

# Comparative Study of Scientific Academies between European Countries (Royal Society of Great Britain, Lincean Academy of Italy, French Scientific Academy), and Iran

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#### Abstract

In this study, we are going to compare the historical background and current status of scientific academies in three European countries and Iran as a country in the Middle East. We also focus on the academy as an institute and review its mission, governing membership, and international relationships. The study depicts that the foundation of scientific academies in European countries developed in the context of new insight into Europe and a new horizon illuminated by the Renaissance. The reflection of the pluralistic nature of science in Europe can be tracked to the structure and function of current Academies. The study of scientific academies in Iran as a prototype of a Middle Eastern country reveals that in the absence of a modern science background, an academy has to be established by the government as an institute in the hierarchy of administration bureaucracy.

#### **Keywords**

Comparative Study, European Scientific Academies, Iran Scientific Academy

## **1. Introduction**

A national academy is an institution under consent and financial support of the state. They have position to make consistent academic disciplines and interrelated academic activities, think tanks. In addition, they pass on advice to government authorities in important public matters and issues considered within their area of responsibility (National Academy, 2024).

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One of the brilliant hills of natural evolution is the human mind and a milestone in the cultural progress is the modern Science. Scientific revolution came to existence between 1500 and 1700 (Scientific Revolution, 2024).

It was the result of new widespread interpretations after the Renaissance. In seventeenth century, science as a well-defined social activity was represented in the scientific academies.

At first, groups of intellectual philosophers gathered and established the scientific community, throughout the time some of these communities progressed from private level to come into new possession of national academies and getting a portion of National Academies (lincei.it), (Royal society.org), (academie-sciences.fr).

Today, the National academies constitute different scientific fields, including hard sciences (Natural sciences) and soft sciences (moral and social sciences) (Hard and Soft Science, 2024). Although there may be different interpretations from science, authors supposed that division of sciences in two filed may be an unacceptable criticism (Van Landingham, 2014: pp. 124-126).

## 2. Methods

In this qualitative study, we throw light on institutionalization of scientific academies in Europe and Iran for comparison.

In this study, we first review the historical background, mission, governing, and international collaboration of academies in 3 European countries which are pioneers in the foundation of academies, then we represent the Academy in Iran. In the discussion, we compare these academies with each other.

# 3. Historical Background of Royal Society in UK

There are four national academies in the UK: The Royal Society, the Academy of Medical Sciences, British Academy and the Royal Academy of Engineering (Royal society.org). In this study we discuss about royal society the oldest scientific society in the UK.

The history of scientific community backs to the Gresham College in London. Sir Thomas Gresham the Elder was a merchant and financier and founder of the Royal Exchange, he also set up Gresham college in London in 1597 (Gresham College, 2023).

In the mid-1640s two groups of natural philosophers got together to discuss the ideas of Francis Bacon. One group of natural philosophers gathered around by John Wallis; they had weekly meetings in Gresham College. Wallis was a cryptographer and during the civil war, he used his skill of cryptography to decode the massage of royalist for the parliamentarians (John Wallis, 2002; John Wallis, 2023).

Christopher Wren was a noted member of the Wallis group. He was acclaimed an architect in Baroque style, mathematician, astronomer, and a geometrician. There are some controversies about his role in Freemasonry Antiquity lodge as an operator or speculator. Wren was the founder of royal society and the president of society from 1680 to 1682 (Christopher Wren, 2024). Another group gathered together by Robert Boyle, he named his group "invisible college (Robert Boyle, 2024, Britannica).

Boyle was a brilliant mind of natural philosophy in 17th century. He was a well-known natural philosopher in chemistry and alchemy, physics, hydrostatic, earth science, and history (Robert Boyle, 2024, Britannica).

After the restoration, these two enthusiastic groups eventually came to be Royal society in 1661 with a mission to advance natural science and journal of Philosophical transaction published in 1664 (Royal society.org). Royal society received the royal patronage of Charles II (Charles II, 2024, Britannica). King Charles II was curious, science interested, as well as tolerant

The member of royal society emulated Francis Bacon's vision of "Solomon's House". "Its mission was advancing natural knowledge and applying it to the benefit of mankind" (Salomon's House, 2023). It would emphasis on Nature and human and could reflect humanistic thought in its founders.

Most of the members of these two groups that founded the royal society had puritans' tendency (Robert Boyle, 2024, Encyclopedia). Boyles family were proponent and advocacy of Cromwell.

