ملل مغرب و مشرق بوده و هست. این فرق را که در واقع در طرق تصور و حل حقایق کونیه و در سلیقه حکم و استنتاج بوده میتوان به این تعبیر توضیح نمود که آن حالت روحی یا عمل دماغی که فلسفه شرقی را تولید مینمود بیشتر اساس روحانی و آسمانی داشته و اساس تفکر غربی جسمانی و زمینی بوده، آن یکی وهم و حسن و خیالات و سیر در ماوراء طبیعت را رهنمای خود ساخته و این یکی عقل و منطق عقلی و قیاس و برهان را پیروی نموده است."<sup>46</sup>

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<sup>46</sup> Ibid., vol. 57, p. 1.

This explanation assumes that Western and Eastern people are essentially different. Comparing their viewpoints, he suggests that differences in their ways of perception and discovering the world are significant, as well as in their styles of statement and argumentation. This is one of the rare cases in which the author speaks about different principles in Eastern and Western science. However, his argumentation leads him to create a duality that became significant in the dominant discourse. The main message of this article is the difference between Eastern and Western thought in terms of rationality and spirituality. It was a very powerful element in the discourse that nobody could avoid discussing; all the other discussions stem from this bold point. He gave us two examples: India and Greece, as two ends of one spectrum, or as he puts it: two parallel lines. The first one had a profound effect on European countries and the second one was very influential in oriental countries. He asserts:

“In the age of enlightenment and during the recent awakening movements in Europe, the English thinker Francis Bacon developed the basis of thought and methods of research one step further, and replaced Aristotle’s deductive approach with posteriori reasoning, as the basis of research and discussion about the real world. This way, the great distinction between Eastern and Western civilization again expanded”.

"باکون انگلیسی و دیگران در قرون نهضت تجدد و بیداری اخیر اروپا اساس تفکر و طریقه فحص را یک قدم دیگر نیز پیش برده و برهان ائی را به جای طریقه لمی فلسفه ارسطو مبنای تحقیق و مدار بحث در حقایق کون کردند و بدین قرار فرق فاحش تمدن شرقی و غربی باز بیشتر گردید." 47

As he specifies here, introducing the posteriori reasoning or factual demonstration, by Bacon, was one of the effective factors, which expanded the gap between two civilizations. He gives us no more comments on this important issue, and jumps to his favorable conclusion, which is to demonstrate the privileges of Western thought and the necessity to acquire it. Asking his audience about the present situation of India as the representative of Eastern thought, he mentions that this country is drowned in misery under the occupation of Great Britain. He asks:

“Isn't it that the secret of domination of the small nation (England), or more accurately, the eccentric inferiority of this great nation (India) is nothing but their manner of life and civilization, and especially their thoughts and conception? Aren't these apparent achievements originating back to the material civilization and natural and rational philosophy, or in our words, to the Greek conception of Western nations, or in the case of

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<sup>47</sup> Ibid.

India doesn't their current situation have its origins in the illusory philosophy or to the spiritual journey and ascension to heaven, parting with physical belongings?"

"آیا سَر استیلاى عجیب آن قوم کوچک (انگلیس) و یا به عبارت صحیح تر زیردستی غریب این ملت بزرگ (هند) جز در طریقه تمدن و زندگی و مخصوصا افکار و بینش آنها است؟ و آیا ریشه این علل و اسباب ظاهری به همان تمدن جسمانی و مادی و فلسفه طبیعی و عقلی و به اصطلاح خودمان به بینش یونانی ملل مغرب و فلسفه وهمی و طریقه سیر در معارج ملکوت علوی و مدارج روحانی و ترک تعلقات جسمانی خود هندیان نمیرسد؟"<sup>48</sup>

For him, Iran's case is closer to India. He argues that since we were always at war with Greece, we had no opportunity to learn from Greek scientists. Today we should compensate this failure and start learning from them. The very first step should be translating ancient Greek works, because they are the sources of new science today:

"Scientists and those who studied the secrets of civilization and progress believe that one of the fundamental requirements to acquire Western civilization and "Greek conception" is translating Greek philosophy and books of wisdom. In Iran, this issue will be one of the foundations of a new movement and it is very important that the translation should be done directly from ancient Greek. Seekers of knowledge in our country should get to know directly those ideas and thoughts that enlightened the world of knowledge, rational progress, and human science. They should translate them to their indigenous language. And in this way they can compensate centuries of ignorance in using that ocean of truth and human light, which is undoubtedly the father of the current European civilization".

"به عقیده دانایان و منتبعین در اسرار ترقی و تمدن، یکی از لوازم اساسی کسب تمدن مغربی و "بینش یونانی" هنوز هم همانا ترجمه کتب فلسفه و حکمت یونانی است. این فقره در ایران نیز یکی از اساسهای نهضت جدید خواهد بود ولی بسیار اهمیت دارد که این ترجمه ها مستقیما از زبان قدیم یونانی به عمل آید و طالبین علم و معرفت از ملت ما نیز بلاواسطه به آن خیالات و افکاری که مشعل عالم تاب معرفت و ترقی عقل و علم بشری در عالم شدند آشنا شده و به زبان بومی خود ترجمه کنند. و کفاره غفلت قرون متمادیه را از استفاده از آن اقیانوس حقیقت و نور انسانیت، که بلاشک پدر تمدن اروپای حالیه بوده بدین طریق ادا نمایند."<sup>49</sup>

This conclusion, despite its ideological aspects, contains another important assumption: ancient Greek science is the prerequisite for acquiring new European science. He states that to learn European science, Iranians should learn its basics because the root of new science goes back to the Greek golden age. Translating their books should be our agenda. This argumentation was misleading, since it neglects the epistemological differences between Greek science and new modern science. As if both are the same, and to understand the new version, we can refer to the

<sup>48</sup> Ibid., vol. 57, p. 2.

<sup>49</sup> Ibid., p. 3.

initial one. This conceptualization leaves no space to raise the question about developments and ruptures in the history of thought. The author of this article, like all the other writers of the journal, is silent about the actual principles of science itself.

The second article, which is devoted to a commentary about new scientific disciplines in Europe, was due to be the first number of a series. Because the journal stopped publishing after five volumes, this article was the final one. 'Alī Khān Tabrīzī, an Iranian doctor living in Switzerland, named his article "The miracle of science in the West and marvels in the East" and notes that his article is an introduction to the science of the soul and its wonders. He does not explain what he means by science of the soul. The only clue is his categorization of different sciences related to human spirit, including mesmerism and psychology. He begins his article, comparing natural sciences to some old superstitious knowledge, which he names false sciences, like astrology, fortune telling and alchemy, and states:

"Man always has questions about his past, present and future and seeks the answer everywhere. Imagine a servitor wants to know when he can attain the rank of a minister of war? Of course, natural sciences cannot answer such a question, and they do not claim such a power either".

"انسان همیشه سئوالاتی راجع به گذشته و حال و آتیه خود و دیگران دارد و از هر جا باشد جواب میخواید. فرض کنیم آبدارباشی میخواید بدانند کی به درجه وزارت جنگ نائل خواهد شد؟ البته علوم طبیعی قادر بر جواب چنین سئوالی نیستند و ادعای همچو قدرتی نمیکنند."<sup>50</sup>

He admits that natural sciences are not able to predict the future, but the other sources of knowledge claim to do so, and they possess the answers to all sorts of questions. The author suggests that what he calls false sciences acts as an inspiration for further investigation and finally scientists succeeded in discovering new information about human beings. In fact, in this article he introduces superstitious knowledge as the historical background of modern psychology. He states:

"Although these superstitious sciences seem funny to us today, it should not be forgotten that these false sciences helped to discover and advance many scientific disciplines. For instance, alchemists sought for the great elixir and cure-all, but discovered Gunpowder, phosphorus, alcohol, etc. Gradually the false science of alchemy transformed into (modern) chemistry. Astrologers wanted to predict the future through planets and stars. This research, ended in astronomy, which is a branch of positive sciences.... Respectively the science of body

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<sup>50</sup> Ibid., vol. 55, p. 5.

magnet or animal magnet and its preparations led researchers to the mesmerism and then to the psychology, and apart from these two branches of mesmerism and psychology, to another subject which is spiritualism, being attached to the animal magnet”.

“اگرچه این علوم خرافی برای ما حالیه اسباب خنده است ولی نباید فراموش کرد که همین علوم کاذبه باعث کشف و ترقی چندین شعب علم گردیده مثلا کیمیاگر عقب اکسیر اعظم و علاج کل میگشت، باروت، فسفر، الکل و غیره را پیدا کرد و تدریجا علم کاذب کیمیا به علم شیمی حالیه مبدل شد. منجم میخواست از روی ثوابت و سیارات وقایع آتیه را کشف کند، این تحقیقات علم نجوم را که یکی از شعب علوم مثبتیه است تولید کرد... به همین نهج علم مغناطیس الابدان یا مغناطیس حیوانی و مقدماتش متجسسین را به تنویم و از آنجا به تجزیه روح دلالت نمود و غیر از این دو شعبه تنویم و تجزیه روح مطلب دیگری که عبارت است از ارتباط با ارواح منضم به مغناطیس حیوانی گردید.”<sup>51</sup>

Here he coins some new terms, like “body magnet” or “animal magnet” without any explanation, and takes it for granted that his audiences will understand what he means. Then the author provides us with more information on different branches related to the science of the soul:

“Dividing these four branches into two categories of positive sciences and esotericism, animal magnet and spiritualism fall into esotericism; mesmerism and psychology into the second category which is positive sciences. These sorts of belief do not belong to any nation, all human beings were involved with them and to some degree are involved even today. In the past, humans had no access to scientific tools, and sought for anything that might help. Our experience today shows that only incapable and desperate people would resort to esotericism. There is no reasoning or logic, and faith is the only proof”.

“اگر این چهار شعبه را میان علوم محققه و علوم خفیه قسمت کنیم مغناطیس حیوانی و ارتباط با ارواح جزء علوم خفیه و تنویم و تجزیه روح داخل در علوم محققه میشوند. این عقاید مخصوص به هیچ ملتی نبوده افراد بشر همه گرفتار آن بوده و هنوز هم تا درجه ای هستند. انسان قدیم به وسائل علمیه امروز دسترس نداشت و از هر چه به فکرش میرسید استمداد مینمود. تجربه یومیه به ما نشان میدهد که توسل به علوم خفیه کار اشخاص عاجز و بدون چاره است. اینجا تعقل و استدلال در میان نیست و امر اعتقادی دلیل است و بس.”<sup>52</sup>

Dividing sciences into the two categories: esotericism and positive sciences<sup>53</sup> is very interesting and important. As the last sentence shows, for him, positive sciences are based on reasoning and logic, while esotericism is based on faith, and we can consider this statement as an endeavor to reflect on differences between European and Iranian sciences. Another presumption in this passage is that science is power, and those who could not access it had to resort to pseudoscience. The author tells us about the history of magic and witchcraft in Europe and the development of their

<sup>51</sup> Ibid., (1921), vol. 55, p. 5.

<sup>52</sup> Ibid., p. 6.

<sup>53</sup> In the old Islamic schools, science was divided into esoteric sciences and factual sciences, which included for example: alchemy, astrology, gnosticism, magic, mesmerism and numerology. Factual sciences included branches such as medicine, logic, and geometry.

methods in healing diseases. He concludes that in the case of the human soul, their methods ended up in positive sciences:

“In the early 13<sup>th</sup> century, necromancy and magic were in decline, unlike healing which was booming. The healing method was usually touching the patients’ body... The main claim of those healers was to cure *khanāzir* disease. This disease is recognized today as a kind of tuberculosis and that it cannot be cured by touching, which causes paroxysm in patients. We will see later that there is no marvel, nor intuition or gift. In 1190 Mesmer, an Austrian doctor, was the first one who seriously studied these treatments and discovered a flow in animals’ body and named it animal magnet”.

“اوایل قرن 13 از غیب گویی و سحر کاسته شد و برعکس شفابخشی رونق گرفت. معمولاً وسیله شفا دست کشیدن به بدن مریض بود... ادعای بزرگ این جمع معالجه مرض خنازیر بود. امروز معین شده که این مرض قسمی از سل است و میکروب سل را با دست زدن نمی توان کشت و اغلب این لمسها نیز باعث تشنج ملموسین میگردد. خواهیم دید نه خارق عادتی در میان است و نه کشف و کرامتی. در سنه 1190 مسمر طبیب اطریشی اول کسی بود که جداً به تحقیق این شفابخشی ها قیام نموده و جریانی (فرضی) در بدن حیوانات و انسان کشف کرد و این جریان را موسوم به مغناطیس حیوانی نمود.”<sup>54</sup>.

He declares that if it happens that someone succeeds in healing a disease by means of esotericism, there must be a scientific explanation. There is no magic in the world and science is capable of proposing an explanation. In this paragraph, he implies the presupposition that scientists will definitely find the reason for each of these strange phenomena, we should only wait and see. Unfortunately, the journal stopped publishing and the series did not continue, so we have no more information on this issue.

### 3-5-4-5- Relation between Science and Religion

The text is silent about the relationship between science and religion, save a single article about the biography and thoughts of Martin Luther.<sup>55</sup> The author praises amendments, made by Protestants in Christianity, and suggests that Iranians need such an amendment in Islam. For him, acquiring new science is inevitable and by adopting new science, if nothing changes in the current order of religion, the whole tradition will be in danger:

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<sup>54</sup> Ibid., vol. 55, p. 7.

<sup>55</sup> Ibid., vol. 57, pp. 5-9.

“It won’t take long that the promotion of natural sciences, based on senses, overwhelms the boom of incidental fantasies. Then the barrier of ignorant and fanatic will inevitably fall by a revolution and the flood of wisdom will influx at once. Unfortunately, this flood will first whelm a neglected garden and will abolish all the flowers and weeds at the same time. And the flame of revolution will burn all together, or people gradually learn the true materialistic sciences and for its tremendous differences to the incidental appearances of religion, will utterly hate religion and will become totally irreligious, which means part of the pure ethic which for thousands of years relied on religion, will be destroyed”.

"طولی نمیکشد که ترقی علوم طبیعی مبنی بر محسوسات رونق بازار عوارض جاهلانه را شکسته و آنوقت ناچار یا سد جهل و تعصب به یک انقلابی برمی افتد و سیل معرفت به یکبار هجوم میکند، ولی بدبختانه در ابتدای امر این سیل یکباره باغی را که به غفلت باغبانان جنگل پرخاری شده فراگرفته و گلها را نیز با گیاههای هرزه از بیخ و بن برمیکند و آتش انقلاب تر و خشک را با هم میسوزاند و یا به تدریج مردم علوم حقیقی دنیوی را فراگرفته و به واسطه غرابت فوق العاده ظواهر عارضی دین، مطلقاً از دین بیزار شده و به کلی بی دین میشوند یعنی قسمتی از اخلاق حسنه که قرن‌ها و هزاران سال است تکیه بر دین دارد منهدم میشود."<sup>56</sup>

Although there is no comment about the author’s conception of the premises of science, some hints exist in their statements. For example, in the last two paragraphs above, science is treated as neutral and reliant on human senses. For the author of this article, it is evident that by promoting natural sciences, religious beliefs will decline. This statement would suggest that science is in contradiction with religion, but the author avoids this assumption by declaring that science is against incidental appearances of religion, and implicitly exculpates true religion from this allegation. In this respect, science is apparently only inconsistent with religion, while inherently there is no contradiction between them. At the end, the author notes that the function of religion is to preserve morality in society. The author of this article is unknown, but his viewpoint is slightly different from the one in the other articles. Nowhere else in the whole journal can one find a discussion about the relation of science and religion. It seems that the authors were cautious about religion because of the possible opposition of the ‘*ulamā*’ in Iran.

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<sup>56</sup> Ibid., p. 8.

## Majalleh-yi *Furūgh-i Tarbiyat*

By Abul-Ḥassan Forūghī

### 3-6-1- Biography

Abul-Ḥassan Forūghī, an Iranian educator and author, was born in Tehran in 1885 to a famous merchant family from Isfahan. He received elementary education at home from his father Muḥammad Ḥossein Forūghī (Zokā 'al-Molk the first) (1839-1907) and his elder brother (Muḥammad 'Alī). He later attended Dār ol-Fonūn and the Alliance Française<sup>1</sup> and continued learning Persian and Arabic literature in Sepahsālār school. Forūghī's family, and especially his father and the elder brother, were among the political elite. At the same time, they had profound influence over the cultural decisions made in Iran. Muḥammad Ḥossein Forūghī was a poet and teacher of the political school in Tehran and helped establish the first non-governmental newspaper in Iran, called *Tarbiyat*, in 1896. At the age of eighteen, Abul-Ḥassan joined this newspaper and after his father's death, he became its administrator. His brother, Muḥammad 'Alī Forūghī was a prominent intellectual and writer who served his whole life in different political positions, most importantly three times as prime minister of Iran, during the Reżā Shāh and Mohammad Reżā Shāh period.

Abul-Ḥassan was enthusiastically interested in philosophy and spent most of his time studying Islamic and European philosophy. In 1908, he began teaching at Dār ol-Fonūn, and in

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<sup>1</sup> A French school in Tehran



1918 became the principal of the teachers' training school in Tehran. The foundation of this school was also his idea and with his elder brother, he convinced the prime minister, Mīrzā Aḥmad Khān Nāṣir od-Dowle, to establish it. In addition to these administration positions, Forūghī also taught Qurān and Oriental history. It was in this period that he founded a journal named *Furūgh-i Tarbiyat* and benefited from the contributions of his colleagues at the school.

