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The Concept of Religion-Science Integration: A Comparative Study of Naquib Al-Attas and Nidhal Guessoum

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Abstract
The integration of religion and science has garnered significant attention, as evidenced by the contributions of prominent Muslim thinkers such as Naquib Al-Attas, Ismail Al Faruqi, Mehdi Golshani, Ziauddin Sardar, and Nidhal Guessoum. This study aims to compare the perspectives of Naquib Al-Attas and Nidhal Guessoum regarding the integration of religion and science, using a literature review with a comparative descriptive approach and content analysis techniques. The findings reveal that Naquib Al-Attas's concept of integration emphasizes three key aspects: a paradigm shift from Westernization to Islamization, a focus on language, and fostering ethical-moral values through *ta'dīb*. In contrast, Nidhal Guessoum highlights three distinct elements: the non-conflictual nature of science and religion, a layered interpretation of the Qur'an, and a theistic-falsification principle. The study identifies common ground between the two thinkers, including critical analysis of the origins of science, layered identification, and the incorporation of religious values. However, their differences lie in Naquib's critique of the emergence of science versus Nidhal's critique of the Islamization model, Naquib's language-based approach versus Nidhal's multilevel Qur'anic interpretation, and Naquib's emphasis on Islamic ethics-morals versus Nidhal's integration of sacred texts and reason under a theistic framework. The study concludes that Muslims should Islamize Western science by embedding ethical-moral *ta'dīb*, facilitating a harmonious dialectic between religion and science, wherein religion provides foundational values and science incorporates theistic principles.

Keywords: Integration of Religion and Science; Naquib Al-Attas; Nidhal Guessoum

Abstrak

Integrasi agama dan sains telah menarik perhatian yang signifikan, sebagaimana dibuktikan oleh kontribusi para pemikir Muslim terkemuka seperti Naquib Al-Attas, Ismail Al Faruqi, Mehdi Golshani, Ziauddin Sardar, dan Nidhal Guessoum. Penelitian ini bertujuan untuk membandingkan perspektif Naquib Al-Attas dan Nidhal Guessoum mengenai integrasi agama dan sains, menggunakan tinjauan pustaka dengan pendekatan deskriptif komparatif serta teknik analisis konten. Temuan menunjukkan bahwa konsep integrasi Naquib Al-Attas menekankan tiga aspek utama: perubahan paradigma dari Westernisasi ke Islamisasi, fokus pada bahasa, dan penanaman nilai-nilai etis-moral melalui gerakan *ta'dīb.* Sebaliknya, Nidhal Guessoum menyoroti tiga elemen yang berbeda: sifat non-konflik antara sains dan agama, interpretasi berlapis terhadap Al-Qur'an, dan prinsip falsifikasi-teistik. Studi ini mengidentifikasi kesamaan di antara kedua pemikir, termasuk analisis kritis terhadap asal-usul sains, identifikasi berlapis, dan penggabungan nilai-nilai agama. Namun, terdapat perbedaan pada kritik Naquib terhadap kemunculan sains dibandingkan dengan kritik Nidhal terhadap model Islamisasi, pendekatan berbasis bahasa Naquib dibandingkan dengan interpretasi bertingkat Al-Qur'an oleh Nidhal, dan penekanan Naquib pada etika-moral Islam dibandingkan dengan integrasi teks-teks suci dan akal oleh Nidhal di bawah kerangka teistik. Penelitian ini menyimpulkan bahwa umat Muslim sebaiknya mengislamisasi sains Barat dengan memasukkan nilai-nilai etis-moral *ta'dīb,* sehingga memfasilitasi dialektika yang harmonis antara agama dan sains, di mana agama menyediakan nilai-nilai dasar dan sains mengintegrasikan prinsip-prinsip teistik.

Kata Kunci: Integrasi Agama dan Sains; Naquib Al-Attas; Nidhal Guessoum

Introduction

According to Naquib Al-Attas and Nidhal Guessoum, the urgency of integrating religion and science arises from the way modern society engages with science, which often contributes to the degradation of human civilization. In the name of scientific progress, both human and non-human subjects are often reduced to objects of exploitation and manipulation, with nature itself being treated as a mere resource for human use. This anthropocentric view leads to an increasingly antagonistic relationship between humans and nature. However, there is no inherent conflict between science and religion; they are deeply interconnected (Amrillah and Hakim 2022). From a religious perspective, Islam in particular, humans are called to collaborate in building civilization, and to maintain a positive stance on science and social issues concerning human interactions (Taqiyuddin 2021). Furthermore, the degradation of Islamic education caused by modernization highlights the need to restructure human knowledge to rediscover the essence of Islamic values (Muslim, 2023).

