

Interaction of Kiai-Santri in The Intellectual Tradition of Pesantren

(Socio-Historical Review of The Development of Astronomy
Science in Pesantren)

Ahmad Wahidi⁽¹⁾, Muthi'ah Hijriyati⁽²⁾

⁽¹⁾⁽²⁾Institut Agama Islam Negeri Kediri

Correspondence: ahmadabdilwahid@iainkediri.ac.id

Submitted: October 25, 2023

Revision: November 30, 2023

Accepted: March 12, 2024

Abstract

This research is a socio-historical review of the development of astronomy in Pesantren by focusing on the relationships and interactions between kiai and santri in the development of intellectual traditions within the Pesantren. The aim of this research is to understand the interaction patterns of kiai-santri in the development of science in Pesantren, as well as to understand the development of Islamic boarding school astronomy from a socio-historical perspective. Using qualitative research methods, data was obtained using library research and analyzed using descriptive analysis. The results of this research are that in the development of astronomy science in Pesantren as an object of study, it is understood that even though the realm of astronomy is scientific in nature, there are principles that influence the results, namely the principle of maintaining the continuity of *sanad*, the principle of practicing knowledge based on a scientific chain and the principle of obedience students towards teachers or kiai.

Keywords:

pesantren, astronomy science, kiai, santri

Introduction

As a traditional Islamic educational institution in Indonesia, Pesantren have long been recognized as centers of Islamic education and cultural preservation. These institutions play an important role in transmitting religious knowledge and religious values. Including the study of astronomy, which talks a lot about determining the beginning of the Hijri month, the calendar, the beginning of prayer times and the direction of the Qibla. On the one hand, it is understandable that the scientific study of astronomy is susceptible to links with science because both reckoning and rukyah

always involve several celestial bodies such as the Earth, Moon and Sun. And on the other hand, the unique interaction between kiai (teachers or clerics) and santri (students) in the Islamic boarding school intellectual tradition looks different from the teacher-student pattern in general. This pattern certainly plays a role in shaping the development of astronomical knowledge among Pesantren.

This theme was discussed in several previous studies, namely in the article entitled Dynamics of the Development of Astrology in Pesantren by Fitri Kholilah, this article focuses on discussing the study of astronomy in several Pesantren in East Java and Central Java, both using classical astronomy studies and involving modern astronomical calculations.(Kholilah, 2017) Apart from that, there is also an article entitled Study of Astrology in Salaf Pesantren in Central Java and East Java by Abdul Mughits. This article focuses on several Pesantren as a sampling that teach falak using a variety of books and different methods.(Mughits, 2016)

This is certainly different from the research in this article, which focuses on unique interaction patterns between teachers and students in Pesantren which have implications for the development of scientific studies, especially in the study of astronomy in Pesantren. By exploring the socio-historical aspects of falak knowledge in Pesantren and focusing on the unique relationships and interactions between kiai and santri in the formation of intellectual traditions, this research aims to understand the interaction patterns of kiai-santri in advancing scientific studies in Pesantren and also provides a socio-historical perspective. historical about the evolution of falak knowledge in this Islamic educational institution. Therefore, it is hoped that this article can provide a deeper understanding of the complex and in-depth relationship between kiai and santri in the Islamic boarding school intellectual tradition, especially in the context of falak knowledge. Understanding these interactions is critical to appreciating the unique educational and cultural heritage of these institutions and their contribution to the preservation and modernization of Islamic knowledge in contemporary society.

Method

The author in this study used qualitative research methods with a sociological and historical approach. In relation to the sociological approach, the author elaborates

on the socio-cultural dynamics that surround and underlie the intellectual traditions in the world of Pesantren, especially regarding the development of astronomy. The historical approach is used to elaborate on the dynamics of intellectual traditions in major Pesantren in the field of astronomy from time to time. Data collection is library research, namely based on books or journal articles. The data analysis used is descriptive analysis, that is, after the data is presented regarding Pesantren and teacher-student interaction patterns, it will then be analyzed using the dynamics of the development of astronomy in Pesantren.

History of Pesantren

From a historical perspective, the origins of Pesantren cannot be understood in a complex and comprehensive way, because the origins of Pesantren are a very old history, so they may require historical data from the XVI and XVII centuries or even the previous century. (Mahrisa et al., 2020) Apart from the problems mentioned above, the close relationship between Islam in Indonesia and Islamic centers, especially Mecca, has occurred since the operation of steamships and the opening of the Suez Canal. All of this proves that the practice of Islamic education in the nineteenth century was, in general, an effort to adapt to the Islamic education provided in Mecca.

According to Abdurrahman Wahid, the scientific tradition of Pesantren originates from two waves, namely the wave of Islamic knowledge that came to the archipelago in the 13th century AD, at the same time as Islam entered the archipelago in a wide scope, and secondly, the wave when the Ulama of the archipelago explored Islamic knowledge on the Arabian peninsula, especially in Mecca and Medina and after that returned to his homeland to establish large Pesantren. These two waves became the source of the Islamic scientific tradition that developed into Pesantren. (Wahid, 2001)

The term pesantren comes from the basic word santri with the prefix pe- and the suffix -ren so it means a place for santri to live and study. (Fitri & Ondeng, 2022, p. 44) Meanwhile, according to the Big Indonesian Dictionary, the word santri means a person who studies Islam, or a person who worships seriously or is a pious person. (Search Results - KBBI Online, nd) A similar understanding was also

expressed by Soegarda Poerbakawatja, who stated that the word santri means people who study Islam, so that Pesantren contain the meaning of a place where people study Islam.(Mahrisa et al., 2020, p. 36) More clearly, Sudjoko Prasojomen defines Pesantren as Indonesian Islamic educational institutions for studying Islam and practicing it as a guide for daily life. Or in another expression, Pesantren are tafaqquh fiddīn institutions.(Mahrisa et al., 2020, p. 36)