In 1933, Abul-Ḥassan Forūghī was appointed by his then prime minister brother, as delegate to Switzerland. After a year he went to Geneva where he served as Iranian delegate in the League of Nations. Forūghī returned to Iran in 1935, and received a position in Tehran University where he spent the rest of his career as an educator and writer. He died in 1959 at the age of 75. His published works include:

- *Sarmāyi-yi Sa'ādat* (Happiness Capital), 1909, Tehran
- *Awrāq-e Moshavvash* (Disarranged Papers), 1912, Tehran
- *Majmū'i-yi Āṣār* (A Collection of Works), 1912, Tehran
- *Shīdūsh o Nāhīd*, 1922, Tehran
- *Civilisation et synthèse* (Civilization and Synthesis), 1936, Paris
- *Système de philosophie* (System of Philosophy), In 2 Volumes., 1940, Paris

*Sarmāyi-yi Sa'ādat* and *Awrāq-i Moshavvash* are his most famous works in which he laid out his political and social ideas. The main axes of his thoughts can be traced in all his works but he devoted some articles in *Furūgh-i Tarbiyat* particularly to the discussion of science. Those articles comprise the subject of investigation in this research.

He was an influential writer who was famous for his emphasis on the new system of training as well as his scientific interpretation of the Qurān and his endeavors in adapting new rational sciences with religion<sup>2</sup>. His teaching and writing left a profound impression on the next generation of intellectuals. He created his own version of interpreting science, which made him a unique person for the aim of this study. Forūghī is also important because of his family ties with two prominent political figures, his father and his brother. A thorough study his ideas sheds light on the discourse of some major political and social actors of the time.

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<sup>2</sup> For more information on his biography see Bāqer Āqeli: "Forūghī, Abul-Ḥassan", *Iranica Encyclopaedia*, vol. X, Fasc. 1, 1999, pp. 107-108; Ḥabib Yaghmāei: "Dāstān-e Dūstān: Mīrzā Abul-Ḥassan Khān Forūghī", (The Story of Friends: Mīrzā Abul-Ḥassan Khān Forūghī), *Yaghmā*, vol. 244, 1969, pp. 574-76; Muhammad Ṣadre-Hashemi: *Tārīkhe Jarā'ed va Majallāte Iran* (History of Press and Media in Iran), Isfahān, 1984, pp. 185-89.

### 3-6-2- About the Journal

In 1921, Forūghī founded the periodical *Furūgh-i Tarbiyat*, which was only published in a few issues. The journal appeared right after the first series of *Kāveh*. Thematic affinities between these two magazines are undeniable. Both publications emphasize the importance of training teachers for the purpose of public education. Forūghī was at this time the principal of the teachers' training school in Tehran and the journal was a reflection of his activities there. As Ḥabīb Yaghmā'ī admitted, the writers of this journal were in fact the teachers of the teachers' training school, including Gholām-Ḥossein Rahnamā, Abbās Eqbāl Ashtiyānī and 'Issā Şeddīqī<sup>3</sup>. Forūghī himself was the chief editor and wrote almost all of the articles, including the following, analyzed in this study:

- Opening remarks, vol. 1
- "Old and New Logic; the major pest of knowledge and wisdom, or veil of human prosperity", vol. 1
- "Old and New Science", vol. 1
- "Science and Wisdom; Facts and Universality", vol. 4

Other articles were devoted mainly to Greek and Persian philosophy. The Fārous office printed the journal in the size of 22×16 cm and the first issue appeared in April 1921. Each volume contained about 40 pages and as previously mentioned it lasted only to the fourth issue, but in spite of small quantities, the text was rich and informative.

### 3-6-3- Meaning of the Text, Isolated from the Context

#### 3-6-3-1- Semantic Episodes

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<sup>3</sup> Ḥabīb Yaghmā'ei: "Dāstān-e Dūstān: Mīrzā Abul-Ḥassan Khān Forūghī", (The Story of Friends: Mīrzā Abul-Ḥassan Khān Forūghī), *Yaghmā*, vol. 244, 1969, p. 575.

Selected paragraphs in which Forūghī argues about new science and the situation of science in Iran contain the following themes:

- Materialistic outcomes of science are not enough for human prosperity
- The solutions to the problems of humanity can be found using the results of science, this will improve morality
- The aim and the fruit of science is edification
- Discovering the truth is impossible for humankind
- Facing unknowable truth makes humans humble
- Humanity is infected with human intention
- The corrupted situation of European countries is the outcome of infected humanities
- New European science is more evolved than our science
- Natural sciences can produce valid knowledge, based on empirical studies
- We should learn old and new science simultaneously
- Principles of old wisdom are still relevant

### **3-6-3-2- Focal Point**

As the name suggests, Forūghī's main concern in the journal is to clarify the importance of training for the prosperity of a nation. He insists that acquiring knowledge goes hand in hand with edification in order to be efficient and this can improve the quality of human life. In fact, a better equivalent for the term *tarbiyat* instead of training would be edification. As I will explain later, the whole context is about proving the significance of ethical edification as the result of scientific discoveries. He does not only emphasize education or pedagogy in his mind, but rather believes in moral instruction together with scientific education. He suggests:

“If materialistic achievements of science and technology were enough to provide prosperity for humanity, what is all this wrangling in the civilized countries over social issues and money?... This demonstrates that reliance of human prosperity on the material advantages is dependent to some conditions outside the nature of those advantages. It should be noted that

there is no doubt that human prosperity is related to its spiritual existence, and that is the precious pearl of training. It is evident from the title of Rousseau's book, *Emile*, which is the word of training that the notion of "returning to nature" is a method for training, so a wise man, no matter how he thinks, will admit that training is essential".

"اگر حاصل مادی علم و صنعت تنها برای سعادت بشر کافی بود اینهمه قال و قیل در ممالک متمدنه عالم بر سر امور اجتماعی و ثروتی برای چه بود... از این وضع اینقدر به طور اقل معلوم میشود که اگر سعادت به آن فواید مادی بسته باشد، مشروط به اجتماع شریاطی است خارج از نفس آن فواید - در مقابل این حال چیزی هست که توقف سعادت آدمی به وجود معنوی آن، محل هیچ تردیدی نبوده و نمیتواند باشد و آن صدف پربهای تربیت است. تنها اسم کتاب امیل روسو که همین لفظ تربیت است معلوم میکند رای واگذاری به طبیعت نیز راهی برای تربیت مینماید، پس آدم عاقل با هر عقیده و رای به هر صورت تربیت را واجب میشمارد."<sup>4</sup>

He is self-confident enough to criticize European science and claims that this new science, despite its materialistic returns, is not enough to make humanity happy. In the new era of the encounter with European science and civilization during the second half of the 19<sup>th</sup> century and the turn of the century, this is the first time that an inferiority complex to Europeans begins to fade. The author is speaking about Europeans from an equal position. This can be seen as the focal point of *Forūgh-i Tarbiyat Journal*, since he tries to say that the materialistic outcomes of science are not enough for human prosperity, and we need to supplement it with spirituality in a broad sense.

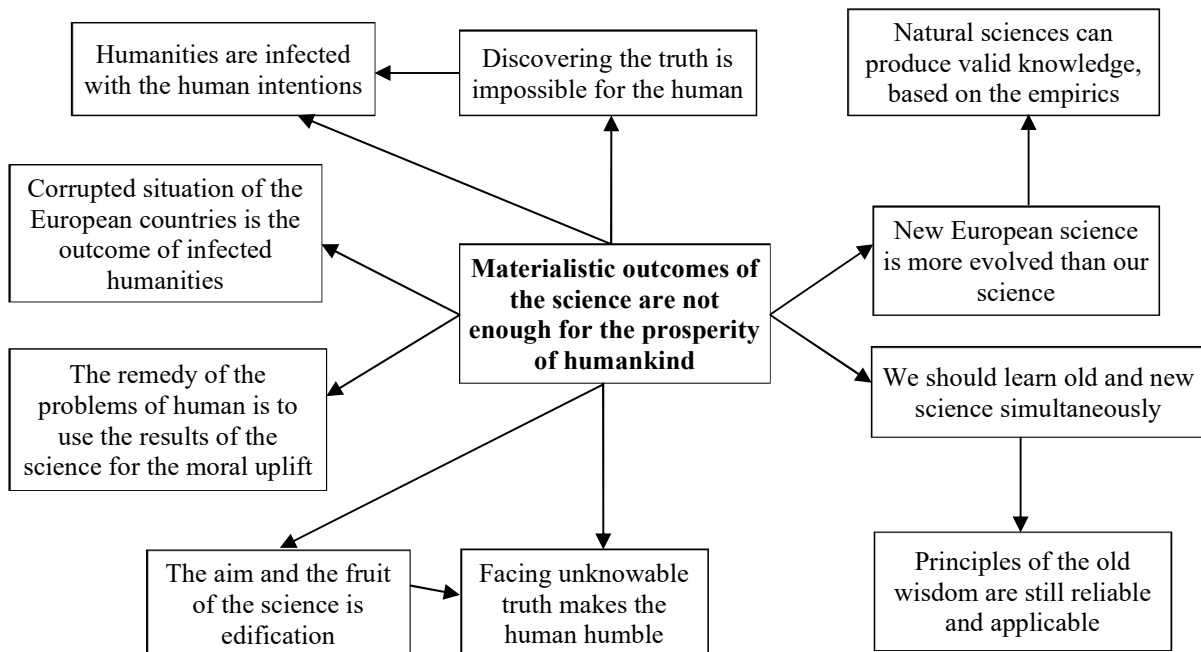
Forūghī is well acquainted with Islamic philosophy and his tendency towards mysticism is quite clear. Mentioning a book written by Jean Jacques Rousseau called *Emile*<sup>5</sup>, it is evident that Rousseau and his training theory influenced Forūghī, but he perceives it in a mystical framework. His prose in this journal and all his other works is poetic and full of allegory and metaphor, his main concern is to provoke his readers and to convince them of his proposed remedy for the problematic situation in Iran. Throughout the text some terms have been frequently repeated which are the key concepts for understanding Forūghī's mindset. These terms include training (*tarbiyat*), edification (*'ebrat*), observation (*dādan*) and understanding (*fahmīdan*).

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<sup>4</sup> *Forūgh-i Tarbiyat Journal* (1921), vol. 1, p. 7.

<sup>5</sup> *Emile*, a treatise on the nature of education and its importance for the life of humankind, is the most famous book of Jean Jacques Rousseau, French philosopher of the 18<sup>th</sup> century.

### 3-3- Semantic Structure



### 3-6-4- Meaning of the Text with Respect to the Context

#### 3-6-4-1- Description of the New Science

Abul-Hassan Forūghī has a unique interpretation of recent developments in science. All the social activists are busy preparing required curricula to teach European science to the young generation, and insisting on the privilege of public education and teaching new science as quickly and easily as possible. Yet Forūghī criticizes their approach and emphasizes paying attention to the details in the philosophy of Western science rather than simplifying it for children. He states:

“It has been many years since the necessity of adopting Western civilization by learning and acquiring new knowledge has been discussed, but to be honest almost nothing has been done. All those discussions did not stimulate us to acquire new science... We assumed that our audiences are the masses of people and the destination of reformation is public, so we did not stop passionate speeches and harsh rhetoric empty of any argumentation, we did not comment about undercover secrets. Our speech was boring for sages and for the masses it was as a joyful entertainment that fades after a few moments”.

"سالها از وجوب واردشدن در تمدن اروپایی از طریق تحصیل و کسب معارف جدیده سخن گفتند و همه گفتیم و انصاف آنکه تقریباً هیچ نکردیم... تمام گفتن ها ما را چنانکه باید به کسب معارف جدیده و انداشت... به خیال آنکه کار ما با عوام است و منظور و مراد نهضت عام، دامن خطابه و کلمات تند و شور خالی از برهان را رها ننمودیم و زبان به شکافتن رازهای نهانی نه گشودیم و خواص را از گفتار ما ملامت گرفت و عوام را جز گرمی مجلسی که به یک نسیم به سردی بدل میشود حالتی نیفزود."<sup>6</sup>

He suggests that Iranians should try to achieve the soul of science and in one way or another affect the mindset of Iranian scholars. Then these scholars would be able to influence the public by their wisdom, and encourage people to move towards science and civilization. He even claims that after many years of studying European science, he found the basis and causes of European progress in knowledge, and that he feels he is responsible to share the solutions he found with the others, in order to facilitate the process of development in the country. Forūghī describes the aim of the journal in the opening remarks, as follows:

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<sup>6</sup> Ibid., vol. 1, p. 13.

"The goal of our journal is to seek a remedy for the public miseries and pains; and the authors of the journal believe that the solution is to embark upon training and paying attention to observation and understanding, and finally edifying from observation and understanding. The journal believes that the main reason for Iranian maladies and miseries is backwardness from Western civilization. It seeks the edification for the sake of Iranians' awareness and their will to move along with the training of the time".

" منظور و مرام مجله ما همان ضرورت جستجوی علاجی است برای دردها یا بدبختیهای عمومی و آن علاج را ورود در طریق تربیت و توجه به دیدن و فهمیدن و عبرت گرفتن از دیده ها و فهمیده ها را می‌شناسد. منشاء بزرگ دردها و معایب کار ما راعقب ماندن از تمدن مغرب میدانند و این عبرت را از بیداری ابنای وطن و درآمدن ایشان در صراط همراهی با تربیت زمان میخواهد."<sup>7</sup>

He attributes all European scientific achievement to observation and understanding, and believes that the progression in human knowledge grew out of these two fundamental prerequisites. The key point in his discussion is that observation and understanding should lead to moral rectification, and that this is the only way to salvation in this world and the world hereafter<sup>8</sup>. It is not clear, what does he mean by observing or understanding. In the following passage, he elaborates his perception of the training and its relation to the observation and understanding:

"All the mundane interests or salvation in the other world, science, art, and industry are dependent to two key concepts: observing and understanding. In this respect, all science and systematic training should be regarded as the practice of observation and understanding, nothing else... Some nations are recognized as advanced and blissful and are labeled as the masters of civilization. This advancement and prosperity are produced by better training. Undoubtedly this privileged training is attributed to knowledge, since what enables humans to distinguish right from wrong is wisdom, and wisdom is the fruit of the enlightenment of knowledge".

"اگر صلاح دنیوی است و اگر نجات اخروی، اگر علم و دانش است یا صنعت و هنر، هر چه هست همه بسته به دیدن و فهمیدن است... و از این نظر تمام علم و تربیت درست را باید مشق دیدن و فهمیدن دانست و بس... مللی را به اسم ارباب تمدن مقدم و سعادت‌مندتر می‌شماریم و این تقدم و سعادت از دولت تربیت بهتری حاصل است. اما این برتری در تربیت را بی تردید به دانش نسبت خواهیم داد، زیرا هر چه موجب تمیز نیک و بد و تشخیص راه صحیح از خطا گردد دانائی است و ناشی از چشمه روشن دانش شناخته شود."<sup>9</sup>

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<sup>7</sup> Ibid., vol. 1, p. 8.

<sup>8</sup> Ibid., p. 5.

<sup>9</sup> Ibid., p. 2.

It seems that he equates observation and understanding with cognition although he never uses the word (*shenākht or ma'refat*). Nevertheless, the last sentence clarifies his comprehension: he believes that science can help us to distinguish right from wrong, thus implicitly he expects a moral outcome from scientific endeavor. He looks through an Islamic mystical lens, and regards a moral destination for the science, as if it should help humankind traverse the phases of spiritual perfection. Cognition of the world or of human beings is not the subject of his deliberation. In the next paragraph, by using the word “should”, he reveals his will to manipulate society, and to guide people by means of science to moral enrichment. This is exactly the definition of science in Islamic mysticism. His description of science is romantic and compatible to the mystical path. He says:

“*Hekmat* and all human research involves similar questions: 1- what does man want from life in this world, or what should he want? What is the aim of establishing a human community? Which characteristics “should” these members of the community have, so that the aim would be fulfilled?”

“سئوالاتی که موضوع تمام حکمت و تحقیقات بشری است عبارتند از: 1- آدمی از زندگانی در این جهان چه میخواهد یا باید بخواهد؟ 2- مقصود از تشکیل جمعیت بشری چیست؟ 3- افرادی که جمعیت را تشکیل میدهند باید دارای چه صفاتی باشند تا منظور حاصل شود؟”<sup>10</sup>

Describing the history of science, he points out that the subject of *hekmat* was initially a moral issue, and gradually changed to what we call today science<sup>11</sup>, but its final aim is still morality. He claims that humankind can never discover the truth to the fullest, it is unattainable. Yet, “wonder” which has the highest rank among the intellectual activities is achievable only for the great *hakim*. Therefore, the final goal of knowledge, which is cognition, will be replaced by wonder and edification. This means for him thinking about the natural phenomena and their causes and effects is in fact admiring and applauding what God had created and can be considered a kind of prayer. Therefore, the result of science -which from his point of view contains an ethical component - turns out to be the goal of knowledge.

He comments about humanity as a whole and does not specify which humans he means, Westerners or Easterners. Explaining about the history of science, he does not distinguish between Western and Eastern history of science. When he wants to argue about humans as the object of knowledge, he always begins with the needs and requirements of humankind. In an article about *hekmat*, in which he talks about the human tendency to develop science, the human is the object of

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<sup>10</sup> Ibid., vol. 1, p. 3.

<sup>11</sup> Ibid., vol. 4, p. 38.



his deliberation. Forūghī argues that scientific curiosity originates in the aesthetic values or the beauty of natural phenomena. Man's innate need for this beauty makes him curious and eager to discover nature<sup>12</sup>. According to him, this tendency gradually caused human beings to discover the world and finally ended with edification. Science, as he uses it, means searching for truth through examining the appearance of phenomena.