John Evelyn was an English writer, landowner, courtier, and diarist and a founding Fellow of the Royal Society, and also the member of a small group of royalist philosophers. The king Charles II appointed Evelyn to the council of the Royal Society and he remained a lifelong member (John Evelyn, 2024a; John Evelyn, 2024b, Britannica).

Evelyn considered the motto "*nullius in verba*" that means "on the word of no one" taking nobody's word for Royal society" to emphasis on independency and freedom of thought in Royal society (Nullius in Verba, 2024).

Although royal society was a scientific society, poet John Dryden, engaged in experimental sciences appealed for membership in Royal society. The royal society instantly set up a committee with Dryden, that committed to embark teaching simple and uncomplicated English writing (John Dryden, 2024).

During the 18th century, Sir Isaac Newton was elected as the president of the society (1703-1727) this increased the prestige and reputation of the society and some principal changes happened (Isaac Newton, 2023; Royal Society.org).

In 18th century, the society spilled into political related issues. Although the society was impartial, it gave pieces of advice to government and the effect is still ongoing. During this period, the society got authorized by Whig supremacy. The influence of Whig party declined in 1780 after George III going off the party. In the early 19th century, the society's enthusiasm was declined and its attainment was deeply criticized by Charles Babbage. This resulted in some reforms on the charter of the society: parliamentary grant system was accepted in aid of scientific research and membership became almost entirely scientific, with few political Fellows or patrons (Royal society.org).

In 20th century, the society council made opportunity for women to be a fellow. Mary Cartwright, a mathematician, was elected as the first female fellow and first woman in the council of Royal Society (Mary Lucy Cartwright, 2024).

In 21st century, after covid-19 outbreak, royal society has an impressive effect on shaping the public discourse and purpose legislation against dissemination of false information about experimental medical interventions. Royal society sets up Science in Emergencies Tasking—COVID-19) (SET-C) to swift response for tackling the pandemic (Royal society.org).

## Royal Society, Mission Governing and Membership and International Involvements

The Royal Society's mission: the Society abides its mission since its foundation in the 1660s. Its mission was advancing natural knowledge and applying it for the benefit of mankind (Royal society.org).

Royal society council is a self-governing organization. The society's president is the chairman of organization, governing according to a set of statutes and regulations. All member is elected through voting process by its fellows. Fellows elect the members of the council and the president. Each year 52 fellows are appointed by the existing fellows. There are three classes of membership, fellows, horary fellows, and foreigner member fellows. The Royal society is the representative of Academy in United Kingdom and internationally collaborate across, Europe, Asia, Africa (sub-Saharan Africa), Middle East and North Africa (Royal society.org).

## 4. Historical Background of Italian Scientific Academy

Nowadays, there are 4 National Academies in Italy: National Academy of Sciences of Siena (Accademia dei Fisiocritici), linean academy of sciences (*Accademia dei Lincei*) for sciences, Accademia della Crusca for Italian language, and Academy of the Forty (*Accademia nazionale delle scienze detta dei XL*) (National Academy, 2024).

Italy is pioneer in scientific academies. This backs to the history of beginning and flourishing of renaissance in Italy and the first scientific society. The Academy of the Mysteries of Nature is pioneer in scientific society. *The Academia Secretroum Nature* (the Academy of the Mysteries of Nature), founded by Giambattista della Porta in Naple in 1560 (Academia Secretorum Naturae, 2022; Giambattista della Porta, 2024).

He had a privilege education in his family atmosphere. Like other renaissance men, he was a person with many talents on areas of knowledge. For membership in the academy, the candidates had to present new facts about nature or new technological invention. In 1578, the academy investigated under suspicion of magic by the Inquisition in order to control opinion contrary to orthodox religious doctrine and the Academy was prohibited from further activity (Academia Secretorum Naturae, 2022; Giambattista della Porta, 2024).

The oldest and first scientific academy that persisted till now is the academy of

Lynx-eye. (italy: Accademia dei Lincei) it is named in English as the Lincean Academy (Accademia dei Lincei, 2023). Lynx or eagle were both symbol of Lincean academy, animals that were reputed to have keen sight (Accademia dei Lincei, 2023).

The academy has had various chapters during its life. In 17th century, in papal state, the academy of Lynx-eye (sharp vision) was founded by Federico Cesi and three other scholars: Johannes Eck, Francesco Stelluti and Count Anastasio De Filiis in 1603 in Rome (Accademia dei Lincei, 2023). Some young aristocratic persons who had enthusiasms in science were the members of the academy. The academy's motto, chosen by **Cesi**, was: *"Take care of small things if you want to obtain the greatest results". The* Lynx-eye academy after death of its patron, **Cesi**, in 1630, survived for two more decades and disappeared in 1651 (Accademia dei Lincei, 2023; Federico Cesi, 2024).

