

The Iranian Scientific Development in the Post-Colonial World and Its Relevance to Indonesia

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International Conference “*Iran and the Malay World: Historical and Contemporary Relations and the Future*”, Asia West-East Centre,
Kuala Lumpur, 29-30 Oct. 2022

Terms Clarification

*“Iranian
Scientific
Development”*

hard sciences achievements: mathematics, physics, chemistry, biology, and medicine along with all their branches and applications in technology.

*“Post-colonial
world”*

a paradigm shift from the notion “the Western world as the owner of modern science imposed on the Muslim /Third world who see modern science as a Western’s cultural domination” into a cosmopolitan view that *“science belongs to humanity for emancipatory project and cultural representation for any countries in the world”*



Prof. Sir Chris Llewellyn Smith
(Director of Royal Society)

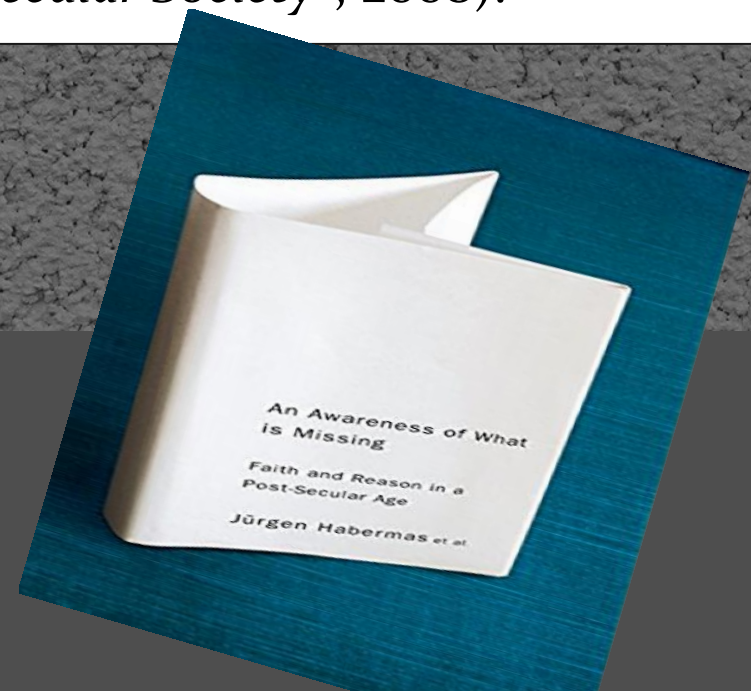
- *“Iran is the fastest growing country for science”*
- “The scientific world is changing and new players are fast appearing. We have got to be open for science. We cannot rest on our laurels and it’s a win-win for us. Science is growing everywhere.”

(Royal Society Report, 2011)

Terms Clarification

“The post-secular world” → Jürgen Habermas has acknowledged the failure of modernity to fulfill human inspiration and needs for moral legitimacy and existential human values and then he welcomes religion to participate in the public sphere

(Habermas, *“Notes on Post-Secular Society”*, 2008).



Terms Clarification



Aceh to Papua (5428 km) is similar London to Tehran

“The Relevance to Indonesia”

- ❑ a largest Muslim country in population in the world;
- ❑ one center of independent movement of Asian-African countries fighting against Western colonialism;
- ❑ dire in need of scientific development, which is able to represent its own values and culture (Islam, Pancasila).



Nurcholish Madjid

Indonesia must settle the reconciliation between divinity and humanity, between faith and science in order to boost scientific temper and rational mentality

(Nurcholish Madjid, *Islam: Doctrine and Civilization; A Study on Faith, Humanity, and Modernity*, Jakarta, 1997)

The Unique Characteristics of Iranian Scientific Development

01. Opposite to popular image

03. Contrary to mainstream practice

02. Opposite to common sense perception

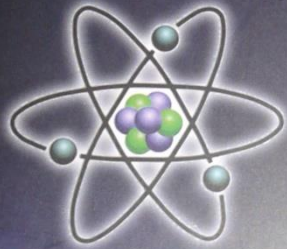
04. Reconciliation of science and religious culture

The Unique Characteristics of Iranian Scientific Development - 1

In opposition to “popular image” pictured in mainstream western media and their local networks across the world as a backward country, Iran has been one of the top countries in the world in terms of scientific quality; at the present it ranks 15th in science production in the world.