He takes it for granted that science is an aesthetic description of the world, since he assumes that the world was created by God in its ultimate degree of beauty, harmony, and stability. Despite this imaginary harmonious world, uncertainty and diversity of new science frustrate him, because he believes in a kind of certain and unique knowledge. While studying new European science, he faces diverse and sometimes contradictory issues that he is not equipped to understand.

When he proposes a remedy for Iranian maladies, his feeling of despair is evident. He claims that after devoting himself to many years of study of European science, he discovered that despite the expansion of new science, the key element and the secret of European success was nothing but "training". He expresses this statement with a high degree of certainty, because from the psychological point of view, he needs a certain answer to his question. By examining European books, he learned that European scientists have studied almost every observable thing, because every object deserves investigation. Diversity of the objects studied by European scientists leads him to the conclusion that Iranians should observe almost every object, including the knowledge of ancient civilizations<sup>13</sup>.

### **3-6-4-2- Relation between the New and the Old Science**

In an article entitled "Old and New Science", Forūghī explains his intention to divide science into two categories: old and new. He argues that after a long period of stagnation in the scientific activities of Islamic societies, in recent years after encountering European advances they have found new branches of science drastically developed from the older traditions. So, he regards European science as the new science and those sciences, which were prevalent in a country like Iran, as the old science. He deliberately stresses the idea that by the old science he does not mean

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<sup>12</sup> Ibid., vol. 4, p. 38.

<sup>13</sup> Ibid., vol. 1, p. 17.

outdated or obsolete<sup>14</sup>. Rather all branches of new science derive from the evolution of the principles of the old. Forūghī regards old science as an introduction to the recent achievements in modern science. Therefore, he believes that they are still authentic.

Discussing the history of science, he does not differentiate between Western and Eastern, and considers the history of scientific development as a single linear progression, subject to evolution. The only difference is that since the 14<sup>th</sup> century, Iranians have not advanced in the field of science, while Europe has gone far. He insists that old and new science should be learned simultaneously, because he believes, this is how European scientists have developed their knowledge. For him, European concern to research the history of science or oriental studies testifies to the necessity of learning old science. In explaining the aim of the journal, he clarifies this point:

“We want to undertake an urgent task: teaching correct principles of the new civilization and civility, which is true Western knowledge and its desired soul, to Iranian compatriots... However, the soul of science,... is the necessity of attention to both old and new science. All the research and writing has been done in the civilized countries about the history of science, and knowledge in each era can prove this claim. They learn everything in the field of science and literature, from old to new. For instance, ancient Iranian knowledge, and wisdom, constitute the field of orientalists. Therefore, Iranians would be able to recognize the soul of the new science, if they are willing to know both old and new science. They should observe what is observable, without considering the shackles of time and place, and to fulfill the duty of observation properly and perfectly”.

"ما می‌خواهیم کاری را که ضروری است شروع نماییم یعنی اصل صحیح تمدن و تربیت جدید را که معارف حقیقیه مغرب باشد بشناسانیدن روح آن مطلوب به هموطنان خویش ... اما آن روح دانش،... ضرورت توجه به معارف قدیم و جدید هر دو است و شاهد آن تصنیفها و تحقیقهاست که در ممالک متمدنه در تاریخ علوم و معارف هر عصری مینمایند و از قدیم و جدید هر چه را عنوان علم و ادب دارد می آموزند از جمله معارف و ادبیات قدیم ما که موضوع کار و فن مستشرقین است. بنابراین ما وقتی روح معارف جدید را شناخته و به سوی آن قدم گذاشته ایم که به شناختن علوم جدید و قدیم هر دو مایل گشته باشیم، بی قید زمان و مکان به دیدن تمام دیدنیها گرانیم و وظیفه بینایی را به درستی و کمال از عهده برآئیم."<sup>15</sup>

He also admits that Iranian science in particular is worth learning and assumes that Iranian indigenous knowledge is a factor, which can differentiate Iranians from those barbarian societies who have no cultural and scientific achievements of their own. This shows his ideological tendency to emphasize national pride by distinguishing Iran from other countries; countries which are encountering the west in a historical situation where each country in the world seems equal in the

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<sup>14</sup> Ibid., vol. 1, p. 11

<sup>15</sup> Ibid., p. 15.

demand for the European science. He enumerates some other advantages of learning old science; for example, understanding new European science would be easier through comparing them with familiar concepts and terms from Iranian science<sup>16</sup>. He comments:

“The breadth of our old knowledge was great enough that new facts of this era would not eliminate our need to refer to them for the sake of progress in science. It is not true that there is no relevancy to the old sciences, which can elucidate origins or be used in promoting new sciences in this era. Our old science is our basic knowledge, and no one cares about it, yet it is our inherited treasure, which is all our identity and our national personality. In one hand, it manifests a special style of thought, conception, and taste, as a format of our scientific research, which is our racial characteristic; and by revealing different methods and aspects of knowledge of different nations, helps the development of science in the world. On the other hand, despite offensive imaginations of some of our friends, those who are acquainted with old science would not push us backward in the path of perfection. They even would help to go forward. The other advantage is that we would not be counted, like barbarian nations and those who need to learn science from the very elementary level”.

"معارف قدیمه ما بزرگتر از آن بوده است که بتوان گفت با حقایق تازه این عصر برای ازدیاد بینش و دانش از رجوع به آن به کلی بی نیازیم یا هیچ نکته استخراج کردنی که قابل تکمیل یا مدد به تسریع ترقی در علوم این عهد باشد در آن وجود ندارد. معارف قدیمه ما به هر صورت معارف اصلیه ماست و برای هر کس غیرقابل اعتنا باشد برای ما گنجینه موروثی است که تمام مایه هستی و شخصیت ملی ما باشد و از یک طرف سبک مخصوصی از فکر و نظر و ذوق و سلیقه را به طور قالبی بر تحقیقات خاصه علمی ظاهر میسازد که خصیصه نژادی ماست و هم به ظاهر ساختن روشها و جنبه های مختلف دانش از اقوام مختلفه موجب تکمیل علم در عالم میشود. از طرف دیگر آشنای به همان معارف بر خلاف تصورات اهانت آمیز بعضی یاران ما را در طریق کمال یا تکامل واپس نخواهد کشانید بلکه پیشتر خواهد برد و ضمناً تنگ شمرده شدن در ردیف اقوام وحشی و محتاج به ابجد خوانی در مکتب اقوام دیگر از دوش ما برمی دارد."<sup>17</sup>

He mentions the Iranian mode of thinking, and implicitly admits that every nation might have characteristic knowledge of its own with a specific method of thinking. Defending old science, Forūghī's readers are intellectuals like Taqīzādeh, who believes that Iranians should just acquire European science, as their own books are nonsense and futile in comparison. Unlike them, Forūghī asserts that Iranians can find some useful points in their old science. He believes that for learning the new science properly, Iranians initially need to learn the simpler version of science, which is indigenous science. One element connects the statements of both groups of “for and against old science” with each other: the discourse led agents to talk about old science and the question of using them or not. This discussion is still ongoing and can be seen in the form of duality of tradition-

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<sup>16</sup> Ibid., vol. 1, p. 16.

<sup>17</sup> Ibid.

modernity. Nevertheless, both mentioned groups are silent about new science, its essence, and the necessity to perceive it. They both presume that new science is more developed and urgent to grasp.

Explaining his intention to write these articles, he mentions confidently that he will review the defections of old and new science in order to guide his audiences the right way. He even reports his intention to comment on how those deficiencies can be resolved<sup>18</sup>. This shows his self-confidence in claiming that he knows everything about advantages and disadvantages of European science. His perception of new science is evidently simplistic. He takes it for granted that new science is based on old science, and that old science provide valid presupposition for new science. With this presumption, he criticizes science by the means of old *hekmat*. Although he claims that he spent many years studying science, in fact he criticizes new science by means of old tools with which he is familiar.

He looks at the science from a superior position, and asserts that he is capable of recognizing the errors of European science. Forūghī sees himself in the position of spectator, capable of comparing two traditions of science and explaining their faults. The implication that he could deliberate about the philosophy of science on an equal plane as European scholars was a turning point in the Iranian discourse. In the past, one could see how Iranian intellectuals expressed their feeling of inferiority when they were confronted with European science. However, in all the articles of *Forūgh-i Tarbiyat*, we can identify a shift in the dominant discourse of Iranians. They seem to rebound in self-esteem after witnessing World War I and the calamity it caused in Europe. They did not consider European countries as unquestioned powers anymore.

### **3-6-4-3- Principles of the New Science**

According to Islamic intellectual tradition, logic (*'elme manteq*), is a prelude of science as a whole. So, in order to commence learning *hekmat*, one should start with logic. Forūghī evaluates new science upon this presumption and supposes that the prelude of the European science is also logic. He comments that logic has experienced many developments over time, by which all the other sciences had continued to progress. He maintains that logic is a criterion to distinguish right from

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<sup>18</sup> Ibid., vol. 1, p. 6.

wrong, as well as a foundation for human sciences, since it provides us tools for evaluating scientific claims<sup>19</sup>.

From his point of view, the principles of the old *hekmat* are still valid and new philosophy derives from old wisdom. In the next passage, he advocates for this old logic in predicting and categorizing different ways of cognition that seem adequate for contemporary philosophy, and he criticizes the Europeans for their exaggerated emphasis on empirical methods. He asserts:

“New sciences which are known to be authentic should be verified by means of rational argument. So empirical sciences are dependent on logical analogy and there is a potential for error, and experiment with new empirical method is not the final solution. Therefore, no matter how one ranks the experiment in science, it cannot be ranked higher than one of the premises of the argument. That is exactly how Iranian logicians would evaluate it. Anyhow, it is part of a chain of argumentation that is inscribed in the intellect, insight, and mental activities”.

"علوم جدید که به این اندازه معتبر شناخته میشود باید به مدد همان استدلال عقلی از شایبه خطای حس مصون گردد، پس علوم تجربی باز از قدم اول به قیاس منطقی محتاج است و راه خطا باز باشد و امتحان به تجربه جدید کاملاً علاج درد را نخواهد کرد، باری هر چه تجربه را در علم اهمیت دهیم از این مقام که یکی از مقدمات برهان باشد بالاتر نخواهد رفت یعنی همان مقام را خواهد داشت که منطقیون ما به آن داده اند و به هر صورت جزئی از رشته استدلال است که محاط در فکر و نظر و اعمال ذهنی است."<sup>20</sup>

His argument contains some contradictions. For instance, he confirms that European science including logic had evolved during the centuries, but in contrast to this statement, he accepts prerequisites and axioms of old logic, without questioning them<sup>21</sup>. In his article entitled “Old and New Logic; the major pest of knowledge and wisdom, or veil of human prosperity”, he compares new European logic with Iranian logic, and introduces dialectic as the major factor of scientific biases. He defines dialectic as a method of reasoning to convince a person who holds a different idea in a dialogue. He mentions five techniques of deduction in old logic, which originates back to the Greek philosophical tradition involving argument, dialectic, sophistry, rhetoric, and poetics. He tries to prove that dialectic is able to produce bias in all branches of science, even in the new European science. He suggests:

“One might say that European knowledge is free from this pest (dialectic), since it is in progress; particularly because the term “dialectic” has been eliminated, so we can discard our

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<sup>19</sup> This argumentation is similar to Fārābī's and apparently, he learned it in Islamic schools of philosophy.

<sup>20</sup> Ibid., vol. 1, p. 23.

<sup>21</sup> Ibid., vol. 4, p. 43.

old knowledge and entirely resort to European science, to get rid of this pest. Though the problem is eliminating one word, we cannot remove the meaning, and when we look deep into the European philosophy and science, we can see the corruption and increasing problems caused by dialectic, that anonymously influence the fields of research, and this anonymity blocks the ability to recognize it and throw it out from the game.”

”شاید کسی بگوید معارف اروپایی چون در حال ترقی است از این آفت خلاص گشته به خصوص که اسم جدل نیز در آن معارف از میان رفته پس ما معارف قدیمه را دور می اندازیم و یکباره دست به دامن علوم اروپایی میزنیم تا از این بحث هم خلاص باشیم اما درد اینجاست که برداشتن لفظ، معنی را از میان برنمیدارد و چون ما درست در فلسفه و علوم اروپایی نظر میکنیم میبینیم آنجا هم خرابی کار و ازدیاد مشکلات از جدل است که بدون اسم میدان تحقیق را گرفته و همین بی اسمی مانع از آن است که شناخته گردد و از معرکه بازی بیرون کشیده شود.”<sup>22</sup>

Then he continues arguing that European knowledge can be divided into three categories: 1- empirical prerequisites, which form the bases for all European progression in science and can produce definitive knowledge, 2- general presuppositions, which are derived from empirical prerequisites, and 3- general philosophical presuppositions, which are derived from the second group. The last part is not based upon empirical proof, rather relies on human intellectual argumentation. Therefore, it can be infected by dialectic. This is the territory of philosophy whose outcomes are apparent in the moral and political corruption in all human societies. He concluded that dialectic can be regarded as the major obstacle of human prosperity<sup>23</sup>. His argumentation in this article, which is entirely founded on the ground of old logic, reveals his ambiguous perception of new philosophy and logical reasoning in Europe. He does not discuss inductive and deductive inference and its impact on the history of logic, or about any other philosophical achievements. He offers a poor reductionist argumentation.

In an article about science and *hekmat*, Forūghī postulates that each natural phenomenon contains two aspects, the visible or apparent aspect, which changes constantly, and the invisible or hidden aspect, which is permanent and never changes. The hidden and inner<sup>24</sup> aspect of each phenomenon is its true and real entity, while the obvious and changing appearance is nothing but deception<sup>25</sup>. He concludes that only the true aspect of each phenomenon deserves contemplation.

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<sup>22</sup> Ibid., vol. 1, p. 26.

<sup>23</sup> Ibid., p. 27.

<sup>24</sup> This conception shows Forūghī’s Islamic background in the school of *Bāteny-yi*, a branch of Islamic philosophy rooted back to *Ismā‘īlīs* who distinguished between inward (*bātenī*) and outward (*zāherī*) aspects of meaning, especially in interpreting the Qurān.

<sup>25</sup> Ibid., vol. 4, p. 40.

The knowledge that he tends to portray has an obscure object and because of its enigmatic characteristics it is mysterious. He states:

“...So they (old *hokama*) named the permanent esoteric aspect, the truth and the appearance as figurative face. And since being attached to the vicious and unstable figure is fault, they regarded attempting to discover the truth as the only effort that is worthy of human dignity, and indeed they showed such a deep insight that this is still the basis of knowledge, and if we can reach eternal knowledge, it will be valid forever”.

"... از این رو باطن پایدار را حقیقت نامیدند و ظاهر را صورت مجاز خواندند و چون به مجاز باطل و گذشتنی دل بستن خطاست تنها اهتمامی را که در خور عقل و نفس انسانی باشد سعی در شناسایی حقیقت گرفتند و الحق چه بلندنظری آشکار نمودند که هنوز مدار عالم دانش است و اگر فهم ما به امور ابدی تواند رسید باید گفت تا ابد خواهد بود."<sup>26</sup>

He argues that the appearance is constantly changing, but the inner aspect of things is invariant, so only this fixed entity deserves cognition. The science of our ancestors about the truth of esoteric aspects of things is permanent, therefore it is still valid, and remains authentic forever. This statement is another confirmation of the fact that old *hekmat* is valid and notable for him.

He states that in seeking for the causes and effects of natural phenomenon, humans have to start from the cause to the effect or vice versa, from the effects to the causes. He provides examples from physics and physical phenomena like thunder and electricity and concludes that this endless movement between causes and effects will intensify human perplexity<sup>27</sup>. According to his mindset, facts and generalities are limited to a certain number, and like old hakims, he tends to categorize everything, while the world contains a limited number of components. He suggests that *hakim* deliberate about the world through moving between the general and the specific, and ultimately, he would learn that he knows nothing, and that human arrogance would result in endless efforts. Using mystical concepts, he is talking about an ambiguous knowledge, which involves a string of vague conjectures. Accordingly, he intertwines science as the action of discovering the secrets of nature with mysticism, and creates a new hybrid knowledge that has a profound impact to the next generation of intellectuals in Iran.

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<sup>26</sup> Ibid.

<sup>27</sup> Ibid., pp. 42-3.

### **3-6-4-4- Relation between Science and Religion**

Writing about the history of science, Forūghī distinguishes religious knowledge from non-religious knowledge<sup>28</sup> and explains that Muslim societies in the 14<sup>th</sup> century were quite successful in developing non-religious sciences: their achievements paved the way for the European scientific revolution in that era. Other than this sentence, there is no statement about religion in his texts, and he uses “ethics” and “spirituality” instead of religion. Evidently, his whole argumentation can be placed in a religious paradigm.

He attributes all the challenges of human societies to an abandonment of the spiritual aspect of the world. Forūghī, like his contemporaries, helps to reproduce the duality of material and spiritual in the dominant discourse. He does not see any contradiction between science and religion, but rather he perceives new science as a tool to achieve God! It is an ambitious plan to use new science to train people and to direct society to prosperity and salvation, in a way that does not contain the negative aspects of European society. He offers an entirely mystical interpretation of new science, which formed an appealing ground for his followers, especially for those known as the national-religious activists in the next decades in Iran.

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<sup>28</sup> Ibid., (1921), vol. 1, p. 10.



## **Majalleh-yi *Iranshahr***

**By Ḥossein Kāzemzādeh Iranshahr**

### **3-7-1- Biography**

Ḥossein Kāzemzādeh, a prolific Iranian author, is best known for the famous journal *Iranshahr* and was named after this journal as Kāzemzādeh Iranshahr. He was a passionate patriot who in his last years of life became a cosmopolitan with the idea of reconciling spiritualism and materialism. He was born in 1884 in Tabriz. Both his father and brother were well known physicians in the town. Kāzemzādeh started his elementary education in traditional schools and continued in a newly established school in the European style called Kamāl. He began to teach at this school while still a student and continued after graduating. When the school was closed down due to the riots of the opposition against modern schools, Kāzemzādeh opened a book store and became involved with intellectual activities in the years leading up to the Iranian Constitutional Revolution (1905-1907).