Previous studies on the integration of religion and science were first pioneered by Naquib Al-Attas through his concept of the Islamization of knowledge. His foundational work, *Islam and Secularism* (1931), examined the degradation of knowledge and religion within

the context of modernity. Al-Attas further developed his ideas with a philosophical approach in *The Concept of Education in Islam* (1980), where he elaborated on the role of education in preserving Islamic values while engaging with modern science. Al-Attas' ideas gained wider recognition and were echoed by Ismail Raji Al Faruqi in his book *Islamization of Knowledge* (1981), which explored how the process of Islamization functions in scientific inquiry. Muhammad Taqiyuddin also referenced Al-Attas in his work, *The Relationship between Islam and Science: The Offer of Syed Muhammad Naquib Al-Attas*, further examining Al-Attas' ideas. Several other scholars have engaged with similar themes, such as Taha Jabir al-Alwani in his book *The Islamization of Knowledge: Yesterday and Today* (1995), and Mehdi Golshani's *How to Make Sense of 'Islamic Science?'* (2000). Ziauddin Sardar has also contributed to the discourse, notably with *The Islamic World* (2017) and *Rethinking Reform in Higher Education: From Islamization to Integration of Knowledge* (2019), co-authored with Jeremy Henzell-Thomas. In these works, Sardar and Henzell-Thomas critique and extend Al-Faruqi's ideas, advocating for a shift from Islamization to a more integrated approach to knowledge.

Several studies have also explored Nidhal Guessoum's ideas on the integration of religion and science. One of Guessoum's notable works, *The Qur'an, Science, and the (Related) Contemporary Muslim* (2008), examines the interaction between scientific inquiry and Islamic thought. In another influential piece, *Science, Religion, and the Quest for Knowledge and Truth: An Islamic Perspective* (2010), Guessoum offers a deeper analysis of how science and religion can coexist in the pursuit of truth. He further elaborates on these themes in *Reviews on Religion and Science around the World*, (2015), which discusses global perspectives on this discourse. Guessoum's ideas have been influential in shaping academic thought, as reflected in works such as Achmad Khudori Soleh's *Quantum Integration of Religion and Science* (2023) and *The Quantum Approach in the Integration of Religion and Science* (2018), which draw on Guessoum's framework. Additionally, Zulpa Makiah's study, *Reconciliation of Islam and Science in the Perspective of Nidhal Guessoum* (Makiah 2021), explores how Guessoum's thoughts offer a middle ground between religious and scientific paradigms. Regional intellectuals have also engaged with Guessoum's ideas, including Ilyas Daud, who reviewed Guessoum's work in *Islam and Modern Science: A Review of Nidhal Guessoum's Thought* in *Islam's Quantum Question: Reconciling Muslim Tradition and Modern Science* (2010). These diverse responses reflect the ongoing relevance of

Guessoum's work, making the integration of religion and science a significant and widely discussed topic in contemporary discourse.

The purpose of integrating religion and science is to shift the prevailing view that there is a fundamental dichotomy between the two. By exploring this integration more deeply, the aim is to dismantle this division and demonstrate the compatibility and mutual benefits that religion and science offer. As we move into modern times, it is crucial to develop ideas that bridge the gap between religion and science, especially in the context of Muslim efforts to advance knowledge in both fields. The integration of religion and science offers a dialogical approach, where religion can support and enrich scientific endeavors, and science, in turn, can deepen the understanding of religious principles. Without a foundation in religion, science risks losing its moral and ethical compass, while religion, without the support of scientific inquiry, can become rigid and disconnected from empirical realities. Therefore, religion and science are inherently connected and must continue to inform one another. The author hopes that this research inspires further exploration in this area, particularly among contemporary scholars, policymakers, and stakeholders as they face the challenges posed by Western ideologies to Islamic civilization (Batubara 2022). The ultimate goal is for the messages of Islam to be effectively communicated, helping individuals embody noble morals and respond to the evolving challenges of the modern world with wisdom and insight (Suraijiah 2020).

Method

This research centers on the integration of religion and science by examining and analyzing the ideas of Naquib Al-Attas and Nidhal Guessoum. The study draws on a variety of sources, including previous research on Naquib and Nidhal's works, as well as relevant thematic studies found in books and academic articles. The methodology involves a literature review, utilizing both primary and secondary data. The primary sources consist of Naquib and Nidhal's key works, such as *Islam and Secularism* and *The Qur'an, Science, and the (Related) Contemporary Muslim*. Secondary sources include articles from other scholars that address the integration of science and religion. Through thorough investigation and careful analysis of these sources, this study seeks to uncover insights and produce valid, meaningful conclusions on the topic (Umar Sidiq & Miftachul Choiri , 2019).

