

Title : **PREFRONTAL CORTEX ACTIVATION IN  
BUILDING EMPATHY: The prevention of Genocide Based on  
Surah Al-Alaq [96]: 15-16 Perspective**

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Abstract : *This study is to explore the possible reduction of genocide tragedy through cortex prefrontal activation in order to build a positive energy of empathy in terms of theological perspective. The main issue of this study is how the bad thinking pattern of perpetrators of crime is isolated by the active cortex prefrontal that can build self control and compassion as stated in the QS. al-Alaq [96]: 15-16. Using the theories of the Quran thematic approach, case approach, and literary analysis, This surah declared a reminder to those who have ignored God's commandment in obeying His guidance, so that neurons in their prefrontal cortex play a role in managing the emotions are attracted to make the empathy circuit suffered abnormality. This empathetic abnormality that can cause people to tend to violence and the possible psychological spectrum of empathy can curb impulsive behavior. It also implies on the contribution of Islamic exegesis of Quran to the scientific exploration of social behavior.*

Keywords : *Prefrontal Cortex, Empathy, QS. al-Alaq [96]: 15-16.*

## INTRODUCTION

Scientists in the last decade have made great progress in understanding science about things that drive good and evil. Two things that seem related to one important emotional trait is empathy, the brain's true ability to experience the feelings of others. Kent Kiehl 2014, a Neuroscientist scanned more than 4,000 inmate brains since 2007, found that psychopathic brains have interfered brain structures that are interrelated to help process emotions, make decisions, control motivation, and set goals. Kiehl mentions the amygdala and orbitofrontal cortex, which help in this process of positive behavior, has an amount of gray matter about 5-7 percent lower than the amount in other prisoners.

On the other side the researchers also found that a person's social brain can change even as an adult, and can be trained to be better and more generous. Tania Singer, social neuroscientist and colleagues at the Max Planck Institute for Human Cognitive and Brain Sciences in Leipzig Germany, found empathy and compassion using different networks in the brain, which results in positive social behavior At the Mendota Juvenile Treatment Center in Wisconsin, it accommodates the possibility of preventing abusive teenage boys

from hardening to become criminals for life, which are managed more like psychiatric units than prisons. Able to apply the system "focus not on punishing bad behavior, but rewarding good behavior". This institution wants a system that sees the world from the perspective of the perpetrators of crime and tries to tear it down in a fair and consistent way.

The directing some human actions that show this personality such as honesty and lies, truth and error, and other social and antisocial behavior, as well as motivating someone to take the initiative to do good or evil has been explained in the word of Allah SWT in Al-Alaq: 15-16.

كَلَّا لَئِن لَّمْ يَنْتَهَ لَنْسَفَعْنَا بِالنَّاصِيَةِ نَاصِيَةً كَازِبَةٍ خَاطِئَةٍ

*"Know, truly if he does not stop (doing so) we will undoubtedly pull his crown (nashiyah), the crown of the person who denies again ungodly" (Quran Surah Al-Alaq verses 15-16)*

Gregory Stanton, founder of Genocide Watch, a nonprofit that works to prevent mass murder, identifies the stages in which good people kill. This process begins with the claim of the demagogue leader that causes discrimination which slowly erodes the empathy of the group. People are polarized and are left untouched not because they do not feel it, but they find a way to rationalize murder even to people they know personally.

Jean Decety, social neurologist, revealed that humans are double-faced because from both faces they can survive. Based on the hypothesis of the researchers, on the one hand humans evolved to want to help each other and work together in social groups, but on the other hand they also compete for resources for survival (Yudhidit, 2018). Not infrequently found in several competitions, humans can also damage, injure, or even kill each other. But most people's empathy levels can be considered sufficient. Only a handful of people who are classified as helping each other without thinking about the safety of their souls are known as extreme altruists and people who cruelly kill children are called psychopaths. This is the reason why both of them attract the attention of many people around due to their high-level empathy. According to Kent Kiehl, psychopaths must think about right and wrong, while most people can feel it (Yudhidit, 2018). In fact, most of them know and are smart when they have to pretend to empathize.

Therefore, innovation in overcoming genocide through the formation of mindset and positive behavior is very urgent to be implemented, before antisocial behavior is endemic in every individual. So the authors initiated the genocide prevention innovation through the formation of positive social behavior by activating the empathy circuit of the human brain. Circuits that emphasize the ends of the moral spectrum, sacrifice, generosity, and other noble qualities that are judged to be good are able to play a role in making the mindset of each individual more pro-social than the anti-social attitude.

### ABOUT SURAH AL-ALAQ (15-16)

Surah al-Alaq is the initial surah which was revealed, seeing from the historical order (*asbabun nuzul*) this surah is categorized as surah makkiyah based on the place it was revealed (Fawaid, 2016). The basic character of the verses in surah al-Alaq is divided into two parts which point to the signs of the decline of the verses in the early prophetic period, precisely when the prophet's preaching goes stealthily. The two characters of sura al-Alaq can be viewed from the top of mind of this verse by describing the principle dominance of

the purpose of this verse revealed. The first category focuses on the prophet Muhammad as an object namely verses 1-5 of surah al-Alaq. The marginalization of the prophet Muhammad as the object of the first category relates to the correlation between Iqra' and Qalam, between reading and writing. In this case al-Jabiri, quoting a history that became the beginning when revelation came to him. He said: "Come to me Gabriel, and I am in a state of sleep (Ru'yal Manam) wearing a steel shirt which contains books, Gabriel said: Read! and the Prophet answered, what did I read? " In other narrations, I cannot read. Regarding this, al-Jabiri, has its own comments. According to him there are two explicit meanings. First, Gabriel came and wanted the prophet to read, meaning Gabriel knew that the Prophet Muhammad could read and write. Second, Gabriel came and brought a book (revelation) called al-Qur'an. From this, the revelation to Muhammad meant by "teaching with a pen (al-Qalam), teaching humans what they did not know (Jabiri, 2008: 28).