In 1904 he published his first book; a teaching manual to teach Persian to Turkish-speaking children. He then left the country for Istanbul to continue his education, until 1909 when he managed to enter university to study law and worked at the Iranian Consulate. In 1911, he went to Belgium where he finished his law education, and spent the next year in Paris and worked as a free lecturer at Sorbonne University. From 1913 to 1915, he lived in London where Edward Brown invited him to work as an instructor of Persian at Cambridge University.

Meanwhile in Berlin, Seyyed Ḥassan Taqīzādeh established the National Committee for the Liberation of Iran (komīte-yi mellī-yi najāt-i Iran) and invited Kāzemzādeh to Berlin to join them.

For the next 20 years, he lived in Berlin and initially worked with Taqīzādeh publishing *Kāveh* and opening the Iranshahr bookstore. In 1921, Kāzemzādeh began publishing *Iranshahr*. Five years later, just like its predecessor, the journal was discontinued due to financial problems. He then began writing books in German, and in a period of ten years published six titles.

In 1936 he left Nazi Germany and moved to a village in Switzerland called Degersheims and lived the rest of his life in peace, guiding his followers and spreading the idea of equilibrium between Western materialism and Eastern spirituality. He established esoteric mysticism schools in Switzerland, Germany, and Austria and published a journal in German called “Welt-Harmonie” from 1949 for eleven years. This journal covered scientific and ethical issues with the aim of reinforcing deism and morality. He died in 1962 at the age of 78. Some of his most important books are as follows:

- *Tajaliyāt-i Ruḥ-i Irani dar Advār-i Tārīkhī* (Iranian Spirit Manifestations through the History), 1924, Berlin
- *Rāz o Nīāz; der Seele Sehnen und Verlangen* (The Soul Longing and Desire), 1924, Berlin
- *Rāh-i Noo dar Ta ‘līm o Tarbiyat* (New Road in Pedagogy), 1927, Berlin
- *Rahbarī-yi Nezhād-i Noo: dar Jostojū-yi Khoshbakhī* (Leadership of the New Race: in Pursuit of the Happiness), 1928, Berlin
- *Oṣūl-i Tadāvī-yi Ruḥī yā Tarīqe-yi Talqīn ba Nafs* (The Principles of Psychotherapy or the Way to Self-hypnosis), 1929, Isfahan
- *Mensch und Kultur im kommenden Zeitalter: Die Geburt des neuen Zeitalters und der neuen Kultur* (People and Culture in the Coming Age: The Birth of the New Era and the New Culture), 1939, Zurich
- *Das Mysterium der Seele* (Mystery of the Soul), 1949, Olten
- *Oṣūl-i Fann-i Tarbiyat* (Principles of Pedagogy), 1952, Tehran
- *Zur Rettung der Menschheit: geistige und praktische Wege und Mittel* (Human Salvation: Spiritual and Practical Ways and Means), 1952, Zurich
- *Rāh-i Rāst Barā-yi Solḥ Myan-i Mellat-hā* (The Right Path for Peace between Nations), 1957, Tehran

- *Die Lehre der mystisch-esoterischen Schule; Schulung für Selbsterkenntnis, Selbstüberwindung und Selbstverwirklichung* (The Doctrine of the Mystical and Esoteric School; Training for Self-awareness, Self-conquest and Self-fulfillment), 1956, Winterthur

### **3-7-2- About the Journal**

*Iranshahr* was a monthly publication from June 1922 until February 1927 in Berlin. Kāẓemzādeh published this journal at his own expenses and he himself was the author of most articles and the editor of the rest. The journal's distribution included India, Afghanistan, Turkey, Bahrain, Kuwait, Egypt and other Middle Eastern countries. His intended audience consisted of all nations and humanity as a whole, because he believed he found the causes of crisis and turmoil in human societies. Each issue of the journal contains a variety of subjects such as literature, history, science, politics, news, and biographies of famous figures. He was particularly interested in the practice of séance or religious spiritualism and devoted a considerable number of articles to this topic or related issues such as a sixth sense, dreams, determination and self-esteem, diligence, esoteric science, and mesmerism. He frequently mentions European séance circles, their activity, and what he calls progress in communication with souls.

This journal should be regarded as the successor of *Kāveh*, since after *Kāveh* had ceased publishing some of its writers joined the *Iranshahr* editorial board. In a short introduction to an article in the first year of the journal<sup>1</sup>, Kāẓemzādeh explains explicitly the relationship between the two journals and states that this particular article is in fact the continuation of a series of articles in *Kāveh*, which could not be published.

I used the collection of articles of *Iranshahr*, which was published in a book by Eqbāl publishers in Tehran in 1984. In the preface, the publisher notes that *Iranshahr* intends to introduce spirituality and faith in God to the Europeans, together with introducing European science and technology to the Eastern societies, in order to create a new synthesis by combining Eastern and Western civilization. Actually, this is the main message of the journal. Other than following this homogeneous pattern of thought posed by Kāẓemzādeh, the journal published a number of other articles written by some respectful individuals like Abbās Eqbāl Ashtiyānī (1896-1956) and Ṭūṭī

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<sup>1</sup> *Iranshahr Journal*: "European best books about Iran", vol. 4, 1922, p. 44.

Marāghe-ī (1840-1910), which in are not far from his ideas.<sup>2</sup> I picked up those articles related to European science, most of which were written by Kāzemzādeh and a few articles by other authors. Therefore, the discourse analysis of the journal mainly contains Kāzemzādeh's articles with some quotations from other authors mentioned in a few cases.

### 3-7-3- Meaning of the Text, Isolated from the Context

#### 3-7-3-1- Semantic Episodes

Bellow, are the main ideas of the text in the selected paragraphs of the journal, in which Kāzemzādeh argues about European science:

- Need for science and morality concurrently
- Science, alone, would not provide prosperity for humanity
- Denying spirituality leads Europeans to moral decay
- Science will prove the validity of religious assumptions
- In acquiring new science there should be a cautious selection
- Need for a revolution to change the status quo in Iran
- Training of own people

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<sup>2</sup> For further information about *Iranshahr* see Jamshīd Behnām: “Iranshahr, Ḥosseīn Kāzemzādeh”, *Iranica Encyclopaedia*, vol. XIII, Fasc. 5, 537-539, 2006; Jamshīd Behnām: “Iranshahr (4)”, *Iranica Encyclopaedia*, vol. XIII, Fasc. 5, 535-536, 2006; Jamshīd Behnām: *Berlanī-ha; Andīshmāndan-I Irāni dar Berlin; 1915 – 1930*, (Berliners; Iranian Thinkers in Berlin, 1915-1930), Tehran, 2000; Edward Browne: *Literary History of Persia*, vol. 4: Modern Times (1500-1924), Cambridge, 1959; Amirabbās Majzūb Şafā: “To The Memorial of Kāzemzādeh Iranshahr”, *Vahīd journal*, vol. 41, pp. 449-454, 1967; Mohammad Şadre-Hāshemi: *Tārīkhe Jarā’ed va Majallāte Iran*, (History of Press and Media in Iran), pp. 337-340, Isfahān, 1984 and Ḥassan Taqīzādeh: *Zendegī-yi Tūfānī, Khāterat-i Seyyed Ḥassan Taqīzādeh*, (Tempestuous Life; Memories of Seyyed Ḥassan Taqīzādeh), Be Kushishi Iraj Afshār, Tehran, 1989;

### 3-7-3-2- Focal Point

The main goal of Kāzemzādeh in publishing this journal was to acclimate Eastern countries to European science and technology and to propose a new solution to the problems of humanity. He aspires to bring forward what he considers to be the ideal combination of European science and technology together with Eastern spirituality and conviction. He believes this is the only salvation for humanity, since advanced science alone cannot provide prosperity and happiness for humanity. He repeatedly reminds his readership that Europe, despite all its advances in science and technology is now entangled in crisis and war. In this regard, he suggests that humanity needs moral principles, particularly religion as the source of morality. Thus, the focal point is a dissemination of morality together with science to the masses in Iran and evidently stresses morality as the savior of humanity from all misery. In a preface to the first issue of the first year of the journal, Kāzemzādeh manifests the purpose of the journal and his dreams for the future of Iran:

“*Iranshahr* will try to provide a liberated and pure groundwork for training the spiritual power of Iran’s new generation. The journal will elucidate the secrets of progress of European nations and will explain Iran’s true requirements to European civilization. More than elaborating social defections, the journal will provide pragmatic proposed steps to reform those defections in a liberated and new Iran. *Iranshahr*, by all scientific means, will try to eradicate the roots of moral corruption from the ground of the new Iranian generation. *Iranshahr* will be the mirror of thoughts and emotions of the liberated and new Iran, and will support the pure and intellectual individuals”.

“مجله ایرانشهر کوشش خواهد نمود که یک محیط پاک و آزاد برای نشو و نمای قوای معنوی نژاد تازه ایران به وجود بیاورد. مجله ایرانشهر اسرار ترقی ملت‌های اروپا را ابضاح و احتیاجات حقیقی ایران را به تمدن اروپایی شرح خواهد داد. مجله ایرانشهر تا حد مقدور، بیشتر از شرح و بسط دادن معایب و نواقص اجتماعی، با ارشادات و پیشنهادات عملی قدم‌های ایران جوان و آزاد را در راه اصلاح آن معایب هدایت خواهد کرد. مجله ایرانشهر با تمام وسائل علمی به کندن ریشه فساد اخلاقی از زمین نسل جدید ایران خواهد کوشید. مجله ایرانشهر آینه افکار و احساسات ایران جوان و آزاد و پشتیبان عناصر پاک و قوای متفکر آن خواهد بود.”<sup>3</sup>

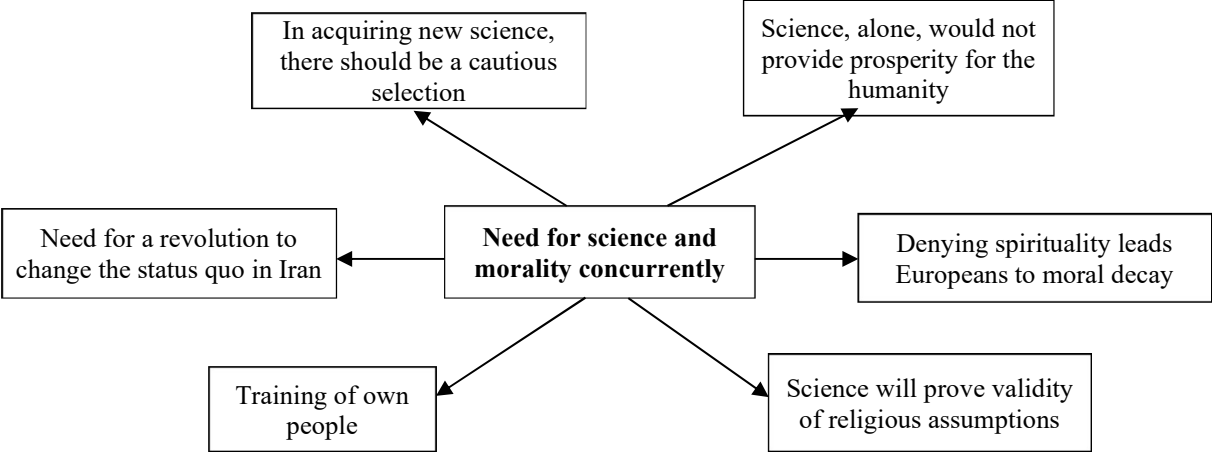
In this paragraph, he addresses some important issues, which can lead us to his solid intellectual framework, to which he frequently insisted and to which he is loyal in all his writings. Apparently, the most prominent elements for him are developing the country by training a new generation of Iranians, carefully selecting aspects of European civilization and emphasizing moral purification.

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<sup>3</sup> *Iranshahr Journal* (1922), vol. 1, p. 2.



**3-7-3-3- Semantic Structure**



### 3-7-4- Meaning of the Text with Respect to the Context

#### 3-7-4-1- Description of the New Science

As the focal point reveals, for the chief author of this journal, morality is a key concept and new European science is discussed only in relation to morality. Kāẓemzādeh suggests that contemporary Western civilization, with its appealing appearance, cannot guarantee happiness for humanity. He believes that new human achievements contain defects and disadvantages and acceptance of them should be avoided<sup>4</sup>. Claiming that he has found these deficiencies, he recommends that in the process of acquiring new science and civilization, Iranians need to be cautious.

In his mindset, science has different and sometimes contradictory functions. For instance, it can provide welfare for humankind and can potentially provide the capability to do many seemingly impossible tasks, but this capability can also create a sense of arrogance. He attributes all human problems to this negative side effect of scientific achievement. Additionally, while science can eradicate superstitious convictions, it also causes a loss of faith. His main assertion is that science on its own, is not enough to make humans happy, and in the next passage, he states:

“The current situation of the world and this world war’s effects on politics, economy, and society, not yet completely faded, would prove that science and technology alone cannot lead humankind to the path of prosperity and happiness. Until morality and science accompany each other, they cannot provide an individual or a nation with welfare and happiness”.

"اوضاع امروزی عالم و این جنگ عمومی که هنوز اثرات سیاسی و اقتصادی و اجتماعی آن به کلی رفع نشده، ثابت کرد که علم و فن به تنهایی هرگز نوع بشر را به شاهراه خوشبختی و کامیابی هدایت نمیتواند بکند و تا اخلاق و علم با هم همدوش و همقدم نشوند به هیچ وجه نمیتوانند مایه سعادت و رفاه یک فرد و یا یک ملت را فراهم بیاورند."<sup>5</sup>

This is what he believes is the remedy for all human problems. He frequently enumerates science, curiosity, spirit, and above all morality as characters by which humans can be distinguished from animals. Presupposing that humans are superior to animal in terms of capabilities, he believes that

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<sup>4</sup> Ibid., (1923), vol. 12, p. 315.

<sup>5</sup> Ibid., (1922), vol. 3, p. 36.



human beings deserve a better life and a better life does not necessarily mean better material equipment, rather human privilege is moral virtue. He argues:

“We cannot say that people who lived centuries ago, without knowing about today's facilities; were the most miserable people on earth. If people in the past have had a kind of happiness, they had it because of morality, since in that era there was no sign of today's science and technology. Today, in spite of these fascinating advances, discoveries and various inventions in Europe, all the misery that can be seen in their societies, are undoubtedly the results of a destruction of morality. Today we see that neither the European nations are happy, nobody is satisfied and grateful for his life”.

“نمیتوان گفت اقوامیکه در قرنهای گذشته زندگی کرده و بهره ای از وسائل امروزی نداشته اند بدبخت ترین مردمان روز زمین بوده اند. مردمان قرنهای پیشین اگر یک خوشبختی نسبی داشتند فقط از پرتو اخلاق بوده زیرا که در آن عهد از علم و فن امروزی هنوز اثری نبود و امروز هم با وجود اینهمه ترقیهای بزرگ و کشفها و اختراعاتی گوناگون در فرنگ اینهمه بدبختی که در این مملکتها دیده میشود سبب آن همانا از میان رفتن اخلاق است و بس. امروز میبینیم که هیچیک از ملل فرنگ خود را خوشبخت نمیشمارد و هیچکس از حیات خود راضی و ممنون نیست.”<sup>6</sup>

Theorizing his purpose for the future changes in Iran, Kāzemzādeh declares that by moral training of the people, we can guarantee making a happier society laid on a solid foundation. Islamic tradition undeniably influences his perspective, as is clear in his definition of morality. He considers morality as a spiritual power, which function to elucidate the right path for humanity, and puts it even on a higher level compared to science and specifies:

“Morality is the producer of spiritual power and is the teacher of science and knowledge, and the key to happiness and progress”.

“اخلاق تولید کننده قوه معنوی و مربی علم و معرفت و کلید خوشبختی و ترقی است.”<sup>7</sup>

“Necessity to train the people” is a key statement in this text, and he considers it an evident assumption, as if everybody agrees preparing people by manipulating them so that the country can proceed on the path of civilization is the solution. Kāzemzādeh elaborates clearly his formula to create a revolution in Iran and proposes that:

“To provoke Iranian's depressed soul and to awaken it from this long sleep, we should try to create a sense of nationality by all means. Iranians should know who they were, and what they become”.

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<sup>6</sup> Ibid., vol. 3, p. 35.

<sup>7</sup> Ibid., p. 37.

"برای دادن یک تکان به این روح افسرده ایرانی و برای بیدار کردن آن از این خواب و خمود به هر وسیله باشد باید بتولید حس ملیت کوشید. ایرانی باید بداند که کی بوده و چه شده است."<sup>8</sup>

He was a passionate patriot and nationalism has a special place in his thinking. Although later in his life he became a cosmopolitan, at this time he still strongly insists on the sense of nationality as a factor in motivating people to change the status quo. However, he identifies politicians as the primary players in the process of social change. He does not believe in individual agency and considers people as shapeless masses who need to be formed. In the next paragraph, he asserts that even in Europe, political and religious leaders manipulate people by training them in their desired way. This is what he expects from intellectuals and political reformists in Iran as well:

"In Europe, each political or religious group, when they possess the power and authority to make decisions about the future of the society, they will change the training programs according to their own intentions and aims. Because it has been proved that just by training, the mindset of people can be altered and can be directed to a new way".

