



INTEGRATION OF RELIGION AND SCIENCE IN ISLAMIC UNIVERSITIES

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Abstract

The Integration Project of Islam and Science in Indonesia in particular has gained momentum in the last ten years. Several Islamic higher education institutions have transformed themselves from STAIN/IAIN into UIN, a step that some consider scientific ijihad in integrating science and Islam at Islamic universities. This step of status transfer was also accompanied by the growth of buildings that all looked like "Inpres Primary Schools" in remote areas, into magnificent and modern campuses. Physical development can be said to be successful, because the image of Islamic universities that have transformed into universities is not inferior to other universities, which have long been established and manage various scientific disciplines.

Keywords: *Integration, Science and Islam*

Abstrak

Proyek Integrasi Islam dan Sains di Indonesia pada khususnya mendapatkan momentum pada sepuluh tahun belakangan ini. Beberapa institusi perguruan tinggi Islam mentransformasi diri dari STAIN/IAIN menjadi UIN, sebuah langkah yang menurut sebagian kalangan sebagai *ijihad ilmiah* dalam memadukan sains dan Islam pada perguruan tinggi Islam. Langkah alih status ini juga dibarengi dengan perubahan gedung-gedung yang semula terlihat seperti "Sekolah Dasar Inpres" di daerah terpencil, menjadi kampus-kampus yang megah dan modern. Pembangunan dari sisi fisik, bisa dikatakan berhasil, sebab citra perguruan tinggi Islam yang telah bertransformasi menjadi Universitas, tidak kalah dengan Universitas-universitas lainnya, yang telah lama berdiri dan mengelola dari berbagai disiplin keilmuan.

Kata Kunci: *Integrasi, Sains dan Islam*

A. Introduction

The most basic question of the big theme of the integration of Islam and science is what really happened to Islamic universities? What is the conceptual framework for the integration of Islam into science? If the two basic questions above have been answered correctly, then the next question arises, how is the development of *pure Islamic scientific subjects* (*usuhuluddin, sharia, tarbiyah*)? What are the benefits for mankind as a whole?

The Integration Project of Islam and Science in Indonesia in particular has gained momentum in the last ten years. Until now, in the PTAI environment in Indonesia there are 8 UIN, 8 IAIN, and the rest are State Islamic High Schools (STAIN) which in total are 53 units, this figure does not include private PTAI which are more numerous. Along with its growth, the majority of STAIN in a number of regions, seems eager to participate in changing status. In 2013, based on Decree No. 3620 of 2013 concerning Determination of the Statistical Number of PTAIN for the Transition of Status, there were five STAINs that had changed to IAIN, namely IAIN Tulungagung, IAIN Ternate, IAIN Palu, IAIN Pontianak, and IAIN Padangsidempuan. In addition, there are two UINs that have recently changed, namely UIN Ar-Raniry Banda Aceh and UIN Sunan Ampel Surabaya.¹

Several Islamic higher education institutions have transformed themselves from STAIN/IAIN into the UIN, according to some circles as *scientific ijtihad* in integrating science and Islam at Islamic universities. This step of status transfer was also accompanied by the growth of buildings that all looked like “Inpres Elementary Schools” in remote areas, into magnificent and modern campuses. Physical development can be said to be successful, because the image of Islamic universities that have transformed into universities is not inferior to other universities, which have long been established and manage various scientific disciplines.

But at the same time, the success of the administrative changes, the physical changes of the magnificent buildings, have they also succeeded--or at least spawned certain scientific disciplines as the fruit of Islam's integration in science? Or if it has not succeeded in producing certain knowledge as processed from integration, is there a pattern of thinking changes in higher education components (especially lecturers, employees, students) where there is a science

¹ Muhammad Yunus, “INTEGRATION OF RELIGION AND SCIENCE: RESPONDING TO THE SLEEPING OF SCIENTIFIC TRADITION IN PTAI,” *INSANIA: Journal of Alternative Educational Thought* 19, no. 2 (2014): 285, <https://doi.org/10.24090/insania.v19i2.717>.

integration project on campus? If these signs have not materialized after ten years of integration issues, how will this “ambitious” project go next?