[While the second category focuses on those who are hostile to the prophet as an object, namely verses 6-19 of surah al-Alaq. al-Jabiri reinforces his argument by referring to the majority of the commentators that the object of the second category of al-Alaq is Abu Jahal bin Hisham who is one of the leaders of the Makhzum who is a competitor of Hashimiyyin (Jabiri, 2008: 70). Al-Jabiri put forward a narration, which is the reason for this verse, when Abu Jahl really will bow the face of the Prophet to the ground, in another narration put forward by al-Jabiri, that Abu Jahl once forbade the Prophet to pray.

Closing his explanation of this verse, Abid al-Jabiri through the narrations he cited attempted to fragment data and information into one part of the discussion, namely Abu Jahl's rejection of Muhammad's treatise (Jabiri, 2008: 170). The rejection illustrated in the asbabun nuzul shows that the beginning of the Prophet's da'wah was a phase full of obstacles. The difficulties of the difficult preaching of the prophet were illustrated clearly by Abdullah Saeed by providing information that the Qur'an descended within the leadership structure and pre-Islamic Arab community as well as fluent Arabic language users. This fact shows that the preaching of the Prophet was not easy so that Arabic-language revelation was difficult to accept, even the Prophet was mentioned as a shaman / kahin (Saeed, 1999: 95-96).

### **CLASSIFICATION STUDY OF AL-ALAQ: 15-16**

Historically the emergence of deviant behavior has been stated in asbab al-Nuzul which is the background of the fall of sura al-Alaq: 15-16. In one of the classical commentaries explained that At-Tabari heard this story from Ibn Hamid, he said: told us Yahya bin Wadlih, he said: has brought news to you Yunus bin Abi Ishāq, from al-Walid bin al-' Aizār, from Ibn 'Abbās, he said: had said Abu Jahl: *truly if Muhammad returned to pray beside Maqām Ibrahim, surely I would really kill him.* then Allah sent down: (أَفْرَأَ بِأَسْمِ رَبِّكَ) to verse:

(لَنْسَفَعَنَّ بِالنَّاصِيَةِ نَاصِيَةً كَاطِبَةٍ خَاطِبَةٍ فَلْيَذُغْ نَادِيَهُ سَنَدْعُ الزَّبَانِيَةَ)

*"... We will undoubtedly pull the crown (into hell), that is the crown which denies the lawless, so let him call his group, someday we will call the zabaniyah angels ..."*

Then came the Prophet SAW. then he prayed, then Abu Jahal was asked by his friend: *what forbids you (from killing Muhammad)?* he replied: *truly has blocked between me and him (Muhammad) the army of horsemen.* Ibn 'Abbās said: if he (Abu Lahab) moved (insisted on

killing the Prophet) surely the angels would finish off Abu Lahab and people would see it (that event) (Tabari, tt: 539). The Qur'an characterizes the word nashiyah with the word kadzibah khathī'ah (lying again ungodly). Allah says, "(Namely) the crown which deniers again ungodly." (Al-Alaq: 16). Prof. Muhammad Yusuf Sakr explained that the task of the part of the brain in the crown of a human is to direct one's behavior. "If people want to lie, then a decision is taken in the frontal lobe that coincides with their forehead and fontanel. Likewise, if he wants to make a mistake, then the decision also takes place in the crown. "

Then he explained this problem according to several expert experts. Among them are Prof. Keith L More who asserted that the crown is responsible for the highest considerations and directors of human behavior. While the organs are only soldiers who carry out the decisions taken in the crown.

By studying the composition of the upper organs of the forehead, it was found that it consisted of one of the skull bones called a frontal bone. The task of this bone is to protect one of the brain lobes called the frontal lobe. Inside there are a number of neorotic centers that differ in terms of place and function. The front layer is the largest part of the frontal lobe, and the task is related to the formation of individual personalities. It is considered the highest center of concentration, thought and memory. It plays a structured role for the depth of individual sensation, and it has influence in determining initiation and cognition. This layer is just behind the forehead. That is, he hid in the crown. Thus, it is the front layer that directs some human actions that show their personalities such as honesty and lies, truth and error, and so on. This section distinguishes between these qualities, and also motivates someone to take the initiative to do good or evil. (Noah, 2009).

### **SOME EXPERT OPINERS ABOUT SURAH AL-ALAQ: 15-16**

The discussion of Surah Al-Alaq should properly begin with the discussion contained in the books of interpretation both classic to contemporary. The definition of interpretation itself means Tafsir / تفسير means al-idlah / الإيضاح (explanation), al-tabyin / التبيين (description). The word tafsir / تفسير is rooted from the word fasara / فسر which means the sincerity of opening or repeating the effort to open.