This study analyzes the writings of Naquib Al-Attas and Nidhal Guessoum, focusing on their differing views on the integration of religion and science. Naquib Al-Attas argues that it is essential to separate scientific elements that have been influenced by Western secularism, culture, and the dualistic nature of Western civilization. His approach emphasizes the philosophical need for Islamization to restore an Islamic worldview in science. In contrast, Nidhal Guessoum believes that science should not be confined to a materialistic perspective but should embrace a theistic paradigm. According to Guessoum, God interacts with the universe through a process of divine maintenance, where the universe consists of both material and metaphysical realities. He calls for a scientific methodology grounded in this theistic view, allowing for a broader understanding of reality that includes spiritual dimensions. This research connects three key paradigms: the Islamization of science as proposed by Naquib Al-Attas, Nidhal Guessoum's theistic approach to science and religion, and the principles of integration from thinkers like Ismail Raji Al-Faruqi, Taha Jabir Alwani, Ziauddin Sardar, and Mehdi Golshani. The study is structured through data collection, analysis, and the presentation of conclusions drawn from these diverse perspectives.

Naquib Al Attas's Islamization Of Science

Naquib Al-Attas is recognized as one of the early pioneers of the concept of Islamization of Science. He introduced this idea at the first International Islamic Education Conference in Makkah in 1977 (Sutrisno 2021). Al-Attas identified modern secular Western science as a significant challenge for Muslims, arguing that Western science is not neutral but is imbued with the values, ideas, and doctrines of Western culture and civilization (Maros and Juniar 2016). Al-Attas believes that knowledge is a profound interaction between the soul and meaning, producing desire and self-will. He defines education therefore as the process of instilling values and knowledge in individuals, with the ultimate goal of developing universally good human beings, or *al-insan al-kamil* (Novayani 2017).

In terms of methodology, Al-Attas believes that the Islamization of science aims to liberate human reason from doubt, prejudice, and empty argumentation, guiding it toward belief and truth in both spiritual and material realities (Bistara 2021). He views Sufism as the primary source for achieving this, arguing that Sufism enables the human spirit to break free from secularism, achieving harmony and inner peace in alignment with human nature

(Muttaqien 2019). For Al-Attas, all knowledge ultimately comes from Allah and is interpreted by human faculties, demonstrating that knowledge in Islam is both absolute and unlimited (Sutrisno 2021). Al-Attas connects this concept of Islamization with the early efforts of the Prophet Muhammad, who spread the teachings of faith (*tawhid*) and worked to elevate human morality. For Al-Attas, this effort represents an improvement in the value of faith in Allah, as captured in the declaration, *There is no God but Allah* (Puspitasari 2022).

Al-Attas' ideas on Islamization of science have parallels with other scholars. His thoughts on freeing human reason from doubt resemble those of Ismail Raji Al-Faruqi, another key figure in the Islamization of Science movement (Muslem 2019). Similarly, contemporary thinker Ziauddin Sardar echoes Al-Attas' emphasis on the collaboration between scientists and religious scholars, stressing the importance of intellectual jihad in integrating Islamic values with science (Muttaqien 2019). Osman Bakar, another Muslim scholar, aligns with Al-Attas on the importance of Sufism in fostering spiritual wisdom and dispelling doubt (Muttaqien 2019). Finally, Al-Attas' thoughts on the cultivation of Islamic values through ta'dib bear similarities to Al-Ghazali's concept of restoring manners and developing spiritual wisdom (*ihyā ulīm ad-dīn*) (Maros and Juniar 2016).

Criticisms of Naquib al-Attas from Other Thinkers

Ziauddin Sardar argues that the separation of secular and religious knowledge can create a dichotomy that undermines holistic understanding (Fadly 2023), By rejecting non-Islamic epistemologies, the process of Islamization can ignore the validity of insights from other religions, potentially strangling collaborative discourse (Puspitasari and Yuliana 2022), Rigid adherence to an Islam-centric view can create barriers to understanding and appreciating religious experience (M. Hanif and Prasetianingtiyas 2023).

The paradigm of Naquib's idea of the integration of Religion and science "Islamization", is the liberation of man from the shackles of myth and the control of secular language that shackles the freedom of reason and belief in things that are real and true. According to Naquib, the Islamization of science is closely related to the liberation of humans from the goals of life that are worldly in nature, but also encourages humans to carry out all activities with *ukhrawi* goals (Al-Attas 1980).

For Naquib, the separation of the world and the afterlife in all human activities is

unacceptable. Because everything we do in this world will always be related to our life in the hereafter, including the development of science in its praxis, religion serves as a means of controlling science. In another sense, the Islamization of science is a form of uniting the framework of thinking and praxis (epistemological and axiological) of Muslims towards modernity (Dr. H.A. Khudori Soleh 2016). *First,* paradigmatic concept, De-Westernization, is to separate culture, civilization, and secularity within the framework of a Western body of thought that only uses rational and empirical reasoning. *Secondly*, that the mind, body and soul of man must be Islamized in order to have an impact on human life. One of the goals is to instill the essence of the Muslim by encouraging the Muslim's faith in Allah (Taqiyuddin 2021). Then Islamization produces an Islamic worldview which is referred to as *ru'yatu al-Islām lil wujūd*; namely the Islamic vision of reality and truth derived from the revelation of the Qur'an to the Islamic Religion through the prophethood of Muhammad SAW (Nidzom, Zarkasyi, and Lahuri 2023).