Regardless of the pros and cons regarding the integration of Islam and science at Islamic universities today, the factual reality shows that universities both with "Islamic" characteristics and universities with a "secular" pattern want mutual "greetings" between disciplines, considering that Today's change is very fast. The campus as an institution that produces cadres *of agents of change* feels the need to provide solutions to the development of current issues today.

It is not surprising that later some opinions were re-discussed, such as Irawan who quoted Albert Einstein who said " *science without religion is limb, religion without science is blind* ". If this Einstein statement is juxtaposed with Ian G. Barbour's theory (independence relation) and John F. Haught's theory (contrast relationship), then religion and science are integrated and interconnected. This means that between science and religion – as Khaled Aboe El Fadl said – there is no dichotomy, but only between ratios and values.²

Although the opinions of some experts related to the integration of science and religion are used in Islamic universities, their applications are different from one another. In this paper, the author will give an example of the integration of science and religion in Islamic universities.

B. Method

The research method in this study uses a qualitative method with a case study approach. The approach used in this research is a case study approach, namely research that places something or the object under study as a "case". According to Yin, case study research is a research method that specifically investigates contemporary phenomena in real-life contexts, which are carried out when the boundaries between phenomena and contexts are not clear, using various data sources. Objects that can be raised as cases are contemporary, that is, are ongoing or have taken place, but still have a broad, strong, or special impact and influence at the time the research was conducted. In this context, talking about the integration of science and Islam is still being discussed. Therefore, it is very appropriate in this research to use a case study approach.

² rawan Irawan, "Integrasi Sains Dan Agama:," *Tawshiyah: Jurnal Sosial Keagamaan Dan Pendidikan Islam* 11, no. 1 (June 6, 2016): 125, <https://doi.org/10.32923/taw.v11i1.554>

C. Results And Discussion

1. College Facts: “STAIN - ITS, does ITS-STAIN?”

“The implication that can arise from the dichotomy of science is the emergence of a gap between the sources of religious sciences and the general sciences. Advocates of the religious sciences only consider valid divine sources in the form of scriptures and prophetic traditions and reject non- *scriptural* sources as authoritative sources to explain the true truth...on the other hand, secular scientists only consider valid, information obtained through observation senses”, wrote Mulyadi Kartanegara as quoted by Armai Arief.³

Furthermore, in the tradition of dichotomous scientific thought as above, it certainly has strong and long historical roots in the body of Muslims. The discourse on the integration of science and religion has appeared for quite a long time, although it does not always use the word integration explicitly, among Muslims the need for guidance of science and religion, or common sense or revelation, has been widely circulated. It is quite popular among Muslims the view that during the intellectual heyday of Islamic civilization, science and religion were integrated. Meanwhile, in classical Islamic education, there has been a *postcentric-integralistic pattern* pioneered by rational or philosophical scientists, such as Ibn Sina, Ibn Farabi, Ibn Khaldun and Ibn Rushd, who are dealing with specific patterns of developing religious scholarship on the other hand, especially those developed by hadith, fiqh, and Sufi scholars. The diamantal separation between the two and other political-economic reasons have resulted in the decline of the Islamic world to a later phase.⁴

What is presented above, in this context becomes important to note. It's not only about the emergence of the dichotomy of science itself, but how arrogant science is that seems to be "independent" without ever greeting other fields of science. Moreover, at the practical level, if science only considers it valid on sensory, positivistic, quantitative sources, then ignores scriptural-religious elements, then the science produced will only make "human machineization". Moreover, at the practical level, other factors, especially capitalism, play a dominant role in determining the direction of knowledge development. As a

³ Armai Arif, “Rekonstruksi Epistemologi Pendidikan Islam Monokotomik” dalam *Kata Pengantar Dikotomi Pendidikan Islam*, (Bandung: PT Remaja Rosdakarya, 2001), III.