التفسير هو علم يبحث فيه عن القرآن الكريم من حيث دلالاته على مراد الله تعالى بقدر طاقة البشرية

*Knowledge that discusses the Qur'an in terms of doing according to what God wants. according to human ability.*

Starting from the work of classical commentaries represented by three works composed around the 5th century to 6th century Hijriyah. The first is the book of Jāmi'u al-Bayān 'an ta'wīlayial-Qur'an by Abu Ja'far Muhammad IbnuJarīr At-Tabari which was composed before 310 H. At-Thabari interprets that: what is meant by the word Nāshiah is face. Sufficiently recite the word an-Nāshiah from the meaning of the faces all because the face-Nāshiah is the base of the face. meaning that God will completely blacken his face (Abu lahab) in the sense that Allah will actually take (throw) his face (Abu lahab) to hell (Tabari, tt: 536).

The second is the book Bahru al-Ulūm by Abū al-Laits Nasr ibn Muhammad ibn Ahmad ibn Ibhīm As-Samarqandi composed before 375 H. Abu Laist interprets that: the word Nāshiah is a fontanun for every human being who is similar to Abi Lahab's behavior

(always hurting and disturbing the Prophet Muhammad SAW) or they are polytheists aka who like the name of the blessings of Allah but worship other than Him then they will be held hard by the top and folded until his legs then thrown to hell. (Samarqandi, 1993).

The third is the book of al-Kasyyāf by Abū al-QāsimMahmūd bin 'Umar Az-Zamakhsyari composed before 538 H. Az-Zamakhsyari interpreted that: what is meant by the word Nāshiah is the badal of an-Nāshiah mentioned in the previous verse, and may be composed the word Nāshiah is replaced which was originally a nakirah has its own principle used as isim ma'rifah. The word Nāshiah is read rafa 'for guessing the word dlomir hia Nāshiatun, and reading Nāshiatan (nasab). The second meaning of the reading is cursing. And the word Nāshiah is characterized by the words al-kidzbu and al-khata 'over the method of isnadkhabari (resting the word nāshiatun to an improper sentence) and the truth about what al-kidzbu and al-khata' are the owner of the fontanel. (Zamkhsyari, 1997: 406).

After the 6th century Hijriyah the development of interpretation began to shift from the classical period with the characteristics of writing accompanied by a lot of history, changing to the middle age which began to explain a little about the meaning of the verse before using riwayat in interpretation. This mid-interpretive work is represented by Ibn Katsīr's commentary by Abū al-Fidā' Ismā'īlIbnKatsīr which was composed before 774 H. Ibn Katsir interpreted that: the meaning of the word ناصية is the Abu Jahl's Nāshiah where he is a liar in saying and erroneous in behaving before (Katsir, tt: 400) In this middle era, Ibn Katsir gave a little explanation at the beginning of his discussion before proceeding with the inclusion of history as contained in the interpretation of the classical era.

Entering the 10th century Hijriyah, the interpretation of the scientific kahzanah before the modern era which is represented by the interpretation of at-Tahrīr wa at-Tanwīr by Muhammad Thāhir ibnu 'Āsyūr was composed before 1393 H. Ibnu' Āsyūr interpreted that: lam which is in the words of an-Nāshiah is a Muhammad "Al" which functions preaches the word an-Nāshiah which was before. Namely, the Nāshiah is the one who always forbids his slaves when they want to pray. And "al" in the word is named by the syntactic expert (kufa) with the name "al' iwald "which is a substitute for the mudlaf ilaih taqdir is:

بناصيته ، أي ناصية الذي ينهى عبداً إذا صلى (Asyur, tt :450) .

From some of the commentary works, we can see a shift in the focus of the discussion in each era. Epistemologically, in its history, classical and medieval interpretations were pointed out by Abdul Mustaqim, especially in the 8th to 15th centuries as interpretations of the affirmative era with ideological reasoning (Mustaqim, 2012: 35-84). However, the shift in focus of interpretation from time to time has not been able to reveal the interconnection of the Qur'an with other scholarship, especially science in general.

After research on the shifting focus of the interpretation of sura al-Alaq: 15-16 from time to time, in the contemporary era studies were found that began to utilize the interconnection of the Qur'an with modern scholarship. The authors do not call these studies by interpretation, because in Islamic scholarship there are special requirements to be referred to as commentators because there are significant differences between "reviewers" and "interpreters" of the Qur'an. A commentator al-Qur'an is accompanied by various conditions that must be met as a standardization of a mufassir, in this case According to Khalid Abdurrahman al-Akk, there are fifteen conditions that must be met to become an



interpreter (mufassir). While the term "reviewer" allows non-Muslims to study the scriptures. So that their work which is a study of the Qur'an refers to the study of the Qur'an.

### PREFRONTAL KORTEKS I: EMPATHY CIRCUIT

Humans are the most social species on earth and the most vicious species on earth, extreme altruists exemplify the best instincts and psychopaths exemplify the worst instincts. At one end of the spectrum there are sacrifices, morals, generosity and other noble qualities that are considered good. While selfishness, violence, and destructive drive are considered bad at the other end. Jean Decety, social neurologist, revealed that humans are double-faced because from both faces they can survive (Yudhidit, 2018). Based on the hypotheses of researchers, on the one hand humans evolved to want to help each other to help and work together in social groups, but on the other hand they also compete for resources for survival.

In the last few decades, researchers have been able to understand the good and bad aspects of science that seem to have something to do with one important emotional trait, empathy. Various studies also found that the lack of empathy in violent, psychopathic, and anti-social behavior seems to be caused by a defective nerve circuit. The empathy circuit in question is the highlighted part (much activity) of the brain and plays an important role in responding to stimuli towards others.