The Islamization of language, as opposed to Arabization, is exemplified in the Qur'anic verse (Al-Hujurat: 13), where the word *Karim*, which originally referred to nobility by lineage, is redefined in the Qur'an to mean *glory through piety* (taqwa) in the sight of God. This represents a significant shift in meaning, where the old linguistic concept was transformed into a new, Qur'anic understanding (Khudori Soleh 2016). The process of language Islamization took place as Middle Eastern scholars spread Islam across various regions, such as the archipelago. In these areas, Arabic was not the daily language, but scholars (such as the *Wali Songo*) redefined the meanings of the local language to align with Islamic teachings. For instance, Javanese terms originally associated with polytheism were reinterpreted into expressions of *Tawhid* (the oneness of God) through cultural elements like songs, poems, and traditional Javanese texts. This approach deeply embedded *Tawhid* within the local Islamic community. The primary goal of language Islamization is twofold: first, to transform the understanding of language based on the Islamic worldview, and second, to prevent linguistic meanings from being influenced by secularization and modernity (Mujahadah et al. 2022).

The integrating principles of Naquib "Islamization" are: 1) The concept of religion (*diin*); 2) The concept of human (*insan*); 3) The concept of knowledge (*ilm and ma'rifah*); 4) The concept of wisdom (*hikmah*); 5) The concept of justice (*adl*); 6) The concept of right

action (*amal as adab*); and 7) The concept of university (*kuliyyah jāmi'ah*) (Nidzom, Zarkasyi, and Lahuri 2023). In the context of science, point number 6 becomes the focal point of integration, emphasizing not just empiricism but also the importance of incorporating Islamic moral and ethical values into modern scientific practices. While it is true that science operates within a positivistic, empirical framework, it is not value-free. Science requires a guiding framework of ethical principles, and Islamic moral ethics serve as a crucial control mechanism. Although science excels at testing observable phenomena, it falls short in addressing intangible aspects like feelings and values. Conversely, these ethical dimensions, rooted in Islamic teachings, help ensure that scientific endeavors remain aligned with broader moral and social concerns.

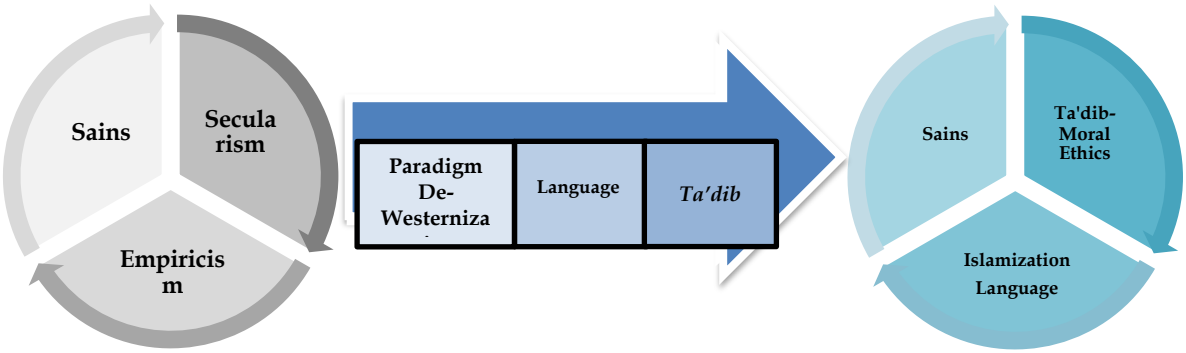

Figure 1. Scope of integration Religion and science

Family and Educational Background of Nidhal Guessoum

Nidhal Guessoum was born in Algeria in 1960 and grew up in a family of great historians. His primary and secondary education was carried out in Algeria, with Arabic and French being the languages of instruction (Hanafi 2024). Guessoum continued his education at the Algerian University of Science and Technology, where he pursued a Bachelor's degree in Theoretical Physics and was named the best graduate. He then continued her master's and doctoral studies at the University of California, USA (Hanafi 2024).

After completing her higher education, Guessoum took a post-doctoral program at the NASA Research Center, USA, from 1988 to 1990. Afterward, he became a lecturer at the University of Blida, Algeria, and then Assistant Professor at the College of Technological Studies, Kuwait. In 2000, he moved to the United Arab Emirates and became a full Professor at the American University of Sharjah in 2008 (Makiah 2021), *Islam's Quantum Question*

Reconciling Muslim Tradition and Modern Science which is popular in Indonesia. Her other works include *Islam Big Bag ed Darwin: Les Quetions Qui Fachent*, *Islam et Science: Comment Consilier Le Corant et La Science Moderne*, and 'Reconcilier l'Islam et La Science Moderne' (Makiah 2021).

