

The Hadiths of Neuroscience: A Hermeneutic Study on the Prophet's Sunnah in Thinking Framework

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Abstract. *The sciences that study reason, thinking, or the brain are known as neuroscience in modern science. The interpretation of neuroscience verses in the Quran has developed rather significantly. However, similar studies of the Prophet's hadith still have little. Therefore, this study aims to discover the hadiths of neuroscience and analyze them with a hermeneutic approach. This research is a literature review with primary data sources from seven books of hadith and other relevant texts. The study found five hadiths in Sunan Abi Dawud, Musnad Ahmad, al-'Aḥqamah, Musnad al-Harith, and others that emphasize the Prophet's sunnah in thinking. The author mentions the five hadiths as neuroscience hadiths: 1) differences in common sense and loss of reason in the Sunan Abi Dawud, of good quality; 2) the urgency of ijtihad in the Sunan Abi Dawud, of good quality; 3) intelligent and ignorant differences in the Musnad Ahmad, hasan quality; 4) limitations of the capacity of human reason in the al-'Aḥqamah as hasan li ghairibi; and 5) the position of reason in the Musnad al-Harith of da'if jiddan. The findings of these neuroscience hadiths allow them to grow steadily and potentially become a new landscape in the future. Complements the study of the interpretation of neuroscience verses that have developed earlier.*

Keywords: Hadith; Neuroscience; Hermeneutics

Introduction

Although the study of science in Islam developed rapidly,¹ even the interpretation of neuroscience verses began to come to the fore.² However, no one has studied science in hadiths or hadiths of neuroscience yet. Since Fazlur Rahman put forward the idea of Islamic intellectualism, the Qur'an has remained the primary source for encouraging Muslims to think critically,³ While hadith did not have a proportionate place to encourage Muslims to think critically, when Agus Purwanto reviewed the verses of the universe, how many were *kauniyah* from *qauliyah* verses?⁴ However, no hadith expert has yet proved what "the hadiths of the universe are" (*kauniyah*) more from the hadiths *qauliyah*. Similarly, when Kuntowijoyo developed the concept of Islamic sciences⁵ and Amin Abdullah initiated scientific integration,⁶ many of the *verses of kauniyah* in the Qur'an are not comparable to the hadiths of *kauniyah* as reference sources. Thus, there have not been many hadith studies that specifically identify *kauniyah* hadiths broadly or scientific hadiths in particular, especially neuroscience hadiths. As a result, Islamic thought in science still needs to be improved.

¹ Waston, "The Relationship of Science and Religion: Philosophical Reflections on the Thought of Ian G. Barbour."

² Suyadi, "Tafsir Ayat-Ayat Neurosains (The 'Aql in the Qur'an and Its Relevance to the Development of Critical Thinking in Islamic Education)."

³ Rahman, *Islam and Modernity: Transformation of an Intellectual Tradition*.

⁴ Purwanto, *Nalar Ayat-Ayat Semesta: Menjadikan Al-Quran Sebagai Basis Konstruksi Ilmu Pengetahuan*; Purwanto, *Ayat-Ayat Semesta, Sisi-Sisi Lain Al-Qur'an Yang Terlupakan*.

⁵ Kuntowijoyo, *Islam Sebagai Ilmu: Epistemologi, Metodologi Dan Etika*.

⁶ Abdullah, "Religion, Science, and Culture: An Integrated, Interconnected Paradigm of Science."

So far, there has been a growing study of the interpretation of neuroscience verses.⁷ However, no study has been conducted on the hadiths of neuroscience. The hadith book contains many commentaries on the virtue of thinking, using various terms, such as *fadh al-'aql*, *fiker*, *ziker*, *tadabbur*, *tabassur*, and many more.⁸ Musa Asy'ari's research, for example, states that thinking is one of the Prophet Muhammad's essential sunnahs.⁹ Moreover, he stated that the Holy Prophet (peace be upon him) was a "philosopher" who could think radically like the Yunani philosophers.¹⁰ However, Musa Asyari's research still needs to be developed. Moreover, it was associated with neuroscience (the science of the brain's ability to think). Therefore, research on neuroscience hadiths is urgent to encourage critical thinking among Muslims and advance science in Islam.

This study aims to find scientific hadiths or hadiths about the sunnah of the Prophet Muhammad in a thinking framework. The findings of this research will complement earlier scientific studies in the Qur'an. The significant contribution of this research opens up opportunities for the ongoing study of hadith in the field of science, especially the hadiths of neurons.

This research is based on the argument that the study of neuroscience hadiths can complement studies on interpreting neuroscience verses specifically and universal verses in general.¹¹ The hadiths of neuroscience also affirm that the Prophet's sunnah included not only worship but also *mu'amalah*, including thinking.¹² Islamic education has been responsible for developing the thinking potential of Muslims and is one of the institutions affected by the findings of this study.¹³ Islamic education is not enough to memorize hadith; it must be a source of inspiration for scientific development.

Theories on the hadiths of neuroscience have yet to be discovered, but that does not mean they do not exist at all. Concepts relevant to both hadith and neuroscience are integrated in a holistic theoretical configuration to formulate an operational definition of the concepts of neuroscience hadiths. This literature review explains the theoretical concept of what neuroscience hadiths mean in this study.

The hadiths of neuroscience are a fusion of two fields of science, namely hadith and neuroscience. During this time, hadith came from the Holy Prophets in speech, deeds, *taqdir*, physical and moral character.¹⁴ Neuroscience is the study of the brain to think with a multidisciplinary, interdisciplinary and transdisciplinary approach.¹⁵ In this case, the hadiths of neuroscience are defined as the sayings, deeds and confessions of the Prophet about using reason to think in solving various socio-religious problems, including advancing science with multiple approaches.

The hadiths of neuroscience are a new field of study that can complement the interpretation of neuroscience verses. If the interpretation of neuroscience sentences studies the concept of

⁷ Suyadi, "Tafsir Ayat-Ayat Neurosains ('Aql Dalam Al-Qur'an Dan Relevansinya Terhadap Pengembangan Berpikir Kritis Dalam Pendidikan Islam)"; Juliani et al., "Tafsir Ayat-Ayat Neurosains Dan Implikasinya Bagi Pengembangan Higher Order Thingking (HOT) Dalam Pendidikan Islam"; Suyadi, "Tafsir Ayat-Ayat Neurosains (The 'Aql in the Qur'an and Its Relevance to the Development of Critical Thinking in Islamic Education)."