⁴ Aris Muzhiat and Mulyadi Kartanegara, “INTEGRASI ILMU DAN AGAMA; STUDI ATAS PARADIGMA INTEGRASI, KOMPARASI, DIFUSI MENUJU PERGURUAN TINGGI KEAGAMAAN ISLAM NEGERI (PTKIN) YANG UNGGUL,” *Al Qalam* 37, no. 1 (June 30, 2020): 72–73, <https://doi.org/10.32678/alqalam.v37i1.3648>.

result, what happens is that science is only for market purposes, not science for welfare and the human process towards goodness.

On the other hand, if the source of knowledge is only *scriptural* in the form of scriptures and prophetic traditions, rejecting sensory truth, then Islamic scholarship will not be able to answer human needs, even though Islam was born to answer all problems that exist in humans.

Today, the Islamic movement in "general" universities is gaining momentum after the reformation. If in the New Order era, the campus Islamic movement had to act ' *underground* ', this is not the case now. They show that their Islamic identity is very strong, even though they are people who study *fardhu kifayah sciences* - borrowing al Ghazali's division of knowledge - although of course there are certain motives, besides the religious motive itself.⁵

Some of the "general science" based campuses that the author has met include the Bandung Institute of Technology (ITB) which shows how strong Islam is. Even the Salman mosque (campus mosque) has become a very strong center for da'wah, economics and integrative education. In this mosque, students and the surrounding community not only learn general sciences, but also explore Islam, grow the creative economy and other social aspects. What should be appreciated is that the Salman ITB mosque is able to pay all its employees and has a net income of 100 million per month. In addition, they are also responsive to social problems (they have a social disaster team along with the equipment), and finally they made a breakthrough by providing revolving loans to local residents who were trapped by loan sharks (*ribawi*).⁶

This fact shows that, there is a "longing" among the "secular campuses" regarding religion. They need an oasis for their life. So far, their studies have focused on the *kauniyah verse* , while the *qauliyah verse* is so rare. Not only that, in their academic studies of science and technology they often agree with the Qur'an. This discovery further strengthens their belief about the truth of the Qur'an.⁷

On the other hand, Islamic campuses that deal with Islamic studies, especially in *tarbiyah*, *shari'ah* , and *ushuludin studies* are still stuttering about the

⁵ Lihat penelitian Zuli Qodir, *Islam Kampus dalam Perubahan Politik Nasional: Studi Keislaman Masjid kampus di Jogjakarta*, Jurnal Studi Islam Volume 18, No. 2, 2012.

⁶ Saat penulis di tingkat magister (S2), penulis melakukan studi banding ke Masjid Salman Institut Teknologi Bandung (ITB). Di Masjid ini penulis melakukan observasi singkat mengenai keberagamaan di Masjid Salman ITB

⁷ Salah satu nama yang begitu populer adalah Agus Mustofa, dosen Teknik Nuklir ini sudah menghasilkan berbagai karya terutama tema-tema yang ada dalam al Qur'an lalu dikuatkan dengan argument sains.

social dynamics that occur (*waqiiyah*) . In fact, social dynamics continue to change along with the rapid flow of information. Finally, Islamic studies are only able to do *repetition* on the same issue . The stagnation at a certain level makes the study of the past become deserted by enthusiasts, it can even experience suspended animation. For this reason, so that this problem does not dissolve, Islamic studies seem to need to integrate with other disciplines. Moreover, the challenges that are visible in front of the eyes are the development of science and technology.

It must be admitted, many benefits are taken by humans related to the development of science and technology. But the development of science and technology without being balanced by spiritual values will lead to what Sayyed Hosein Nasr terms a "modern world crisis". According to him, as quoted by Tris Astutik H. by various crises that hit modern humans such as ecological crises, epistemological crises and even existential crises, starting from the rebellion of modern humans against God as a result of what was embraced in the Enlightenment era, namely positivism-anthropocentric. So that the science that is created is only based on reason, without the light of the intellect.

