

Multiple Intelligences Theory and the 99 Names of God in Islam (Asma Allah Al Husna) A Brain-Based Perspective

نظرية الذكاءات المتعددة وأسماء الله التسعة والتسعين في الإسلام
منظور قائم على علوم الأعصاب

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Abstract

In the early 1980s, Howard Gardner (1983) redefined the concept of intelligence and suggested that intelligence is not a single entity, but a variety of talents. His theory of Multiple Intelligences, considers rhythmic / musical, kinesthetic, spatial, interpersonal, intrapersonal, verbal, mathematical, existential and naturalistic intelligences. This theory acclaimed Gardner as the most influential educational theorist since John Dewey. Islam confirms Gardner's theory and proposes a variety of intelligences, which can integrate educational curricula and promote learning, teaching and all ways of human life. The 99 names of Allah constitute the pillar of these intelligences. They either match with Gardner's intelligence criteria, or are carefully confirmed findings by neuropsychology, and functional magnetic resonance imaging. Understanding these names might help neuropsychologists to understand the still hidden power of the brain.

Keywords: Multiple intelligences, 99 Names of Allah, neuropsychology, learning, functional magnetic resonance imaging

ملخص

في أوائل الثمانينيات، أعاد عالم النفس هاورد غاردنر (1983) تعريف مفهوم الذكاء واقترح أن الذكاء ليس كياناً واحداً، بل مجموعة متنوعة من 09 ذكاءات: الذكاء اللغوي، الذكاء المنطقي الرياضي، الذكاء الاجتماعي، الذكاء الموسيقي/الإيقاعي، الذكاء الجسمي الحركي، الذكاء البصري المكاني، الذكاء الشخصي، ذكاء الطبيعة، والذكاء الوجودي.

أشادت هذه النظرية بغاردنر باعتباره أكثر المنظرين التربويين تأثيراً منذ جون ديوي. فهي تساعد الأستاذ على معرفة أساليب التعلم وأساليب التدريس وتساعد على اكتشاف مواطن القوة والضعف عند المتعلم. يؤكد الإسلام نظرية غاردنر ويقترح مجموعة متنوعة من الذكاءات، والتي يمكن أن تدمج في المناهج التعليمية وتعزز عملية التعلم والتعليم في جميع التخصصات. إن أسماء الله الحسنى الـ 99 تشكل ركيزة هذه الذكاءات. لكونها تتوافق مع معايير ذكاءات جاردنر، ولكون وجودها في مخ الإنسان مؤكد بعناية من قبل علم النفس العصبي، والتصوير بالرنين المغناطيسي الوظيفي. قد يساعد فهم هذه الأسماء علماء النفس العصبي وعلماء التربية على فهم وظائف الدماغ في التعلم وكذا التعليم.

الكلمات المفتاحية: الذكاءات المتعددة، أسماء الله الحسنى، علم النفس العصبي، التعلم، التصوير بالرنين المغناطيسي الوظيفي

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Introduction

Traditionally, human intelligence has been represented by a single score based on how well a learner does on timed paper-and-pencil tests, and by grades students get at schools. It was thought to be a uniform cognitive capacity born with us, and which can be measured by short-answer questions. In practice, institutions used scores on an Intelligence Quotient (I.Q.) test to rank students' degree of intelligence. Many educators, researchers have long rejected Alfred Binet's Intelligence Quotient multiple choice testing as a measure of intelligence. Howard Gardner (2003) has used his Multiple Intelligence Theory as a rallying point for a better reconsideration of school practice.

The Theory of Multiple Intelligences

Howard Gardner (1983) claims that all human beings have at least nine intelligences. These multiple intelligences can be seen, measured, and developed. The nine intelligences as described by Thomas Armstrong (2003) are:

Linguistic Intelligence: The capacity to use words effectively, whether orally (e.g., as a storyteller, orator, or politician) or in writing (e.g., as a poet, playwright, editor, or journalist).

Logical-mathematical Intelligence: The capacity to use numbers effectively (e.g., as a mathematician, tax accountant, or statistician) and to reason well (e.g., as a scientist, computer programmer, or logician).