This part of the circuit synergizes with each other so that it can determine a person's behavior towards what is experienced by others around him. This empathy circuit shows areas that have a unique role in the way the brain responds to others, namely: Somatosensory Cortex, spontaneously reacting to other people's physical pain; Inferior Parietal Lobe, reflects the actions and emotions of others; Superior Temporal Sulcus, reading the eye expressions and movements of others; Temporoparietal Junction, imagining or reading other people's thoughts (right side only); The amygdala, the part of the brain that is associated with emotional responses and disturbing stimulus processing; Middle Cingulate Cortex, recognize pain and decision making; Medial Prefrontal Cortex, comparing one's perspective with others; Orbitofrontal Cortex, understanding social cues and physical pain; Anterior Insula, recognizing emotions, pain, and self-awareness; Inferior Frontal Gyrus, notes facial emotions; Frontal Operculum, understanding the intentions of others (Yudhidit, 2018).

Among these sections, two of them are dominant enough to distinguish between extreme altruists and psychopaths, the amygdala and the orbitofrontal cortex. In addition, various brain scan studies of a murderer who claimed to be insane showed low activity in the medial prefrontal cortex and orbitofrontal cortex located in the prefrontal cortex, the part of the brain that curbs impulsive behavior. Abnormalities in this area can make people inclined to violence.

The prefrontal cortex, which is located at the top of the front, plays an important role in cognitive and executive functions such as focusing attention, making plans, controlling impulses, and making decisions (good or bad). In this area it also functions as an expression of personality, decision making and correct social behavior

The empathy circuit can be activated and suppressed from biological, psychological, and social factors. Genetic variation increases the ability to recognize facial expressions or

produce more enzymes associated with low aggressive levels. However, one estimate is that about 70% of psychopathic traits are genetic. From psychological factors, temporary conditions such as drunkenness, hunger, or fear can reduce empathy responses briefly compared to childhood trauma that can cause long-term effects. From a social point of view, a widespread blackout of empathy can occur when groups of people support the ideology of aggression or superiority, as in wartime. On the other hand, this social factor can be increased, seeing friends cry or hear dogs whimpering, for example can lead to empathy and the desire to end shared suffering.

## **PREFRONTAL II CORTEX: EMPATHY SPECTRUM**

Empathy is the nature to feel and / or experience the feelings of others / things around them. Actually, this trait has begun to grow in humans before the age of 1 year. Most 8-month-old babies who have begun to show empathy traits such as facial expressions that reflect concern, move caring, advance body and try to communicate with people who are distressed. Although, this does not happen to all children.

The researchers finally found that human empathy can actually be measured according to science through the empathy spectrum. This spectrum is one of the results of measurements from the emotional intelligence test (EQ). The person being tested will be asked questions aimed at determining the amount of interest in the feelings and thoughts of others. This question will measure a person's level of empathy which leads to the type of empathy spectrum of a person. The empathy spectrum determines the magnitude of one's interest in the feelings and thoughts of others, with extreme altruists occupying one end of the spectrum and people who do not have empathy at the opposite end. At least, there are four types of person based on this spectrum, namely extreme altruists, humanities professionals, science professionals, and psychopaths (Yudhidit, 2018). Most people are part of the professional humanities or science. This means that most people's empathy can be considered sufficient. Only a handful of people have extreme altruists and extreme psychopaths. This is the reason why both of them attract the attention of many people around due to their high-level empathy. Especially for psychopaths themselves, most of them can know and be smart when to pretend to empathize.

In several studies, it was revealed that psychopathic brains experience disturbances in interrelated brain structures, the "amygdala and prefrontal cortex" that help process emotions, control motivation, make decisions, control heart movements, and set goals. Kiehl, Kent (2014), neuroscientists at the University of New Mexico scanned more than 4,000 inmates, finding abnormalities in the brains of psychopathic criminals from the activation and size of various brain regions. Psychopathic criminals have lower activity in the brain's amygdala, the place of emotional processing, when compared to non-psychopathic inmates.

In extreme altruists having a larger brain amygdala compared to a psychopathic brain amygdala, there is more nerve activity in the amygdala - the part of the brain associated with learned emotional responses and disturbing stimulus processing. Abigail Marsh (2014), a psychologist who scans the brain of altruistic kidney donors by showing a series of black-and-white photographs with facial expressions of fear, some angry, and others using an MRI machine to map the activity and structure of finding the amygdala of the subek on average eight percent more big. The responsive form shown by the fear of the subject raises

a greater sense of concern and care, most likely this is because the amygdala of the altruist is greater than the psychopath.

### EMPATHY-THE TRIGGERS OF COMPASSION

Empathy is the true ability of the brain to experience the feelings of others. Researchers understand empathy as firewood to ignite compassion in the hearts of every individual, to understand each other and help each other in distress. According to research by Tania Singer (2017), a social neuroscientist at the Max Planck Institute for Human Cognitive and Brain Sciences in Leipzig Germany found empathy and compassion using different networks in the brain. The empathy response of the brain when seeing other people suffer sometimes results in its own suffering. For people who see without being based on compassion in their inner turmoil will cause a negative reaction from what they suffer, making people who see the incident want to turn away from the sufferer to maintain his inner state.