Humanitic decadence in modern times occurs because humans have lost the direct knowledge of self and self that they always have. Modern humans have rebelled against God by creating a science that is not based on *intellect* but based on positivism.⁸ This means that modern humans in the achievement of their work are more concerned with the aspect of "material gain" ignoring the values that should exist in their lives: spiritual! As a result, modern man slowly loses the "wheel" that leads him to serenity.

Such a mindset and science is a consequence of the Western framework and worldview which has released spiritual values. According to Alparслан Acikgenc, thinkers or scientists will work according to their perspectives related to the framework and view of life they have. The results of the *research* and the resulting policies will be influenced by these two things. The West which has materialistic rationalism will produce positivistic science that is free from spiritual values. This is because rationalism puts forward reason in knowledge which results in the assumption that truth can only be reached by reason logically. Another consequence is the elimination of cosmological knowledge as a metaphysical doctrine that explains the relationship between matter and

⁸Tri Astutik H, Modernitas Dalam Perspektif Sayyed Hosein Nasr, Jurnal Penelitian Vol. 8. No. 2 November 2011. H. 316.

revelation.⁹ In fact—modern humans arrogantly—spread a narrative that says that science has been able to replace the role of religion, so that religion is no longer needed.

2. Conceptual Framework for the Integration of Islam and Science in Higher Education, the Cobweb Model or the Tree of Science

In M. Amin Abdullah's observation, the new scientific paradigm that unifies, not just combines divine revelation and the findings of the human mind (Holistic-Integralistic Sciences), it will not result in reducing the role of God (secularism) or ostracizing humans so that they are alienated from themselves. from the local community and the surrounding environment. It is hoped that the concepts of integration and reintegration of scientific epistemology will simultaneously be able to resolve conflicts between extreme secularism and negative fundamentalism of religions that are *rigid* and radical in many ways.¹⁰

M. Amin Abdullah gave an example of an integralistic science with the prototype of an integrative scientist that he produced. An example in the practice of sharia economics, which is already evident there is a unification practice between divine revelation and the findings of the human mind. There are BMI (Bank Muammalat), BNI Syariah, agribusiness, transportation, marine and so on. Religion provides ethics in economic behavior including profit sharing (*al mudharabah*), and cooperation (*al-Musyarakah*). There is a process of objectification of religious ethics into religious knowledge that is beneficial for people of all religions, non-religious or even anti-religious.¹¹

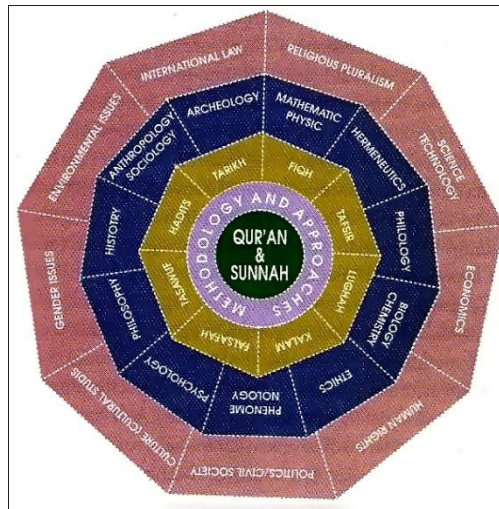
From this idea, it seems that Amin Abdullah wants to make religion a spirit (value/ethics) for scientific building. So that the resulting product is truly of human-religious value and is beneficial for all humans in general. In addition, the knowledge produced is no longer an attribute of a particular religion, but belongs to everyone, even if they are not religious.

It becomes interesting, if we look at the horizon of the theanthropocentric-integralistic cobwebs below;

⁹ Afith Akhwanudin, "Sains Modern Dan Urgensi Sentralitas Nilai Transenden Dalam Pengembangan Ilmu Pengetahuan," *Farabi (e-Journal)* 16, no. 2 (December 31, 2019): 109, <https://doi.org/10.30603/jf.v16i2.1083>.

¹⁰M. Amin Abdullah, *Islamic Studies in Integrative-Interconnective Approach Universities*, (Yogyakarta: Pustaka Pelajar, Cet. II, 2010), 104-105.

¹¹Ibid.