Bodily-kinesthetic Intelligence: Expertise in using one's whole body to express ideas and feelings (e.g., as an actor, a mime, an athlete, or a dancer) and facility in using one's hands to produce or transform things (e.g., as a craftsman, sculptor, mechanic, or surgeon).

Musical Intelligence: The capacity to perceive (e.g., as a music aficionado), discriminate (e.g., as a music critic), transform (e.g., as a composer), and express (e.g., as a performer) musical forms. This intelligence includes sensitivity to the rhythm, pitch or melody,

Interpersonal Intelligence: The ability to perceive and make distinctions in the moods, intentions, motivations, and feelings of other people. This can include sensitivity to facial expressions, voice,

Intrapersonal Intelligence: Self-knowledge and the ability to act adaptively on the basis of that knowledge. This intelligence includes having an accurate picture of oneself (one's strengths and limitations); awareness of inner moods, intentions, motivations, temperaments, and desires; and the capacity for self-discipline, self-understanding, and self-esteem.

Naturalist Intelligence: Expertise in the recognition and classification of the numerous species—the flora and fauna—of an individual's environment. This also includes sensitivity to other natural phenomena (e.g., cloud formations, mountains, etc.)

Spatial Intelligence: The ability to perceive the visual-spatial world accurately (e.g., as a hunter, scout, or guide) and to perform transformations upon those perceptions (e.g., as an interior decorator, architect, artist, or inventor). This intelligence involves sensitivity to color, line, shape, form, space.

Existential Intelligence: According to Gardner (1999), existential intelligence exhibits "the proclivity to pose and ponder questions about life, death and ultimate realities". It is the ability to conceptualize and understand deeper the still unanswered questions about our being on earth. It deals with questions related to the origin of life, the meaning of death and the truth about ultimate realities: Why are we here on this planet? What happens to us after death? Are there extraterrestrials? Do animals speak with one another?

According to Thomas Armstrong. (2003) the major areas of the brain associated with each of the 09 intelligences (Figure.1) are:

- **Linguistic:** left temporal and frontal lobes
- **Logical-mathematical:** left frontal and right parietal lobes
- **Spatial:** occipital and parietal regions (especially of right hemisphere)
- **Bodily-kinesthetic:** cerebellum, basal ganglia, motor cortex

- **Musical(rhythmic):** right temporal lobe
- **Interpersonal:** frontal lobes, temporal lobe (especially right hemisphere), limbic system
- **Intrapersonal:** frontal lobes, parietal lobes, limbic system
- **Naturalist:** left parietal lobe, (important for discriminating "living" from "non-living things")

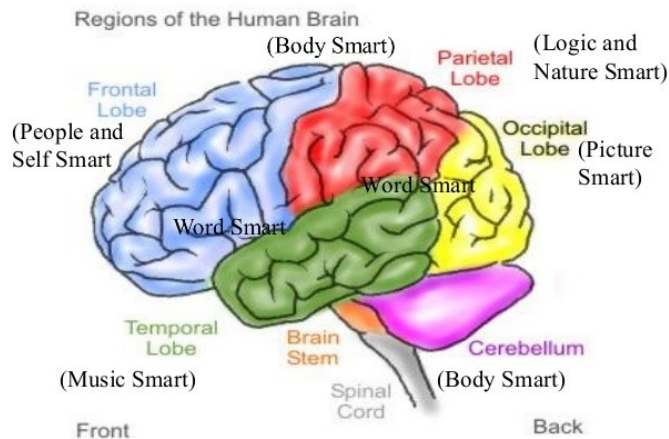


Figure1. Areas of the brain associated with Gardner's intelligences

Gardner's Criteria to Define Intelligences

Armstrong (2003) believed that "each intelligence had to meet certain basic tests to be considered a full-fledged intelligence". The criteria he mentioned include the following factors:

1. Potential isolation by brain damage

Intelligences must be susceptible to isolation by brain damage. Assuming that there are brain structures for each intelligence, brain lesions can impair one intelligence while leaving all the others intact. For example, if a person has damage to Broca's area, linguistic intelligence may greatly deteriorate. The person may have great trouble reading, writing, and speaking, but able to do math, sing and dance.