Guessoum seeks epistemic reconciliation between Islamic tradition and modern science. He sees that efforts to establish a relationship between religion and science are still very modest and require a more systematic approach. Guessoum also emphasizes that science and religion cannot be compartmentalized because both are the needs and interests of humanity (Holilulloh 2020).

Nidhal Guessoum's Idea on Integration of Religion and Science

Guessoum's thought about the integration of religion, philosophy and science is based on Ibn Rushd's (1126-1198 AD) view that the teachings of religion, philosophy and science come from the same source, namely Allah SWT. Guessoum considers this third aspect as *blood brothers* who reveal the truth in different ways (Holilulloh 2020). Guessoum is critical of some existing models of science integration, such as Sardar's ijmali model, an-Najjār's i'jāz model, and al-Faruqi's Islamization of knowledge model. Guessoum considers that these models contain weaknesses and the need for other alternatives to achieve more effective integration (Makiah 2021). Guessoum also refers to Golshani's thoughts which emphasize that knowledge in Islam should be global and not distinguish between natural sciences, social sciences, religious sciences, or other sciences. Guessoum adds that Muslim scholars during the golden age of Islam had a global vision and view of all sciences (Holilulloh 2020). Thinkers such as Stefano Bigliardi and Zainal Abidin Bagir have engaged with Guessoum's ideas, reflecting a broader interest in reconciling scientific inquiry with religious belief (Herlina 2023).

Guessoum aims to reconcile Islamic tradition with modern science, recognizing that current efforts to bridge the gap between religion and science are still quite limited and in need of a more structured, systematic approach (Makiah 2021). He advocates for the Principle of Non-Contradiction, stressing that religion, philosophy, and science can never be in conflict. According to Guessoum, science is not only relevant to Islam but is also a vital contributor to progress in material, intellectual, cultural, and religious spheres (Hanafi 2024).

Guessoum suggests the convenience of a graded reading of the Qur'ān. He argues

that one's understanding of various Qur'ānic verses depends on one's knowledge, culture and era. This suggests that Qur'ānic interpretation should be dynamic and subject to change in line with scientific developments (A. Hanif 2022). He emphasizes the importance of collaboration between scientists and religionists in developing science. He argues that the history and philosophy of science should be taught to students, and that scientists and religionists should collaborate to publish science books that combine moral values with factual understanding (Holilulloh 2020).

Criticisms of Nidhal Guessoum from other thinkers

Guessoum's reliance on the quantum approach, which asserts that there is no inherent conflict between science and religion, has faced criticism for not fully addressing the deeper philosophical implications (Huda and Habibi 2022). Critics argue that his critique of the education system in the Arab world may overlook the socio-political factors that significantly influence these institutions (Makiah 2021). Additionally, Guessoum's suggestion to integrate theistic science into the educational framework raises concerns about its feasibility and effectiveness, especially in diverse educational settings (Prastowo, Suharto, and Widodo 2023). There are also nuanced objections regarding his treatment of evolution. While modern science widely accepts the theory of evolution as fact, some religious interpretations either reject or remain in conflict with this theory. Critics argue that Guessoum may not adequately address these tensions between science and religion (Musthofa 2021). Furthermore, Guessoum employs the concept of theistic falsification to validate scientific theories, but some critics contend that this approach is insufficient for handling the complexities and diverse interpretations of sacred texts across different religious traditions (Makiah 2021).

Nidhal Guessoum's paradigm for integrating religion and science is built on the premise that the two are not in conflict. He seeks to integrate Islamic law with science, drawing inspiration from the renowned scholar Ibn Rushd. According to Guessoum, Ibn Rushd was an expert in three key fields—Islamic jurisprudence, science, and medicine—and played a significant role in establishing theological foundations (Mubarok & Mansur 2023) Ibn Rushd's influence is evident in three key areas: first, his expertise across multiple disciplines; second, his lasting impact on later thinkers, particularly in the fields of science, technology, and philosophy; and third, his articulation of the harmonious relationship

between religion, science, and philosophy. Guessoum highlights how Ibn Rushd demonstrated that these three fields are not contradictory but interconnected and complementary. Following Ibn Rushd's example, Guessoum promotes the idea that modern science and Islam are not at odds, but rather, can be harmoniously integrated to foster a deeper interest in science among Muslims (Ghazali 2021).