Johns believes that the term santri comes from Tamil, which means teacher of the Koran, while CC Berg says it comes from Indian which means a person who knows the sacred books of the Hindu religion or a scholar who understands the sacred books of the Hindu religion. The word shastri comes from shastra which means sacred books, religious books or books about science. Terminologically, it can be said that Islamic boarding school education in terms of its form and system originates from India. Before the spread of Islam in Indonesia, this system was generally used for education and teaching Hinduism in Java. After Islam entered and spread, this system was adopted by Islam. Apart from these reasons, the similarities between Hindu education in India and Pesantren can be considered as a clue to explain the origins of Pesantren.(Musthofa, 2015, p. 7)

The opinion above is not always true and we just accept it because there are other opinions which state that Pesantren actually originate from the Islamic tradition itself, namely the tarekat tradition. Pesantren is closely related to a special place of education for the Sufi community. This opinion is based on the empirical fact that the spread of Islam in Indonesia was initially mostly known in the form of tarekat rituals. This is marked by the formation of tarekat communities which carry out special rituals or practices of dhikr and wirid. And the leader of the tarekat is called a kiai or murshid, who requires his followers to observe suluk for forty days a year by living with members of the tarekat in a mosque to carry out worship activities under the guidance of the kiai or murshid. Apart from teaching the tarekat rituals, these followers also receive lessons from religious books in various branches of Islamic knowledge. The activities carried out by the followers of this tarekat were then called recitation, which in subsequent developments, these recitation institutions grew and developed into educational institutions known as Pesantren.(Musthofa, 2015, pp. 7–9)

Another opinion states that the origins of Pesantren come from Islamic study and teaching institutions carried out in Khan mosques (the title of leader, ruler or king) in Egypt, because if the spreaders of Islam came from Arabia, then automatically their preaching movement would be influenced by these institutions, so that at least they will spread Islam based on what exists in their country.

As the oldest Islamic educational institution in Indonesia, Pesantren have clear historical transmission roots. Tracing the person who first founded it can be done based on empirical facts, although - admittedly - there is debate among historians in identifying the first founder of the Islamic boarding school. Some mention Sheikh Maulana Malik Ibrahim - known as Sheikh Maulana Maghribi - from Gujarat, India as the first founder of the Islamic boarding school in Java. Mohammad Said and Junimar Affan named Sunan Ampel (Raden Ahmad Rahmatullah) as the founder of the first Islamic boarding school in the Kembang Kuning area of Surabaya. Apart from Sunan Ampel, there are those who think that Sunan Gunung Jati (Shaykh Maulana Syarif Hidayatullah) in Cirebon was the founder of the first Islamic boarding school, when he isolated himself with his followers in seclusion, worshipping istiqamah to do taqarrub (get closer) to Allah.

In the perspective of Sayyid Muhammad Naquib al-Attas, Sheikh Maulana Malik Ibrahim is known by the majority of historians as the first propagator of Islam on the island of Java who Islamized the northern coastal areas of Java, even several times trying to invite the Hindu-Buddhist king of Majapahit, Vikramawardhana (r. 788-833 /1386-1429) to want to embrace Islam.(Musthofa, 2015, p. 7) Meanwhile, there is an identification that the existence of Pesantren has begun to be recognized since the birth of the Islamic community in the archipelago. However, because the system of the Islamic boarding school which was pioneered by Shaykh Maulana Malik Ibrahim is still unclear, therefore its existence is still speculative and debated.

The formation of Pesantren is a process that is not short. Starting with the formation of leadership in the community. As the leader of an Islamic boarding school, a Kiai does not just appear out of thin air. The leadership of a Kiai emerges after going through a process of recognition from the community. Kiai are informal leaders in society because they are considered to have superior knowledge, especially religious

knowledge. Therefore, Kiai is always a reference and place to ask questions, not only regarding religious issues but also regarding social issues. This is also what gave birth to a culture of obedience and devotion among students and the community towards Pesantren because of the figures and kiai who lead these Pesantren.

From the formation of Kiai leadership who became the community's reference, a community education system began to be formed. In the end, society made the figure of Kiai a teacher who taught all areas of knowledge under his control. (Alfadla et al., 2021, p. 983) The facilities and supporting facilities used to assist the learning process are whatever is around them. In the early stages of establishing Pesantren, mosques generally become centers of education for the community. In the mosque learning activities are carried out. In subsequent developments, Pesantren were equipped with huts or residences for students. The construction of Islamic boarding school facilities is led by Kiai, with the help of the surrounding community. The community voluntarily donates their land, donates the necessary funds or materials, and even contributes their labor. In essence, society gives what it can give. This kind of thing still often happens in Pesantren today.

In its journey, Pesantren were mostly developed by kiai who lived on the island of Java and were affiliated with the NU community organization. And the fact is that Muslim ulama and figures who are not from NU and are outside Java are more focused on developing the madrasa education system. This can be seen in community organizations other than NU, including Muhammadiyah, Al-Washliyah, and Al-Ittihadiyah, they are more concerned with developing the madrasa education system. Among the many NU clerics who developed Pesantren, one of them was KH. Hasyim Asy'ari. He is the founder of NU and his Islamic boarding school is a model and model for other kiai in participating in developing the Islamic boarding school system. (Abdurrahman, 2020)

NU was born because it was pioneered by Islamic boarding school Kiai, therefore it is very reasonable and correct to negate that NU and Pesantren cannot be separated. (Nasrullah et al., 2023, p. 24) However, this does not mean that all existing Pesantren are considered affiliated with NU, because in reality there are Pesantren that are affiliated with Muhammadiyah, Al-Isyad, Persis, or claim to be neutral and

independent Pesantren and are not affiliated with any Islamic mass organizations such as the Darussalam Gontor modern Islamic boarding school, which has the slogan "standing above all".