"در ممالک اروپا هر فرقه سیاسی یا دینی، به محض اینکه نفوذی را دارا شد و خود را به مقام حاکمیت و به دست گرفتن سرنوشت ملت رسانید، فوری پروگرام تعلیم و تربیت را تغییر و موافق مقاصد و آمال خود تجدید می نمایند. چونکه این مسئله ثابت است که فقط به وسیله تعلیم و تربیت میتوان مجرای افکار مردم را تبدیل داد و به راههای جدید انداخت."<sup>9</sup>

Holding these presumptions about training people, Kāzēmzādeh discusses materials that should be taught or on methods of teaching. In an article entitled "Sending Iranian Students to European Universities", he argues that what Iranians need to learn from Europeans is either material or spiritual sciences. He suggests that the most important sciences to learn are agriculture, engineering, and architecture, which he classifies as material sciences. He defines spiritual sciences as scientific disciplines that can respond to human spiritual needs, for instance fine arts and literature. Spiritual sciences relate to the people's spiritual training, and particularly for him, pedagogy stands above all scientific disciplines. He insists that half of the Iranian students in Europe should be educated in pedagogy, and declares that the most urgent agenda in the country is to train capable people. Emphasizing the importance of morality, he recommends that policy makers should be cautious not only about which scientific disciplines students learn, but also about the country of destination. He asserts:

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<sup>8</sup> Ibid., (1923), vol. 12, p. 314.

<sup>9</sup> Ibid., (1925), vol. 7, pp. 387-88.

“It is important to find out the country in which the principles of pedagogy are most compatible with our nature, our spirit, and our social requirements. To be able to preserve our political independence and to do a real social and spiritual reformation, we need to reform this morality and this nature. We need to train young people who unlike their current feeble nature, can improve their self-confidence, tolerance, steadiness, perseverance, activeness and braveness. And such a nature and morality can be found in Anglo-Saxon nations, containing Britain and Germany, but not in France”.

" باید ببینیم اصول تعلیم و تربیت کدام یک از ممالک موافقت کامل با طبیعت و احوال روحی و احتیاجات اجتماعی ما ایرانیان دارد. برای حفظ استقلال سیاسی و تولید یک انقلاب حقیقی روحی و اجتماعی باید این اخلاق و طبیعت را اصلاح کرد... ما باید جوانانی تربیت کنیم که بر خلاف طبیعت سست امروزی استقلال شخصی، تحمل مشقتها، متانت و استقامت و فعالیت و شهامت را در نفس خودشان تکمیل کرده باشند و این طبیعت و اخلاق در ملتهای انگلوساکسون که انگلیسیها و آلمانیها هستند بیشتر وجود و نفوذ دارد تا در ملت فرانسه.<sup>10</sup>

The other authors of the journal share this discourse. For instance, Abbās Eqbāl Ashtiyānī also states in one of his articles that Iranians should be provoked by useful books, which will inspire them to actively participate in the process of development. He believes that the most important books in European societies are the books written by Isaac Newton, Charles Darwin, Henry Poincare (1854-1912), and Albert Einstein (1879-1955). Since Iranians are not be able to understand these complicated theories, he instead suggests biographies of successful men in the history. He says:

“Everybody knows that one of the best way to gain ambition and discover the road to success, is to read the biography of great men in history, who are the representatives of ambition, will and action”.

"همه میدانند که یکی از بزرگترین وسائل تحصیل همت و کشف راه کامیابی به مطالعه سیرت بزرگان و خواندن شرح حال رجال تاریخی عالم- یعنی نمایندگان همت و عزم و اقدام است."<sup>11</sup>

Like other intellectual texts of the time, in this journal, authors presume that new European science is undoubtedly better than indigenous science and must be learned as soon as possible. And in the process of the transmission of new science Iranian intellectuals should consider the priorities of society. In other words, while they are selecting from the wide range of knowledge Europe offers to them, they should select those parts of new science that are most urgent for society.

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<sup>10</sup> Ibid., (1922), vol. 7, p. 163.

<sup>11</sup> Ibid., pp. 168-170.

It should be noted that these articles, all written in the first decades of the 20<sup>th</sup> century, show the same pattern of ideas. Having analogous presumptions, they discuss the top priorities and about selecting criterions that should be considered in acquiring new science. For example, in *Kāveh* the question was whether the priority should be given to elementary education or to higher education. However, in *Iranshahr*, the authors intend to prove the priority of morality over science. In all the cases they do not raise a question about scientific cognition and science itself, rather the discourse leads them to discuss the procedure of choosing between different options.

In spite of numerous articles devoted to the subject of progress and civilization in Iran, and despite the profound influence of the journal on the new generation of Iranian reformists in the first decades of the 20<sup>th</sup> century, it has few words for actual scientific properties. Although one of its obvious presuppositions is the necessity to acquire new science, the journal is even more inattentive in raising questions about European science compared to its predecessor. From now on, the discourse is engrossed in criticizing European optimism about science. Intellectual challenges faced by Europeans at the time, as the consequence of two world wars, played an important role in this shift in the discourse of Iranian intellectuals, and gave them courage to criticize Europeans too.

### **3-7-4-2- Relation between the New and the Old Science**

Kāẓemzādeh devoted an entire article to knowledge and its foundation, in which he depicts the Iranian situation encountering European science and civilization, as the situation of a patient who, after a long period of convalescence, is ready to eat normal foods and is eager to try everything.<sup>12</sup> The doctors would recommend that the patient start with simple dishes. Similarly, indulgence in consuming the vast spectrum of intellectual and scientific productions will cause the sickness to return again. Kāẓemzādeh ascribes some positive adjectives to the new science, such as: constant convictions, rational, logical, and discursive.<sup>13</sup> He confirms explicitly that new European knowledge is more mature and complex than Iranian knowledge.

In another article about barriers of progress in Iran, Kāẓemzādeh explains that the main reason for Iranian stagnation and backwardness is their corrupted morality. This statement is in

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<sup>12</sup> Ibid., (1924), vol. 8, p. 434.

<sup>13</sup> Ibid., pp. 441-42.

contradiction to his argumentation about the lack of spirituality in Europe. He believes that European morality is corrupted as a consequence of neglecting religious beliefs. On the other hand he admits that Iranian morality is also corrupted, although they have a strong faith in religion. European moral corruption and arrogance are the result of technology and welfare, provided by new science. Iranians are corrupted even without such an achievement! He says:

“In my opinion, one should seek the cause of troubles in Iran only in our corrupted ethics. Only Iranians’ vicious morality would avoid efficiency of laws, institutions, reformations, revolutions, and their self-devotion. They claim that in such an environment decayed by vicious ethics, competent and honest men cannot live long”.

“در نظر ما علت اوضاع پریشان ایران را فقط و فقط در اخلاق فاسد شده ما باید جست، فقط اخلاق تفسخ کرده ماست که نمیگذارد قانونها، تشکیلات و اصلاحات و انقلابها و فداکاریهای ما ثمر بیخشد. ما میگوییم در محیطی که چنین اخلاق تفسخ کرده آنرا متعفن ساخته است رجال باکفایت و صداقت زنده نمیتوانند بمانند.”<sup>14</sup>

Kāzemzādeh suggests training good teachers for the new generation in Iran in order to solve these problems. In spite of his criticism of morality in Europe, he proposes that Iranian students should go to Europe to study pedagogy and become teachers, because teachers deal with morality and the spiritual training of the people. He implies:

“Only true training methods and fine arts can prepare our national spirit to protest against the wickedness of civilization and the effects of moral corruption, and only these methods can provide us with the enlightened encounter and can produce a steady morality”.

“فقط فنون تربیت صحیح و صنایع ظریفه میتواند روح ملی ما را برای مقاومت با آفتهای تمدن و اثرات فساد اخلاق حاضر بکند و فقط این فنون میتواند یک استقبال روشنی برای ما تامین و یک اخلاق متینی در ما تولید بکنند.”<sup>15</sup>

One can see a contradiction in his argumentation. On the one hand, he believes Europe is sinking into corruption, but on the other hand, he recommends adopting methods of moral training from Europeans. He explicitly tells us that Europeans have already discovered the principles of ethics. One can ask that if Europeans possess the ethical principles and scientific methods of training, why are they themselves immoral? Apparently, he does not raise such a question in his text.

Another case in which he makes a comparison between European and Iranian science is an article entitled “Orientalism and Occidentalism”<sup>16</sup>, where he alleges that European scientific methods in studying Eastern societies have many privileges and we should learn these methods

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<sup>14</sup> Ibid., (1922), vol. 4, p. 64.

<sup>15</sup> Ibid., (1923), vol. 7, p. 161.

<sup>16</sup> Ibid., (1922), vol. 1, p. 12.

from them. In fact, his attitude to the Orientalism is positive. He explains the history of oriental studies in European countries, as well as the political motives behind their efforts in investigating other societies. He concludes:

“The scrutiny that they (Europeans) have about historical relics, language and literature of oriental societies, and their efforts in discovering antique alphabets and their content were so broad and beneficial that Easterners will need them a few more centuries and should follow their methods”.

"تدقیقاتی که اینها درباره آثار تاریخی و ادبی و لسانی ملت‌های شرقی کرده و زحماتی که در کشف خطوط عتیقه و حل محتویات آنها کشیده اند به قدری مفید و واسع است که تا چند قرن دیگر خود شرقیان محتاج به استفاده و اقتباس از آنها بوده و روش آنان را سرمشق خود باید قرار بدهند." 17

Then he makes an interesting suggestion to Iranian scholars, and proposes to study European countries, using European Orientalist methods. He calls this field of study Occidentalism and it seems he is the first person who ever coined this term, or at least I have never faced this word in all the texts I have reviewed. He acknowledges the advantages of such Occidental studies for Eastern societies are greater than the benefits that European countries enjoy from their Orientalists, while Easterners urgently need to understand Western civilization and adapt themselves to it. Kāzēzādeh lays the foundation of his argumentation about acquiring new science, on the necessity of development in the country, when he says that Occidental study is more profitable for Easterners than Oriental study is for Westerners. The presupposition hidden in this statement is that science should be at the service of reformation and development, otherwise why should Western scholars have to endure all the bitterness to investigate Eastern societies. He sees science through the lens of a political elite, therefore any other possible motive for scientific activities is unimaginable to him.

Throughout the journal, man can only find one article about philosophy, which is “Philosophy of Pragmatism”, written by Assad ol-Lāh Bīzhan. In a short preface to the article, Kāzēzādeh introduces Bīzhan as a philosophy graduate who now teaches philosophy at Columbia University in New York, and emphasizes the necessity of such philosophical debates among Iranians. The article starts with an explanation of the author’s intention of writing about the philosophy of pragmatism:

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<sup>17</sup> Ibid, p. 14.

“It is half a century since philosophers and social engineers are looking to America with precision and passion... How is it possible that America is the richest country in the world and its’ social foundation is enviable? The reason for American progress lies in their accepted social philosophy, which is pragmatism... Pragmatism<sup>18</sup> means to prove the claims by experiment and to prove statement by action”.

“از نیم قرن اخیر به این طرف انظار دقت فلاسفه و مهندسين اجتماعي با شور خاصی به طرف آمریکا دوخته شده... چطور است که ملت آمریکا امروز متمولترین ملل روی زمین است و اساس اجتماعیش رشک تمام دنیاست؟ دخیل ترقیات آمریکاییها فلسفه اجتماعی مورد قبول آنها یعنی پراگماتیسم است... ادعا را با عمل آزمودن، و گواه قول را از فعل جستن معنی پراگماتیسم است.”<sup>19</sup>

Regardless of the accuracy of his analysis of American society, his definition of philosophical terms and concepts are not precise. Bīzhan attributes all American successes to the philosophy of pragmatism, which developed in America in the 1870’s. He reduces all philosophical achievements to this single school of thought and claims:

“One of the features of this philosophy is its conflict with obscurantism... another feature of pragmatism is opposition to pure emulation of tradition. In the Renaissance period, philosophers were more interested in this tradition. They used to give more importance to the quotation of predecessors... They tended to solve problematic cases by discussion and debate, instead of trial and experiment. This tendency of solving problems is still common within non-pragmatic societies and laggard nations”.

“از اختصاصات این فلسفه ضدیت با کهنه پرستی است... دیگری از اختصاصات عملیت ضدیت است با حدیث پرستی و تقلید صرف. در دوره رنسانس تمایل فلاسفه بیشتر به احادیث بود. گفته های پیشینیان را خیلی اهمیت میدادند... قضایا و غوامض فعلی را به جای اینکه با امتحان و تجربه معلوم کنند میخواستند همیشه با مناظره و مباحثه حل کنند. این رویه حل قضایا هنوز در میان جامعه های غیر عملی و ملل پس مانده معمول است.”<sup>20</sup>

Bīzhan even ascribes inductive reasoning to pragmatism, and suggests that all scientific successes are the result of applying inductive reasoning. While Western societies are enjoying the fruits of this method; in stagnating societies like Iran scholars are protesting against any change: Iranians are still using deductive reasoning<sup>21</sup>. Although Bīzhan is a philosophy graduate, he uses

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<sup>18</sup> Pragmatism was a philosophical tradition that originated in the United States around 1870. Pragmatism is a form of empiricism, with a difference: pragmatism rejects that the function of thought is to represent the reality. It holds that an idea is best viewed by its practical uses and successes, and that the content of a thought is a matter of the role it fills in our activities of inquiry. (*Stanford Encyclopaedia of Philosophy*, “Pragmatism”, First published Aug 16, 2008; revision Oct 7, 2013, <http://plato.stanford.edu/entries/pragmatism/>).

<sup>19</sup> *Iranshahr Journal* (1925), vol. 10, pp. 578-79.

<sup>20</sup> *Ibid.*, p. 580.

<sup>21</sup> *Ibid.*, p. 582.

philosophical concepts carelessly, in order to achieve his intended purpose. In fact, the priority for Iranian intellectuals is to advise Iranians for political amendments, and whenever they mention Western thought, they are inattentive. Even in this case, Bīzhan is not talking as a teacher of philosophy, rather he is talking from a position of a political elite to the masses of people.

### 3-7-4-3- Principles of the New Science

Despite the objectives that the magazine has set for itself, namely the introduction of European science to Iranians, a word rarely comes about science and its premises. Even more surprising, in an article entitled “knowledge (*ma ‘āref*) and its triple bases” he clearly reveals his conception of knowledge and clarifies:

“In our definition of knowledge, it is not just newspapers or foundation of the ministry of knowledge; but whatever can dictate thoughts to the people or teach information to them, such as state laws, programs of schools, newspapers and journals, scientific and cultural communities, conferences, speeches, sermons, etc. All comprise the knowledge of a nation”.

"مقصود ما از معارف، تنها مطبوعات و یا بنای وزارت معارف نیست، بلکه هر چیزی که به افراد ملت تلقین و تعلیم فکر و معلومات کند، مانند قوانین مملکتی، پروگرام مدارس، مطبوعات و نشریات و انجمن های علمی و ادبی، و کنفرانسها و نطقها و وعظها و غیره، همه جمعا معارف یک ملت را تشکیل میدهند."<sup>22</sup>

Apparently, he equates knowledge with media, all the possibilities by which people can be trained and ideas can be transmitted to them. He believes knowledge can stimulate the wish for change among Iranians. This statement is crucial for understanding his perception of science. Speaking from the position of a social reformer, his definition focuses on the practical uses of science and ethics to manipulate society.

Three bases of knowledge in his definition are “sense of nationality”, “discursive education”, and “independent training”<sup>23</sup>. It means teachers and leaders of the new generation should make sure that young Iranians are proud of their nationality. The second basis implies that in learning new ideas and sciences, students need to be convinced by reasoning. In other words, they should comprehend the reason of everything, instead of being forced to accept an idea without

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<sup>22</sup> Ibid. (1924), vol. 8, p. 438.

<sup>23</sup> Ibid., pp. 439-45.



a strong argument to support it. Finally, they should be treated as free and independent individuals. Although he is silent about European knowledge characteristics and simplistically equates knowledge with media, the differences between European and indigenous knowledge are explicit in this statement. What he calls discursive teaching method is in fact an argumentative method of thinking. However, he expresses no curiosity in the cognition of the world or the cognition of the new science itself.

His perception of creating new concepts and formations of an intellectual revolution in human society also seem simplistic. He suggests that an idea comes to one's mind and in the next step, this idea propagates among people through education. Therefore, teaching plays a fundamental role in the process of progression in every society. He says:

“All amendments and progression in the world are the result of changes and revolutions which are first occurring in one individual's mind or a few minds and then spreads by means of training and would affect minds and souls of others and would cause the revolution. Political, religious, social, economic, philosophical and moral thoughts, all would spread by pedagogy and will be settled deep in the souls and minds of new generations and arouse them for new actions and creates the properties and renovations of each era”.

"همه تحولات و ترقیبات عالم نتیجه تبدلات و انقلاباتیست که ابتدا در افکار و ارواح یک یا چند نفر پیدا شده و به وسیله تعلیم و تربیت در افکار و ارواح افراد دیگر سرایت و نفوذ کرده و آن انقلاب را به عمل آورده است. عقاید سیاسی و دینی و اجتماعی و اقتصادی و فلسفی و اخلاقی و امثال اینها همه به وسیله تعلیم و تربیت انتشار می یابد و در اعماق روح و افکار نسلهای جدید جایگیر شده آنانرا به کارها و اقدامات تازه وامیدارد و مختصات و تجددات هر عصر را به وجود می آورد." <sup>24</sup>

The material-spiritual binary plays a key role in his argumentation, and overall in the discourse. He even believes that this binary is the basis of European thought<sup>25</sup>. In fact, he evaluates the position of this idea in European philosophy just by its value in his own eyes. To support his argumentation, he uses European thinkers' quotations, as well as history of thought. In the next passage, he determines the most effective philosophical and scientific theories in the evolution of materialism as the main factor for the current maladies of society. He comments:

“As a result of scientific and technological discoveries, Auguste Comte, French philosopher, proposed his philosophy of positivism and said only those things that we can prove their existence by our senses, are true and exist and there is no truth and existence outer than that. Then Darwin from Britain discovered laws of evolution, survival, and prevailing of the strong

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<sup>24</sup> Ibid., (1925), vol. 7, pp. 387-88.