Nidhal's approach to integrating religion and science involves a layered interpretation of the Qur'anic text. He believes that the text must be understood in stages, corresponding to the reasoning capacity of the reader, as human reasoning varies across different contexts and individuals. A single interpretation or subjective understanding is insufficient. Therefore, this multilevel interpretation is intended to foster a meaningful relationship between religion and modern science, ensuring their compatibility and continuous dialogue (Soleh 2018). Nidhal's approach to Qur'anic interpretation involves several key principles. First, he rejects extreme perspectives, particularly claims that the Qur'an contains explicit scientific knowledge or miracles, for various reasons. Second, he advocates for a multiplicity of readings, encouraging multi-level interpretations and insights across different parts of the Qur'an. He believes that the Qur'an should be studied using various tools, including scientific knowledge. For Nidhal, the Qur'an must be approached with seriousness and respect, aligning with Ibn Rushd's hermeneutical principles, which assert that there can be no contradiction between God's word (the Qur'an) and God's work (the natural world).

Nidhal's principle of falsification-theistic provides a methodological framework for understanding the stages of scientific inquiry. These stages include observing and recording information related to phenomena, formulating hypotheses based on the observations, testing these hypotheses to validate their accuracy and predict outcomes, and refining and evaluating the hypotheses through experimental results and observations (Soleh 2018). In addition to this, Nidhal examines the relationship between science and metaphysical concepts, asserting that science is fundamentally built upon a theological worldview. He believes that scientists must recognize certain metaphysical truths, including the idea that the universe is a reflection of God's intelligence, that humans are capable of understanding the universe, and that the universe has contingency—meaning that the object of study may vary from the initial hypothesis, necessitating continuous experimentation and observation. Furthermore, he highlights the existence of objective variables that capture the truth of what

is sensibly observed and stresses the fundamental unity of the universe, with God as the foundation of all things (Guessoum 2008a). In light of these considerations, Nidhal emphasizes the importance of adopting strict scientific methods that are systematic, objective, quantitative, and falsifiable. He argues that this rigorous approach is essential for gaining a correct and wise understanding of the universe (Soleh 2018).

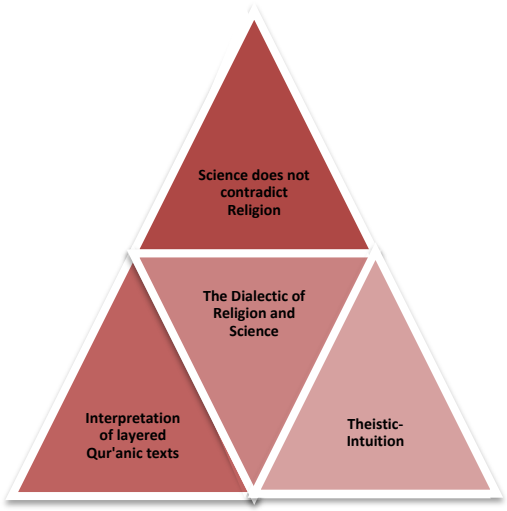

Figure 2. Dialectics of Religion and Science Nidhal Guessoum.

A Comparison of the Thought of Naquib Al-Attas and Nidhal Guessoum

Naquib Al-Attas and Nidhal Guessoum both offer critical perspectives on the dichotomy between religion and science. According to Naquib, the rise of the De-Westernization paradigm is a response to the dominance of the positivistic paradigm in modern science, which has marginalized religion and failed to provide a unified theoretical framework for understanding the world (Bagir 2005). He argues that modern science, under Western influence, has undermined the role of religion in shaping knowledge. On the other hand, Nidhal critiques existing models of integrating science and religion, particularly those proposed by thinkers like al-Faruqi and Ziauddin Sardar. He believes that these models, which rely solely on knowledge from Muslim sources, limit progress and can actually hinder Muslim advancement. However, Nidhal does not reject Naquib's concept of Islamization, as Naquib seeks to separate science from secular and modern influences while still remaining open to knowledge from outside the Islamic tradition, incorporating Islamic values into the

process of "Islamizing" science. This dynamic creates a productive dialogue between religion and science, where Islamic principles serve as a guiding force in shaping modern scientific inquiry (Briggs 2006). Thus, establishing a framework for the Islamization of science, as Naquib envisions, becomes an important foundation for achieving the integration of science and religion, leading to a dialectical relationship between the two, as Nidhal emphasizes (Saiful 2023).

Naquib's approach to the Islamization of language focuses on altering meanings to align with religious values, similar to what was done by the scholars of the old archipelago (Wali Songo). In their work, they transformed the meanings in the local Javanese language, which originally supported polytheism, into expressions of *Tawhid* (the oneness of God) through songs, poems, and other cultural forms. This process helped embed the values of *Tawhid* deeply within the Islamic community. In contrast, Nidhal's approach involves a layered interpretation of the Qur'anic text, aiming to minimize subjective interpretations. His method of multilevel interpretation seeks to bridge the gap between religion and modern science, ensuring both can coexist harmoniously.