NU has made Pesantren the basis of its movement since the colonial period until now. If we trace it further, many NU movements and mobility emerged from Pesantren. During the colonial period, Islamic boarding school Kiai were the driving force and leaders of the struggle against the invaders, including KH Cholil from Bangkalan Madura (1235-1343 AH), KH Hasyim Asy'ari from Tebuireng Jombang (1871-1947 AD), KH Abbas from Buntet Cirebon (1879 -1946 AD), KH Bisri Samsyuri from Denanyar Jombang (1886-1980 AD), KH Machrus Ali from Lirboyo Kediri (1906-1985) and others.(Nasrullah et al., 2023, p. 25)

One of the Islamic educational institutions which is a subculture of Indonesian society is the Islamic boarding school, although in fact this recognition is not evenly shared by the Islamic boarding school itself.(Wahid, 2001, pp. 1–2)Islamic boarding school is a unique institution with very strong and inherent characteristics that other institutions or educational institutions do not have. The participation taken by Pesantren is oriented towards efforts to educate the nation and the nation's children which have been passed down from generation to generation. In difficult times, Pesantren are educational institutions that continue to provide education to anyone who needs it without fear or being eroded and influenced by intimidation and threats from various parties, from the time of the struggle against the colonialists until now. Pesantren are complex centers of study related to science, especially religious science, which have survived and are sustainable until the present. (Hidayah, 2022, p. 409)

Islamic boarding school models can be categorized into at least three types, although it may be somewhat difficult to distinguish in detail between these models, namely salafiyah (traditional) boarding schools, Khalafiyah (modern) boarding schools and integrated boarding schools. Salafiyah Islamic boarding school is a model of Islamic boarding school that only teaches Islamic religious knowledge, or classical books (read; yellow book) written by previous ulama. The teaching methods used are the bandongan, sorogan, memorization and deliberation methods.(Kamal, 2020, pp.

20–21) Meanwhile, the Khalafiyah Islamic boarding school is a model of a modern Islamic boarding school, which teaches Islamic religious knowledge and general knowledge, but still teaches classical books like Salafiyah Pesantren in general. The leadership pattern of this model of Islamic boarding school is usually collective-democratic, so that duties and authority are clearly described, so that there is no centralization of decisions in the figure of a kiai. The system used is a classical system, and the evaluation used has clear and modern standards. (Kamal, 2020)

Kiai - Santri Relations

In the Islamic boarding school tradition, apart from being taught the Koran and studying religious knowledge, the students are also taught to internalize and be responsible for what they have learned. Pesantren also teach the values of simplicity, independence, a spirit of cooperation, solidarity, togetherness and sincerity. Simplicity indicates a resignation from the ties and hierarchies of local society, and a search for a deeper meaning of life contained in social relationships. The spirit of cooperation and solidarity ultimately embodies the desire to merge individuals into a pluralistic society whose goal is to sincerely pursue the essence of life.

As for the concept of sincerity or devotion without taking into account material personal gains and losses, the meaning of good relations is realized not only between the students themselves, but also between the students and the kiai and with the community. From this spirit of sincerity, Islamic boarding school alumni become individuals who are emotionally intelligent, virtuous, and responsible for every mandate they carry out. (Muhakamurrohman, 2014, p. 110)

The emotional teacher-student relationship created in the kiai-santri relationship certainly makes it easier for these two elements to preserve Islamic boarding school traditions. Kiai become patrons for the students, so that the Kiai has a tremendous influence on the 'personality of the students', so it is not surprising that the students carry out and obey all the Kiai's orders. Therefore, Kiai play an important role in introducing and implementing Islamic boarding school traditions such as book reading, tahlilan, yasinan, wirid, diba'an, manakib, hadrah, salawatan, and ratib al-haddad in the ritual ceremonies of the Prophet's birthday, haul, harlah, pilgrimage to

the graves of saints and istighasah. All of them are Islamic boarding school traditions which are full of Islamic meaning and moral values.

As for the students, they play an important role in internalizing and implementing it, both in the Islamic boarding school environment, and when they have joined and entered society while becoming part of the community itself. (Rajafi & Aisyah, 2017, p. 181) Santri who already have alumni status become the spearhead of the preaching mission of the kiai in wider society. The form of da'wah carried out by each student adapts to their role and position in society.

Kiai leadership in Pesantren adheres to noble values which are the reference in behaving, acting and developing Pesantren. Noble values are the kiai's beliefs in his life. So if leading an Islamic boarding school contradicts or deviates from the noble values that one believes in, directly or indirectly, it will have implications for the loss or fading of public trust in the kiai or Islamic boarding school. Because in fact the noble values believed by kiai or Muslims become spirit (strength) which is believed to be a gift and mercy from Allah SWT. (Syarif, 2012, p. 21)

Santri identify kiai as figures full of charisma and representatives or substitutes for parents (*in loco parentis*). Kiai is a model model (*uswah*) of the attitudes and behavior of santri. The process of socialization and interaction that takes place in Pesantren allows students to imitate the attitudes and behavior of kiai. Santri can also identify kiai as ideal figures who continue the scientific lineage of the ulama who inherited the knowledge from Islam's past glory days. This process and identification are able to give rise to a santri's obedience to his kiai. Santri's obedience to kiai figures has psychological implications which sometimes show less desirable psychological implications, for example obedience with independence. In every societal structure there is always a dominant class or elite group that regulates the class structure below it. (Syarif, 2012, p. 21) Kiai in a particular community is an elite class. He has a position not only as a central figure and role model for students, but is also respected by the wider community. Kiai themselves are recognized as scholars who are the heirs of the Prophets and at the same time continue the lineage of previous scholars who are considered heirs to the greatness of classical Islam. (Misbah, 2019, p. 217)

The kiai status they hold is also often strengthened by the title of nobility which

is rooted in the tradition of political leadership and upper class social strata. As is commonly known, the majority of kiai in Madura are recognized as being genealogically related to Sheikh Maulana Ishak or known as Sunan Gresik, one of the figures or guardians who determined the political direction of the Islamic kingdom of Demak.