<sup>25</sup> Ibid., p. 409.

over the weak and claimed that man originated from apes. Karl Marx also set the economical rules and communism and Bolshevism, thus put Europe into the maelstrom of materialism and barbarism that is still sinking in it. All these stresses, revolutions, murders, plunders and chaos, which is growing all the time, are the fruits of exaggeration in materialism and corporeality and avoiding spirituality and immateriality”.

”در نتیجه اکتشافات فنی و علمی، آگوست کنت فیلسوف فرانسوی فلسفه اثباتی خود را وضع کرده گفت فقط چیزی که وجود آن را با قوا و حواس خود میتوانیم ثابت کنیم حقیقت و وجود دارد در خارج آن هیچ چیز وجود و حقیقت ندارد. سپس داروین انگلیسی قوانین نشو و ارتقاء و غلبه قوی بر ضعیف و تنازع بقا را کشف و نشأت انسان را از میمون ادعا نمود و کارل مارکس آلمانی هم قواعد اقتصادی و مبارزه طبقاتی و مسلک اشتراکی (کومونیزم و بلشویزم) را ترتیب و تنظیم داده عالم غرب را بدین قرار به گرداب مادیت و وحشیت انداختند که هنوز هم در آن غوطه ور است و این اضطرابها و جنگها و انقلابها و قتلها و غارتها و فتنه ها که هر روز دامنه اش وسیعتر میشود، محصول این حالت یعنی افراط در مادیت و جسمانیت و دوری از روحانیت و معنویت است.”<sup>26</sup>

Ḥabīb ol-Lāh Pūr-Rezā, one of the writers of the journal who lived in Cairo at the time, shared an article in *Iranshahr* entitled, “Creation of Human Being,” and introduces a theory about the relationship between soul and body. His theory follows entirely the same discursive pattern, and this is not just true about Pūr-Rezā and Kāzemzādeh, but all the authors of the journal. Here are some of his phrases I translated literally to declare the author’s point of view about this key issue.

In one passage, Pūr-Rezā declares:

“Pascal<sup>27</sup>, one of the great philosophers of France, wrote once that the creation of human being is one of the mysteries of the nature, which its basic truth is still unknown. It is not evident that what is the medium between body and the soul? Today as the result of scientific discoveries and marvelous progresses of the human, the theories about the human body have divided into two major groups and the followers of each group have their own different and contradictory believes: first spiritualist, second materialists. We have to elaborate detailed ideas of believers of these two important branches of philosophy that is the basic foundation of all European thoughts”.

”پاسکال یکی از فلاسفه بزرگ فرانسه مینویسد خلقت بشر یکی از عجایب طبیعت است که تا کنون حقیقت اصلی آن مجهول و معلوم نیست که واسطه مابین روح و جسم چیست. امروزه در نتیجه اکتشافات علوم و ترقیات محیرالعقول بشر، فرضیات راجع به بدن انسان منقسم به دو قسمت مهم شده اند و پیروان شعب مزبور هر یک دارای عقاید مختلف و متضادی میباشند: اول روحانیون و دویم مادیون. ناگزیریم عقاید پیروان این دو شعبه مهم از فلاسفه را که امروزه مبنای اساس کلیه عقاید اروپایی هاست مبسوطا بیان نماییم.”<sup>28</sup>

<sup>26</sup> Ibid., (1926), vol. 4, p. 205.

<sup>27</sup> Blaise Pascal (1623-1662).

<sup>28</sup> *Iranshahr Journal* (1924), vol. 7, p. 409.

In another interesting statement, he clarifies the idea of spiritualists in its religious sense, is closer to the truth<sup>29</sup> and predicts that science gradually will be able to prove the truth of spirituality. Nevertheless, he admits:

“Until recently spiritualists were unable to provide an argument for rejecting the claims of materialists, and it is obvious from Western and Eastern books, that when spiritual philosophers were incapable of reasoning and presenting a positive proof, they resorted to religion”.

"تا چندی قبل علمای روحانیون از اقامه دلیل و جواب بر رد ایرادات مادیون عاجز بودند. از آثار و نوشته های کتب غربی و شرقی به خوبی مفهوم میشود که وقتی که فلاسفه روحانیون از استدلال و اقامه دلیل مثبت عاجز میشدند خود را به پناهگاه مذهب می کشیدند." <sup>30</sup>

This means he believes that scientific tools and reason made spiritualists capable of arguing with materialists. Although neither he, nor the other authors of the journal, provide any reason to support this claim, the idea of proving religious presupposition by means of science sometime in the unknown future seems so appealing that no one could resist. Actually, they encounter European science and philosophy in a moment in which Europeans are in debate about the relationship between rational achievements and metaphysics. Consequently, Kāzemzādeh and all his contemporaries are stuck in the trap of the material-spiritual binary. A trap, that they could not release themselves from, up to today! He attributes all Western troubles to the wrong choice between materialism and spiritualism.

### 3-7-4-4- Relation between Science and Religion

In one of his articles about social reformation and knowledge<sup>31</sup>, Kāzemzādeh proposes his remedy for the future of the country in detail. He also determines the most important issues to deal with, and the questions that should be answered in order to elucidate the path for next generations. Among his proposed questions about social and political agendas, he asks the following questions, which are frequently discussed throughout the journal:

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<sup>29</sup> Ibid., p. 414.

<sup>30</sup> Ibid., p. 409.

<sup>31</sup> Ibid., vol. 8, p. 436.

- How should we distinguish material and spiritual powers?
- How should we solve challenges between science and religion, or between reason and quoting authorities?
- How should we reform the principles of pedagogy and training? From which European country should we accept the knowledge? And how should we alter the methods of training according to the Iranian context and situation?

Considering the given list, Kāzēzādeh reveals the most important questions raises for him when he encountered European knowledge and civilization. Again, we can see his emphasis on the duality of spiritual-material, science-religion, and reasoning-quoting. He perceives the question of theses dualities as the intellectual prerequisite for reformation in all aspects of Iranian society. He suggests:

“These are the issues that the Iranian nation will face in each step, and have to investigate and analysis them and make a decision about them and determine a guiding line for themselves. Otherwise nobody can expect salvation or prosperity, from a revolution which its nature is to destroy”.

"اینها مسائلی است که ملت ایران در هر قدم بدانها خواهد برخورد و مجبور خواهد شد آنها را تدقیق و تحلیل کرده تصمیمی در آن باب گیرد و خط حرکتی برای خود معین نماید وگرنه از یک انقلاب صرف که جز تخریب چیز دیگر نشناسد امید نجات و سعادت را نمیتوان داشت."<sup>32</sup>

There are some presuppositions in his statements that he considers them clear and obvious; and sees no reason to explain them for his audiences. For instance, it is evident from his comments that religious epistemological assumptions are absolute truth, and that science, finally will prove the correctness of all religious claims<sup>33</sup>.

It should be noted that in spite of his sympathy for spiritualism and the truth of religion, Kāzēzādeh frequently criticizes the *'ulamā* for their role in forming people's mindset. In a comment for an article about scientific achievements in Europe, translated from German<sup>34</sup>, together with denouncing the ignorance of *'ulamā* and their moral corruption, he makes a strange

<sup>32</sup> Ibid., p. 437.

<sup>33</sup> Ibid., (1924), vol. 7, p. 412.

<sup>34</sup> Ibid., vol. 8, p. 451, “Western civilization: connection to the planet Mercury”, published in German newspaper *illustrierte Zeitung*, the name of the author was not mentioned in *Iranshahr journal*.

comparison between European scientists and religious leaders in Iran and surprisingly calls both of them *'ulamā*:

“These outstanding thoughts of Western *'ulamā* reminds me of an anecdote I have heard a few years ago in Tabriz. Once upon a time, a *mullā* who possessed a village, told his son passionately: ‘you know, last night I made a plan and found a way to possess a village in our neighborhood for free. We cut the water and peasants leave the village for lack of water, the village begins to desolate and the owner of the village will have to sell it to us cheaply or even for free, and without trouble we add another village to our villages.’ This is the difference between Eastern and Western *'ulamā*, that one intends to find a way for communicating with planer Mercury and the other one, plans to make a whole community homeless and ruin a village because of greed”.

"این خیالات عالی علماء غرب حکایتی را که چند سال پیش در تبریز شنیده بودم بی اختیار به یادم آورد: روز یکی از ملاهای صاحب دهات به پسر خود، با ذوق تمام گفت: میدانی دیشب فکری کرده ام و راهی پیدا نموده ام که به وسیله آن به مفت صاحب فلان ده که همسایه دهات ماست بشویم... آب ده را میبندیم و دهاتیان از بی آبی پراکنده می شوند، ده رو به خرابی میرود و صاحب ده مجبور خواهد شد که آنرا به قیمت بسیار کم و بلکه مفت به ما بدهد و ما بی زحمت یک ده دیگر به دهات خود افزوده ایم. این است فرق علمای شرق با غرب که این یکی میخواهد راهی برای مخابره با ستاره مریخ پیدا کند و دیگری میخواهد در راه حرص و طمع جمعی را بی خانمان و یک آبادی را محو و ویران بسازد."<sup>35</sup>

It is not evident why he makes such a comparison. Probably he sees the *'ulamā* in the Islamic traditional context, where they are held to the same duties of scientists; and it is expected from a religious *ālem* to be a *hakīm* too, who is supposed to think about all the possible issues in the world and the world hereafter.

His theory about European moral corruption and the necessity for a spiritual revival in all human societies seems quite appealing for his Eastern readership and gives them a sense of validity. This can help them to improve feelings of inferiority to wealthy or powerful European nations and inspire them. There is no strong argumentation in Kāzēnzādeh's statements. In contrast, one can find many contradictions in the text, which I mention here. He reveals his lack of a comprehensive understanding of European thought by his false comparisons or simplistic comments.

Ṭūṭī Marāghe-ī, a famous writer, wrote an article entitled, “Religion or the basis of science and civilization”. In this article, he mentions the religious origins of scientific curiosity. The next paragraph provides an abstract of his message:

“If it wasn't for deism and religion, we would not have been able to investigate the situation and state of celestial bodies. Thus, it can be said confidently that civilization is the child of

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<sup>35</sup> Ibid., (1924), vol. 8, p. 453.

science, science is the child of deism, and deism is the creation of some men of pure nature of human kind. If religion did not exist, science could not exist as well and if there was no science, humanity could not be distinguished from animals”.

"اگر خداپرستی و دیانت نبود، ما را دست از تحقیق، از وضع و کیفیات اجرام سماوی کوتاه می شد. از این رو با کمال جرات میتوان گفت که تمدن زاده علم، علم زاده دیانت و دیانت زاده خداپرستی و خداپرستی زاده افکار و عقول نیک مردان پاک نهاد از نوع بشر میباشد. اگر دین نبودی علم صورت خارجی نبستی و هر آینه علم نبودی آدمی زاد از جانوران تمیز نیافتی."<sup>36</sup>

Then, he states that we should be thankful for all the considerable services of religion to our sublimity and progress. He admits that science could not yet discover all truth, but this is temporary and in the future the truth will be revealed, and humanity will realize the validity of religious claims. As I mentioned before, he follows a pattern of thought similar to other Iranian intellectuals. They see no contradiction between science and religion and think there is no need to reconcile them, because scientific advancements will prove that religion was right.

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<sup>36</sup> Ibid., (1925), vol. 11, p. 650.

## Chapter 4

### Context Analysis and the Conclusion

During the Qājār dynasty and specifically under Nāṣir ad-Dīn Shāh, Iranians were introduced to an entirely new phenomenon, new European science, which seemed to be the origin of all the differences between their own society and the West. This is the moment my journey through history begins, the date that Dār ol-Fonūn was established. As the first school of higher education in Iran, it is symbolic of the accumulation of the discourse on social reform and the desire to adopt these developments in Iran.

The second university, which is the University of Tehran, was established 80 years later in 1934. Several factors were involved in this historical delay, most importantly political unrest in the country. In the period from 1851 to 1934, Iranian intellectuals were preoccupied with political issues at home and abroad and this is reflected in their writing. These issues include sequential defeats in war, the threat of colonialism by Russia and Britain, gradual formation of the idea of modernization, law, limiting the authorities of the king as well as the failure of reformists in creating amendments.

Intellectuals, politicians, clergy and all those who were the agents of introducing new science to Iran, or even adversaries of new European civilization, were all speaking in the same discursive order and shared the same presuppositions. They were silent about specific topics and

are encouraged to comment about certain issues, while being prohibited from proposing some others. A new paradigmatic discourse emerged which dominated the whole social sphere. Although those who contributed to this discourse may have contributed from different vantage points, all helped these topics remain the premier issue in intellectual circles. New discourse makes it possible to grasp a new understanding of the world and to delegitimize all the other discourses.

The first individuals to question the status quo in the country were called *Monavar al-fikr*. They were the agents of change in Iran, or at least the agents of the will for change. They belonged to different social classes who came from different professional backgrounds; aristocrats, officers, clergy or merchants; but what made these individuals a new emerging class was their desire for reformation and their belief in the urgent need to adopt the new achievements of European civilization. Because of the failure in convincing the king to implement reforms, they often concentrated on cultural activities and on providing intellectual foundations for change and development. In this era, all the intellectuals were also part of the political elite or active in political actions. This factor is the most important feature of the process of modernization in Iran, which initially made it impossible to separate the territory of politics from that of science. The political elite introduced science as a new phenomenon with the aim to strengthen the country against its enemies.

In this period of history, Iranians were facing new questions, difficult issues that they were not ready to answer. They were not prepared to understand and learn from the new developments in the West. They found themselves in a situation in which they had no choice but to passively imitate Europe, and to translate their intellectual achievements into their own language. They emphasized acquiring science by educating the masses without contemplating the actual premise at its root. The idea of acquiring European science and civilization interested them and produced great energy for the new discourse, the main elements and development of which will be discussed below.

#### **4-1- Development of the Discourse**

The previous chapters have been devoted to the analysis of each book or journal, isolated from the other texts regardless of social context. In this chapter, I will show the relations between different



texts, and the whole pattern of the discourse, the role each text plays in the formation and development of the collective perception about science.

The main characteristic of the Iranian discourse on European science is its drastic emotional aspect. They frequently used highly sentimental phrases in commenting about new science, and the adjectives they attribute to the European science and technology were at the beginning of the period very positive and at the end very negative. In this respect, I can divide the entire intellectual discourse in these 80 years into two periods: in the first period, the main components are the feeling of inability and weakness towards a powerful “other” in the West and a critical passivity of “us”. The next period can be identified by the emphasis on the cultural capacities of “us” and the necessity to conserve it.

#### **4-1-1- The First Period**

During the first phase of our historical period, the social agents and the texts shared the following presuppositions, despite their differing views about Europe:

- Western civilization is more advanced than Iran
- Their power is product of science
- To become powerful, Iranians must study Western science

Ākhūndzādeh, Malkam Khān, Afghānī and Kermānī were some of the prominent and influential figures of this period who, despite their different opinions, shared positive attitudes toward science and optimism about a future created by the means of science.

Ākhūndzādeh was one of the first intellectuals who propounded a new discussion about European science and introduced new ideas and concepts to the Iranians. In his famous book published in 1866, *Maktūbāt-i Kamāl od-Dowle*, he admitted that science in Europe was superior to a stagnant and ignorant Iran. He believed that the only solution to the unpleasant situation of Iranians was to propagate European science together with a sense of patriotism. A key concept in his texts was education. He took many efforts to change the alphabet, just to facilitate educating people, because he believed the first step to progress was to enlighten people. He maintained that religious institutions were discordant with new science and education.

Although he was responsible for introducing new elements into Iranian discourse like patriotism, a glorious history of ancient Iran and the necessity to educate people, all of which became inseparable elements of the discourse, but Ākhūndzādeh was alone in his criticism of religion. All the other intellectuals agreed that there was no contradiction between science and religion. For example, Afghānī argued that Islam was the absolute truth and new science is based on facts, therefore true belief in Islam cannot be in conflict with valid knowledge. This was an important notion, which directed the discourse in a way that averted the discussion away from criticisms of religion. The fact that Afghānī's idea was accepted and not Ākhūndzādeh's may have roots in different factors. Possible factors include true faith, fear of being labeled a heretic, or simply because Afghānī's arguments were more familiar and appealing and were thus more likely to be integrated into the intellectual atmosphere.

Another argument was introduced by Malkam Khān who confessed in a letter to his friends: "In order to adopt principles of civilization, it is enough to prove that these principles are embodied in the Islamic laws and *sharī'a*, in this way we make them acceptable for the people"<sup>1</sup>.

Malkam Khān suggested that Europeans were far more advanced than Iranians, and that historical evolution dictates the progress of all nations, unless they faced an obstacle to their progress. He believed in the universality of European civilization and maintained that Europeans seek progress for all the countries in the world, on the grounds that all of them would share the fruits of development or the failure<sup>2</sup>. For him new and old science belong to the same series of human deliberation about the world, and that after many years of research, Europeans succeeded to produce a more mature science. We, Iranians, have no time to discover all their achievements on our own, but we can simply learn from their three thousand years of efforts in just a few years.

Almost at the same time, Afghānī expressed his idea of the unity of the Islamic world, which was welcomed in many Muslim countries, including Iran. Unlike Malkam, he was pessimistic about European intentions in spreading their civilizational achievements, and believed that Islamic countries should be united against European colonization and against the

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<sup>1</sup> Hamed Elgar: *Mīrzā Malkam Khān; A Biographical Study of Iranian Modernism*, Berkeley, 1973, p. 34.