2. Existence of idiot savants, prodigies and other exceptional individuals

Evidence of single intelligences can be seen operating at very high levels in savants and prodigies. We can give the example of that musical savant who can play a piano composition after hearing it only once, or an individual who can multiply multiple digits in his head (without using a calculator or a computer). An idiot savant is that intellectually disabled person who can exhibit extraordinary ability in a highly specialized area, such as music, linguistics or mathematics,

3. An identifiable core operation or set of operations

Each intelligence has a different set of required operations in order for it to function. For example in musical intelligence, the core operations may be the ability to discriminate among different musical notes and among various rhythmic structures.

4. A distinctive development history, along with a definable set of 'end-state' performances

Each intelligence should have an identifiable developmental history. Hence, certain activities are associated with each intelligence during an individual's growth. Each activity has a time of beginning in early childhood and a time of peaking during one's lifetime. For example, musical intelligence seems to peak early in order to develop a high level of proficiency, but linguistic intelligence often peaks late.

5. An evolutionary history and evolutionary plausibility

Intelligences must be rooted in evolutionary history. Gardner hypothesized that each of the nine intelligences has its roots deeply embedded in the evolution of human beings. For example, the cave drawings all around the world support the existence of early spatial intelligence. The written notations in early cultures demonstrate the presence of linguistic intelligence. The early tools created by early people show their bodily-kinesthetic intelligence.

6. Support from experimental psychological tasks

Gardner believes that psychological tasks are a good way to see the intelligences working in isolation from one another. Students may master a specific skill, such as writing, but they do not automatically transfer that success to logical-mathematical intelligence. The tasks are independent from one another.

7. Support from psychometric findings

Psychometrics is "The branch of psychology that deals with the design, administration, and interpretation of quantitative tests for the measurement of psychological variables such as intelligence, aptitude, and personality traits". (The online free dictionary). According to Gardner (2003), the existence of an intelligence may be supported by psychometric findings.

8. Susceptibility to encoding in a symbol system

An intelligence can be symbolized. For example, there are spoken and written languages, graphic languages, computer languages, musical notation systems, and ideographic languages.

Only those intelligences that have satisfied all or a majority of the criteria mentioned above were selected as bona fide intelligences (Gardner 1985). Hence, whoever wants to know if an aptitude is an intelligence or not, must refer to the above criteria.

Considering Multiple Intelligences makes us understand the fact that every individual has some strengths and that we ought to utilize these strengths in a productive way. Hence, identifying our student's potential is a MUST in order to give each what he deserves and not fall in the trap which led many scholars accuse geniuses of being stupid. .

2. Multiple Intelligences Theory in Islam

Context

Few years ago one of Howard Gardner's research associates and pioneers of MI theory, Thomas Armstrong, "an award-winning author and speaker with over thirty years of teaching experience, and over one million copies of his books in print on issues related to learning and human development" send us an email and asked the following:

"I have a question for you. I am writing a chapter for a book edited by Dr. Howard Gardner and two of his colleagues, to be entitled Multiple Intelligences around the World (Jossey-Bass). For this chapter, I am looking at how MI theory interacts with the values of different cultural systems around the world. Islamic culture is one of the cultures that I am looking at."

Actually, I felt honored to be contacted by this famous scientist and motivated at the same time to investigate the topic. I sent him a résumé of Multiple Intelligences theory and the 99 names of Allah. He found it, as he said, interesting and he mentioned it in his worldwide project.

The 99 names of Allah in the Qur'an

BBC (<https://www.bbc.co.uk/religion/religions/islam/texts/quran1.shtml>) defines the Qur'an as "the holy book for Muslims, revealed in stages to the **Prophet Muhammad** over 23 years. Qur'anic revelations are regarded by Muslims as the sacred word of **God**. There are 114 chapters in the Qur'an, which is written in the old Arabic dialect. All the chapters except one begin with the sentence *Bismillahir rahmanir raheem*, "In the name of **Allah** the most Merciful and the most Compassionate". This is the **thought** with which Muslims should start **every action**."

The first verse of the Qur'an the holy book for Muslims starts as follows:

“Read! In the name of your Lord who created. (96.1) He created man from a clot. (96.2) Read, and your Lord is the Most Honorable (96.3) who taught with the pen. (96.4)”.