The royal identity of a kiai is often placed at the beginning of his name and other titles. Examples are RKH (Raden Kiai Haji) and RPKH (Raden Panji Kiai Haji) which are commonly used in Madura and in several areas of Tapal Kuda in East Java. The title raden above is generally used to indicate the nobility status of a kiai. The term nobility itself describes a group of people who had certain positions and functions in society in the past. The title Raden is almost the same as the title "wangsa" in Balinese society. This dynasty is an elite group which has two forms of legitimacy, namely social status of nobility and religious symbols. The high or low level of the kiai's lineage and nobility greatly determine the level and charisma of the kiai in society. Thus, the social status and religious symbols attached to the kiai become the strongest legitimizing factors in placing the kiai as elite figures who personify ideal ideals in the eyes of the community and their students. (Misbah, 2019, p. 217)

The transmission of knowledge and the cultivation of *al-akhlāq al-karīmah* from a kiai or ustaz to his students, gives rise to physical contact between the two, and this creates a relationship between the two, both during the education and learning process, as well as during daily activities in outside the educational process in the Islamic boarding school environment. The continuity of physical meetings between the kiai and the students creates high loyalty from the students towards their kiai or ustaz. This loyalty is one of the characteristics that is deeply rooted in the nuances of Islamic boarding school life. (Misbah, 2019, p. 214)

The existence of loyalty towards kiai or ustaz among Pesantren is due to the fact that the kiai figure, in general, is often perceived by the public as an integrative person and is a reflection of scientific and leadership traditions, pious, mastering religious knowledge (*tafaqquh fī al-dīn*) and prioritizing the appearance of proper virtuous behavior. emulated by the students and the community (becoming *uswah ḥ{asanah*). The higher the level of piety and humility of a kiai, the higher the level of

respect given by the students and the community. On the other hand, the degree of respect the students and the community have for the kiai will decrease along with the lack of mastery of religious knowledge and a low sense of tawadlu in him, so that he appears less authoritative in front of the students and the community. (Misbah, 2019, p. 214)

An interesting aspect of the relationship model between Kiai and students is the feeling of absolute respect and obedience from a student to his teacher. This feeling of absolute respect and obedience must be unbroken, lasting the entire life of a student. A feeling of absolute respect and obedience must be shown by students in all aspects of their lives. Forgetting the bond with the teacher is evil and will eliminate the teacher's blessings and ultimately the knowledge possessed by a student will be useless. This is done not as a manifestation of total submission to the teacher who is considered to have authority, but because of the student's belief in the teacher's position as a distributor of God's mercy bestowed on his students, both in this world and in the afterlife. (Setiawan, 2012, p. 139)

The values contained in Pesantren contain three elements that lead to the formation of a patron-client relationship between Kiai and students, namely:

1. Patron-client relationships are based on unequal exchanges that reflect differences in status. A client, in this case a santri, has received many services from the patron, in this case the Kiai, so that the client is bound and dependent on the patron,
2. The patron client relationship is personal. The personal pattern of reciprocity between Kiai and students creates a sense of trust and dependence in the mechanism of the relationship. This can be seen in the culture of respect of santri towards Kiai which tends to be an individual cult,
3. Patron relationships are spread throughout, flexible and without time limits. This is possible because the socialization of values as a student has been going on for years. A form of value that is always held firmly by santri, for example, the santri do not have the courage to argue about anything with the Kiai or argue against it because they are incompetent and their knowledge is not useful. (Setiawan, 2012, p. 145)

According to Eko Setiawan, there are factors that have caused the client's

Patron Culture to survive until now, including:

1. Charismatic leadership

A Kiai is an ideal figure in the eyes of his students. He is considered someone who is consistent in practicing the Islamic teachings that he has conveyed to his students. Kiai as an ideal figure in the eyes of their students is a figure that all students need to emulate. Santri consider Kiai to be a figure who is idolized, loved, and even feared because Kiai is the heir to the teachings and behavior of the Prophet.

Obedience to the Kiai and a set of values that have been institutionalized in Pesantren means that is the personality of being a true Muslim. As a result, students must submit to their Kiai by obeying the Islamic boarding school rules and policies/orders given to their students. In santri there is a high level of respect and obedience, this is because basically to gain knowledge from the Kiai, a santri has a sense of humility and open mindedness. This kind of thing refers to the existence of a patron-client culture in Pesantren in the classic book *Ta'lim al-Muta'allim*, written as follows: "Those who seek knowledge should remember that they will never get knowledge or their knowledge will be useless, unless they respect his knowledge, and also respect the Kiai who taught him.

It is understandable that the emergence of charismatic forms of leadership often ignores democratic values because this leadership is irrational. All orders given to traditional Islamic boarding school residents, especially their students, are almost absolutely carried out as long as they do not conflict with Islamic law. Often students are not aware of the implied purpose behind an order, but they believe that a Kiai's order is correct and has good intentions for themselves. Santri firmly believe that behind the holy man's command there is a "barakah" if it is carried out but disobeying the Kiai means wanting to get "kualat". This form of interaction closes the gap for a student to criticize, let alone fight against, his teacher.

2. *Barakah* and kualat: Spiritual Foundations of Kiai's Social Reality

The bond between teacher and student, which means the bond between Kiai and students, is still valid and attached to this status even though the students are no longer studying at the Kiai. Saying the term "used" to a teacher is often considered an insulting and bad thing that is not permitted. Until forever the santri are students of the

Kiai and forever the kiai are the teachers of the students. Santri believe that if they break the rules set by the kiai it means that they want to get "quality", so that their life will not be blessed. If a student does not want to receive qualifications because he acted unwisely towards his teacher then he must make total submission in the sense of submitting to his teacher as long as he does not carry out orders that are contrary to Islamic law.