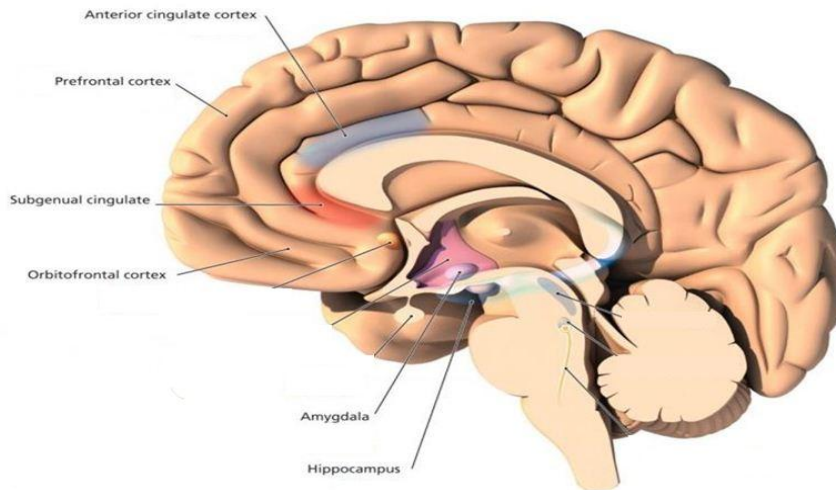
The capacity to empathize with humans and channel compassion is not innate from genetic factors, but that does not mean they cannot be built. Likewise psychopathic and anti-social personalities were not so strong in their childhood, so that can still be changed. In recent years, researchers have proven that vices can be prevented early on and strengthens our positive social instincts. At the Mendota Juvenile Treatment Center in Wisconsin, a serious criminal shelter managed more like a psychiatric unit than a prison examines the possibility of preventing abusive teenage boys from hardening to become criminals for life (Yudhidit, 2018). This center proves by managing a different perspective in general, "not to punish bad behavior, but to reward good behavior". They apply this focus to all adolescents who carry a long history of crime, children who behave aggressively and are antisocial with patterns of behavior assessment every day. They will get certain rights such as the chance to play video games if the value is good, but if the value is bad, for example because of fighting, then their rights will be revoked.

This perspective, which is rarely found and differs from most of these prisons, proves that the social brain can change even as an adult and can be trained to be kinder and more generous. Greg Van Rybroek (2001), the director of the shelter center revealed that the behavior of each child changes improved over time. Outside the center study found that youth handled between two and six years in this program were far less frequent and not as hard as adolescents handled elsewhere. This center creates a system that sees the world from the perspective of the teenager and tries to tear it down in a fair and consistent way.

Various studies of Tania Singer were conducted to determine the desire to grow prosocial (Yudhidit, 2018). Studies conducted by Tania Singer and her colleagues, social neurologists, examine the effects of various exercises to increase compassion, which combines awareness of the difficulties of others with a desire to relieve them. In another study, Singer tested the effect of compassionate training on the desire to help by using computer games. The results of this study found that subjects who participated in compassion training were more often helpful than people in ordinary groups.



**PREFRONTAL CORTEX ACTIVATION IN BUILDING EMPATHY:  
The prevention of Genocide Based on Surah Al-Alaq [96]: 15-16 Perspective**



*(Adapted from some references)*

## **INTERPRETATION OF 'PREFRONTAL CORTEX ' IN TWO PERSPECTIVES**

### **Qur'an's perspective**

Based on the historical order (sabab al-nuzul) surah al-Alaq is a verse that descended in the early period of prophecy leading to the understanding that in the perspective of the Koran this verse becomes a "pioneer" of the Shari'a which describes the role and function of Muhammad SAW very complexly, because Muhammad was responsible for presenting a new theological discourse among Arabs, in addition to having tasks that were not easy commands, such as orders of worship, social relations by creating ethical frameworks through Shari'a (Sajoo, 2012: 5).

The complexity of Muhammad's role and function during the fall of the surah al-Alaq is illustrated by the challenge of the Qur'an to the Arabs with rhetoric that challenges the surah to be commensurate with and equals the Qur'an. Such challenges cannot be faced with a low and weak culture, this certainly indicates that Arabic culture has been at a fantastic level of progress in stylistica and civilization are some important aspects which are the object of the challenge of the Koran, this is evident from many Arabic cultures are still adopted by Islam (Najitama, 2007: 106).

The complexity is depicted in surah al-Alaq in the form of lawlessness and contradictions which then become the Prophet's response to a group of people who reject it. Through this historical construction it can be concluded that there are 3 main points which are discussed in Surah Al-Alaq, namely: the perspective of the performer (Prophet Muhammad), the content of the treatise (Shari'a) and the strategy to deliver the treatise.

The description of the complexity of the role and function of the Prophet as the subject of the first discussion, the content of the treatise, and the strategy of delivering Shari'a, became a pattern of reaction to the dynamics of the spread of Islamic teachings. Where the pattern repeats itself in subsequent times after the fall of Surah Al-Alaq, even the mid to modern times became the basis for seeing Surah Al-Alaq through a contemporary perspective.

### Contemporary Perspectives

Efforts to interpret or study sura al-Alaq in a contemporary perspective must be assessed based on the closeness of the text with the empirical facts that surround it, or in other words the closeness of the interpretation statement with the facts that occur (Lutfi, 2013: 41), the interpreter's effort in achieving the legal meaning (Zarkashi, 1957: 13), and most importantly the implicative function of interpretation (Gracia, 1995: 61).