Naquib principle is to include Islamic ethical-moral values into the most important concentration of integration, where not only empiricism but the need for Islamic moral ethical values in the body of modern science, the ethical-moral value aspect also plays a role in science products, that science is the positivistic empirical realm is true, but science is not value-free, science needs a control tool in the form of Islamic ethics, because science can test the visible but science is powerless to measure the dimensions of taste and value and vice versa. Meanwhile, according to Nidhal, it is the theistic-falsifiable principle, as a methodological structure, how science works on several stages; 1) Observing, recording information related to phenomena. 2) Make hypotheses based on the phenomenon. 3) Test the hypothesis to determine its validity and predict certain consequences of the results. 4) Evaluate the steps to refine the hypothesis in accordance with the results of experiments and observations.

Nidhal's intersection with Naquib concepts of integration are: 1) Ideas born from critical analysis of the birth of science and critical of the Islamization model. 2) Requires layered identification both identification of meaning in language and identification of multi-level interpretations of the Qur'an (multiplicity readings). 3) Including religious values, in

ethics-morals (*ta'dib*) and incorporating intuitive theistic values of religion into science. Then the point of difference are three things: (1) Naquib criticizes the birth of science, Nidhal criticizes the model of integration of science and religion "Islamization" (2) There are differences in the object of approach where Naquib uses a language approach, Nidhal uses a multilevel interpretation of the Qur'an (3) Naquib focuses on fostering Islamic ethical-moral values, Nidhal has a broader resonance because it uses the object of sacred text (Al-Qur'an) with a combination of reason (science) sourced from "theistic" God.

Table 1. Comparison of the Integration of Religion and Science Naquib Al-Attas and Nidhal Guessoum.

Figure	Integration Model	Paradigm	Approach	Principle
Naquib Al-Attas	Islamization of Science	de-Westernization	Islamization Language	Ethics-morals (*ta'dib*)
Nidhal Guessoum	Integration of religion and science	Religion and science do not conflict	Layered interpretation (Al-Qur'an)	Falsification-theistic

Discussion

The research analysis summarizes the concept of Islamization, according to Naquib, namely; 1) Science as systematic learning about the universe and socio-culture, 2) Interaction with the universe and culture involved by a learning, which is cognitive, ethical and moral, 3) Therefore, ethics and technical become a unity, technical can not be separated from ethical considerations - *Technical is ethics in action*, 4) Because science is full of values, 5) Science contains human subjectivity, being a research methodology, with it scientific blend of objective and subjective, 6) Thus, Muslim scientists are tasked with separating science and human subjectivity in a connected episteme and axiology, in order to achieve cognitive truth and pragmatic benefits for humans (Nasution et al. 2023). According to Ziauddin Sardar, the steps of science integration go through the following: 1) Current scientific design; 2) Ideas; 3) Philosophy and Symbols; 4) Empirical and logical aspects and interrelated aspects of values and ethics; 5) Theorizing about the universe; 6) His explanation of the universe; the logic of natural processes; 7) His view on the actual existence of the world; 8) Classification of knowledge (Nidzom, Zarkasyi, and Lahuri 2023).

The basic consequences of the combination of science and Islam are; 1) The realization of the usefulness of science, 2) The balance of the universe. "*And Allah has raised the heavens and He has set a balance (justice), so that you do not exceed the limit about the balance.*" (*QS Al-Rahmân* l55]: 5-8). 3) Psychic cleansing, in Qur'anic thought, the messages of God's messengers are twofold: teaching religion and cleansing the human soul: "*O our Lord! Send them a messenger from among themselves, who will recite to them Your verses and teach them the Book and wisdom and purify them. Indeed, You are the Mighty and the Wise.*" (*QS Al Baqarah* [2]: 129). 4) Avoiding unreasonable judgment: "*And do not follow what you have no knowledge of. Indeed, hearing, sight and heart will all be held accountable*". (*QS AI-Isra'* [17]: 3. 5). In this case, the perspective of Fiqh, *maqāsid sharīa* and moral-ethical as the basis of scientific steps. Therefore, there is also a need for experts in Islamic sciences as an authority to provide direction, guidance and relevant suggestions. Thus, the hope of benefit, rather than harm to humans and nature (Nidzom, Zarkasyi, and Lahuri 2023).

Research analysis, Nidhal's point of view on the concept of integration of science and religion, includes the following aspects; *First,* integration must be based on a worldview that is not materialistic. *Second,* integration cannot be separated from religious values. That is, integration is not value free (Soleh 2018). *Third,* where the integration of revelation texts becomes the basis of the empirical reality of science and is inseparable between the two. Science in the future must go hand in hand with revelation. *Fourth,* integration becomes a wake of awareness, Muslim openness to the sacred text of the Qur'an so that it can be read with various approaches and methodologies. Then, according to Faruqi;

> "*Muslim academicians must master all the modern disciplines in order to understand them completely and to achieve an absolute command of all that they have to offer" (Al-Faruqi 1981)*

Muslim academics must master all the modern disciplines in order to understand them completely and to achieve an absolute command of all that they have to offer. Then, they must integrate the new knowledge into the corridors of the Islamic heritage by eliminating, transforming, reinterpreting and adapting its components in accordance with the Islamic worldview and values. The exact relevance of Islam to the philosophy and methods and goals of each discipline needs to be determined (Faruqi 1981).