Gambar I. (Jaring Laba-Laba)

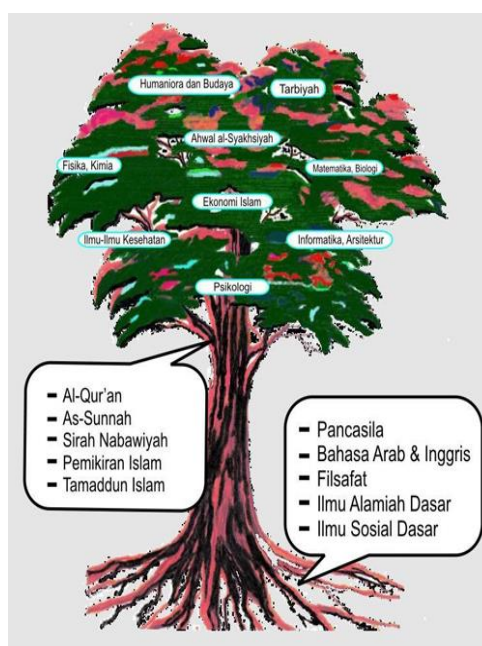
The picture explains that the source of all knowledge is the text of the Qur'an or kalamullah and the universe (natural law) sunatullah. So that all the knowledge written in the image of the spider web above is excavated and developed from the two sources of kalamullah and sunatullah. It is clear that they are connected to each other. The lines that limit one knowledge indicate an open door for mutual acceptance of other knowledge.¹² The picture above also shows that the main spirit of scientific development in Islamic educational institutions remains focused on the Qur'an and As-Sunnah. In other words, the development of knowledge in Islamic educational institutions should not deviate from the teachings of the Qur'an and As-Sunnah.

It's just that, according to Amin Abdullah, the radius of the coverage of scientific activities and especially religious education in religious universities, especially IAIN and STAIN throughout the country, only focuses on circle 1 and layer 2 paths (Kalam, Philosophy, Sufism, Hadith, Date, Fiqh, Tafsir, Lughah). Even then, it can be said that it is only limited to the space for the classical humanities scientific approach. Currently, IAIN has not been able to enter discussions of contemporary social sciences and humanities as illustrated in Circle 2 (Atropology, Sociology, Psychology, Philosophy and the various theoretical approaches it offers). As a result, there is an unbridgeable gap in Islamic insight between the classical Islamic sciences and the new Islamic sciences that have

¹² "Jaring Laba-Laba, Interaksi-Interkoneksi Universitas Islam Negeri Sunan Kalijaga Yogyakarta | JIIP - Jurnal Ilmiah Ilmu Pendidikan," January 14, 2022, 306, <http://jiip.stkipyapisdompu.ac.id/jiip/index.php/JIIP/article/view/413>.

utilized the analysis of the contemporary social sciences and humanities, and even the natural sciences.¹³ These weaknesses must receive the main attention so that scientific development can be maximized by not violating the principles of the Qur'an and As-Sunnah as the main foundation. In fact, the Qur'an and As-Sunnah should be the main inspiration in the development of Islamic scholarship. It is not only used as an ethical basis as has been believed by Islamic intellectuals. There are many values of the Qur'an and As-Sunnah that need to be re-explored with various approaches so that the development of Islamic scholarship is truly based on the values of the Qur'an and As-Sunnah.

Meanwhile, if you look at the scientific development at the Maulana Malik Ibrahim State Islamic University (UIN) Maliki Malang, which introduced the concept of "the tree of knowledge", there are several interesting things to observe. Even though *the ending* of the concept of "tree of knowledge" and the concept of "spider web" have the same goal, namely scientific development, there are some things that are different. Look at the image below;



Gambar 2. Pohon Ilmu UIN Maliki Malang

The building of the university's scientific structure is made aware of the universality of Islamic teachings. The metaphor used is a tree that is sturdy, shady branches, fertile leaves, and bears heavy fruit because it is supported by strong

¹³Ibid, 108.

roots. Strong roots not only function to support the tree trunk, but also absorb soil content for tree growth and development.