Therefore, the demands of a solutive function of the Qur'an can certainly put pressure on interpreters of the Qur'an to produce creative synthesis that can solve modern crises. In the framework of interpretation, al-Jabiri considers this to be something very crucial and important, but at the same time there are many subjects (mufasssir) not reading these things by repeating past traditions in producing interpretations. Contemporary perspective motivation is a response to the classical interpretation model by testing the relevance of an understanding of the text and making an effort to find new things in the reading of the text of the Koran in order to find the current spirit of the Koran / ruh al-'Ashr (Jabiri, 2008 : 9).

With that position, it is clear that interpreters of the contemporary era want a work in accordance with the demands of their era, this is inseparable from the responsibility to open a space of communication between text and (experience / mughamarah) which is directly related to reality, as the most prominent aspect in a work. From this effort, then contemporary interpreters and reviewers try to understand the text by presenting data and current information, based on the horizon and horizon of all its contents (Jabiri, 2008: 10).

The motivation for this contemporary study is none other than the business that is commonly referred to as Washl al-Qari bi al-Maqrū (connecting the reader with what is read). This project is expected to find renewal based on authenticity (al-Ashalah), which is an ijihad based on continuity with tradition (Mujiburrahman, 2008: 93).

Washl al-Qari bi al-Maqrū (linking the reader with the reading) is one of the bases underlying the interconnection between the Qur'an surah al-Alaq: 15-16 with neuropsychology, which is not only explaining the word Nāshiah as the crown the dominant face or place of honor, only the literal meaning. Furthermore the interconnection is able to explain the word Nāshiah as a prefrontal cortex which is part of the study of neurology and its function as a controller of emotions and empathy in psychology. Empathy itself is absolutely necessary to foster compassion as a preventive deterrence to shape the positive behavior of crime leaders such as the threat of genocide. As mentioned in asbabun nuzul surah al-Alaq: 15-16 namely the existence of Abu Jahl who wanted to do evil to the Prophet had indicated the low empathy he possessed, so that his position as leader of the tribe allowed the genocide of coercion from the coercion of a tribe to prevent the propagation of the apostle from spreading to the all corners of the Arabian peninsula, as mentioned in the history of the boycott of the Hashim before the death of Abu Tholib, the uncle of Rosulullah who supported the prophet's preaching.

### ISLAMIC CONTRIBUTION TO THE MAKING OF COMPASSION

The formation of compassion in each person's soul is an effort to form positive behavior to deal with the negative views of empathy. The formation of compassion has been proven by researchers, some of whom are Tania Singer, social neuroscientist; Michael Caldwell, senior staff psychologist, Greg Van Rybroek Director of the Mendota Juvenile Treatment Center in Wisconsin (Yudhijit, 2018). With compassion training by some

experts, accelerating the future by shaping the brain so that it is more altruistic is a prospect that can increase the degree of society. The result might make a more benevolent world, filled with altruists, whose reflexes of doing good will become more prevalent and become the defining trait of social humans.

Known as the principle of the teachings of Islam as a religion of compassion: Islam rahmatan lil alamin, indicated by the verses of the Koran which ordered to be fair and do good, including to non-Muslims, and to seek peace. Although there are a number of verses in the Koran that talk about war and violence, that in no way invalidates the main mission of Islam as the religion of rahmatan lil -âlamîn. The 'soft' verses in the Qur'an are far more numerous than the "hard" verses (Kholid, 2017). According to M Kholid Syeirazi, Secretary General of PP ISNU said the hard verses were historical and contextual. The Messenger of Allah was ordered to fight the infidels who fought the Messenger of Allah and Friends. They are hostile and drive out the Messenger of Allah from his homeland. Therefore, the first verse to go down about war is to use passive editorial (مبني مجهول), not an active command.

"Hard verse" is referred to as stated in the QS. al-Hajj (22: 39-40), QS. al-Anfal (8: 39), QS. al-Baqarah / 2: 191 and QS. an-Nis' / 4 verses 89 and 91, QS. an-Nis' (4: 89 and 91). If this 'hard verse' is read without the historical context and asbâbun nuzûl, Islam will be a religion of terror and war as practiced by ISIS, affiliated organizations, and sympathizers. They dragged the world into a war situation, departing from a number of verses that were read partially and released from their historical context (Kholid, 2017). War is used as a means of fighting for political ideology, not as part of a natural response to self-defense as is the asbâbun nuzûl.

Not only that, Islam also provides compassion training through the meditation of several Islamic figures such as Al-Ghazali, as one of the Sunni Sufi figures having a set of meditative methods. With his tariqat Al-Ghazali emphasizes the science and deeds of deeds, ending with al-muhibbah (love) which will eventually lead someone to ma'rifatullah. The discipline of Al-Ghazali's technique technically and practically includes the following activities: first, leave all bad behavior and lust demands, and concern yourself in dealing with God and the seclusion of seclusion to the extent of being away from others to calm oneself and ugly thoughts; secondly dhikr both verbally and heartily, third riyadhoh (training) by means of mujahadah born like fasting and inner mujahadah such as conditioning the heart not to turn away from God in all forms and conditions, the four tafakkur, the five muraqabah (Taqiyuddin, 2009).