⁸ Al-'Abasi, *Al-Mushannaf*; Al-'Abasi, *Al-Adab*; Al-Baihaqi, *Sy'ab Al-Iman*.

⁹ Asy'arie, *Filsafat Islam, Sunnah Nabi Dalam Berpikir*.

¹⁰ Asy'arie.

¹¹ Suyadi, "Hybridization of Islamic Education and Neuroscience: Transdisciplinary Studies of 'Aql in the Quran and the Brain in Neuroscience"; Suyadi, "Tafsir Ayat-Ayat Neurosains ('Aql Dalam Al-Qur'an Dan Relevansinya Terhadap Pengembangan Berpikir Kritis Dalam Pendidikan Islam)"; Purwanto, *Nalar Ayat-Ayat Semesta: Menjadikan Al-Quran Sebagai Basis Konstruksi Ilmu Pengetahuan*.

¹² Asy'arie, *Filsafat Islam, Sunnah Nabi Dalam Berpikir*.

¹³ Suyadi, *Pendidikan Islam Dan Neurosains*.

¹⁴ Al-Jaza'iri, *Taujih Al-Nazhar Ila Ushul Al-Atsar*; Al-Utsaimin, *Mushthalab Al-Hadits*.

¹⁵ (Hebb, 2012; Sherwood, 2012; McCandless, 1997)

reason with its entire semantic field, such as *ziker*, think, *tafakkur*, *tadabbur*, and *tasyakkur*.¹⁶ So, it is with the hadiths of neuroscience. The hadiths of neuroscience seek hermeneutical explanations for concepts found in the books of hadith. Thus, the hadiths of neuroscience examine the idea of reason in thinking.

This qualitative research uses the hermeneutic method, which is the science that reflects on how a word (text) or event that occurred in the past can be understood and existentially can be meaningful in the present human situation. In simple language, hermeneutics is defined as an attempt to bridge between the past and the present. In this case, researchers use the hadith hermeneutic method offered by Musahadi HAM, where the explanation of hadith will begin with historical criticism (authenticating the message of the Prophet by testing the quality of hadith narration), then edits criticism (conducting studies on the meaning of hadith, both linguistic aspects, historical background when the hadith was said, and generalization of the meaning of hadith), followed by praxis criticism, namely linking hadith with the reality of current life.¹⁷ Through this hermeneutic method, this study seeks to explore the sources of hadith and test the quality of hadith regarding neuroscience, how to interpret the message delivered by the Prophet and re-establish the sunnah of the Holy Prophet in the thinking framework without forgetting the context and reality of modern life.

Data collection in this study was carried out by utilizing documentation of the meaning of the text. In this study, the authors wanted to look at the representation of neuroscience hadiths by determining how hermeneutic circles work to gain optimal understanding. Therefore, hermeneutics can reflect the sunnah of the Prophet in thinking. The circle of hadith can change the definition of hadith neuroscience. All of the hadith's neuroscience together form a circle of understanding the Prophet's sunnah in thinking.

The source of data in this study is primary data, namely *Sabih al-Bukhari*, *Sabih Muslim*, *Sunan Abi Dawud*, *Sunan al-Tirmidhi*, *Sunan al-Nasa'i*, *Sunan Ibn Majah*, *Musnad Ahmad*, *al-Mustadrak*, and *Shu'ab al-Iman*. In addition, it is also taken from several books of hadith that are not very popular, such as *al-'Azamah* by Abu al-Shaikh, *al-Ibanah al-Kubra* by Ibn Baththah, *al-Asma' wa al-Shifat* by al-Baihaqi, and *Musnad al-Harith* by Ibn Abi Usama.

In addition to the main book, hermeneutic explanations of hadith are elaborated through commentary books of hadith, ranging from classical to contemporary works, e.g. *Fath al-Bari Sharh Sabih al-Bukhari* by Ibn Hajar, *al-Minhaj Sharh Sabih Muslim bin al-Hajjaj* by al-Nawawi, *Faidh al-Qadhir Sharh al-Jami' al-Saghir* and *al-Taisir Sharh al-Jami' al-Saghir* both by al-Munawi, *'Aun al-Ma'bud Sharh Sunan Abi Dawud* by al-'Azim Abadi, *Mirqat al-Mafatih Sharh Misykat al-Mashabih* by Nur al-Din al-Qari, *al-Tanwir Sharh al-Jami' al-Saghir* by al-Shan'ani, and *al-Adab al-Nabawi* by al-Khauili.

Based on the selected books of hadith, neuroscience hadiths relevant to the Prophet's sunnah in thinking were selected. In addition, this study also uses secondary data from books, journal articles, and references related to the research. Data analysis techniques in this study include the interpretation of neuroscience hadiths; researchers categorize them into three stages: (1) complete understanding, (2) understanding of parts and (3) understanding of the underlying meaning. Technically, data analysis techniques in research consist of data reduction, data presentation and conclusions.

¹⁶ Suyadi, "Tafsir Ayat-Ayat Neurosains (The' Aql in the Qur'an and Its Relevance to the Development of Critical Thinking in Islamic Education)."

¹⁷ Ham, *Evolusi Konsep Sunnah (Implikasinya Pada Perkembangan Hukum Islam)*, 151–62.

Results and Discussion

Based on a literature search with a rigorous literature study instrument, it was found that there are five hadiths related to neuroscience. These five hadiths are what researchers call neuroscience hadiths. The following description presents a hermeneutic discussion of the five hadiths.