During the nineteenth century lincean academies was re-founded in Italy. In 1801 Accademia dei Lincei was founded by Abbot Feliciano Scarpellini and Gioacchino Pessuti, with the patronage of 8th Duke of Sermoneta, Francesco Caetani. The academy collapsed in 1840.

In 1847 Pope Pius IX re-founded it as *Pontifical Academy of New Lincei in Vatican* (Accademia dei Lincei, 2023; Pontifical Academy of Sciences, 2024).

*Royal National lincean Academy*, was founded by Quintino Sella in 1870. Quintino Sella was a politician and economist who had studied engineering in Turin and mineralogy in Paris. He named it as Lynx-eye to reaffirm on secular basis of science. He boarded Academy's vision to moral, and humanistic sciences; history, philology, archaeology, philosophy, economics and law (Quintino Sella, 2024).

During the fascist period in 1926, according to totalitarian ideology a unification of all academies took place and a supreme national academy, Accademia d'Italia got established.

In this period the Lincean Academy was replaced and a short-lived academy The Royal Academy of Italy (Reale Accademia d'Italia) and latter in 1943 Accademia d'Italia was created. After overthrow of Mussolini in 1949, the Lincean Academy recovered its independence (Accademia dei Lincei, 2023; La Reale Accademia d'Italia, 2016).

The academia nationale die lincei was founded based on new statute in 1986 and was composed of 540 members in two classes of natural sciences and moral sciences. In 2001, natural sciences divided into five categories and moral sciences into seven categories (Accademia dei Lincei, 2023).

#### 4.1. Structure, Mission, Governing and Membership and International Involvements in Italy

Since1986 lincean national academy of Italy has been composed of two classes: one for mathematical, physical, and natural sciences; and the other for moral, historical, and philological sciences. In 2001 the Academy was reconstructed. natural sciences got divided into five categories for biology, mathematics, astronomy, physics, geology and the Class of the moral sciences was divided into seven categories for art, poetry; history anthropology, philosophy, social, political and; juridical science. Each of the two Classes comprised 90 national members, 90 corresponding members and 90 foreign members.

The mission of the Academy was to promote, coordinate, integrate and spread scientific knowledge in its highest expression, in the unity and universality of culture (lincei.it).

## 4.2. Organs of the Lincean National Academy of Italy

General director of the Academy is the chancellor. The President, the Vice President; treasures and the Deputy Treasurer, secretaries and the Deputy Secretaries are executive board of academy, all are members of the two academy and are elected by general assembly. If the President is a member of the Class of Physical Sciences, the Vice President must be a member of the Class of Moral Sciences and vice versa. They can be immediately re-elected only once. Board of Auditors has five members. They are chosen from members of Academy (3 persons), and two of whom form executive staff of Ministry of economy and finance, and ministry of cultural heritage (lincei.it).

## 4.3. International Collaboration

In the Accademia dei Lincei's office is the Office of International Relations that supports the International Relations Committee. This committee coordinates International Relations under the auspice of IPA (Inter-Academy Partnership), ALLEA (All European Academies), GID (Groupe Inter-académique pour le Development), EASAC (European Academies Science Advisory Council), IHRN (International Human Rights Network of Academies and Scholarly Societies) collaborate globally, regionally and in Europe, Africa on scientific, engineering, health, environment and global warming, human rights issues (lincei.it).

# 5. Historical Background of Academy in France

The French Academy of Sciences (French: Académie des sciences) planned by Jean-Baptiste Colbert (The French Académie des Sciences, 2023a).

He gathered a small group of academics in king library on 1666 and they had regular meetings twice a week. For the first 30 years, the academy was an informal society till Louis XIV granted it a new status, thereafter it was named as Royal Academy of Science (The French Académie des Sciences, 2023b). Colber was the first minster of state of Louis XIV from 1661 until his death, he was in fact a merchant and statement (Jean-Baptisle Colbert, 2024a; Jean-Baptisle Colbert, Britannica, 2024b).

Before setting scientific community, France Academy (La Academia Francesca) was founded by Richelieu in 1635 for purification of language (Academia Francesa, 2024).