The first word of this verse is ‘**READ**’, a word, which is unfortunately understood as decoding the written letters of a message to grasp its meaning, like reading a book. Actually, the word ‘**READ**’ has a broader meaning and is directly related to intelligence. We can read a person, the weather, the body language, aura, one’s mind, and plenty of things. The word ‘**Read**’ according to my analysis involves higher order thinking: observing, analyzing, evaluating, and creating. These levels are similar to Bloom’s taxonomy.

The new suggested intelligences, which obey the criteria set by Gardner, mainly the following ones (Hammoudi Abdelhak 2010):

- Potential isolation by brain damage
- Susceptibility to encoding in a symbol system
- The existence of idiot savants, prodigies and other exceptional individuals

Survival Intelligence

This intelligence is a combination of verbal and kinesthetic intelligences. To illustrate this type of intelligences we suggest the following example: Whenever a man is engaged in a fight he uses his body (kinesthetic) and accompanies it with a yell such as "Yaaa !" in Karate. This sound and the body gestures during fight are indivisible, like H₂ and O when forming H₂O. In Islam, this meaningless wild sound "Yaaa !" (proximate to animals rather than to humans) was given a meaning to fortify this intelligence and was translated into expressions like ' In the name of God, God is Great! O God! etc.'. In the world of animals this intelligence, most of the time, manifests itself when engaged in fighting. Whenever a tiger, as an example, is fighting it makes specific war sounds. The tiger's fighting and the sound it makes are indivisible and form one intelligence we have called Survival or Natural Intelligence. This new type of intelligence does obey Gardner's criteria because its two components have already been confirmed as intelligences.

Temporal Intelligence

We believe the ability to tell time without referring to technology existed in people before the creation of the clock. This ability was and still is so high in certain people and animals. It is often referred to as the biological clock. First, its role was controlling the wake-sleep cycle, and the flow of activities of early people. Later, with the arrival of Islam, this intelligence was given much more importance because people had to observe prayers at prescribed periods of the day: dawn, noon, afternoon, sunset and evening (Fajr, Dhohr, Asr, Maghreb, and Isha). People who had such an intelligence were often solicited to take care of mosques and prayers (e.g., El Mouaadh, or the Muezzin).

How does this new intelligence obey the three criteria cited above?

1. Potential isolation by brain damage

The evidence which strengthens our claims that Temporal Intelligence is in fact a new intelligence is the research findings published by Science Update (May 4, 2007). According to this article, “each day, a master clock in the brain synchronizes the timing of lesser clocks in cells throughout the body to the rising and setting of the sun, regulating such daily rhythms as sleep, body temperature, eating, and activity”. Scientists locate this master clock in the brain’s hypothalamus. For more information, connect to (<http://www.nimh.nih.gov/science-news/2007/cell-networking-keeps-brains-master-clock-ticking.shtml>)

2. Susceptibility to encoding in a symbol system

This criterion is respected because Time can be and is encoded in a symbol system. The drawings and shapes in old clocks, numbers in today's ones represent the corresponding symbols.

3. The existence of idiot savants, prodigies and other exceptional individuals

Mastering this intelligence does not require university studies or special training. There are people who have never been to school but possess high level of this intelligence.

Still, new neuropsychology findings confirm the existence of a part in the brain responsible for regulating our sense of time. "SleepFoundation.org" states that humans possess **"the circadian biological clock which is controlled by a part of the brain called the Suprachiasmatic Nucleus (SCN)"** (Figure. 2), a group of cells in the hypothalamus that respond to light and dark signals. From the optic nerve of the eye, light travels to the SCN, signaling the internal clock that it is time to be awake.