Human Common Sense Humanity

The first neuroscience hadith is the hadith narrated by Abu Dawud, al-Tirmidhi, al-Nasa'i, Ibn Majah, and Ahmad in their respective books of hadith. This hadith was chosen because it distinguishes between an intelligent and unintelligent lunatic. In interpreting neuroscience verses, the reason is a sublime function of the brain, as described in neuroscience.¹⁸ The *takbrij* and hermeneutic antics of this hadith are as follows:

عن علي بن أبي طالب رضي الله عنه أن النبي صلى الله عليه وسلم قال: رُفِعَ الْقَلَمُ عَنْ ثَلَاثَةٍ عَنِ النَّائِمِ حَتَّى يَسْتَيْقِظَ، وَعَنِ الصَّبِيِّ حَتَّى يَحْتَلِمَ، وَعَنِ الْمَجْنُونِ حَتَّى يَعْقَلَ (رواه أبو داود والترمذي والنسائي وابن ماجه وأحمد)

Meaning: It is from Ali ibn Abi Talib (RA) that the Prophet said he was appointed a pen (exempted by law) from three classes: one who sleeps until he wakes up, children until he reaches puberty, and a madman until he returns to reason [again] (HR. Abu Dawud, al-Tirmidhi, al-Nasa'i, Ibn Majah, and Ahmad).

This hadith narrated in *Sunan Abi Dawud* (4/141), *Kitab al-Hudud, Bab fi al-Majnun Yasriqu aw Yushibu Haddan*, No. 4403 through:

Abu Dawud [al-Sijistani – *al-imam*] → Musa bin Isma'il [al-Tabudzaki – *tsiqab ma'mun*] → Wuhaib [bin Khalid al-Bashri – *tsiqab hujjab*] → Khalid [bin Mihran al-Hadzda' – *tsiqab*] → Abu al-Dhuha [Muslim bin Shubaih al-Qurasyi – *tsiqab hujjab*] → 'Ali [bin Abi Thalib al-Hasyimi – *shababi*] → Rasulullah Saw.¹⁹

It is also found in *Musnad Ahmad* [No. 956], *Musnad al-Khulafa' al-Rasyidin, Musnad 'Ali bin Abi Thalib*; *Sunan al-Tirmidzi* (No. 1423), *Kitab al-Hudud, Bab Ma Ja' fi man la Yajib 'alaibi al-Had*; *Sunan al-Nasa'i* [No. 3432], *Kitab al-Thalaq, Bab Man la Yaqa' Thalaqubu min al-Azwaj*; and *Sunan Ibn Majah* [No. 2041], *Kitab al-Thalaq, Bab Thalaq al-Ma'tub wa al-Shaghir wa al-Na'im*.²⁰

The quality of this hadith is **valid** because *tsiqab* narrators narrate it. Moreover, it was strengthened by several *shawahid* through the path of 'Aisha, 'Umar, Ibn 'Abbas, Abu Qatadah, Abu Hurairah, Thauban, and Shaddad.²¹

The hadith begins with the phrase (رفع القلم), which is a *kinayah* (metaphor), that it is not recorded or punished by groups of people who error "deviate" when they experience the condition:

¹⁸ ITB, *Tafsir Salman: Tafsir Ilmiah Juz'amma*; Suyadi, "Tafsir Ayat-Ayat Neurosains (The 'Aql in the Qur'an and Its Relevance to the Development of Critical Thinking in Islamic Education)."

¹⁹ Al-Sijistani, *Sunan Abi Dawud*.

²⁰ Al-Syaibani, *Musnad Ahmad Bin Hanbal*; Al-Tirmidzi, *Sunan Al-Tirmidzi*; Al-Nasa'i, *Sunan Al-Nasa'i: Al-Mujtaba*; Ibn Majah, *Sunan Ibn Majah*.

²¹ Al-Jazari, *Jami' Al-Ushul Fi Ahadits Al-Rasul*; Al-Zaila'i, *Nashb Al-Rayah Li Ahadits Al-Hidayah*; Al-Albani, *Al-Siraj Al-Munir Fi Tartib Ahadits Shabih Al-Jami' Al-Saghir*.

sleepers, children, and lunatics. However, that does not mean they are entirely free from the world's laws and hereafter. When the sleeping person wakes up, the child has reached puberty, and the madman is healed (sane), they return to the burden as normal humans.

In the time of 'Umar ibn al-Khaththab, there was a reported incident of a mad woman who committed adultery. At the urging of the people, 'Umar ordered the culprit to be stoned. Suddenly 'Ali ran into the people who were about to carry out the execution, ordering them to return (not punishing the perpetrators) while going to 'Umar and saying: "Do you not know that the pen has been raised against the madman as in the hadith of the Prophet?". 'Umar replied, right.²² Eventually, the woman was acquitted of stoning.

Thus, the hadith holds that there is no more significant loss than loss of reason. All physical illnesses do not take the man away from his status and privilege as a human being. Only insanity (madness) causes humans to turn like animals. It is in line with why it is a sublime function of the brain, especially the prefrontal cortex, the only neurobiological organ humans have. However, no other creature has the prefrontal cortex.²³ Even the hadith stated that the difference between humans and animals is their intellect.²⁴

The Thinking of *Ijtihadi*

Abu Dawud, al-Tirmidhi, and Ahmad in *Sunan Abi Dawud*, *Sunan al-Tirmidhi*, and *Musnad Ahmad* narrate the second neuroscience hadith. This hadith was chosen because of its content, which is about *ijtihadi* thinking. In Bloom's taxonomy, *ijtihad* thinking occupies the top position, namely C6, which means to create.²⁵ In the Indonesian dictionary, *ijtihadi* thinking can only be done by experts in specific fields of science who have very broad and deep knowledge.²⁶ The *takbrij* and hermeneutic study of this hadith are as follows:

عن معاذ بن جبل رضي الله عنه أن رسول الله صلى الله عليه وسلم بعث معاذًا إلى اليمن فقال: ... فَإِنْ لَمْ تَجِدْ فِي سُنَّةِ رَسُولِ اللَّهِ وَلَا فِي كِتَابِ اللَّهِ؟ قَالَ أَجْنَهُدُ رَأْيِي وَلَا أَلُو ...
(رواه أبو داود والترمذي وأحمد)

Meaning: It was from Mu'adz ibn Jabal (RA) that the Holy Prophet sent Mu'adz to Yemen, then the Prophet asked: [how do you decide a matter] if it is not found in the sunnah of the Prophet and not in the book of Allah? Mu'adz ibn Jabal replied: Then I will *ijtihad* with my own opinion, nothing more (HR. Abu Dawud, al-Tirmidzi and Ahmad).