From point of view of Louis XIV, the foundation of scientific academy was a

project to glorify and rise the prestige of his monarchy and his absolute monarchy to control the culture. He needed the patronage of scholars and specialized craft-men, and membership of the Academy was a grant and subside for those people whom were appointed by the King as honorary member. But Colbert, as a pragmatic chief minister of government, knew that scientific academy was necessity to improve and empower France by translating scientific progress into technical progress.

In May 1789, the old regime encountered a widespread social upset that led to the assembly of the Estates General that later changed into a National convention Assembly in June. After The Storming of the Bastille, on 14 July 1789, radical changes started resulting in abolishing the Monarchy and the creation of constitutional monarchy and later to declaration of the French first Republic in September1792. During hot period of revolutionary egalitarianism and terror, all royal academies activities temporarily stopped (The French Académie des Sciences, 2023c; Academia Francesa, 2024).

In 1791, national Assembly directed the academy to solve the issue of weight and measures that resulted in metric system standard. In 1795 the National Convention put of the end of all the academies. Two years later, a new organization named National Institute of Sciences and Arts (Institute de France) was implemented to replace the Royal Academy of sciences that had been created by Colbert in 1663 and French academy (Académie Française) by Cardinal Richelieu in 1635 as an authorized literary academy that was tasked to publish an official French dictionary (The French Académie des Sciences, 2023c; Academia Francesa, 2024).

As the role of enlightenment members in revolution, in this period, the first priority of the national institute was science. Innovation and implementation of metric system is a dazzling achievement of National Institute of Sciences and Arts "instituted France" during revolutionary period. On 7 April 1795, the metric system was formally defined in French law.

In 1816, after restoration of Bourbon's regime, the Royal academy was revived as an essential part of National institute. During this period the Royal Academy comprised the French Academies; the Academy of Fine Arts; the Academy of humanities (Inscriptions and Belles-Lettres); and the Academy of Moral and Political Sciences (The French Académie des Sciences, 2023c).

During the second republic, after fall of the Louis Philippe monarchy, the Royal Academy was renamed as "Académie des sciences" and was subsidized by ministry of public instruction which was legally in charge of it (The French Académie des Sciences, 2023c).

Through 19th century, the academy flourished and in 1914 the French academy of science had the prominent role in the academy life of France (The French Académie des Sciences, 2023c).

After World War I, the Academy was questioned to shift from meritocracy to gerontocracy (The French Académie des Sciences, 2023c). In 1976, a major re-

organization and modernization took place in the France academy.

## 5.1. Academy Mission Governing and Membership and International Collaboration of Institute des France

The Institute de France compromised of five Academies: Academy of the French Language (Académie Française), The Academy of Literature and the Humanities, The Academy of Science, The Academy of Fine Arts, the Academy of Moral, Social and Political Sciences. The Institute de France Under the shelter of the President of France (The French Académie des Sciences, 2023c).

#### 5.2. Academy of Science in France

Academy of science in France: is one of five academies which is inside the Institute de France. Its members consist of 150 full members, 300 corresponding members, and 120 foreign associates that are elected lifelong. Academy of science is divided into two scientific groups: the Mathematical and Physical sciences and their applications and the Chemical, Biological, Geological and Medical sciences and their applications

#### 5.3. Mission, Structure, Governing, Membership of France Academy of Science

Advancing the scientific life, contributing the teaching of science, dissemination of knowledge, advancing international collaborations, ensuring a dual role of expertise and advice (Academia Francesa, 2024).

Academy of science has an executive committee that gets elected by their fellow's academician. It is composed of president, vice president and two permanent secretaries. Academy elects the president and vice president. New members are elected by the Académie itself; the original members were just appointed. A candidate is elected by a majority of votes from voting members (Academia Francesa, 2024). According to its mission academy of science pledges to fostering international collaborations, they proceeded Euro-African program in 1997. After that for boarding their international collaboration, established the Committee for Developing Countries, (COPED). Today the France Academy of science has expanded its bilateral cooperation in Asia (South Korea, China, Vietnam, India), Middle East (Israel, Lebanon), and Latin America (Uruguay, Argentine). In Europe the academy has cooperation with Germany, and Sweden Academy (Academia Francesa, 2024).