The tree root symbolizes the university's scientific foundation. These include: Arabic, English, Philosophy, Natural Sciences, Social Sciences and Citizenship Education. The mastery of this scientific foundation is the basic capital for understanding all aspects of Islamic scholarship, which is described as the tree that becomes the identity of students, namely the Qur'an and Sunnah, Sirah Nabawiyah, Islamic thought and Islamic social insight.

The branches and branches represent the academic fields of the university that are constantly growing and developing , namely: Tarbiyah, Syari'ah, Humanities and Culture, Psychology, Economics and Science and Technology. Flowers and Fruits describe the whole and the benefits of this university's educational efforts, namely faith, piety and knowledge.¹⁴

If we understand these two concepts ("Scientific Cobweb" and "Tree of Knowledge") there are interesting things from both of them. The scientific spider web uses the concepts of the Qur'an and Sunnah as the main building so that Islamic values reach out to other scientific fields. In short, the concept of a scientific spider web is not much different from the process of Islamization of science that has been developed. In short, this concept from "Islamic" to "Secular" values gave birth to Islamic disciplines/Islamic ethics.

While the concept of "tree of knowledge" is just the opposite. This concept strengthens his scientific foundation in aspects of language, natural sciences, social sciences, and Pancasila to then read/understand the Qur'an, As Sunnah and Sirah Nabawiyah, Islamic thought and Islamic social insight. In short, the concept of the tree of knowledge started from the direction of 'secular to Islamic understanding' and then gave birth to Islamic disciplines/Islamic ethics.

3. Core Scientific Structure: *Tarbiyah, Shari'ah and Usuluddin* , What's next?

The anxiety of various groups with the various changes from STAIN/IAIN to UIN deserves to be pondered. However, the main task of STAIN/IAIN is to organize core Islamic knowledge and to produce future Islamic scholars . Another concern is that the change from STAIN/IAIN to UIN has made Islamic faculties (Tarbiyah, Syari'ah and Usuluddin) afraid of lack of interest. Moreover, to borrow Mukti Ali's term that "ulama are never born apart from pesantren institutions",

¹⁴ Lihat Pedoman Pendidikan Universitas Islam Negeri (UIN) Maulana Malik Ibrahim Malang 2014, h 5.

which means that universities cannot print/have not been able to produce scholars. This also means that Islamic universities (STAIN/IAIN) are still unable to compete with Islamic boarding schools in the mastery of Islamic scholarship.

Borrowing the term Azyumardi Azra, universities have advantages in terms of rationality and experimentation. Meanwhile, Islamic boarding schools are the traditional world of Islam, namely the world that inherits and maintains the continuity of Islamic traditions developed by scholars from time to time, not limited to certain periods in Islamic history.¹⁵

So, so that STAIN/IAIN students who have excelled in terms of rationality and experimentation, should also be able to inherit and maintain the continuity of Islamic tradition so that they can become complete scholars, think rationally and experimentation on the one hand and maintain tradition continuity on the other.

It would be more advanced, if rationality and experimentation also involved other sciences, so that the Islamic scientific building at STAIN/IAIN became solid because it was supported by rationality and experimentation, supported by other scientific fields (science and humanities) while maintaining (good) tradition continuity. written by Islamic scholars in a certain period.

4. Integration of Islam and Science: What are the Benefits for Humans.

As stated at the outset, currently the development of science has separated from transcendent values, because from the beginning the idea of science that was developed was "value-free". Science, arrogantly, no longer needs the role of spirituality. As a result, nowadays it is not humans who control science but science that controls humans. Predictably, in the *end* , humans are the ones who lose.