Even though a teacher does not know that his student has committed a presumptuous act, God will give him strength. This is all because teachers are people who are close to God and with His permission anything can happen to a student if they dare to go against their teacher and with God's permission the teacher can channel mercy from God, which is called barakah. Theoretically, the distribution of blessings mentioned above is intertwined with the radiance of God's light which makes an impression on the Kiai and then flows to the students.

3. Bond Lifetime between kiai and santri

The emotional bond between the students and their Kiai has more or less been able to support the economic life of the Islamic boarding school. Students often make donations to their Islamic boarding school in any material form. Likewise, alumni who are still active in keeping in touch with their kiai also often provide certain materials, either aimed at the kiai or for the benefit of their Islamic boarding school.

There are 2 (two) factors that continue to perpetuate the relationship between Kiai and students. The first factor, culture. The relationship between Kiai and their santri is very close and in many cases, very emotional because the Kiai's charismatic position in their society is strengthened by a culture of subordination. This close relationship is not only limited to the time at the Islamic boarding school but continues after the students become members of society, so the spread and continuity of such culture is increasingly guaranteed. This unequal relationship continues to be maintained because former students continue to visit their kiai regularly.

Alumni of an Islamic boarding school usually make regular visits to their Kiai just to stay in touch and receive blessings. Such regular visits did not stop even after Kiai's son replaced his father as the new leader of the Islamic boarding school. This is because the position of Kiai and his children are the same in the view of the students.

Apart from that, when the child becomes a Kiai, by replacing him, the alumni usually send their children to the Islamic boarding school which is now managed by the Kiai's child.

The second factor that binds students to their Kiai is related to certain religious rites held by the Kiai and attended by alumni. These rites take various forms, from commemorating the death of the founder of the Islamic boarding school to festivals or celebrations at the end of the learning period or known as *Haflah Akhir Sanah* or *Imtihan*. In the world of the tarekat there are religious rituals such as the "*Mujahadah Kubra*" which is attended by thousands of followers. On the one hand, rituals provide a forum where people can practice their religious beliefs, but on the other hand, they also become a medium in which the relationship between Kiai and his santri or followers can continue to be strengthened.

The strong emotional bond between Kiai and students has caused the relationship between the two to last throughout life. Until then, the students are students of their Kiai. Even though the students have graduated and returned to society or their Kiai has died, there is a moral obligation to pray for them through a grave pilgrimage, such as at a haul event.

So it can be concluded that there are 2 (two) things that perpetuate the Kiai santri relationship, namely the continuous culture of subordination and the rituals held by the Islamic boarding school. According to him, the culture of subordination implies an unequal relationship between teachers and students which is then perpetuated until the students have children and then these children are sent to the same Islamic boarding school so that they become students of the Kiai concerned. Meanwhile, the rituals held at the boarding school, such as the haul, *haflah Akhir Sanah* and Eid gatherings, which are often invited and attended by alumni students, also strengthen the relationship between the Kiai and the students. (Setiawan, 2012, p. 149)

Santri Obedience Patterns to Kiai

Obedience is behavior according to rules and discipline. Compliance is a social influence that is used as a person's willingness to carry out certain behavior which is a direct or indirect request from a party in authority with the aim of getting a favorable

reaction or avoiding sanctions as a consequence of the behavior that has been carried out. Compliance essentially has four main elements in it, namely: 1) the existence of a party who has authority who demands compliance, 2) the existence of a party who is required to comply, 3) the existence of a certain object or content of demands from a party who has authority to be implemented by the party. others, and 4) the consequences of the behavior carried out. Based on the explanation above, obedience can be formulated as the willingness of a person or group of people to carry out certain behavior which is a direct request from another party who has authority, in order to get a favorable reaction or avoid punishment as a consequence of the behavior carried out.(Marufah & et al, nd, p. 100)

Compliance is associated with perceptions of kiai leadership which involves students' cognitive and students' affection to think and feel how a leader leads a group of individuals who have hope and trust in their leader. Santri as members of the Islamic boarding school community will certainly feel and assess what kind of people they obey while the students live in the Islamic boarding school. Aspects of the perception of kiai leadership include cognitive and affective. Where cognitive is the result of an individual's assessment of the object being perceived, while affective is the result of perception felt by the individual after organizing that perception. Apart from perceptions of kiai leadership, obedience is also associated with conformity.

Conformity is something a person does when in a group that takes action or adopts an attitude as a result of real or perceived group pressure. Individuals who have a high level of conformity will depend more on the rules within their group, so that individuals tend to attribute each activity as a group effort, not their own effort. It is assumed that if students have a low level of conformity, then the level of compliance with regulations is high and conversely, the higher the conformity, the lower the level of compliance.(Marufah & et al, nd, p. 110)

The influence of kiai goes beyond the influence of other leadership institutions. In various affairs of the people, the kiai becomes a place for complaints. Such as matters of religion, medicine, fortune, marriage, building a house, farming, social conflict, career, politics and a number of other life problems. It doesn't feel good if all matters are not consulted with the kiai and have not received his blessing. Kiai serve

the needs of the people with patience and compassion, the people feel satisfied. And as a "reward" the people will be obedient, submissive, and ready to serve the kiai.

The leadership of kiai in Pesantren is generated by the belief of the students and the people around the Islamic boarding school community that kiai are an extension of God's hand in conveying His teachings. This phenomenon of belief is manifested in the attitude of taqlid (following without knowing the knowledge) which has almost become a tradition in the daily life of the students and their congregation. (Marufah & et al, nd, pp. 100–101)

A santri's devotion to his kiai is manifested in the form of obedience to the kiai. The students' obedience to the kiai sometimes goes beyond reasonable limits, so that not only do they not dare to "resist" correcting the kiai, the students and even the community often consider every word and action of the kiai to be the truth. Resisting against the kiai can be difficult, and the anger of the kiai is seen as something that is greatly feared by the students and the community.