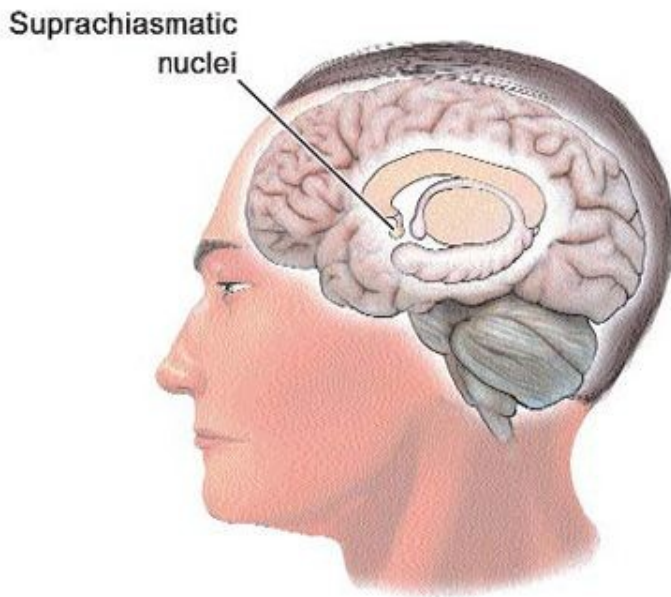


Figure 2. The Suprachiasmatic Nucleus

Other Intelligences dwell in the attributes of God in Islam. According to this religion, God possesses 99 names. They are called ASMA' ALLAH UL HUSNA'. Scholars translated AL HUSNA' as 'the most beautiful'. This translation seems to us incomplete and inappropriate since it does not convey the true message and meaning these NAMES hold. They are attributes and perfect qualities that God in Islam possesses, and which humans should adhere to in order to solve their daily life problems and lead a 'happy life'.

Allah in the Holy Quran says:

"HE is Allah, The Creator, the Originator, The Fashioner, to Him belong the most beautiful names: whatever is in the heavens and on earth, do declare His praises and glory. And He is the Exalted in Might, The Wise." (Quran 59:24)

"The most beautiful names belong to God: so call on Him by Them..." (Quran 7:180)

Prophet Muhammad in Islam said: 'To God belongs 99 names, 100 minus 1, anyone who memorizes them will enter Paradise ...'... Boukhari

قال رسول الله صلى الله عليه وسلم " لله تسعة وتسعون اسما- مائة إلا واحدة. لا يحفظها أحد إلا دخل الجنة، وهو وتر يحب الوتر " أخرجه البخاري (Arabic version)

It is a pity, though we are in the twenty first century, the meaning of **يحفظ** is translated as **memorize** (see the above English translation). **يحفظ** has a deeper meaning. Only very learned people can decode its meaning in its context. The participation of specialists in all domains of sciences (psychology, neurology, linguistics, ethnography, brain research and so on) is a BIG MUST to unlock the mystery

surrounding this word along with the attributes of God (Allah) in Islam. Furthermore, the importance of understanding the true meaning of Allah's names is conveyed in the saying by Malek bin Dinar, quoted in Elhilia by Abu Naim (no date):

"The dead left this life without tasting its sweetest taste." What is it?" his companions asked. "The knowledge of Allah" he replied.

The Arabic version of the above quote is:

قال مالك بن دينار رحمه الله: "خرج أهل الدنيا من الدنيا، ولم يذوقوا أطيب ما فيها، قالوا: وما هو يا أبا يحيى؟ قال: معرفة الله عز وجل" رواه أبو نعيم في الحلية (358/2).

If we look up the word UL HUSNÂ in 'El Kamous El Djadid'(1991) dictionary, we find that its meaning is HUSN EL AKIBA., not 'Most Beautiful', as translated in literature (even in the holy Quran). HUSN EL AKIBA is an output which means good results, and this Akiba is the fruit of an effort and ability we might call intelligence. Hence, ASMÂ ALLÂH UL HUSNÂ are qualities and abilities which when respected, help man solve his daily problems. This is why they are INTELLIGENCES and we believe calling them Allah's Smart Names would be very appropriate. The use of '**Most Beautiful Names**' is misleading for those who want to understand Islam.

The 99 names of God in Islam with Meaning

Note: The following definitions - appear to us incomplete because Arabic linguists lack the necessary scientific competence to decode their true meaning. Cooperation of scientists from other domains is necessary to understand these 99 names.