In fact, if we pay attention to, for example, at the beginning of learning the Qur'an is placed as an umbrella or source of inspiration that overshadows various phenomena in Biology, then in this model the discussion of a finding in Biology or Biology research, is "returned" or confirmed with the Qur'an. an. Thus, analysis and synthesis in Biology are never separated from what has been revealed in the Qur'an. An example is the acquisition of data on trichomes (hairs on the epidermis of leaves, for example soybean leaves) which have different densities. Leaves that have a high density of trichomes will have a high resistance to attack by armyworm (*Spodoptera* sp.) compared to leaves with a low density of trichomes. What if Allah swt created all soybean leaves with high trichome densities? So it

¹⁵ Baca Azmuradi Azra, *Pendidikan Islam: Tradisi dan Modernisai Menuju Milenium Baru* (Jakarta : Logos), h. 107.

can be ascertained that no armyworms can live because all of them cannot eat due to being disturbed by Trichoma. On the other hand, if all soybean leaves have low density trichomes, then all soybean leaves will be consumed by armyworms. Based on this data acquisition, then an analysis of the relationship with QS Al-Mulk verses 3-4 or other verses of the Qur'an is carried out. This is the model of integration with confirmation ("returned") to the Qur'an.¹⁶

Islam as a religion that has ethical values, it is appropriate to take action on the problems of today's civilization. The idea of integrating Islam and science is at least expected to make science able to carry ethical messages that can be used by humans. If these ethical values have entered the realm of science, they have become the *frame* of science scientists, producing science that is friendly to human life becomes a necessity . ethical science.

D. Conclusion

Today's universities, realize that science cannot stand alone, science must greet each other with other sciences. Some public universities that work on the subject of general science, feel the need to use *scripturalis-religious elements*, if not, then the science produced will only make "human machineization". Meanwhile, in the field of religion (PTAI), they also feel the need to build a relationship with science, because contemporary *issues (waqiiyah)* also require science.

The scientific spider web uses the concepts of the Qur'an and Sunnah as the main building so that Islamic values reach out to other scientific fields. In short, the concept of a scientific spider web is not much different from the process of Islamization of science that has been developed. In short, this concept from "Islamic" to "Secular" values gave birth to Islamic disciplines/Islamic ethics.

While the concept of "tree of knowledge" is just the opposite. This concept strengthens his scientific foundation in aspects of language, natural sciences, social sciences, and Pancasila to then read/understand the Qur'an, As Sunnah and Sirah Nabawiyah, Islamic thought and Islamic social insight. In short, the concept of the tree of knowledge started from the direction of 'secular to Islamic understanding' and then gave birth to Islamic disciplines/Islamic ethics.

It is important to note that the existence of an integrative paradigm in the scientific context between *transmitted knowledge* and *acquired knowledge* is

¹⁶Eko Budi Minarno, "INTEGRASI SAINS-ISLAM DAN IMPLEMENTASINYA DALAM PEMBELAJARAN BIOLOGI," *Seminar Nasional Teknologi Informasi Komunikasi dan Industri*, no. 0 (May 19, 2017): 668, <http://ejournal.uin-suska.ac.id/index.php/SNTIKI/article/view/3253>.

expected to create a holistic and not partial academic atmosphere. So that the barriers of specialization in certain fields of knowledge do not result in the formation of myopic-narcissistic insight, and the range of knowledge also does not limit itself to facts or the introduction of immanent finalities, all of which are only seen in its "pragmatic" meaning. However, there is also the existence of a transcendent meaning or finality of science, that is, something beyond science which is the significance and direction of something in its "teleological" sense .¹⁷

Basic Islamic science (*Tarbiyah, Sharia, Usuluddin*), must be able to come into contact with science so that the building of Islamic scholarship at STAIN/IAIN becomes solid because it is supported by rationality and experimentation, while maintaining (good) continuity of traditions written by Islamic scholars in a certain period.

The idea of integrating Islam and science is at least expected to make science able to carry ethical messages that can be used by humans. If these ethical values have entered the realm of science, they have become *the frame* of science scientists, producing science that is friendly to human life becomes a necessity. So that science can really benefit human life and nature.

¹⁷ Iis Arifudin, "Integrasi Sains dan Agama serta Implikasinya terhadap Pendidikan Islam," *Edukasia Islamika*, March 2, 2017, 173–74, <http://e-journal.iaipekalongan.ac.id/index.php/edukasiaislamika/article/view/774>.

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