This hadith is recorded in *Sunan Abi Dawud* (3/303), *Kitab al-Aqdbiyah*, *Bab Ijtihad al-Ra'y fi al-Qadha'*, No. 3592 from the line:

Abu Dawud [al-Sijistani – *al-imam*] → Hafsh bin 'Umar [al-Azdi – *tsabat mutqin*] → Syu'bah [bin al-Hajjaj al-'Ataki – *tsiqah mutqin*] → Abu 'Aun [Muhammad bin 'Ubaidillah al-Tsaqafi

²² Al-'Asqalānī, *Fath Al-Bārī Bi Sharh Ṣaḥīḥ Al-Bukhārī*.

²³ Snell, *Clinical Neuroanatomy*, 7th Edition.

²⁴ Al-Subki, *Ibraḥīm Al-Hikām Min Hadīṡ Rūfī'a Al-Qalam*.

²⁵ Bloom, *Taxonomy of Educational Objectives*.

²⁶ Nasional, *Kamus Besar Bahasa Indonesia Pusat Bahasa*.

– *tsiqab*] → al-Harith bin 'Amr [al-Tsaqafi – *da'if*] → Penduduk Himsh [*la yu'rafun/ mubham*]
→ Mu'adz bin Jabal [*sahabi*] → Rasulullah.²⁷

In addition, it is also narrated in *Sunan al-Tirmidhi* (3/608), *Kitab al-Ahkam, Bab Ma Ja' fi al-Qadhi Kaija Yaqdbi*, No. 1327, and *Musnad Ahmad* through the path of his teachers Muhammad bin Ja'far, Waki', and 'Affan with different editors but the same substance, *Tatimmah Musnad al-Anshar, Hadith Mu'adz bin Jabal*, one of them No. 22007.²⁸

The *sanad* of the hadith above is considered *da'if* because the narrator, al-Harith bin 'Amr al-Tsaqafi, is *mursal* by Muhammad bin Isma'il.²⁹ According to al-Tirmidhi, the inhabitants of Himsh are discontinuous (*muttashil*), and the inhabitants of Himsh are also unknown (*mubham*). However, most *fuqaha'* and hadith scholars cite this story in their works. Some opinions call the meaning of this hadith valid, such as Abu Bakr al-Razi, Abu Bakr bin al-'Arabi, al-Khatib al-Baghdadi, and Ibn al-Qayyim al-Jauziyah.³⁰ Al-Khatib al-Baghdadi, as quoted by Ibn Kathir, even loudly mentions that scholars accept and argue with this hadith.³¹ Thus, researchers argue that the quality of this *matn* is **valid** even though it is *da'if* because Islam still opens the door of *ijtihad* as widely as it mentions in the Qur'an: "*afala ta'qilun*," "*afala tubshirun*," and "*afala yubshirun*".

Ijtihad is to exert all one's ability to solve a problem by applying analogical law (*qiyas*) to something similar to its '*illat*' with the principles already called the Qur'an and Sunnah.³² *Ijtihad* is not easy for experts because they must exert all their abilities. Therefore, if the result of *ijtihad* is wrong, then it is not sinful,³³ Even to obtain one merit.³⁴ If the expert's *ijtihad* results are correct, they receive two merits, as mentioned in the hadith (إذا حكم الحاكم فاجتهد).

The initiative put forward by Mu'adz bin Jabal received appreciation from the Prophet, as seen in the statement at the end of the hadith. The Prophet "patted" his chest as a sign of pride, saying, "Thank you, Allah. You have informed his messenger, the Messenger of Allah." Thus, *ijtihadi* thinking is essential in solving problems.

عن قرة بن هبيرة أن النبي صلى الله عليه وسلم يقول: ... قَدْ أَفْلَحَ مَنْ رُزِقَ لُبًّا (رواه الطبراني)

Meaning: From the Qurrah ibn Hubairah, the Prophet said: Fortunately, people are endowed with reason (HR. al-Thabarani).

Based on the *takbrif* of hadith and hermeneutic studies above, *ijtihad* thinking is *higher-order thinking* (HOT) that can only be done by experts or *fuqaha'* and cannot be done by ordinary people.³⁵ People who are not experts and have limited knowledge will think at a low level (LOT). Therefore,

²⁷ Al-Sijistani, *Sunan Abi Dawud*.

²⁸ Al-Tirmidzi, *Sunan Al-Tirmidzi*, Al-Syaibani, *Musnad Ahmad Bin Hanbal*.

²⁹ al-Bukhari, *al-Tarikh al-Kabir*.

³⁰ Al-Thayyar, Al-Muthlaq, and Al-Musa, *Al-Fiqh Al-Muyassar*.

³¹ Al-Damasqi, *Gift al-Talib b. Ma'rafah Abadits Makhtasbr Ibn al-Hajjib*.

³² Al-'Azim abadi, '*Aun al-Ma'bud Sharh Sunan Abi Dawud*.

³³ Al-Dimasyqi, *Tafsir al-Qur'an al-'Azhim*.

³⁴ Al-Bukhari, *Sahih al-Bukhari*, Al-Naisaburi, *Sahih Muslim*.

³⁵ Syaubari et al., "Teaching Practice of Islamic Education Teachers Based on Higher Order Thinking Skills (HOTS) in Primary School in Malaysia: An Overview of the Beginning."

although Islam upholds man because of his intellect, not all intelligent men can do *ijtihad*. In neuropsychology, higher-order thinking requires intellectual, emotional, and spiritual intelligence.³⁶

Intelligence and Stupidity

Ahmad, al-Tirmidhi, Ibn Majah, and al-Hakim in *Musnad Ahmad*, *Sunan al-Tirmidhi*, *Sunan Ibn Majah*, and *al-Mustadrak* narrate the third neuroscience hadith. This hadith was chosen because it explains the difference between intelligent people (strong thinking) and ignorant people (weak thinking). In neuroscience, thinking and lust are regulated in the brain but occupy different areas, namely the prefrontal cortex and limbic system.³⁷ In neuropsychology, the limbic system is better known as the mammalian brain since this brain belongs only to mammals.³⁸ Therefore, a foolish but highly lustful person is equivalent to a "mammalian person". Furthermore, the *takbrij* and hermeneutic study of the hadith about intelligence and foolishness are presented.