“Iran is showing fastest worldwide growth in science”
(Eric Archambault, *Science-Metrix* , Montreal, 2010)

Revolusi Sainifik Iran



Husain Heriyanto

UI Press Chairman said,

- *What the hell is going over Iran's science?*
- *Are you kidding me?*

Published by University of
Indonesia Press, Jakarta, 2013



Terms Clarification



<https://nasional.sindonews.com/berita/718894/15/indonesia-iran-pererat-kerja-sama-bidang-iptek-budaya>

Book Launch and Seminar on *Iranian Scientific Achievements*, held by Faculty of Humanities, University of Indonesia, Depok, 18 Feb. 2013

The Unique Characteristics of Iranian Scientific Development - 2

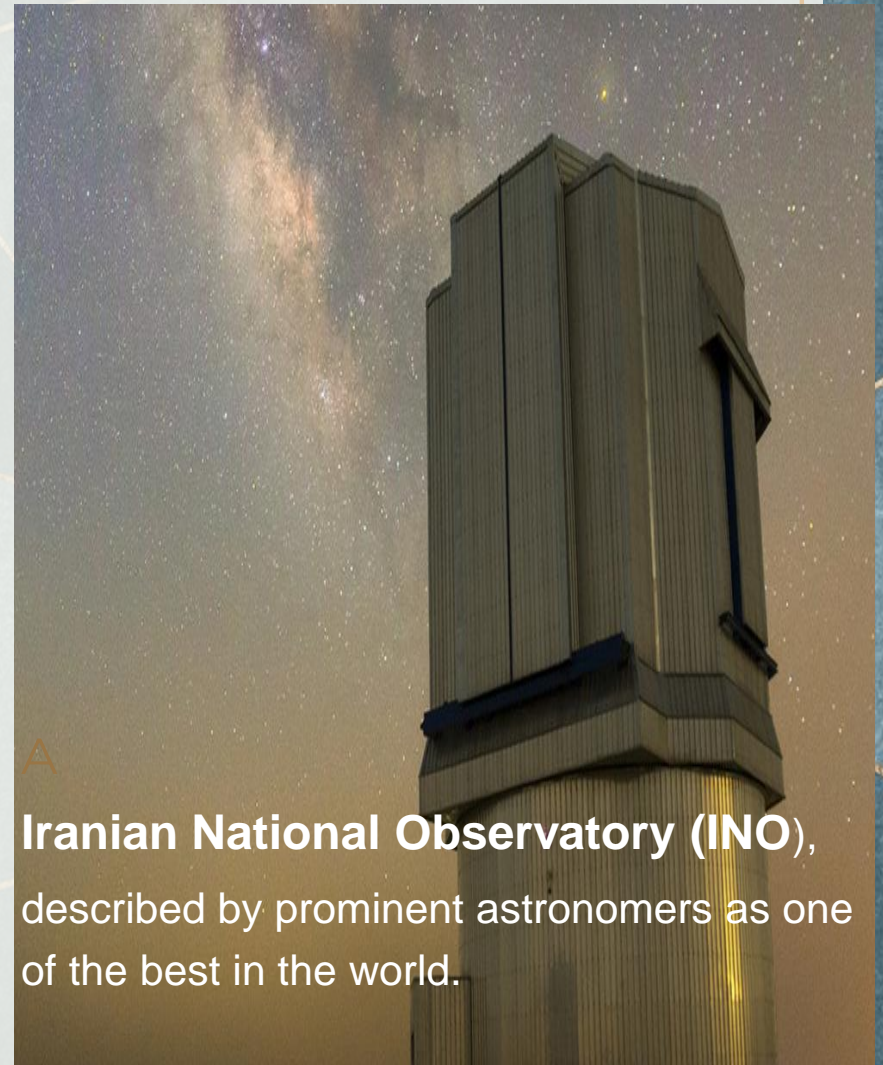
In opposition to “common sense perception”, Iran’s progress in science and technology has surprised many observers, who falsely imagined that an Islamic values-based society would be run by obscurant clergymen or ideological-propagandists.