Tafakkur in the study of Al-Ghazali meditation is a process of combining two sciences related to the science that has been studied (studied), so as to reach an understanding. The fruit of this tafakkur is the science of matters and deeds of deeds. If knowledge is successful in the heart, then the state of the heart will change and good deeds will follow. Thus, the tafakkur moves from the disliked to the loved one, and from desire and greed to zuhud and qana'ah (Moh. Zuhri, t.t.: 238-239). This understanding tries to show the connectedness of mind in determining or planning positive social behavior or vice versa.

The results or results from following the discipline of meditation are true. The results of this meditation are then needed by each individual to form more positive behaviors. This meditation is used to intersperse defuse, focus, or separate the impulses and patterns of ordinary experience to enable him to increasingly realize directly about the absolute reality

of life. Humans are known as social beings, through this meditation one will find the essence of life.

### EMPATHY : REDUCE ANTI-SOCIAL TENDENCY

Most people in the world have committed violence, they are not extreme altruists or psychopaths. However, the genocide took place requiring the involvement and passivity of large numbers of people such as Nazi Germany to destroy millions of Jews, Communist Khmer Rouge, Hutu extremists in Rwanda, and ISIS terrorists slaughtering Yazidis in Iraq, almost parts of the world seem to have experienced genocide. Gregory Stanton, founder of Genocide Watch, identified from the stages that can cause good people to kill, this process begins with the claim of a demagogic leader who causes discrimination which slowly erodes group empathy (Yudhidit, 2018). People are polarized and are left untouched not because they do not feel it, but they find a way to rationalize murder even to people they know personally. This justification raises the mindset of "if I don't kill them, then those who will kill me later" in other words they understand and justify bad behavior for the benefit of the group.

Researchers from Oxford University and University College London (UCL) have identified parts of the human brain that help a person learn to be good to others (Putra, 2016). This finding can at least help understand conditions such as psychopaths, one of which is antisocial behavior. the researchers, led by Dr. Patricia Lockwood, explained that "prosocial behavior" is social behavior that benefits others. Although humans have an extraordinary tendency to engage in prosocial behavior, there are big differences between individuals. Empathy, the ability to understand and experience one's own experiences and feelings is an important part of prosocial behavior.

The researchers scanned the brains of volunteers in an MRI machine where they were given a series of choices to give presents to themselves and others. Researchers find that we are quick to make choices that benefit others, but are slow in making choices that benefit themselves. They also identify areas of the brain involved. Dr. Lockwood said that there is a "certain part" of the brain called the subgenual anterior cingulate cortex as the only part of the brain that is activated when helping others (Putra, 2018). In other words, this subgenual anterior cingulate cortex seems to be specifically tuned to benefit others. He also said that those who had high levels of empathy showed an increase in signaling in the subgenual anterior cingulate cortex when they succeeded in benefiting others than those who reported lower levels of empathy.

This is similar to the study of Abigail Marsh (2014), a psychologist who scans the brain of altruistic kidney donors by showing a series of black-and-white photographs with facial expressions of fear, some anger, and others using an MRI machine to map the activity and structure of finding the amygdala of kidney donors the altruist is on average eight percent greater. Two things that point to the light that everyone who has high empathy both have a larger brain size in certain parts and reduce the desire to do violence, psychopaths, and anti-social.

### CONCLUSION

Surah al-Alaq verses 15-16 underlies the top of mind which is focused on those who are hostile to the prophet and Abu Jahal bin Hisham, the leader of the Bani Makhzum,

describing the object of this verse shows the beginning of the prophet's preaching due to the opposition of the Quraysh infidels against the Hashim. The shift in focus of the interpretation of Surah Al-Alaq: 15-16 from the classical to the contemporary period and studies that began to utilize the interconnection of the Koran with modern scholarship explained that the task of the part of the brain, the prefrontal cortex, which exists in the human crown synergizes with each other towards positive behavior in tackling crime.

This study shows empathy circuits such as the amygdala, orbitofrontal cortex, medial prefrontal cortex, subgenual anterior cingulate cortex, and hippocampus which work together to form positive behavior and self control. Likewise, this study successfully described that the spectrum of empathy can be influenced by biological, psychological, and social factors.

Al-Ghazali such as *uzlah* and *khalwat*, *dhikr*, *riyadhoh*, *tafakkur*, *muraqabah* can be effective steps to build empathy to overcome the threat of acts of genocide. This study also recommends the need for further study of the extent to which the response programs of acts of genocide see the world from the perspective of the perpetrators, not giving punishment to the perpetrators but directing positive behavior by giving rewards.