عن شداد بن أوس عن النبي صلى الله عليه وسلم قال: الْكَيْسُ مَنْ دَانَ نَفْسَهُ وَعَمِلَ لِمَا بَعْدَ الْمَوْتِ وَالْعَاجِزُ مَنْ أَتْبَعَ نَفْسَهُ هَوَاهَا وَتَمَتَّى عَلَى اللَّهِ (رواه أحمد والترمذي وابن ماجه الحاكم)

Meaning: Shaddad bin Aus, from the Prophet, said that a smart person can subdue passions and do (think) for a further future (after death). Whereas the weak (foolish), that is, those who follow lust and dream of Allah [that they will be forgiven and enter heaven by getting what they want] (HR. Ahmad, al-Tirmidzi, Ibn Majah, and al-Hakim).

This hadith recorded in *Musnad Ahmad* (28/350), *Musnad al-Syamiyyin*, *Hadits Shaddad bin Aus*, No. 17123 through the path of narration:

Ahmad bin Hanbal [al-Syaibani – *al-imam*] → ‘Ali bin Ishaq [al-Sulami - *tsiqah*] → ‘Abdullah bin Mubarak [al-Hanzhali - *tsiqah*] → Abi Bakr bin Abi Maryam al-Ghassani [*fibi kbilaf*] → Dhamrah bin Habib [al-Himshi - *tsiqah*] → Shaddad bin Aus [al-Najjari - *shababi*] → Rasulullah.³⁹

In addition, its found in *Sunan al-Tirmidhi* (4/638), *Kitab Sifat al-Qiyamah wa al-Raqa'iq wa al-Wara'*, No. 2459; *Sunan Ibn Majah* (2/1423), *Kitab al-Zuhd*, *Bab Dziker al-Maut wa al-Isti'dad*, No. 4260; and *al-Mustadrak* (1/125), *Kitab al-Iman*, *Hadith Samurah bin Jundub*, No. 191. These routes go through Abu Bakr al-Ghassani → Dhamrah bin Habib → Shaddad bin Aus → Rasulullah.⁴⁰

According to Abu 'Isa, this hadith has the status **of hasan**.⁴¹ Al-Hakim judged it as *valid* based on Al-Bukhari's terms.⁴² The research of 'Abd al-Qadir al-Arna'ut (d. 2004), when edited the

³⁶ Pasiak, *IQ/EQ/SQ Revolution: Uncovering the secrets of intelligence based on the Qur'an and cutting-edge neuroscience*.

³⁷ Laurelee Sherwood, *Human Physiology, From Cell to System*, Translation: Brahm U. Pendit, Edition VI.; Snell, *Clinical Neuroanatomy*, 7th Edition.

³⁸ Vicki Anderson, Elisabeth Northam, *Developmental Neuropsychology*.

³⁹ Al-Syaibani, *Musnad Ahmad Bin Hanbal*.

⁴⁰ Al-Hakim, *Al-Mustadrak 'alā Al-Ṣaḥīḥain*; Al-Tirmidzī, *Sunan Al-Tirmidzī*; Ibn Mājah, *Sunan Ibn Mājah*.

⁴¹ Al-Tirmidzī, *Sunan Al-Tirmidzī*.

⁴² Al-Hakim, *Al-Mustadrak 'alā Al-Ṣaḥīḥain*.

book of *Jami' al-Ushul fi Ahadith al-Rasul* by Ibn al-Atsir al-Jazari (d. 1233), mentions one of his stature, Abu Bakr ibn Abi Maryam as *da'if*. Ibn Hajar al-'Asqalani judged Abu Bakr as very weak or *da'if jiddan*.⁴³ So did al-Dzahabi, as quoted by al-'Ajluni in *Kasyf al-Khafa'*,⁴⁴ who referred to this Ibn Abi Maryam as *da'if* (وايف).

If explored more deeply, Abu Bakr bin Abi Maryam al-Ghassani was indeed considered *da'if* and weak in memorization by several hadith critics such as Ahmad bin Hanbal, Abu Hatim, Ibn 'Adi, Ibn Hibban, al-Daraquthni and others.⁴⁵ However, al-Ghassani is also mentioned as an honest person (*shaduq*) and a Yazid bin Harun worship version member. Even the titles *al-Imam*, *al-Muhaddith*, *al-Qudwah*, *al-Rabbani*, and the nickname *Sheikh* of the Himsh community are no doubt pinned by al-Dzahabi.⁴⁶ Therefore, the author argues that this hadith is *hasan* because al-Ghassani lied in his weak memorization.

This hadith emphasizes that an intelligent person is a wise person who has insight into problems and knows the consequences that will be received from the results of his work.⁴⁷ Therefore, intelligent people are not subject to momentary passions and desires; they have religious considerations and responsibilities that they will face afterwards. It is his vision and orientation of the future that is the measure of his intelligence. Imam al-Nawawi, as quoted by Nur al-Din al-Qari, mentioned that an intelligent person is a person who constantly evaluates all behaviour, speech, deeds and his condition, whether it is good (to be grateful and continue) or bad (to be immediately regretted and repented) before finally being tried in the court of Allah.⁴⁸ This is impossible for a fool (*al-'ajiz*) whose life orientation is pleasure in the here and now while dreaming: one day, Allah will put him into heaven, too.

In this context, it is interesting what Sufyan bin 'Uyainah said:

لَيْسَ الْعَاقِلُ الَّذِي يَعْرِفُ الْخَيْرَ وَالشَّرَّ، إِنَّمَا الْعَاقِلُ إِذَا رَأَى الْخَيْرَ اتَّبَعَهُ، وَإِذَا رَأَى الشَّرَّ اجْتَنَّبَهُ (رواه أبو نعيم والبيهقي في حلية الأولياء وشعب الإيمان)

Meaning: It is not intelligent but only knows good and evil. An intelligent person sees good and follows; when he sees evil, he avoids it [in *al-Hilyah* and *al-Shu'ab*].⁴⁹

Based on the *takhrīj* of hadith and hermeneutic studies above, it can be concluded that an intelligent person prioritizes his common sense over his passions. In contrast, a fool prioritizes his passions over his common sense.⁵⁰ The prefrontal cortex regulates common sense in neuroscience, while the limbic system (the mammalian brain) regulates lust.⁵¹ A fool has more dominant limbic system functions than his prefrontal cortex.⁵² In other words, the lust of an intelligent person is

⁴³ Al-'Asqalani, *Ithaaf al-Mahara bi al-Fawa' ad al-mubatkara mein 8th al-'asira'*.