## 6. Historical Background of Scientific Academy in Iran

Persian scientists contributed to the current understanding of nature, medicine, mathematics, and philosophy. Persians made important contributions to algebra and chemistry, they also invented the wind-power machine, and the first distillation of alcohol. Even though, in mediaeval era, famous scholars had brilliant scientific works such as Avicenna in medicine, Al-Farabi known in the Latin West as Al-pharabius (working on physics of vacuum), Al-Kharazmi (whose present formally Hindu-Arabic numerals and the concepts of algebra into European mathematics, Rhazes (physician, philosopher and alchemist (Avicenna, Britannica, 2024; Al-Khwarizmi, 2024; Abu Bakr al-Razi, 2021, Encyclopedia).

Iranian has no role in modern sciences that began after 17th century in Europe but in 20th century after foundation of Modern, secular government 1925 (Reza Shah Pahlavi, 2024, Britannica).

In the contemporary era, Academy of Iran was an institution that was established on in 1935 to reform the Persian language and was script by the order of Reza Shah. Its mission was embellishing Persian language from inappropriate foreign words. The performance of the academy in this field was successful and the results of its approvals were well received by the public (Academy of Persian Language and Literature, 2023).

#### 6.1. Academy of Sciences of Iran

The Iranian Academy of Sciences started working under the initiative of Farah Pahlavi and under the umbrella of the Pahlavi Foundation of Iranian Academies, which was approved by the National Assembly in July 1978 and by the Senate in June 1979 (Academy of Persian Language and Literature, 2023). One decade After the Iranian revolution in 1978, the founding of the Academy of Sciences of the Islamic Republic of Iran was approved in 1988 by Supreme Council of the Cultural Revolution (The Academy of Sciences of IR Iran, 2023).

Science Academy is one of the four Iran's academies. Academy is an institution with an independent legal personality that is affiliated to the Iranian presidential institution.

At first, 15 prominent professors of different fields of the country were selected as the first permanent members of the Academy of Sciences. This academy officially started its activity in 1369.Currently, there are 4 academies operating in Iran and all their members are selected by the government. Academy of Persian Language and Literature, Academy of Sciences, Academy of Medical Sciences and Academy of Arts (The Academy of Sciences of IR Iran, 2023).

## 6.2. Structure, Mission, Governing and Membership and International Involvements in Islamic Republic

The Academy of Sciences of the IR consists of six departments: Department of Agricultural Sciences, Basic Sciences, Engineering Sciences, Humanities, Department of Islamic Studies, and Department of Veterinary Sciences.

In Iran academies of sciences were founded many years after establishing of Academy of Persian Language and Literature (Formerly known as the Academy of Iran).

The main bodies of the Academy are: the President of the Islamic Republic of Iran, the Board of Trustees of the Academies (the Members of the Board compose of First Deputy of the President of IR Iran as the Chairman of the Board of Trustees, Minister of Science, Research and Technology, Minister of Health,

Treatment and Medical Education, Minister of Culture and Islamic Guidance, Presidents of the Academies and two representatives of the Fellows of each Academy proposed by its president), the General Assembly (consisting of the Academy's Fellows), the President of the Academy, the Academic Council (President of the Academy and the chairs of the Academic Departments), and the Secretary. Mission of scientific academy in Islamic Republic is the development of science and technology in the country, strengthening the spirit of research, and improving the scientific and cultural level of the country. Academy of Sciences has honorary members, associated members and invited colleagues. At first, 15 prominent professors of different fields of the country were selected as the first permanent members of the Academy of Sciences. President of academy is appointed by President of Islamic republic and approval of the Supreme Council of the Cultural Revolution. For fellow membership, the eligible scholar recommended by the Eligible scholars will become Fellows by President of the Academy or at least five members of the General Assembly and voting by the approval of this Assembly. The international collaboration in mission of I.R of Iran scientific Academy is limited to promoting the quality of national and international seminars, congresses and conferences (The Academy of Sciences of IR Iran, 2023).

#### 7. Discussion

In the contemporary era, institutions defined as highly organ body with specified laws and rules. Government institutions have been one of the foci of attention of political science, sociology and anthropology since the past (Social Institutions, 2019; Institution, 2015, Britannica). Traditional political science consisted of the study of government institutions.

In the study we focus on founding, growth, and development of scientific academies since beginning from a formal small group of educated philosophers to a government institution. If we take a look at the history of science, we will find that government institutions have been supporters of the expansion of science in the past, and this is still the case today.