- even more astonished once considering Western’s harsh sanctions and maximum pressure imposed on Iran
- passing four decades under cruel sanctions and sabotage since Islamic revolution (1979-2021), Iran has made a big leap from ranking 38th to 15th concerning number of published papers in Scopus.

Defying US sanctions, Iran's world-class telescope receives first light, records debut images

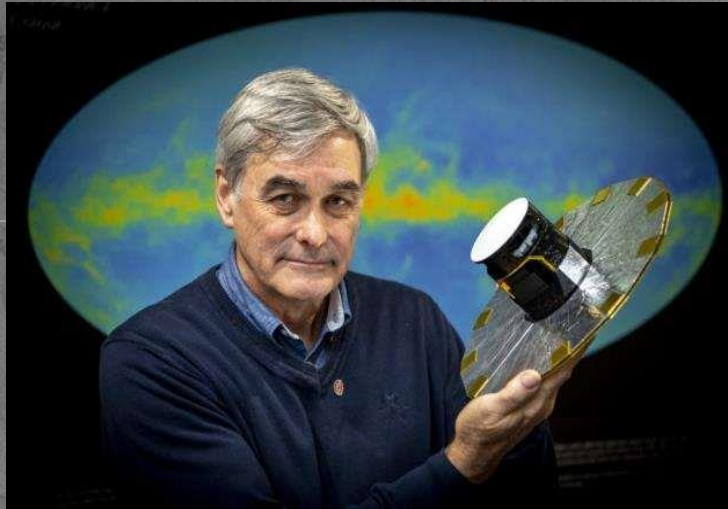
(<https://www.presstv.ir/Detail/2022/10/22/691406/>)

<https://www.science.org/content/article/door-open-iranian-astronomers-seek-collaborations-their-new-world-class-telescope> -
19 Oc. 2022



Iranian National Observatory (INO),
described by prominent astronomers as one
of the best in the world.

INO project is like a dream; working like hell



Prof. Gerry Gilmore, an astronomer at the University of Cambridge said the project was just a dream when INO started it. *“No one in Iran had attempted anything on this scale before”* (Science Magazine, 19 Oct. 2022)



Prof. Lorenzo Zago, a Swiss optical engineer, said *“What surprises me is that the know-how came so fast. They’ve been working like hell!”*

The Unique Characteristics of Iranian Scientific Development - 3

Contrary to mainstream practice, the scientific and technological advancement has led Iran to have capacity to “*represent itself*” as well as to use it as part of emancipation movement and liberation from the global arrogance.

- to “represent itself” means to demonstrate its values, independence, way of life, culture, civilization
- contrary to what Karl Marx says, “***They cannot represent themselves; they must be represented***”

(Marx, *The Eighteenth Brumaire of Louis Bonaparte*)



Abdoulaye Diop
(Malian Foreign Minister)

Malian Foreign Minister **Abdoulaye Diop** said,

*“The Islamic Republic of Iran, with its scientific and technological advances, is **a model for countries that want to stand up to global arrogance and their oppressive sanctions.**”*

<https://iranpress.com/content/55451/mali-calls-iran-role-model-for-scientific-progress>



Nurcholish Madjid, a

Prominent Indonesian Muslim thinker
(1939-2005)

□ *“... The experience of the Ottoman Empire, then the Republic of Turkey, is a typical of the experience of the Islamic world in general, in the sense that the adoption of Western science and technology occurred **on the basis of merely pragmatic considerations.**”*

❖ *“Therefore, the adoption of modern technology by the Islamic world is still **ad hoc and piecemeal**, so that actually Muslims are nothing more than as consumers, even as end users, of the products of science and technology...”*

The Unique Characteristics of Iranian Scientific Development - 4

Reconciliation of religion and reason; of science and religious culture

It is unique in a sense that **it is contrary to the dominating paradigm** – theoretically and in practice – imposed by Western culture and Orientalism project against Muslim/Third world is that

- ❑ religion is considered essentially a hindrance for scientific progress;
- ❑ religious culture and values are contradictory to rationality and human intellectual enterprises.