⁴⁴ 'Ajluni, *Kasyf Al-Khafa' Wa Muḥḥil Al-Ilbas*.

⁴⁵ al-mizzi, *tabdhib al-kamal fi asma' al-rijal*.

⁴⁶ Al-Dhahabi, *siar a'Lam al-Nubala'*.

⁴⁷ Al-Khauḥi, *Al-Adab Al-Nabawi*.

⁴⁸ Al-Qāri, *mirqāt al-mafātih sharb mishkāt al- maṣābih*, 3310.

⁴⁹ Abū no'M, *Hilyah al-Auliya' and Ṭabaqāt al-Aṣfiya'*; Al-Bayhaqi, *Seo' Ab Al-Iman*.

⁵⁰ Pasiak, *God in the Human Brain: Realizing Spiritual Health Based on Neuroscience*.

⁵¹ Pinel, *Biopsychology, Seventh Edition*.

⁵² Vicki Anderson, Elisabeth Northam, *Developmental Neuropsychology*.

very different from a fool's. Smart people, though they have lust, do not seem to have lust. On the contrary, though trying to be intelligent, a fool appears to be his lust.

Limits of Human Brain Capacity

The fourth neuroscience hadith is a narration of Abu al-Shaikh, Ibn Baththah, and al-Baihaqi in the books of *al-'Aḥamab*, *al-Ibanah al-Kubra*, and *al-Asma' wa al-Shifat*. This hadith was chosen because it explains the limits of the human brain's capacity to think about the substance of Allah. The limits of the ability to think in this hadith also give its colour in the study of secular Western neuroscience, which states that the potential of the human brain is infinite.⁵³ The following is presented *takhrīj* and hermeneutic study of hadith about the limits of the human brain.

عن أبي ذر رضي الغفاري الله عنه قال: قال رسول الله صلى الله عليه وسلم: تَفَكَّرُوا فِي خَلْقِ اللَّهِ، وَلَا تَفَكَّرُوا فِي اللَّهِ فَتَهْلِكُوا (رواه أبو الشيخ وابن بطة والبيهقي)

From Abu Dharr al-Ghifari (may Allah be pleased with him), the Holy Prophet(saw) said, think of Allah's creation. Do not think about the substance of Allah; you will surely perish (HR. Abu al-Shaikh, Ibn Baththah, and al-Baihaqi)

The above hadith was narrated by Abu al-Shaikh (d. 369 AH) in *al-'Aḥamab* through several channels, such as 'Abdullah bin 'Umar with the text (تفكروا في آلاء الله), Ibn 'Abbas كل تفكروا في كل شيء / تفكروا في الخلق / تفكروا في كل شيء / تفكروا في المخلوق (تفكروا في) and Abu Dharr al-Ghifari (خلق الله) with narrators as follows:

Abu al-Syaikh [al-Ashbahani – *tsiqab*] → Muhammad bin Sa'id al-‘Assal [al-Ashbahani – *shalih*] → Abu Sulaiman al-Sughdi [Ayyub bin Sulaiman - *tsiqab*] → ‘Abd al-‘Aziz bin Musa Abu Rauh [al-Lahuni – *shaduaq tsiqab*] → Saif bin Ukht Sufyan [bin Muhammad al-Tsauri – *laisa bi al-qami, da'if, matruk*] → al-A'masy [Sulaiman bin Mihran al-Asadi – *tsiqab hafiz*] → Mujahid [bin Jabar al-Qurasyi – *tsiqab imam*] → Abu Dzar [al-Ghifari – *shahabi*] → Rasulullah.⁵⁴

In addition, Ibn Baththah (d. 387 AH) reported this hadith as *manquf* (تفكروا في كل شيء) in *al-Ibanah al-Kubra*, 7/150, No. 108 through:

Ibn Baththah [al-‘Ukbari – *tsiqab*] → Abu Bakr Ahmad bin Hisyam al-Hadhrami [*majbul al-hal*] → Abu Bakr Yahya bin Abi Thalib [al-Wasithi – *tsiqab*] → ‘Ali bin ‘Ashim [al-Tamimi – *fibi khabir*] → ‘Atha' bin al-Sa'ib [al-Tsaqafi – *shaduaq*] → Sa'id bin Jubair [al-Asadi – *tsiqab tsabat*] → Ibn ‘Abbas [al-Qurasyi – *shahabi*].⁵⁵

⁵³ Ikrar, *Ilmu Neurosains Modern*.

⁵⁴ Al-Ashbahani, *Al-'Aḥamab*.

⁵⁵ Al-‘Ukbari, *Al-Ibanah Al-Kubra*.

Al-Baihaqi (d. 458 AH) also narrated as *mauquf* from Ibn 'Abbas in his book *al-Asma' wa al-Shifat*, No. 618 and 887 (تفكروا في كل شيء)⁵⁶. From the information of Ibn Hajar al-'Asqalani,⁵⁷ the status of this hadith of Ibn 'Abbas is *mauquf* with a good *sanad* (*jayyid*). According to Isma'il bin Muhammad and Jalal al-Din al-Suyuti, as Nashir al-Din al-Albani quoted, this hadith *hasan* quality but does not explain why.⁵⁸ After being traced, it turned out that there was a narrator named Saif bin Muhammad al-Tsauri whose quality was disputed. Thus, the author concludes that the status of this hadith is *hasan li ghairihi* because it is supported by *shawahid* as in *Musnad al-Rabi' bin Habib* through his teacher Jabir bin Zaid [al-Azdi - *tsiqah*] → Sa'id bin Jubayr [al-Asadi – *tsiqah tsabat*] → Ibn 'Abbas [al-Qurasyi -*shababi*]. Substantially, this hadith is in line with other, more valid propositions advocating thinking.

The background to the emergence of this hadith was to respond to a handful of people at that time who tried to think of the substance of Allah. They questioned God, who created all creatures, and who created God? Hearing their discussion, the Prophet warned them to elaborate enough on the universe and not to think of the substance of God because man would not be able to do so.⁵⁹ It can perish the person who thinks about it.