1. Allah : the One and Only 2. ArRahman : The Most Merciful. 3.Ar-Raheem : The Merciful 4.Al-Malik :The King and Owner of Dominion. 5.As Salam : Peace 6.AlMu'min : the giver of belief and safety 7.AlMuhaymin : the Guardian 8.AlAzeez :the All- Mighty 9.Al-Jabbaar :The Compeller, The Restorer 10.AlMutakabbir : The Supremely Great 11. Al-Khaaliq :The Creator M 12. Al-Baari' :The Originator 13. Al-Musawir :The Fashioner 14. Al-Ghaffaar : The All- and Oft-Forgiving 15.Al-Qahhaar :The Subduer, The Ever-Dominating 16.Al-Wahhaab : The Giver of	35. Ash-Shakur : The Acknowledging 36 . Al-'Ali : The Sublime One 37. Al-Kabeer : The Great One 38. Al-Hafidh : The Guarding 39. Al-Muqit : The Sustaining 40. Al-Haseeb : The Reckoning 41 .Al Jalil : The Sublime 42.Al Karim :The Generous 43 . ArRaqib : The Watchful 44. Al-Mujib : The Responsive 45. Al Wasi : The Encompassing 46. Al Hakeem : The Wise 47. Al Wadud : The Loving 48. Al Majeed : The most Glorious One 49. Al -Ba'ith :The Infuser of New Life 50. Ash-Shaheed :The All Observing Witness 51. Al-Haqq : The Embodiment of Truth 52. Al-Wakeel : The Universal	69. Al-Qaadir : The Able One 70. Al-Muqtadir : The Powerful 71. Al-Muqaddim ;The Expediting One 72. Al-Mu'akhkhir : The Procrastinator 73. Al-Awal : : The Very First 74. Al-Akhir : The Infinite Last 75.Az-Zaahir : The Perceptible 76 : Al-Baatin : The Imperceptible 77. Al-Waali :The Holder of Supreme Authority 78. Al-Muta'ali : The Extremely Exalted 79. Al-Barr : The Fountain-Head of Truth 80 .At-Tawab : The Ever-Acceptor of Repentance 81. Al-Muntaqim : The Retaliator 82. Al-Afuw : The Supreme Pardonner 83. Ar-Ra'oof : The Benign One
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Gifts 17. Ar-Razzaq :The Provider 18. Al-Fattaah :The Opener, The Judge 19. Al-‘Aleem:The All-Knowing, The Omniscient 20. Al-‘Qaabid: The Withholder 21 : AL-BASITO :The Expender 22 : AL-KHAFIDO: The Abaser/Reducer 23. Ar-Raafi’: The Elevating 24. Al-Mu’izz: The Honourer 25. Al-Mudhill: The Abaser 26. Al Sameo : The All Hearing 27. Al-Basir: The All-Seeing 28. Al-Hakam: The Judge 29. Al-‘Adl: The Embodiment of Justice 30. Al-Lateef: The Subtle 31. Al-Khabeer: The All-Aware 32. Al-Halim: The Clement One 33. Al-‘Adheem: The Magnificent 34. Al-Ghafur: The Forgiver	Trustee 53. Al-Qawwiyy (The Strong One) 54. Al-Mateen: The Firm One 55. Al-Waliy: The Protecting Associate 56. Al-Hameed: The Sole-Laudable One 57. Al-Muhsee: The All-Enumerating 58. Al-Mubdi: The Originator 59. Al-Mueed: The Restorer) 60. Al-Muhyi : The Maintainer of life 61. Al-Mumeet : The Inflictor of Death 62: Al-Hayy : ” The Eternally Living One” 63. Al-Qayoom – The Self-Subsisting One 64. Al-Wajid :The Omnipotent 65. Al-Majid : The Glorious One 66. Al-Wahid: The Unique 66. Al-Wahid : The Unique 67. Al-Ahad : The One 68 . As-Samad: The Supreme Provider	84. Maalik-ul-Mulk: The Eternal Possessor of Sovereignty 85 .Thul-Jalaali-wal-Ikram:The Possessor of Majesty and Honor 86. Al-Muqsit :The Just One 87. Al-Jaami’ :The Assembler 88. Al-Ghaniy: The Self-Sufficient 89. Al-Mughni : TheBestower of Sufficiency 90. Al-Maani : The Preventer 90. Al-Maani: The Preventer 91. Ad-Dhaar – The Distressor 92. An-Naafi’: The Bestower of Benefits 93. An-Noor: The Prime Light 94 .Al-Haadi : The Provider of Guidance 95. Al-Badi : The Unique 96. Al-Baaqi : The Ever Surviving 97. Al-Waarith: The Eternal Inheritor 98 . Ar-Rasheed: The Guide to Path of Rectitude 99. As-Saboore : The Extensively Patient
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Table1. The 99 names of Allah.