According to Zainudin Syarif, santri's obedience to kiai is divided into 3 patterns, including: (Syarif, 2012, pp. 24–26)

1. Absolute obedience, santri in daily life absorb information and values completely from the kiai in aspects of religious, intellectual and social moral behavior. In fact, the kiai, in Geertz's terms, becomes the center and sole information agent that connects the santri with the outside world. So dominant is the kiai's role towards the santri, that his (santri's) attitude of laughter towards the kiai is extraordinary. What the kiai says and does is considered absolute truth. Santri view kiai as versatile in various things (polymorphic) and become a source of reference in the daily life behavior of students
2. False obedience, - the researchers chose the term conditional obedience - Santri with an attitude of submission towards the kiai in the moral, religious, intellectual and social aspects. This phenomenon is characterized by the symptom that students have tried to absorb information coming from outside (kiai or Islamic boarding school), or in other words, within the students there is free and rational space to interpret information coming from outside. The practical picture of what students do against the kiai's wishes does not all reflect his will and conscious

- behavior. This is caused by the confines of the situation, and the position surrounding it. What students do is that they often do not show their true will. Borrowing Karl Marx's term, the behavior of these students constitutes false consciousness. So even though the students follow the kiai's politics, basically it is not in accordance with their true political wishes and wishes. Because students actually have their own political views and choices. But students do not dare to make their political choices because of the moral constraints that surround them.
3. Prismatic obedience: These are students who have experienced a transition process from traditional to modern attitudes. Santri no longer treat kiai as a single information center, so the role of kiai is no longer polymorphic but monomorphic. A concrete example in matters of starting Ramadan fasting and celebrating holidays is no longer using kiai as the only source of reference. But on the other hand, in terms of social-intellectual interaction and religious moral traditions, santri do not want to separate themselves from their relationship with their kiai. This type of student model is usually students who are alumni and are outside the internal activities of the Islamic boarding school.

Socio-Historical Review of the Development of Astronomy Science in Pesantren

Falak science has reached us today through a long journey from one figure to another, from one region to another, across much space and time. Starting from Hermes in Babylonia to the kiai in Indonesia. According to history, the existence of Falak Science in Indonesia was known by the Javanese Islamic calendar by Sultan Agung. Then it was only in the 19th century that falak figures began to emerge such as Sheikh Abd al-Rahman al-Misri who came to Jakarta (Betawi) in 1314 H/1896 AD bringing Ulugh Bek's table and teaching it to his students, among his students were Ahm} ad Dahla>n al-Samarani or al-Tarmasi or al-Turmusi and Sayyid Uthman Betawi.(Khazin, 2004, p. 29)

To Then Ahmad Dahlan al-Simarani or al-Tarmasi taught it in the Termas area (Pacitan) by compiling the book Tadhkirat al-Ikhwan fi Ba'd Tawarikh A'mal al-Falakiyyah bi Semarang which was completed in 1321 H/1903M. Meanwhile, Habib Uthman ibn 'Abd Allah ibn Aqil ibn Yahya continued to teach in Betawi. He wrote the book Iqaz al-Niyam fi Ma Yata'allaq bi al-Ahillah wa al-Siyam (printed in

1321H/1903M). Habib Uthman had a student named Muhammad Mansur ibn Abd al-Hamid bin Muh}ammad Damiri ibn Muhammad Habib bin Abd al-Muhit ibn Tumenggung Tjakra Jaya Betawi who wrote the book *Sulam al-Nayyirayn* (printed the first time in 1344H/1925 AD). (Khazin, 2004, p. 29) This book is still popular and studied and is a mandatory book in the field of astronomy among Pesantren to this day.

In other sources, the science of astronomy is said to have come from the path of Sheikh Tahir Jalal al-Din (1869 – 1957), who studied with his older cousin in Mecca, namely Sheikh Ahmad Khatib Minangkabawi (1855 – 1916), imam and teacher at the Grand Mosque who was also known as an expert in astronomy. Sheikh Tahir has several works in the field of astronomy, including "Pati Kiraan on Determining the Five Times" (published in 1357 H/1938 AD), and *Natijah al-Ummi The Almanac: Muslim and Christian Calendar and Direction of Qibla according to Shafie Sect* (printed in 1951). Apart from Sheikh T}a>hir Jalal> al-Di<n, the science of astronomy also entered Indonesia through Sheikh Ahmad Djamil Djambek (1862 – 1947). His famous writings in the field of astronomy were *Almanac Djamiliyah* and *Diya' al-Nur fi ma Yata'allaq bi al-Kawakib*. Other Falak figures are Sheikh Ahmad Khatib al-Minangkabawi, Ahmad Rifa'i, and Sholeh Darat. (Azhari, 2007, p. 10)

In subsequent developments, works on astronomy produced by Indonesian scholars in the following period were only dominant repetitions of the two books above. Among the books written by Indonesian scholars which have the characteristics of these two books are *al-Khulashah al-Wafiyah* by Zubayr 'Umar al-Jaylani which was printed in 1354/1935, *Ilmu Falak and Hisab and Hisab 'Urfi and Haqiqi*, both works by K. Wardan Diponingrat, printed in 1957. *al-Qawa'id al-Falakiyah* by Abd al-Fattah al-Sayyid al-Tufi, *Badit al-Mithal* by Ma'shum Jombang (d.1351/1933), *Almanac Menara Kudus* by Turaikhan Adjhuri, *Nur al-Anwar* by Noor Ahmad SS Jepara which was printed in 1986, *al-Makshuf* by Ahmad Saleh Mahmudjauhari Cirebon, and *Ittifaq Dhat al-Bayn* by Muhammad Zubayr Abd al-Karim Gresik. (Azhari, 2007, p. 10)