The search for people's minds brings them closer to Allah, as revealed in the Qur'an and other hadiths:

الَّذِينَ يَذْكُرُونَ اللَّهَ قِيَامًا وَقُعُودًا وَعَلَىٰ جُنُوبِهِمْ وَيَتَفَكَّرُونَ فِي خَلْقِ السَّمَاوَاتِ وَالْأَرْضِ رَبَّنَا مَا خَلَقْتَ هَذَا بَاطِلًا سُبْحَانَكَ فَقِنَا عَذَابَ النَّارِ (آل عمران: 191)

That is, [intelligent people are] those who make remembrance to Allah standing, sitting and lying down. In addition, they also thought about the creation of heaven and earth and said: "O Rabb, did You not create all this in vain? Most Holy Thou, so keep us from the torments of hellfire (QS. Ali 'Imran: 191).

عن أبي سعيد الخدري، قال: سمعت رسول الله صلى الله عليه وسلم يقول: قَسَمَ اللَّهُ الْعَقْلَ عَلَى ثَلَاثَةِ أَجْزَاءٍ فَمَنْ كُنَّ فِيهِ كَمُلَ عَقْلُهُ، وَمَنْ لَمْ يَكُنْ فِيهِ فَلَا عَقْلَ لَهُ: حُسْنُ الْمَعْرِفَةِ بِاللَّهِ وَحُسْنُ الطَّاعَةِ لَهُ وَحُسْنُ الصَّبْرِ عَلَى أَمْرِهِ (رواه أبو نعيم في الحلية)

From Abu Sa'id al-Khudri, he said, I have heard the Holy Prophet(saw) say, Allah has sworn by reason to three things. He who has all three is perfect with his intellect, and he who does not have all three is imperfect in his mind, namely: good knowledge of Allah, good obedience to Allah, and good patience with Allah's decrees (HR. Abu Nu'aim in *al-Hilyah*).

Based on the *takbrij* of hadith and hermeneutic studies above, thinking is the most critical worship besides remembrance (QS. Ali 'Imran: 191). However, the human brain can only think of some things, especially the substance of Allah Almighty. This is the limit of the human brain's

⁵⁶ Al-Bayhaqi, *Al-Asma' and Al-Shifat*.

⁵⁷ Al-'Asqalani, *Fath al-Bari B Shad Ü* *Abih al-Bukhari*.

⁵⁸ al-'Ajluni, *Kashf al-Khafā' and Muḥḥil al-Ilbās*, 357; Al-Albaani, *Al-Siraj al-Munir fi Order Ahadith Shahiyya al-Jami' al-Saghir*.

⁵⁹ Al-Sakhawi, *Al-Muqashad al-Hasana fi Bayan Katseer Min al-Ahadith al-Masitabara' Ala al-Al-Sunnah*, 261.

thinking ability, and it needs to be explained in modern neuroscience literature.⁶⁰ The brain's capacity is believed to be unlimited or *unlimited*.⁶¹ The Prophet commanded us to think about the secret and purpose of the creation of man, other beings, and the universe. Thinking about it all is expected to usher in the majesty of God. As for how God's substance, man has no power to attain his true essence; their knowledge is limited to what is bestowed by his skin.⁶² Tracing God's substance is like staring at sunlight in broad daylight.⁶³ With knowledge of the universe, the heavens, and the earth's bowels, man can and is encouraged to explore it through science and technology (QS. al-Rahman: 33).

Common Sense and Religious Pillars

Ibn Abi Usama and al-Baihaqi in *Musnad al-Harith* and *Shu'ab al-Iman* narrate the fifth scientific hadith. This hadith was chosen because it confirms the position of reason in religion. As mentioned in the previous section, the intellect is a sublime function of the brain, especially the prefrontal cortex area. Only people with sound minds can be well religious. This aligns with Harun Nasution's statement about reason and revelation that the Qur'an can only be understood by common sense or rationality.⁶⁴ The following is the *takbrij* of hadith and the fifth hermeneutic study of neuroscience.

عن جابر بن عبد الله رضي الله عنه أن النبي صلى الله عليه وسلم قال: قِوَامُ الْمَرْءِ عَقْلُهُ،
وَلَا دِينَ لِمَنْ لَا عَقْلَ لَهُ (رواه ابن أبي أسامة والبيهقي)

From Jabir bin 'Abdullah Ra, the Prophet said that one's pillar is his reason. There is no religion for the unintelligent (HR. Ibn Abi Usama and al-Baihaqi).

This hadith narrated by Ibn Abi Usama (d. 282 AH) in *Musnad al-Harith* (No. 816), *Kitab al-Adab, Bab Ma Ja' fi al-'Aql* through the channels:

Ibn Abi Usamah [al-Harith bin Muhammad al-Tamimi] → Dawud bin al-Muhabbar [al-Tha'i – *wadhba*] → Nashr bin Tharif [al-Bahili – *matruk al-badits*] → [Abd al-Malik bin 'Abd al-'Aziz al-Makki] Ibn Juraij [*tsiqab*] → Abu al-Zubair [Muhammad bin Muslim al-Qurasyi - *tsiqab*] → Jabir bin 'Abdullah [al-Anshari - *shahabi*] → Rasulullah.⁶⁵

Moreover, Imam al-Baihaqi (w. 458 H) also reported in *Syu'ab al-Iman* (No. 4323), *Bab Ta'did Ni'am Allah wa ma Yajibu man Syakaraha, Fasl fi Fadhl al-'Aql alladzī huwa min al-Ni'am al-'Izzam* via path:

Al-Baihaqi [Ahmad bin al-Husain al-Khurasani] → Abu 'Abdillah al-Hafiz [Muhammad bin 'Abdullah al-Hakim al-Naisaburi – *tsiqab hafiz*] → Abu 'Ali al-Husain bin Muhammad al-Shaghaniy [*majbul al-bal*] → Yahya bin Sasawaih [al-Marwazi – *majbul al-bal*] → Hamid bin Adam [al-Marwazi – *kadzdzab*] → Abu Ghanim [Yunus bin Nafi' al-Marwazi - *tsiqab*]

⁶⁰ Ikrar, *Ilmu Neurosains Modern*.