<sup>2</sup> Mīrzā Malkam Khān: *Majmo'e-yi Āṣāre Mīrzā Malkam Khān* (Collected Works of Mīrzā Malkam Khān), edited by Muḥammad Moḥit- Ṭabāṭabā'ī, Tehran, 1948, pp. 101-108.

threat of weakening religious belief. This was a new element he introduced into the discourse for the first time and it went on to become a prominent idea in all Islamic countries, even today.

He agreed with Malkam about the impressive progress of Europe, but unlike Ākhūndzādeh, emphasized the point that there is no contradiction between science and Islam. Instead, he argued that Muslims should be equipped with West's major weapon, which is knowledge. For him, religious assumptions are absolute truth, which would remain constant through time. Because the laws of nature discovered by Europeans are also axioms and self-evident, the religion of Islam cannot be in contradiction of axioms and valid knowledge.

Mīrzā Āqā Khān Kermānī was among the advocates of Afghānī, who later became a critic of his ideas. Affected profoundly by Ākhūndzādeh's idea of Iranian nationalism, Kermānī, in his book *Se Maktūb va Şad Khaṭābe*, presented an idealized notion of Iranian society from pre-Islamic times, which is still alive as a potent element in Iranian intellectual discourse. Throughout the text, he blamed Iranians for ignorance and for their faith in determinism. He asserted that all the misery and passivity as well as the lack of seeking for terrestrial causes, derived from faith in determinism. He and his other predecessors used very positive adjectives to describe new European science and civilization. In spite of their admiration, their explanation as to the foundation of science and various scientific fields is ambiguous and influenced by Islamic philosophy<sup>3</sup>.

By forming a discourse about national identity, created by Ākhūndzādeh and Kermānī, the pre-Islamic period represents a glorious era that in need of revival. At the same time, European scientific achievements are considered tools to compensate decades of decline and bridge the gap to more developed countries. The idea of establishing modern institutions grows out of their desire to change the status quo. All the texts were optimistic about the philosophy of human progress, suggesting that the fruits of science are beneficial for human prosperity. All the texts were pessimistic and critical of a stagnant Iranian society. By propagating the new science, the hope was that all these superstitious convictions would vanish.

The discourse, which was formed by Ākhūndzādeh, Malkam, Kermānī and Afghānī contains some shared themes, including negative comments about Iranian science, positive adjectives describing European science, and optimism about the future of human progress. Their disciples implicitly applied these elements. They took it for granted that everybody agreed about

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<sup>3</sup> In previous chapters, I gave some examples of ambiguity in the definition of science and scientific fields, for each case.

the superiority of new science over indigenous science, so it never became a point of discussion or debate, and the elements mentioned above became the hidden parts of the discourse. The next generation of intellectuals added some new elements to the discourse that largely followed the previous discourse and caused it to develop in a predictable, linear form.

#### **4-1-2- The Second Phase**

In the second phase of Iran's encounter with the new science Ṭālibof Tabrīzī, Taqīzādeh, Kāzemzādeh Irānshahr, the Forūghī brothers (Abul-Ḥassan and Muḥammad 'Alī) and Kasravī represented the highly regarded intellectuals. This phase can be identified by the following presuppositions:

- Europe cannot serve as a model civilization because it is in crisis itself
- Neglect of the spiritual aspects of the world is the reason for the crisis in Europe
- We should preserve our religious and cultural heritage

Although Taqīzādeh did not join the others in criticizing Europe, or Iranians for their ignorance, or emphasizing the adoption of all aspects of European civilization, he and the other authors of *Kāveh* did share these other characteristics of this discursive period:

- Regaining confidence in order to compete with the West
- Selecting useful parts of the new science and preserving useful parts of the indigenous culture
- Emphasizing the duality of the material and the spiritual

By the publication of Ṭālibof's successful series of *Kitāb-i Aḥmad* in 1893, a new genre of books had appeared in Iran's intellectual sphere. Ṭālibof's intention of writing this book was to introduce new European science in a simple style for public consumption. Everybody was convinced that the only way out of the miserable situation in the country was to adopt new science. Despite admiring new scientific achievements, Ṭālibof added a new element to the discourse. He criticized Europeans for losing their faith and for ignoring the immaterial world. Quite on the contrary, he saw scientific research as theological practice to discover the power of God. He was not the first one who propounded this idea, and many other scholars before him, such as Afghānī, shared the

same points of view. But Ṭālibof was known as someone well acquainted with European scientific achievements who had disseminated his perceptions in a scientific book. This promised to be a gateway to the acquisition of European science. Therefore, this tendency had a great impact on readers and became the dominant discourse.

Like all the other texts, religion remained a determining factor in perceiving new science. Ṭālibof claimed that new science is useful but defective. This idea grew out of a fundamental conviction in Islamic knowledge, in which absolute knowledge is in the possession of God alone, humans have no access to it. Accordingly, science would not be able to explain everything, and they will never discover all the unknowns.

At this time, some elements were emerging in the discourse that specified the borders between European and Islamic science clearer than before, for instance the duality of materiality and divinity and denouncing Europeans for ignoring the immaterial aspects of the world. One can trace the impact of Afghānī's ideas clearly; those he disseminated in his famous treatise entitled "The Refutation of the Materialists." In the field of humanities, the conviction that God knows humans better than humans do led to the conclusion that European thinkers can never produce a comprehensive knowledge about humanity, at least no better than what is available in sacred texts. Such a presumption facilitated the impossibility of human sciences in Iran.

In the writings of Ṭālibof and those from the late years of the 19<sup>th</sup> century, the signs of change in the dominant discourse were evident. There was no longer a negative depiction of Iranians. Instead, all the texts tended to point out the positive aspects of traditional culture and costumes, and gradually the idea of the necessity to preserve indigenous culture was considered. Instead of a positive attitude towards the Europeans, Ṭālibof and Afghānī criticized European intervention in Iranian internal affairs. At the same time, they stressed the conservation of religious and cultural properties, by enumerating the disadvantages of neglecting them.

In the last years of the 19<sup>th</sup> century and the first decade of the 20<sup>th</sup> century, Iranian intellectuals devoted their efforts to political reform, which led to the constitutional revolution, in 1906-7. Nevertheless, failure in reaching their aims in this revolution brought their attention again to the necessity of awakening people through education. Impressed by European progress, intellectuals wanted to do something for their country, and in such a condition, *Kāveh* was born (1916-1922 in Berlin). Editors of *Kāveh* strongly believed that the best thing someone could do for his beloved country was to educate the people: the enlightenment of a minority while the majority remained illiterate would not suffice. Therefore, literacy should be encouraged in order to stimulate

reform. Educating people was not a new subject and all the intellectuals in the first phase also insisted on it, but this time intellectuals were disappointed with the failure to reform. The only possible way for them to achieve successful political reform in the country seemed to be the enlightenment of the entire society.

Many articles were devoted to their practical plans for improving the educational system in Iran. They aimed to answer this question: which scientific disciplines are most urgent to learn from Europeans? They did not wait long to see the result of their suggested plans and advice. After Reżā Shāh came to the power in 1925, his extensive reformation programs aligned with the dominant tendency of intellectuals and the number of schools and higher education institutes dramatically increased in a short period.

Like Ākhūndzādeh and Kermānī, the authors of *Kāveh* were interested in the history of ancient Iran. They emphasized the importance of history in reinforcing a sense of nationalism among Iranians as motivation for development. Although *Kāveh* abstains talking about religion directly, as far as possible, it follows the same intellectual approach as that of Ṭālibof. He was the pioneer of adhering to a duality of rationality and spirituality. In various articles written by various authors, Western thought is defined as rational and Eastern thought as spiritual.

Simultaneous to the end of World War I, a very important change occurred in the dominant discourse in Iran. The feeling of inferiority towards Europeans gave way to a sense confidence. The self-esteem of intellectuals there rose, and they became brave enough to question European civilization and to criticize their ideas. Criticizing Europe was not a new idea as Afghānī and Ṭālibof had done so previously, but this time it became a key element of the discourse. It is no coincidence that this turning point coincided with the post-war self-reflection of European thinkers, of which Iranians were aware. In the first phase, the effects of debates in European intellectual circles can be traced through Iranians' works, for example their optimism on the role of science in humanity's future. The ongoing debates in a war torn Europe continued to play an important role, especially on their perception of the state of Europe and the relationship between the "self" and the "other".

A shared element between all the texts written in this era in Iran was an ambitious plan for the nation's future. They regarded themselves as equals to European thinkers and felt the burden of all humanity on their shoulders. They considered Iranian issues on par with those of other countries, and suggested their solutions for the whole world.

Another issue that can connect the texts written by intellectuals in this period is the proposition of a plan for Iran to integrate science successfully without the negative aspects of European society. In this respect, a good example would be *Forūgh-i Tarbiyat*, which appeared in 1921. As a well-educated philosopher, Abul-Ḥassan Forūghī confidently claims that he found the causes of European progress, the deficiencies of this civilization, as well as the solutions for all the problems of humanity. Like Ṭālibof and Afghānī, he criticizes Europeans for abandoning the spiritual world because science alone is not enough to provide happiness for mankind. Another similarity between Ṭālibof, Afghānī and Forūghī is that they see no contradiction between science and religion, and regard the cognition of the world as the discovery of God's secrets. They attribute all the miseries in Europe and everywhere in human society to a lack of faith and spirituality.

In summary, the inherent assumption in this conclusion is that religion is the absolute truth and should not be neglected. Europeans are unhappy, and happiness is found in the spiritual realm. Having a background in mysticism, Forūghī played a considerable role in introducing a gnostic interpretation of science in general, and new science in particular. He could only perceive new science through the framework of Islamic gnosticism. In fact, he produced a new hybrid knowledge that appealed to the next generations of intellectuals in Iran. It was the idea that European science is just a small subset of a greater set of knowledge, in which all parts are harmonious and even help each other improve.

The significant feature of the discourse at the turn of the century is the priority of public education for social activists. All the intellectuals shared optimism about the results of learning European science, assuming that if only people were aware of new knowledge, they would be eager to change the status quo in Iran and would try to develop their country. Here Europe is a text that should be read and science is equated to the information. They all share the simplistic perception of the effects education would cause and they all underestimate the power of resistance against new ideas.

Although Ākhūndzādeh, Ṭālibof, Kermānī and Afghānī all talked about enlightening people and educating them, this time intellectuals were offering a practical plan to reform the educational system in Iran. For example, in both mentioned journals; *Kāveh* and *Furūgh-i Tarbiyat* the emphasis is on training accustomed teachers to propagate new science, with the difference that the editors of *Kāveh* prioritized elementary education and Forūghī preferred higher education.

In 1921, *Iranshahr*, another respected journal, began to publish in Berlin. This journal also devoted many articles to discussing the top priorities of the country in regards to acquiring

European science. It placed great importance on teaching ethical principles to society in order to change their mindset and guide them to a better life. In fact, *Iranshahr* entered a new element to the discourse: equilibrium between Western material science and Eastern spirituality. The focus of the journal was the lack of morality in both Europe and Iran and the necessity to establish morality throughout society before teaching science.

The journal theorizes that European moral corruption is the consequence of losing faith in God and wrongfully choosing materialism over spiritualism. On the other hand, he suggests that countries like Iran are suffering from long-term stagnation and that there is an urgent need for them to incorporate science into their education. Therefore, both East and West can learn from each other, Easterners should adopt material science and Westerners should accept spirituality.

Influenced by mysticism, Ṭālibof, Forūghī and *Iranshahr* maintain that the ultimate goal of knowledge should be moral enrichment. In fact, they consider the humanities equal to religious knowledge, whose aim is to purify morality. For them, the duty of the humanities is the same as the duties of religion. They had no idea about the premise of European humanities or its motivations, which is the cognition of the human condition. Another shared element between *Kitāb-i Ahmad*, *Forūgh-i Tarbiyat*, and *Iranshahr* is that religious presuppositions are absolute truth and sometime in the future, science will prove that they are valid.

Another significant point in the second phase of the discourse in Iran is the tendency to conserve indigenous culture. Criticizing Europeans, intellectuals were seeking an alternative, and the only substitute choice at hand was their own cultural possession. Simultaneous with some reforms, which began under Reżā Shāh's regime, intellectuals together with governors began to argue about preserving language and cultural heritage. All the texts regard nationalism as a factor in stimulating reform and mobilizing people for a more developed nation.

Unlike the previous discursive period there is no sign of denouncing Iranians for their ignorance, rather the texts are positive about Iran and its culture. They tried to draw attention to what seems valuable among classic literature. This may have been a byproduct of associating with orientalist, especially in the case of the editors of *Kāveh* and *Iranshahr*, who were personally in contact with famous orientalist in Europe. Through oriental studies, they learned about the importance of classical Iranian literature, through archeological discoveries they became aware of the history of ancient Iran. In the field of humanities, they concentrated all their scientific efforts on the literature and history of Iran and in a short period, many books and articles were written.



Muḥammad ‘Alī Forūghī, the older brother of Abul-Hassan Forūghī, was one of the most influential politicians and scholars in this period. He argued that in addition to preserving indigenous culture, we, Iranians, should do something greater than trying to acquire European science; we should contribute to the development of science and civilization. Participating in the process of development is a quite new element in the discourse. Iranians should not simply be passive consumers of European achievements; rather they should strive to be contributing members to the development and prosperity of mankind.

His contemporaries did not all share this same passion to participate actively in human civilization. For example, Aḥmad Kasravī, an illustrious figure influential among the reformists, remained critical of Europe. He followed the intellectual trend whose most outspoken figure was Iranshahr. Like Iranshahr, Kasravī remained critical of Europeans for their problematic situation, but goes far beyond him and uses a severely poignant language. He formulates his ideas carefully and proposes a comprehensive solution for the challenges faced by Iranians in adapting to societal changes, while maintaining their own culture. In 1932 he published his manifesto entitled *Āyīn* (Religion), in which he revealed his central ideas.

Using mostly negative expressions, Kasravī devoted his book to criticizing Europeans and trying to incite an emotional reaction from readers. The key point in his argument is that Europeans are living in crisis as the result of religious neglect. Therefore, they do not deserve to be in the position of a mentor for other societies. He does not speak about science except for technologies he deems unnecessary and ostentatious, with more disadvantages than benefits. He states:

“Despite all Europeans’ astonishing inventions and despite all the boasting of superiority and advantages over the world, that land itself, is in a bad condition... this testifies that those sciences have done nothing but harm and decrease nothing but misdirection. The creed for human life should be established by men of God and those pure men should show the way to prosperity... In short, we are saying that Europeans’ claim of superiority and progress is very deceiving. Some inventions and discoveries in certain fields of science would not cause the world to progress. Easterners who are drawn to the wonders of the West and began to follow it in every way severely cheated”.

"با همه اختراعات حیرت انگیز اروپا، با همه لافهایی که از برتری و بهتری جهان زده میشود، خود آن سرزمین امروز حال بسیار بدی دارد... این خود گواه است که از آن دانشها جز زیان نزیاید و جز گمراهی نیفزاید، و آیین زندگی آدمیان را باید مردان خدا بگذارند و راه رستگاری را آن پاکمردان بنمایند... کوتاه سخن ما این است که دعوی پیشرفت و برتری که اروپا دارد یکجا فریب است. اگر اختراعهایی شده و کشفهایی در یک رشته علوم روی داده، جهان از اینها پیشرفت و برتری نخواهد

یافت، شرقیان هم که از شگفت کاریهای غرب دل باخته و در همه جا به جنبش درآمد از دنبال او دوانند، سخت فریب خورده اند.<sup>4</sup>

The case of Kasravī is an interesting example because it shows how the discourse transformed over time - from 1866 when Ākhūndzādeh disseminated his ideas in admiration of European civilization, to 1932 when Kasravī reproaches Europeans for all damages they have done to human society. It shows that these intellectuals stand on two extreme ends of the spectrum that begins with a highly positive appraisal of Europeans and ended with hatred.

## 4-2- Principles of the New Science

Malkam suggested that European science was the continuation of ancient scientific traditions and since the new one is much more advanced Iranians should learn it without wasting time. Iranian intellectuals were anxious to learn new science as soon as possible, arguing that a right mind would confirm that we should neglect our outdated science and instead should learn new fruitful science. All of them praise new science and consider them as valid and true knowledge.

But there is some ambiguity about their understanding of new science, and if any of them attempted to elaborate more on new science or categorization of different scientific disciplines, they remain within an Islamic philosophical framework<sup>5</sup>. They are not interested in a new categorization of scientific disciplines: even the last books or articles written in this period do not entail any description of the order of new knowledge, subject, or territory of each science. Their description on the evolution of science and methods of cognition are careless.

In all the texts reviewed in this study, I could find many examples of critical thinking where contradictory statements were considered. Instead, different schools of thought were largely considered to all belong to the same intellectual roots. In spite of all the debates and discussions about science education in the journals and newspapers studied here, in all the cases they are unaware of science itself. Rather they are busy choosing from a vast spectrum of scientific disciplines according to the requirements of the society.

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<sup>4</sup> Aḥmad Kasravī: *Āyīn* (Religion), Tehran, 1932, pp. 14, 87, 89.

<sup>5</sup> I gave examples in each case in the previous chapters.

Intellectuals regarded science as part of an evolutionary path, changing over the course of the time. Therefore, they failed to raise basic questions about the essence of new science. Intellectuals were silent about new science' principal presuppositions and the necessity to perceive it. Their silence paved the way for reducing modern science to the old version of science. One of the consequences of not questioning the premises of new science is that Iranians were not concerned about clearly defining the differences between the new and the old science, thus they could not theorize about their relationship, nor did they feel the necessity to do so.