Then, the development of astronomy in Indonesia can also be seen from the book entitled *Matla' al-Sa'id fi Hisab al-Kawakib 'ala Rasd al- Jadid* by Husain Zayd al-Misri and *al-Manahij al-Hamidiyah* by 'Abd al-Hamid Murshi Ghayth al-Falaki al-Shafi'i. According to available information, these two books were brought from the

Middle East by figures (ulama) who performed the Hajj after taking the time to study in the Holy Land.(Butar-Butar, 2019, p. 160)

The next period is the modern period, which is characterized by the integration of astronomy and astronomy. This discussion of the history of the development of modern Indonesian astronomy cannot be separated from the role of Saadoe'ddin Djambek. He was a astronomer from Bukittinggi who was born on March 24 1911 AD/1330 H, and died on November 22 1977 AD/11 Zulhijjah 1397 H, in Jakarta. He was the son of the great cleric Sheikh Muhammad Djamil Djambek (1860-1947 AD/1277-1367 H) from Minangkabau.

The astronomical science books currently available in Indonesia are generally in foreign languages, Dutch and Arabic. Therefore, to meet the needs of people who did not understand foreign languages, in the 1955s a Falak expert emerged from Yogyakarta who compiled the science of Falak using newer methods. He is KRT. Wardan Diponingrat, a ruler of the Yogyakarta palace. Wardan, his nickname, compiled two books entitled: Science of Falak and Hisab and Hisab urfi and Hakiki, which were first published by the publisher al-Mataramiyah, Yogyakarta, in 1957 AD. Wardan's book Hisab urfi and Hakiki is basically the same as the book al-Khula >s}ah Zubayr's work, namely the astronomical data used by Wardan is the same as the data in al-Mat}la'> al-Sa'id< , but uses the Yogyakarta epoch (Longitude = 110 21"). When calculating the height of the new moon using spherical triangle geometric formulas and solving it using a list of logarithms, the calculation results obtained are quite accurate although there are still things that need to be refined. However, Wardan's hisab urfi and haqiqi system is categorized as Tahqiqi hisab haqiqi.(Alimuddin, 2013, p. 190)

In connection with the socio-historical review of the development of astronomy in Pesantren, the author takes 2 examples of pesantren in Malang, namely the Miftahul Huda Gading Pesantren in Malang City and the Roudlotul Muhsinin Al-Maqbul Bululawang Pesantren, Malang Regency. These two Pesantren are large Pesantren in the Malang area, and have consistently taught and applied the science of astronomy since the early decades of the two Pesantren' founding.

The consistency of Pesantren in teaching and practicing the science of

astronomy falls into the category of value-oriented rationality arguments. The values used as arguments by the actors in pesantren are contained in 3 things, namely:

1. There is a principle of upholding and maintaining the continuity of scientific knowledge (ittissal al-sanad), meaning that what is studied must be clear to the teachers. Regarding the intellectual genealogy of Pesantren, citing what has been stated by Zamakhsyari Dhofier, that since Islam entered Indonesia, the Kiai have always been intertwined by unbroken intellectual chains, where one Islamic boarding school and another Pesantren, both in one era and in from one generation to the next, intellectual relationships are established.(Dhofier, 2011, p. 100)In the Islamic boarding school tradition, the chain of scientific transmission is called sanad(Dhofier, 2011, p. 122)(borrowing a term from hadith science), the tradition of having sanad or silsilah in the pesantren tradition does not merely arise from the Kiai's desire to guarantee himself as a legitimate student and thus has the right to be a teacher in the knowledge he has acquired, but more than that, there are many The values in this tradition relate to the relationship between teachers and students which is very important and is very much considered in the world of Pesantren.(Dhofier, 2011, p. 125)
2. There is a principle that practicing knowledge based on intellectual chains or the researcher's term for the continuity of sanad is mandatory. There are demands in religious teachings regarding people who have knowledge, especially religion, to carry out or put their knowledge into practice, so that if they do not want or are reluctant to practice their knowledge it will have negative implications for them in life in this world and in the afterlife.
3. There is a principle of values which then becomes a tradition that crystallizes in the world of Pesantren regarding the obedience of students or santri to their teachers or Kiai. So whatever is ordered and said by a teacher or Kiai, as long as it is not a matter that is contrary to religion, must be obeyed and carried out by students or students. Pesantren traditions, especially those related to the relationship between kiai and santri, are almost entirely oriented towards the ethics of santri towards their kiai or teachers.

Conclusion

In this research, an in-depth review has been carried out regarding kiai-santri interactions in the context of pesantren intellectual traditions, especially in the development of astronomy. However, Pesantren are the oldest Islamic educational institutions in Indonesia, but interestingly it is not only religious science that is studied and studied. But also life and social sciences. Kiai is not only a reference for religious knowledge for students as students, but also as a role model and reference for all problems. From here, a santri's obedience to the kiai becomes a unique value that differentiates Pesantren from others. Especially in the development of astronomy in Pesantren, where in fact astronomy has studies not only related to religion but also intersects with scientific knowledge which should be free of values and interventions other than empirical data.

However, this research illustrates the importance of the role of kiai as teachers and spiritual leaders in Pesantren, as well as how the interactions that take place between kiai and santri play a key role in the formation and development of astronomy in the Pesantren environment. Several traditional principles such as maintaining the continuity of sanad, adhering to scientific heritage, and obedience of students to kiai have also been proven to play an important role in the development of astronomy. Therefore, with this research it is hoped that astronomical studies will continue and will be studied and developed in Pesantren. This effort must be increased so that this study is not eroded by changing times. Although it still has to be integrated with modern astronomy, it can help Pesantren teach astronomy more efficiently and accurately. By taking these steps, we can ensure that the intellectual traditions of Pesantren, especially in the study of astronomy, remain alive, develop, and make a significant contribution to the maintenance and development of Islamic knowledge in Indonesia.