⁶¹ Pasiak, *Unlimited Potency of the Brain: Recognize and fully utilize the unlimited potential of your brain*.

⁶² Al-Shan'ani, *Al-Tamir Planet Al-Jami' Al-Saghir*, 82.

⁶³ al-Munawī, *Faid al-Qadir sharh al-Jami' al-Saghir*, 263.

⁶⁴ Nasution, *reason and revelation in Islam*.

⁶⁵ Usamah, *Bughyah Al-Babits 'an Zawa'id Musnad Al-Harits*.

→ Abu al-Zubair [Muhammad bin Muslim al-Qurasyi – *tsiqah*] → Jabir bin ‘Abdullah [al-Anshari – *shahab*] → Rasulullah.⁶⁶

The hadith narrated by Ibn Abi Usama has two problematic narrators. *First*, Dawud ibn al-Muhabbar judges as a forger of hadith (يضع الحديث), weak (ضعيف), a liar (كذاب), abandoned hadith (متروك الحديث), and mungkar (منكر الحديث) by Ibn al-Jauzi, Ibn Hibban, Abu Zur'ah, Ahmad, Ibn Hajar al-'Asqalani, and al-Bukhari. *Secondly*, Nasr bin Tharif is also referred to as abandoned hadith (متروك الحديث), weak (ضعيف), not written hadith (لا يكتب حديثه), unknown to the person who judged *tsiqah* (لا أعلم فيه توثيقاً), and abandoned hadith (ذاهب) by Abu Hatim, Abu Zur'ah, Ahmad, Ibn Hajar, and al-Bukhari.

The hadith narrated by al-Baihaqi cannot raise its status. Some of the names of his stature could be more problematic. When commenting on this hadith, Abu Bakr al-Baihaqi, as quoted by al-Hut, said that Hamid bin Adam [al-Marwazi] was alone (*tafarrud*) in narrating this hadith. At the same time, he was also indicated to be lying or falsifying hadith (متهم بالكذب أو بالوضع).⁶⁷ In addition, the two previous names, al-Husayn and Yahya are also problematic.⁶⁸ Thus, the status of this *sanad* is *da'if jiddan*, even *maudhu'*.

However, look at the substance of its *matn*. In that case, it is in line with the spirit of the Qur'an and other hadiths that encourage humanity to think about himself (QS. al-Dzariyat: 21) and the universe as evidence of the existence of the Creator (QS. Ali 'Imran: 190). In addition, the hadith tells us about the order of one's life based on one's intellect. The power of reason becomes essential because people are steeped in religion and manage life in the world. The degree of man depends on his reason.⁶⁹ Religion only provides many benefits if its adherents can maximize their intellect and explore Islam's teachings, laws, secrets, and wisdom.⁷⁰ However, the human mind cannot work alone, it needs to be guided by conscience as revealed in this narration:

عن النعمان بن بشير قال سمعت رسول الله صلى الله عليه وسلم يقول: ... أَلَا وَإِنَّ فِي الْجَسَدِ مُضْغَةً إِذَا صَلَحَتْ صَلَحَ الْجَسَدُ كُلُّهُ وَإِذَا فَسَدَتْ فَسَدَ الْجَسَدُ كُلُّهُ أَلَا وَهِيَ الْقَلْبُ
(رواه البخاري ومسلم)

Meaning: From al-Nu'man bin Bashir, I have heard the Holy Prophet(saw) say that indeed in the body there is a clot of blood which, if it is good, then the whole body is good. If it is damaged, it damages the whole body. That is called the heart (HR. al-Bukhari and Muslim).

Based on the *takbrij* of hadith and hermeneutic studies above, it could be understood that reason is a pillar of support for establishing religion. It means that religion is only for human beings who have reason. Other creatures, despite having brains, are not obliged to be religious. It can also be interpreted that people's behaviour contrary to their common sense is tantamount to violating the teachings of the religion itself. Although religion without reason cannot be established, the

⁶⁶ Al-Baihaqi, *Syu'ab Al-Iman*.

⁶⁷ Al-Baihaqi.

⁶⁸ Al-Hit, *Isna al-Mutalib fi Abadits al-Rabtab*, 203.

⁶⁹ Al-Munawī, *al-Taisir b shad al-Jami' al-Üaghbir*, 200; Al-Munawī, *Fai, al-Qadir shad al-Jami' al-Üaghbir*.

⁷⁰ Al-Shan'ani, *Al-Tamir Planet Al-Jami' Al-Sagbir*.

position of reason remains under revelation, not the same as Harun Nasution proposed.⁷¹ It is because reason is only an instrument for understanding revelation, not a revelation that is 'reasoned'-i to justify its behaviour that is not necessarily true.

Conclusion

The study of neuroscience hadiths is new in hadith research. This study can potentially become a new landscape in the area. However, this study needs to be more timely than interpreting neuroscience verses developed earlier. Therefore, this study can be said to be the first founder of the study of neuroscience hadiths. Hermeneutic analysis of neuroscience hadiths is also new in the study of hadith because, so far, the hermeneutic approach is more widely used in the study of other texts. The five hadiths found in this study confirm the importance of the Prophet's sunnah in thinking. Based on the *takbrij* performed, successively, the quality of the first prominent hadith is *sahih*; the second prominent hadith is *sahih*; the third prominent hadith is of *hasan* quality; the fourth prominent hadith is of *hasan li ghairihi* quality; and the fifth prominent hadith is *da'if jiddan* even *maudhu'*. Although the quality of the five hadiths varies, it does not reduce the sunnah of the Prophet in thinking. Hermeneutically, the Holy Prophet encouraged Muslims in particular and humans, in general, to think critically because 1) reason is the distinction between those who are responsible and those who are not (for lack of reason or madness); 2) do not hesitate to give *ijtihad* to solve a problem; 3) the intelligent thinking person is a visionary person who not only solves the demands of his passions; 4) think things that the brain can reach because its capacity is limited; and 5) reason is a pillar of religion that needs to get a touch of revelation. All of the Prophet's messages to think critically are still relevant to the conditions of modern society, especially since the latest problems are increasingly complex; it takes the power of intelligent reason to solve them. The result of critical thinking is expected to be able to deliver people to their God, not even holding their brains alone.

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