## REFERENCES

- Abigail Marsh, Sarah A. Stoycosa, Kristin M. Brethel. 2014. *Interpretasi Surat Al-Alaq: 15-16, peran dan aktivasi korteks prefrontal dan metode meditatif Haurwitzza, Paul Robinsonb, John W. VanMeterc, and Elise M. Cardinalea*: "Neural and Cognitive Characteristics of Extraordinary Altruists", *PNAS* 111 (42), 15036–15041.
- As-Samarqandi, Abū al-Laits Nasr bin Muhammad bin Ahmad bin Ibrāhim. 1995. *Bahru al-Ulūm, cet. Dār al-Kotob al-ilmiah*: Berot: Lebanon.
- Az-Zamakhsyari, Abū al-QāsimMahmūd bin ‘Umar. 1997. *Al-Kasyāf cet.* Maktabah al-‘Abikan: Reyadl, th. 1418 H.Vol.6
- Katsīr, Abū al-Fidā` Ismā‘īlIbnu. tt. *Ibnukatsīr, cet. Dār al-Kotob*: mesir, tt.Vol.14
- At-Thabari, Abu Ja’far Muhammad Ibnu Jarīr. tt. *Jāmi’u al-Bayān ‘an ta’wīlayial-Qur’an,cet.* Hijr: Pdf, tt. 24.
- Al-Ghazali. 2009. *Minhaj Kaum Arifin Apresiasi Sufistik untuk Para Salikin* (terj.), Masyur Abadi dan Hasan Abrori.
- Andromeda, Satria. 2014, "Hubungan Antara Empati Dengan Perilaku Altruisme Pada Karang Taruna Desa Pakang" *Skripsi* Surakarta: Universitas Muhammadiyah.
- Asih, Gusti Yuli dan Margaretha Maria Shinta Pratiwi. 2010. "Perilaku Prosocial Ditinjau dari Empati dan Kematangan Emosi" 1 (1).
- Bhattacharjee, Yudhijit. "Sains Tentang Baik dan Jahat" *National Geographic Indonesia*, Januari 2018.
- Caldwell, M.F., Van Rybroek, G.J. 2001. Efficacy of a decompression treatment model in the clinical management of violent juvenile offenders. *International Journal of Offender Therapy and Comparative Criminology* 45 (4): 469-477.
- Daulay, Nurussakinah. 2017. "Struktur Otak dan Keberfungsiannya pada Anak dengan Gangguan Spektrum Autis: Kajian Neuropsikologi", *Jurnal Buletin Psikologi* 25 (1).



- Engen, H., Kanske, P., & Singer, T. 2017. The neural component-process architecture of endogenously generated emotion. *Social Cognitive and Affective Neuroscience* 12 (2): 197-211.
- Fauziah, Nailul. 2014. "Empati, Persahabatan, dan Kecerdasan Adversitas pada Mahasiswa yang sedang Skripsi" *Jurnal Psikologi UNDIP* 13 (1): 78-92.
- Fawaid, Ahmad. 2016. *Ayat-Ayat Mahfuzat*. Surabaya: Pustaka Idea.
- Gracia, Jorge J. E. 1995. *Theory of Textuality: The Logic and Epistemology*. New York: State University of New York Press.
- Jabiri, 'Abid al-. Fahm. 2008. *al-Qur'an: Al-Tafsir al-Wadhah Hasb al- Tartib al-Nuzul*. Beirut: Markaz Dirasat al-Wahdah al-'Arabiyyah.
- Khairiyah, Siti dan Hendy M. Margono. 2012. "Aspek Neurobiologi Gejala Perilaku dan Psikologis pada Demensia (Behavioural and Psychological Symptoms of Dementia / BPSD)" 1 (1): 5.
- Kiehl, Kent. 2014. *The Decompression Chamber (Chapter 10) [about MJTC]* in: *The Psychopath Whisperer: Inside the Minds of Those Without a Conscience*. Crown Publishing Group, Random House LLC.
- Lutfi. 2013. *Epistemologi Tafsir Sains Zaghlul al-Najjar*. Magelang: Ngudi Ilmu.
- Muhammad Thāhiribnu. t.t. 'Āsyūr, *at-Tahrīrwa at-Tanwīr, cet.Dār at-Tūnisiah*: Tunis, tt.Vol.30.
- Mujiburrahman. 2008. *Mengindonesiakan Islam: Representasi dan Ideologi*. Yogyakarta: Pustaka Pelajar.
- Muryadi dan Andik Matulesy. 2012. "Religiusitas, Kecerdasan Emosi dan Perilaku Prosocial Guru", *Jurnal psikologi*, 7 (2): 544-561.
- Mustaqim, Abdul. 2012. *Epistemologi Tafsir Kontemporer*. Yogyakarta: LKis Group.
- Najitama, Fikria. 2007. "Sejarah Pergumulan Hukum Islam dan Budaya serta Implikasinya bagi Pembangunan Hukum Islam Khas Indonesia", *Jurnal al-Marwarid*, Edisi XVII.
- Robert, Robertus. 2013. "Altruisme, Solidaritas, dan Kebijakan Sosial", *Jurnal Sosiologi Masyarakat* 18(1): 1-18.
- Saeed, Abdullah. 1999. "Rethinking 'Revelation' as a Precondition for Reinterpreting the Qur'an: A Qur'anic Perspective" *Journal of Qur'anic Studies*, 1 (1): 95-96.
- Sajoo, Aryn B. 2012. "Introduction: Faith and Culture" *A Companion to Muslim Cultures*, Aryn B. Sajoo (Ed. ), London: I.B. Tauris.
- Yastab, Rezky A., Taufiq Pasiak, dan Sunny Wangko. 2014. "Hubungan Kinerja Otak dan Spiritualitas Manusia Diukur dengan Menggunakan Indonesia Spiritual Health Assessment pada Pemuka Agama di Kabupaten Halmahera Tengah" *Jurnal e-Biomedik (eBM)* 2 (2): 419.
- Wulanyani, Ni Made Swasti. 2015. "Memori dalam Multitasking" *Buletin Psikologi* 23 (2): 112-116.
- Zarkashi, Badr al-Din al-. 1957. *al- Burhan fi 'Ulum al-Qur'an*, Jilid I. Kairo: Maktabah Dar al-Turats.