Referring to Allah's names as Intelligences involves us in a great challenge. Can we demonstrate these Intelligences by evidence of the criteria set by the scientist Gardner? For some, yes but others, the cooperation of specialists in Psychology, Neurology and Brain research is necessary. However most of them can be seen by fMRI.

Allah's names that convey the meaning of ability, capacity or intelligence are exhibited as follows:

Arabic name of Allah	Meaning in English	Intelligence
AL-KHALIQ	The Creator	Creativity
AL-MUBDI	The Originator	Originality
AL-QADIR	The Able	Ability

The Place of Allah’s Names in the Brain

It is so amazing today to know is the place of the names of God might have in Neuropsychology. Thanks to the powerful scanning technology and advancement in brain imaging, scientists can see and even measure the brain activity. Brain structure and functions are clearer today.

Functional Magnetic resonance imaging (fMRI) offers a powerful means to study human brain structure and function in vivo. As such, “this scanning technology has become an important research tool for mapping human brain-behavior relationships and functions”.

1. **Name of Allah:** Al Khaliq
Meaning in English: Creator
Intelligence: Creativity

An example of a verse from the Quran containing this God’s Name:

“That is Allah, your Lord; there is no deity except Him, **the Creator** of all things, so worship Him. And He is Disposer of all things.”

(Surah : Al An’am – the Cattle; Ayah - verse 6:102)

What Neuropsychology sciences say

Thanks to functional magnetic resonance imaging (fMRI) technology, Roger Beaty’s (2019) cognitive neuroscience group at Penn State found that highly creative thought was correlated with increased activity within three different networks in the brain. These networks consist of “interacting brain regions that are highly correlated with each other, and often fire at the same time for similar processes”. The three networks that are the source of creativity are the Executive Attention Network (or Central Executive Network), the Imagination Network (also known as the Default Mode Network) and the Salience Network (figure 3).

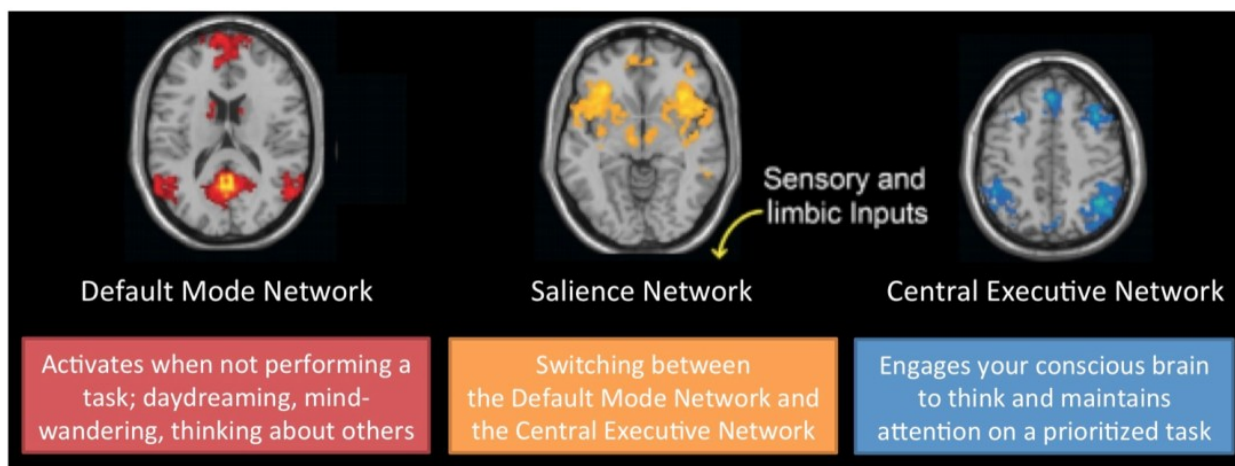


Figure 3. Central Executive Network, the Default Mode Network and the Salience Network