Rational Religion and Religion-based Independence

Habermas: “Rational-public religion

Habermas: Religion in post-secular Societies

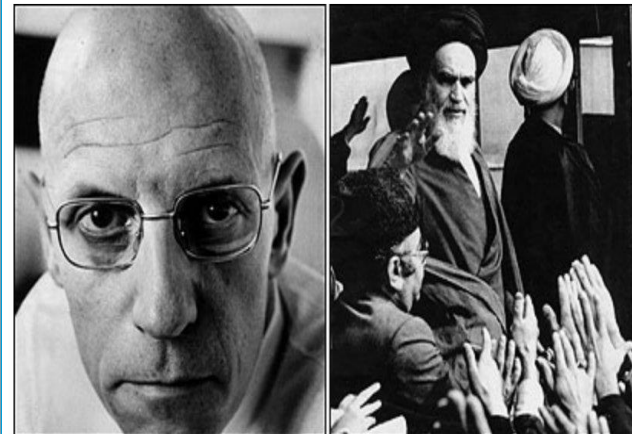
- “Religious communities continue to exist in a context of ongoing secularisation” (Habermas 2002, 66) → post-secular society
- Religion has a “potential of meaning” for religious *and* non-religious people



Foucault: “Religion is another way of life; political spirituality”

The philosopher and the ayatollah

In 1978, Michel Foucault went to Iran as a novice journalist to report on the unfolding revolution. His dispatches — now fully available in translation — shed some light on the illusions of intellectuals in our own time.



Philosopher Michel Foucault (left), in reports from Tehran in 1978, praised the Ayatollah Khomeini as reflecting “the perfectly unified collective will” of the Iranian people. (Camera Press Photo; AP Photo) Camera Press Photo; AP Photo

The Relevance to Indonesia

Nurcholish Madjid has played an important role in the discourse of Islamic teachings in relation to humanity, modernity (rationality), and Indonesian culture.

One of his main idea, which can be considered as a fundamental principle for his thought thoroughly, is **a coherent and organic interconnection of divinity and humanity, of faith and reason, of religion and science.**

□ “... What is more needed is the growth and development of a strong and deep scientific temper, which generates the awareness that *science is not only useful* for fulfilling *expediency* and responding to *ad hoc challenges*, but is also *part of a way of life*.

❖ So, what is really needed is an ethos that is able to see *the organic relationship between science and faith....*

But this is precisely what does not seem to have grown steadily among Muslims...”



Islamic Scientific Tradition and Authenticity

The Islamic scientific tradition is useful for establishing the authenticity of Muslim civilization itself. Without an appreciation of the Islamic tradition, it is impossible to revive the ethos of

The *Islamic intellectual tradition in Indonesia is still relatively young* and poor in heritage.

Nurcholish Madjid, however, highlighted that *talking Islam in Indonesia is discourse about the future of Islam*

“The glorious Islamic civilization will start from Indonesia, an area inhabited by many Muslim communities while maintaining its cultural uniqueness”

(Fazlur Rahman, Jakarta, 1985)



Fazlur Rahman (1919-1988)

Conclusion

- ❑ Iran's revolutionary progress in science and technology is
 - ❖ a success story how to use modern science and technology to stand for independence and sovereignty in politics, socio-economics and culture (*Ahmad Soekarno's Trisakti*)
 - ❖ a role model how to reconcile science and religious culture and values, which is very relevant to Indonesia as well as Muslim countries across the world.