The logical outcome of integrating Islamic values with science is that scientific theories, along with their underlying values, can be understood and refined through the lens of both

Islam and modern science. Collaboration between scientists and religious scholars is essential to produce Muslim innovators and scientists, as seen during periods of Islamic renewal. If scientists ignore metaphysical and spiritual reflections, they risk disconnecting themselves from society. Islamic science, born from the revival of orthodoxy in Muslim countries, is not limited to modern Arab nations but should be revitalized across the Islamic world to foster dynamic and innovative research centers. The hope is that Islamic science will flourish in the coming decades. As Faruqi suggests, Muslim scholars must lead by example, guiding future generations of both Muslims and non-Muslims in advancing human knowledge. By doing so, they will uncover new layers of Allah's creation in nature and pave the way to fulfilling His will and commands (Faruqi 1981).

The analysis of the convergence between the thinkers reveals that their concept of integrating religion and science highlights the need to critique the paradigm of Western science, which is often shaped by cultural influences and the positivistic thinking of the modern era. This paradigm tends to diminish or even undermine the role of religion in scientific inquiry. Nidhal's approach to integration is rooted in the Islamic worldview, asserting that religion and science are not in conflict. He emphasizes the importance of connecting scientific inquiry to Islam through the interpretation of the Qur'an, avoiding subjectivity by applying a standardized, layered interpretation. This method allows science and religion to coexist harmoniously, as they both originate from the same source: God. Religion stems from divine revelation, philosophy from reason, and science from nature. As a result, in practice, science and religion can be integrated within the Islamic framework. The distinction lies in the broader concept of Islamization, which seeks to Islamize the knowledge produced by Western scientists by promoting an Islamic approach to science. On the other hand, science integration aims to reconcile modern science with religion, fostering a dialogue that bridges the gap between the two.

The logical consequences of integrating science and religion are, *First,* in scientific dialetics, Muslims must learn a critical and selective attitude towards modern science, with all its assumptions, methodologies and theories. *Secondly,* they should not necessarily discard all Western science, but falsify it methodologically. *Thirdly,* the spirit of progressive efforts so as to give birth to methodological steps presented by Islamic thinkers. Rasullulah Saw also encourages us to pursue knowledge in line with the prophet's words; "*whoever takes a path in*

order to pursue knowledge, Allah will pave the way for him to heaven" (HR at-Tirmizi) (Khan, 1997). Fourth, being able to encourage Muslim scientists who are creative, critical, competitive, open-minded, innovative, fast in their ability to solve problems, manage information, adaptability and their relationship with faith reason and ethics (Zarkasyi 2018).

Conclusion

From the explanation above, three key conclusions can be drawn. Firstly, Naquib's concept of integration focuses on three main points: a) paradigm shift from Westernization to Islamization, b) focus on the role of language in this process, c) emphasis on fostering Islamic ethical and moral values, particularly through *ta'dib* (discipline and education). While Nidhal's concept of integration also has three key elements, namely a) the belief that the scientific paradigm does not inherently conflict with religion, b) a layered interpretation of the Qur'an, which adapts based on context and understanding, and c) the principle of *theistic falsification*, integrating scientific inquiry with belief in God. Secondly, the two scholars Naquib and Nidhal have some common grounds: 1) Both conduct a critical analysis of the origins and development of science. 2) They share a layered approach to understanding, particularly in integrating religious values. 3) Both agree on the importance of including religious values in the integration of science and religion. Thirdly, aside from similarities, there are differences between Naquib and Nidhal: 1) Naquib critiques the very origins of modern science, while Nidhal focuses more on critiquing existing models of integrating science and religion. 2) Naquib's approach centers on the role of language, while Nidhal emphasizes a multilevel interpretation of the Qur'an. 3) Naquib advocates for fostering Islamic ethical and moral values, while Nidhal emphasizes the harmony between the sacred text (the Qur'an) and reason (science), both grounded in a theistic worldview.

In synthesizing their concepts, the integration of religion and science, according to Naquib and Nidhal, suggests that Muslims should separate science from Western influences and Islamize it by incorporating Islamic ethical-moral values (*ta'dib*) and theistic principles. These elements, while not captured by empirical methods, resonate with Muslim intuition and spiritual understanding. The goal is to create a productive dialogue between religion and science, where neither side conflicts, and both integrate theistic values.

This research, however, acknowledges certain limitations in the sources used and the depth of analysis. Future studies should aim to delve deeper into the topic, drawing from a wider range of references and comparing the ideas of other thinkers in the field of religion-science integration. Such work would help refine the integration model, making it more relevant to contemporary contexts and a valuable reference for scholars exploring the intersection of science and religion.

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