### 4-3- The Old Science

As far as I endeavored to show, many of the texts consider indigenous knowledge as nullified thoughts to be cast aside. In the first phase, it was accepted that traditional science is useless and nonsense. Abandoning old knowledge caused a disconnection between new and old science in Iran. They maintain that European science had advanced beyond Iranian science and illustrated this discrepancy through a comparison of a steamship to a small boat or the day to the night.

There were some individuals who were against this hegemonic tendency, who questioned the dominant assumption about traditional knowledge. Instead, they believed that European science and Iranian science, especially in the field of philosophy, were related. This conception remained a powerful tendency among intellectuals. Abul-Ḥassan Forūghī did not believe that old science is nonsense or outdated, in fact, he argued something new. He said that European science had its foundation on the ground of old science; therefore, promises and principles of old science are still valid and should be regarded as the introduction to the recent achievements. The next generation of intellectuals followed suit, especially because it was in harmony with the discourse of nationalism and preserving national cultural identity. This debate is still ongoing.

His older brother, Muḥammad 'Alī Forūghī<sup>6</sup> also follows the same pattern of thought. Forūghī believes that the only difference between new and old science is methodology. In spite of

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<sup>6</sup> He was well educated in both Islamic and European philosophy and worked as the translator and teacher of European philosophy. Among all his books *A History of Western Philosophy*, after 80 years of its first publication, is still one of the most important philosophical books ever written in Persian.

his dominance over the history of intellectual transitions in Europe, he has an evolutionary and historical viewpoint to the science, and does not see any differences in the essence of modern and traditional science. He even asserts that Western science is a kind of supplement to ancestral knowledge. He states that Iranian scholars already introduced most of the topics that Western philosophers discussed: they just built onto these earlier ideas. Considering Western science as a developed version of Islamic-Iranian science, he avoids paying attention to the epistemological differences in between and as a result like his other contemporaneous intellectuals does not discuss the principles and premises of modern science. He comments:

“Those who are aware of thoughts of our former scholars will learn that much of the research studied in this book, was somehow known, and stated by our Hakims and Mystics”.

"خوانندگانی که از افکار دانشمندان پیشین ما آگاهند، بخواهند خورد به‌اینکه بسیاری از تحقیقاتی که در این کتاب مطالعه می‌شود حکما و عرفای ما به‌جوهی دانسته و گفته‌اند."<sup>7</sup>

Āqā ‘Alī Modarres Zenūzī is another example of a reputable philosopher in the Qājār period and spent his life teaching Islamic philosophy in Tehran. Zenūzī wrote a book to answer some of the difficult philosophical questions, including the relationship between European and Islamic thought. In this book, *Badāye’ ol-Hekam*, he argued that what some philosophers like Descartes and Bacon suggest about God is similar to what Iranian scholars said before. And two concepts that European philosophers have used, namely power (*qovveh*) and matter (*māddeh*), are equivalents of substance (*hauolī*) and form (*şorat*)<sup>8</sup>. In his point of view, they are both using the same argumentation, just with different terms and expressions.

Simultaneously some scholars devoted themselves to the study of traditional science, most notably in religious schools. However, there was no dialogue between them and mainstream thought; only some nonscientific argumentations published in newspapers. Their encounter with the relationship between old and new science was superficial, hasty, and ideological. This can be considered as a pre-condition to the rupture between new and traditional science in Iran.

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<sup>7</sup> Muḥammad ‘Alī Forūghī: *Seyre Hekmat dar Europa* (History of Philosophy in Europe), In 3 Volumes, Tehran, 1938, vol. 2, p. 157.

<sup>8</sup> "حکمای فرنگ مثل متکلمین این مملکت قائلند به خالق قدیم و علیم و ابدی و ازلی و ... و براهین آنها همان براهینی است که حکما و متکلمین ایران بیان کرده اند. از جمله حکمای فرنگ به این اعتقاد دکارت، باکن، لیبنیتز، فلان. و فرقه ای دیگر از حکمای فرنگستان قائل به خالق نیستند ... مثل حکمای مشهور آلمان کانت و فیشت. ... قوه و ماده که بعضی حکمای فرنگ قائلند، همچو مینماید که همان هیولی و صورت است که حکمای مشابین قایلند که صورت را حال و هیولی را محل میدانند و همه اجسام از این دو مرکبند... لکن این مطلب مستلزم نباشد انکار واجب الوجود را". بدایع الحکم، صفحات 276-277.

Either way, neglecting old science or trying to revive them, both obey the same discursive order. In fact, all of them had fallen in the trap of dualities, which preoccupied them with endless comparisons: reason-quotation, body-spirit, material-spiritual, rationality-spirituality, mundane-divine, science-religion, positivism-esotericism, Western-Eastern. These dualities avoided questioning and observing grey areas between these two black and white ends of the spectrum. Material and spiritual became codes to refer to the conditions of thought in Europe and in Iran.

The outcome of a lack of inquiry into the relation between new and old science, and this assumption that these two are obviously identical, is that the gap between traditional science and new science grew wider. This situation culminated in the current circumstances of modern Iran: Iranians are still consumers of European products in the field of modern science, and in the territory of traditional science, they are narrator and reciter of what their ancestors said, without being able to add anything to any of them.

#### **4-4- Ideology and Science**

The state of emergency in the country and Iranians' haste to fulfill reforms forced intellectuals, who were influential in developing education policy, to choose which among the so-called beneficial branches of science were most urgently needed. They wanted technologies, particularly military technology. They emphasized the necessity to instruct the people. They were aware that some sciences were neutral, which means some branches of knowledge would not raise any opposition, neither in the court, nor among religious representatives. For example, Dolatābādī states that teaching natural sciences to children is not a threat for the power of the Shāh. Nobody objects, and intellectuals could freely expand their activities in this field<sup>9</sup>.

Among all the differences between Europe and Iran, Malkam Khān highlights “order” and “discipline” in European society. This assumption places political science or a science that helps to organize the state affairs in the center of knowledge. All the other scientific fields are peripheral. He suggests that progress in European societies is the result of constituting some institutions that put everything in order. In fact, for him, efficient systems such as administration or parliament enabled Europeans to achieve such astonishing developments. He asserts that if the same king and

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<sup>9</sup> Dolatābādī (1992), vol. 1, p. 47.

the same ministers in Iran possessed such tools, the country would flourish. The focal point of his statements became the dominant discourse and the idea of acquiring European governing practices led intellectuals to believe in the necessity of learning new European concepts of law.

With the political vacuum left after the death of Nāṣir ad-Dīn Shāh, many new style schools were established. The most famous school in this period was the school of political sciences, in which many of the revolutionary activists were educated. In an atmosphere when political reforms were the main agenda and everybody was admiring the legal system in Europe, nobody paid attention to the other sciences. A school of political sciences should have been established, because for the enforcement of the law, Iranian society needed the science of law and those educated in it.

It took 80 years until Iranians decided to establish a second university. Due to the desire for political reforms, intellectuals devoted themselves to the political issues and all the other sciences were marginalized. At the same time as the establishment of Tehran University in 1934, Iranian nationalism dominated the discourse. Seminal elements of the discourse entailed: conserving the Persian language as part of a national identity and becoming a participant in the development and improvement of humanity's future using the achievements of science. Just one year later, in 1935, another important scientific institution opened its doors. The Farhangistān-i Zabān-i Farsi, (Academy of Persian Language) showed the state of research of Persian among intellectuals. The language is regarded as a tool to preserve Iranian national identity. During the reign of Rezā Shāh, having new modern institutions was important and meaningful. Intellectuals had an uncertain perception of the university being important in Europe. The actual mechanisms of producing knowledge in the universities is not an aspect of their discussion.

At the beginning of the historical period of this study, Ākhūndzādeh and Kermānī considered the Persian alphabet to be one of the main barriers of progress in the country. They complained that it is difficult to learn, so instead of being a vehicle to facilitate learning and conveying ideas, Persian itself became the main objective of education in Iran. However, during this time, this language became a tool of nationalism, which should be protected against alien cultures and should be conserved as an important part of the national identity. In fact, it plays an ideological role in the discourse. It should be mentioned that when intellectuals comment about the preservation of traditional knowledge, they mainly refer to literature and not old traditions of philosophy and philosophical thought in Iran and the need to revive it.

The concept of preserving the Persian language has its origins in *Kāveh*. Considering the fact that the editorial board of *Kāveh* and most of its authors had personal connections to

Orientalists in Europe, this is not surprising. For Orientalists the most interesting part of a culture is its language, through which they can achieve a deep understanding of that culture. This would lead us to the influence of Orientalists in the emergence of this new element in the discourse. Orientalists' emphasis on the importance of Persian language is perceived ideologically. In this respect, the connection between Iranians and orientalists in Europe is effective in forming their perception about "themselves". This is the first time that Iranians are not experiencing a sense of inferiority. Rather they hear compliments and praise of their language and history. After this time, we can see that most of the scientific efforts are devoting to the Persian language and more precisely to classical Persian literature. Over the following decades, the only active field of science in Iran became Persian literature and language studies. The number of studies and journal titles devoted to the Persian language and poets speaks to this.

At the same time, the early twentieth century, by dissemination of the results of anthropological and linguistic research on the origin of human races and introducing the term "Aryan", Persian joined the group of Indo-European languages. This was exactly what Iranian intellectuals needed as a fuel to inflame nationalism among their audiences in Iran. Therefore, neglecting some fields of study and paying attention to some others like language, archeology and history of Iran is understandable according to their nationalist ideology, since these sciences could provide energy for the discourse. Except for literature, history, and archeology, which by ideological reasons were popular, the other fields of the humanities were neglected.

Any endeavor to learn other disciplines of the humanities related to the ideology of development. It is clear from the comments of intellectuals that they have a particular framework for scientific questions in mind. For instance, why have Iranians lagged behind? What is the ideal condition of society, and how we can achieve it? Intellectuals had no doubt that the present of Europe could be the future of Iran. The subjects of their deliberation were initiated in a way that there was only one possible answer, which entailed the ideal circumstances for Iran in the future and the strategy to reach it. No other possibilities remained for the authors and their audiences to consider. In fact, they restricted their options by limiting their questions.

A good example in this regard can be seen in the ideas behind the foundation of the University of Tehran. The minister of culture, 'Alī Aṣghar Ḥekmat, commissioned 'Issā Ṣeddīq A'lam to travel to America and to do some research about the structure, management and curriculum of modern universities. In his return to Iran, he was due to present a proposal for establishing the same institutes in Iran. Ṣeddīq A'lam was among the founders of the faculty of

literature and humanities in the University of Tehran. In his speech for the opening ceremony of this faculty in 1935, the notion of establishing a university in Iran, as it was in the dominant discourse, was reflected in his argumentation:

“The country of Iran, which is now experiencing evolution and seeks to transform from an old order into a new one, and acquire some parts of Western civilization, requires advice. This advising should be from some individuals who are knowledgeable and can identify from our own civilization which parts of literature and fine arts and customs should be conserved and from Western civilization which parts of the science and technologies should be acquired”.

"مملکت ایران که اکنون در حال تحول است و می‌خواهد از وضع قدیم به‌وضع جدیدی استحاله کند و از تمدن مغرب زمین قسمت‌هایی را اقتباس نماید، احتیاج به‌راهنمایی دارد. این راهنمایی باید از طرف اشخاصی بشود که صاحب فضل و دانش باشد و مثلاً بگویند از تمدن خودمان چه قسمت‌ها از ادبیات و صنایع ظریفه و آداب و رسوم را باید نگاه داشت و از تمدن مغرب چه قسمت‌ها را از علوم و فنون باید اخذ نمود."<sup>10</sup>

In fact, he predetermines the area of deliberation for the scholars and specifies exactly to what questions they should find proper answers. Although he says that knowledgeable individuals should advise the society, he actually identifies that they should choose between various aspects of culture and society. Furthermore, he clearly points out that those parts of Iranian culture that should be preserved are literature, fine arts and customs. From European civilization, only science and technology deserve acquisition. In another comment, he asserts that scholars in the fields of the humanities are mentors of society, and their duty is to guide society for the better. Nevertheless, it becomes evident from his statements that the best way of life is also predetermined and it is nothing but religious moral elevation.

#### **4-5- New Science and the Program of Modernity**

In studying the Iranian experience of modern science, I avoided using the term “modern” because the texts themselves do not use this term. Whenever they refer to the European science and culture,

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<sup>10</sup> Seddīq A‘lam: “Raveshe ‘Elmi dar Ta‘lim va Tarbiyat” (Scientific Method in Training), *Ta‘lim va Tarbiyat Journal*, winter 1953.



they describe it as new, novel, recent, etc.<sup>11</sup>. They conceived of European societies as a new civilization and thought it was impossible to resist against its influence and impact. In redefining and reconstructing their encounter with this new civilization, Iranians created new modes of interpreting the world as well as a program of modernity.

In order to investigate this phenomenon from a broader perspective and to see it on the global scale, I would apply the useful concept of modernity and the characteristics of Modern age that most scholars agree upon. In this regard Iran can be considered as an example of a non-Western country encountering the modern Age, and although I can't generalize what I found about Iranian society, to the others, as the results of comparative civilization studies shows, many similar aspects can be observed in all of them. Eisenstadt's theory on the multiple modernities<sup>12</sup> inspired me to see the different aspects of modernity in Iran and on how they commenced to modernize the country while rejecting some basic premises of modernity. His predictions of the encounter of non-Western countries with modernity are authentic in the case of Iran and I mention some of them here.

The most important characteristics of the experience of modern science in Iran was integration of politicians in acquiring new science. They were the agents of introducing new science into Iranian society. At the same time, they belonged to a newly emerging social group of intellectuals, who were representative of the ruling class. New science in this regard should have guaranteed the power of the state. Politicians were determining the mission and the goal of science, as well as scientific objects. The questions that scientists aimed to answer were not about the cognition of the world, rather they should have been relevant to the circumstances of development in Iran. Science is not a tool to understand the world or human beings, but it is a tool to fill the gap between a stagnant "us" and an advanced "other". In other words, political consideration is the main identifier of the nature of intellectual activities in Iran.

In this era, the existence of the nation is threatened by an advanced civilization, therefore it is the most convincing idea that the first priority of the nation-state should be to strengthen the country against foreign threats. Accordingly, science and the intellectual activities should also be at the service of this notion, which was the dominant ideology at the time. In the process of transporting and translating new European science, the encouraging force behind all the efforts to learn science was not scientific curiosity or personal motivation of individual scholars, rather political motivations or more precisely, nationalism. Learning about science became a national

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<sup>11</sup> Tāzeh, No, Jadīd

<sup>12</sup> I explained about his theory of multiple modernities in the first chapter of my dissertation.

mission, through which the nation would reconstruct its place in the new political order of the world.

The key questions in the field of humanities originate in political considerations. In fact, the subject of knowledge does not emerge from within the academy, but is imposed upon the scientists. Intellectuals are all involved in political activities, and this factor is the most significant feature of the conditions of institutionalization of science in Iran; the context that shaped the order in which Iranians were introduced to the new European science in the modern era<sup>13</sup>.

Eisenstadt suggests that a modern Jacobin characteristic can be traced in the intellectuals' attitude toward reforms in those countries facing the will to modernize. As the first agents of social change in Iran, intellectuals possessed the knowledge and power to transport and translate the new civilization into Iran and that made them believe strongly in the possibility of reshaping society by manipulating people and mobilizing them for change.

In such a condition, development became an undeniable part of the discourse and each activity should involve the process of development. In seeking development, intellectuals are regarded as the source of reference, since the tool for development is considered to be new European science and this territory is utterly in their possession. They are the bridge between the civilization and indigenous society and compared to the masses of ignorant people they are the ones who hold the key to all the problems. Therefore, as the agents of entering new science, they are in the position to determine the strategies and methods. This allows them to talk from a superior position and as the mentor of the public.

In spite of their high self-esteem, it was ideology which dictated their strategies. They were commenting from within the discourse and their choice of ideas and terminology would have been shaped by the dominant discourse. The discourse itself was at the service of the power. Not necessarily the power of the state, but the power that was subjected in each component and particle of society that must guarantee the survival of that particular society. This is what Eisenstadt calls trying to preserve a cultural program in the process of modernization. It means in spite of vast structural amendments as well as changes in the appearance and lifestyle of a society facing modernity, the stress of the discourse is on maintaining the core of the culture. The dominant discourse identifies specific areas of the culture that should not be abandoned.

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<sup>13</sup> To see the definition of Modernity and the other terms related to it, see the first chapter.

Eisenstadt, in his theory of multiple modernities, asserts that apart from structural changes and new institutional formations, the core of modernity is the crystallization of modes of interpretation of the world, and of the ontological vision, of a distinct cultural program. Imagining and defining “us” according to the differences to the “others” and according to the negative or positive attitudes of the West and to modernity, finding some distinct features to differentiate our culture versus the others are the strategies to the resurgence of an indigenous cultural program.

Modernity, as all the scholars agree, entailed a shift in the conception of human agency, of autonomy, and of the place of the individual in the flow of time. Later in Iran, individualism and humanism were seen as negative aspects of the new civilization in Europe. Therefore, this basic element of modernity is absent in the Iranian discourse, and all one can see is the argumentation against it. They warmly welcomed new technologies but they interpreted new scientific achievements within their own ontological premise. For example, unlike the European version that accepts the existence of different possible answers to the same question, they assumed that only their own ontological answers were valid and European science would adapt itself with their ready-made answers.

Iranians, like other nations encountering modern European societies, made their own version of modernity, trying not to lose the core premise of their cultural program. In the continual construction of their new collective identities-their conception of themselves and the “other”-they selectively rejected many aspects of European modernity and instead created new hybrid forms of modernity.

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