Reference

- Abdurrahman, A. (2020). SEJARAH PESANTREN DI INDONESIA: : Sebuah Pelacakan Genealogis. *Jurnal Penelitian Ilmiah INTAJ*, 4(1), Article 1. <https://doi.org/10.35897/intaj.v4i1.388>
- Alfadla, M. T., At, A. M.-, & Rahman, D. H. (2021). Identifikasi Social Power dalam Karakteristik Kiai sebagai Rujukan Kualitas Diri Konselor. *Jurnal Pendidikan:*

- Teori, Penelitian, dan Pengembangan*, 6(6), Article 6.
<https://doi.org/10.17977/jptpp.v6i6.14901>
- Alimuddin, A. (2013). Sejarah Perkembangan Ilmu Falak. *Al Daulah : Jurnal Hukum Pidana dan Ketatanegaraan*, 2(2), Article 2.
<https://doi.org/10.24252/ad.v2i2.1475>
- Azhari, S. (2007). *Hisab & rukyat: Wacana untuk membangun kebersamaan di tengah perbedaan*. Pustaka Pelajar.
- Butar-Butar, A. J. R. (2019). HISTORIOGRAFI ILMU FALAK DI NUSANTARA: Sejarah, Motivasi dan Tokoh Awal. *Journal of Contemporary Islam and Muslim Societies*, 2(2), Article 2. <https://doi.org/10.30821/jcims.v2i2.2928>
- Dhofier, Z. (2011). *Tradisi pesantren: Studi pandangan hidup kyai dan visinya mengenai masa depan Indonesia*. LP3ES.
- Fitri, R., & Ondeng, S. (2022). PESANTREN DI INDONESIA: LEMBAGA PEMBENTUKAN KARAKTER. *AL-URWATUL WUTSQA: Kajian Pendidikan Islam*, 2(1), Article 1.
- Hasil Pencarian—KBBI Daring*. (n.d.). Retrieved October 13, 2023, from <https://kbbi.kemdikbud.go.id/entri/santri>
- Kamal, F. (2020). MODEL PEMBELAJARAN SOROGAN DAN BANDONGAN DALAM TRADISI PONDOK PESANTREN. *PARAMUROBI: JURNAL PENDIDIKAN AGAMA ISLAM*, 3(2), Article 2. <https://doi.org/10.32699/paramurobi.v3i2.1572>
- Khazin, M. (2004). *Ilmu falak dalam teori dan praktik: Perhitungan arah kiblat, waktu shalat, awal bulan dan gerhana*. Buana Pustaka.
- Kholilah, F. (2017). Dinamika Pengembangan Ilmu Falak di Pesantren. *JURNAL PENELITIAN*, 14(2). <https://doi.org/10.28918/jupe.v14i2.968>
- Mahrissa, R., Aniah, S., Daulay, H. P., & Dahlan, Z. (2020). PESANTREN DAN SEJARAH PERKEMBANGANNYA DI INDONESIA. *Jurnal Ilmiah Abdi Ilmu*, 13(2), Article 2.
- Marufah, S. & dkk. (n.d.). *Persepsi terhadap Kepemimpinan Kiai, Konformitas dan Kepatuhan Santri terhadap Peraturan Pesantren | Persona: Jurnal Psikologi Indonesia*. Retrieved October 14, 2023, from <https://jurnal.untag-sby.ac.id/index.php/persona/article/view/374>

- Misbah, M. (2019). RELASI PATRONASE KIAI-SANTRI DALAM PENDIDIKAN KARAKTER DI PONDOK PESANTREN MA'HADUTHOLABAH BABAKAN TEGAL. *Jurnal SMART (Studi Masyarakat, Religi, dan Tradisi)*, 5(2), Article 2. <https://doi.org/10.18784/smart.v5i2.817>
- Mughits, A. (2016). Kajian Ilmu Falak di Pesantren Salaf di Jawa Tengah dan Jawa Timur. *Asy-Syir'ah: Jurnal Ilmu Syari'ah dan Hukum*, 50(2), Article 2. <https://doi.org/10.14421/ajish.v50i2.236>
- Muhakamurrohman, A. (2014). PESANTREN: SANTRI, KIAI, DAN TRADISI. *IBDA` : Jurnal Kajian Islam Dan Budaya*, 12(2), 109–118. <https://doi.org/10.24090/ibda.v12i2.440>
- Musthofa, M. (2015). Kedatangan Islam dan Pertumbuhan Pondok Pesantren di Indonesia Pespektif Filsafat Sejarah. *An-Nuha: Jurnal Kajian Islam, Pendidikan, Budaya Dan Sosial*, 2(1), Article 1.
- Nasrullah, N., Rama, B., & Achruh, A. (2023). NAHDLATUL ULAMA, TOKOH DAN KEGIATANNYA DALAM DUNIA PENDIDIKAN. *Nizam: Jurnal Islampedia*, 2(1), Article 1.
- Rajafi, A., & Aisyah, L. (2017). RELASI KIIYAI-SANTRI DI PESANTREN MODERN ALKHAIRAAT MANADO. *IBDA` : Jurnal Kajian Islam Dan Budaya*, 15(2), 179–191. <https://doi.org/10.24090/ibda.v15i2.1085>
- Setiawan, E. (2012). EKSISTENSI BUDAYA PATRON KLIEN DALAM PESANTREN: Studi Hubungan Antara Kyai dan Santri. *ULUL ALBAB Jurnal Studi Islam*, 13(2), Article 2. <https://doi.org/10.18860/ua.v0i0.2372>
- Syarif, Z. (2012). MITOS NILAI-NILAI KEPATUHAN SANTRI. *TADRIS: Jurnal Pendidikan Islam*, 7(1), Article 1. <https://doi.org/10.19105/tjpi.v7i1.376>
- Wahid, A. (2001). *Menggerakkan tradisi: Esai-esai pesantren*. LKis. https://books.google.co.id/books?id=E1e_6PDmZ7sC