Study of the historical background reveals that the foundation of scientific academies is dissimilar. Besides, there are varies between the academies in different countries in the time of establishment, structures, regulation and their relationship with government. The difference in structures, law and rules can be explained by differences in social background of these institutes

Academies in UK, and France are self-governing bodies, they have been founded as an organ of government in 17th century. They established short time after that precursor learned groups founded scientific academies. Predecessors of Royal Society were small groups of natural philosophers who had meetings in Gresham College and in 3 decades they got new status as national institute. Likewise, In France scientific Academy was set up by small group of academics who gathered informally 30 years before establishing Royal Academy of Science. Although Italy is pioneer in scientific academies, and founded under patronage of aristocrats, Italian academies were put up as a state academy in 19th century after resurgence of Italy. In other words, the history of Italy from city-state to unification in 1871 is the reason of the late establishment of government academies. Iran started contributing to modern medical research lately in 20th century. Iranians have little or no role in developing and progress of modern sciences that begin in 17th century and later in Europe. Throughout 17th to early 20th century, was the time that flame of sciences in Iran was extinguished by backward social class and religious thought. Constitutional revolution in 1906 represents a pivotal moment in the formation of modern Iran and paved the way for modernization. Academy established after foundation of Modern, secular government in 1925.

#### 7.1. Correlation of Linguistic Academy and Scientific Academy

The clear writing and speaking in scientific issue are fundamental principles for sharing the idea. This fact was first considered in Royal Academy of UK, by presence of John Elvin, diarist, and John Dryden, poet, in academy. Historically foundation of In Royal society backs to decade of restoration when new eagerness arose for free interchange of ideas among scientists, philosophers and poets. Linguistic area and scientific writing merged.

In contrast to UK, linguistic academy in France, Italy and Iran inaugurated independently many years before founding of scientific society and Academy. Linguistic academy in Italy (The Accademia della Crusca) was set up in 1583, timely earlier than scientific academies, because early Italian renaissance began as cultural revival and renewed interest in Florence (Accademia della Crusca, 2023; Italian Renaissance, 2024).

In France, linguistic academy was established by in 1635 by Cardinal Richelieu, the chief minister to King Louis XIII and 3 decades before inauguration of Royal Academy of science of France (Academia Francesa, 2024).

Also, there is long lag period between inauguration of Academy of Iran for Persian language and scientific academies, this backs to historical background of science in this country. From beginning in early 20th century, Founding of Academy in Iran begun by government charter and Academy of sciences and 5 decades later.

#### 7.2. Governing and Membership in Academies

Although Royal society in UK was formed under patronage of king Charles II, a tolerant king, and take annual government grant, some founders of Royal society were Cromwell supporters, so as a learned person in the society, they were trying independency that reflects in the society Motto "nullius in verba". The glorious revolution shows British manner that can solve the problems without radical changes, these issues reflect the contemporary position of royal society as a self-governing society and election of members by voting.

Italian culture and science flourished in context of city-state and grew off the bourgeoisie that thrive scientific society and academy so the relationship between patronage and members of academies were based on new social concepts that supported individual freedom of thinking.

In France, The Academy of Sciences was established by Louis's financial controller, at time of absolute monarchy that tried to formalize private meetings on scientific matters under government control, but through the time academy values that origin from its royal legitimacy changed into the fundamental principles of liberal democracy and institutions.

In Iran, the relationship between public policies and government institutions is tight. In other words, the adopted policies become public policy only when one of the government institutions becomes its guardian and expands it to the public using its authority. Election of president of academies and membership of fellows are a governmental decision.

The role of Academies in scientific collaboration: the study of academies in the three European countries shows their scientific capacity and institutional abilities for international collaboration. Comparative studies show the mission of institute, the history of institution has significant role in these issues; furthermore, the background of sciences in European society is an essential factor for these institutes.

#### 8. Conclusion

Renaissance paved the way of the scientific revolution from the 15th to 17th century around Europe. Italians were pioneers in scientific academies. The first scientific academy, which had a short life span, was founded at the beginning of the Renaissance in Naples between 1560 and 1578. Scientific academies in three European countries were developed in the 17th century. In these countries, Academies (before taking National status), were founded by learned philosophers, who had an enthusiasm for understanding natural phenomena. In Italy, the Academies had taken a national position later than the UK and France; the establishment of Italy as a nation-state happened in 1871. The three academies in Europe have been founded in a common European cultural milieu. So, there are similarities among European countries' academies in mission, governing, membership, and broad international collaboration. In Iran, a scientific academy was founded in the 20th century by the government, in a country without a background in modern science, and scientific discourse. Therefore, it is different from European countries in mission, governing, membership, and international relationships.

## **Conflicts of Interest**

The authors declare no conflicts of interest regarding the publication of this paper.

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