2. **Name of Allah:** Al Hakeem
Meaning in English: The Wise
Intelligence: Wisdom

An example of a verse from the Quran containing this God's Name:

The Quran states that wisdom is of greatest value for a human being. A verse in Chapter Al-Baqarah (the Cow) states: **“Whoever is granted wisdom has indeed been granted abundant wealth” (2: 269)**. This verse means that wisdom is the greatest good ever a person can possess.

What Neuropsychology sciences say

Jeremy Labrecque (2009) states that San Diego neuroscientists Thomas Meeks and Dilip Jeste analyzed decades of research and found that the multitude of characteristics associated with wisdom—including social decision making and control of emotions—may be accounted for by a surprisingly small number of brain regions: a putative wisdom network. One brain area, the anterior cingulate cortex (Figure 4), detects conflicts and makes decisions. Psychologists at Stanford University recently found that activity in this part of the brain predicts how we balance short- and long-term rewards. But wisdom is about more than just cold calculation. “Instincts and emotions are also critical,” says Jeste. So areas of the brain responsible for emotions, such as the ventromedial prefrontal cortex, play a role as well

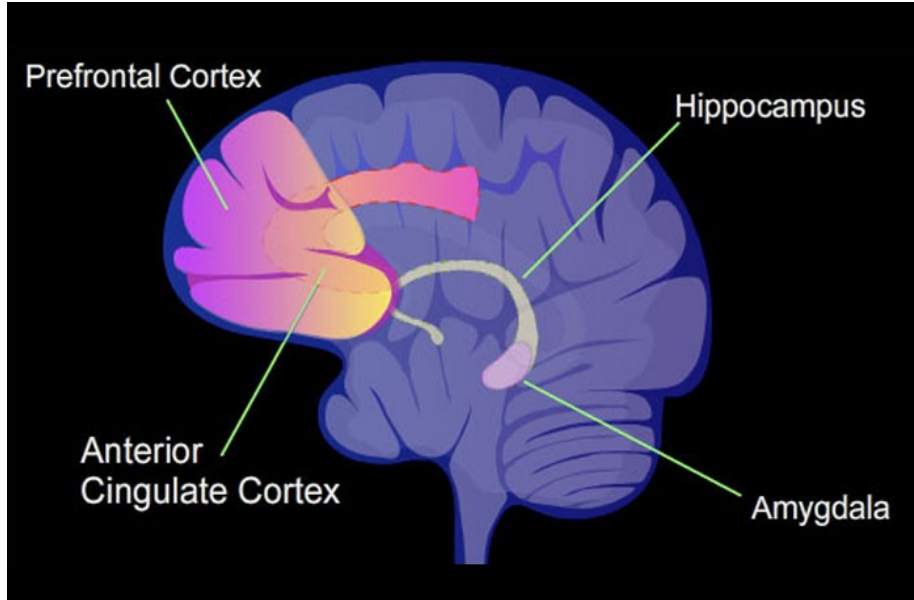


Figure 4. Anterior Cingulate Cortex

3. **Name of Allah:** Ar-Rahmaan
Meaning in English: The Compassionate

Intelligence: Compassion

An example of a verse from the Quran containing this God's Name:

“The Most Compassionate, Taught the Qur'an, Created man,[And] taught him eloquence.” Surah55, Ar-Rahmaan (The Compassionate)

What Neuropsychology sciences say

In an article entitled “Brain can be trained in compassion, study shows” Helen Weng (2013) stated that a study by researchers at the Center for Investigating Healthy Minds at the Waisman Center of the University of Wisconsin-Madison discovered that adults can be trained to be more compassionate. In the study, the investigators trained young adults to engage in compassion meditation. Using Neuroimaging technology, the researchers noted increased activity in the inferior parietal cortex (Figure 5), an area of “the brain associated with empathy and understanding others, in those who were most altruistic after compassion training”.

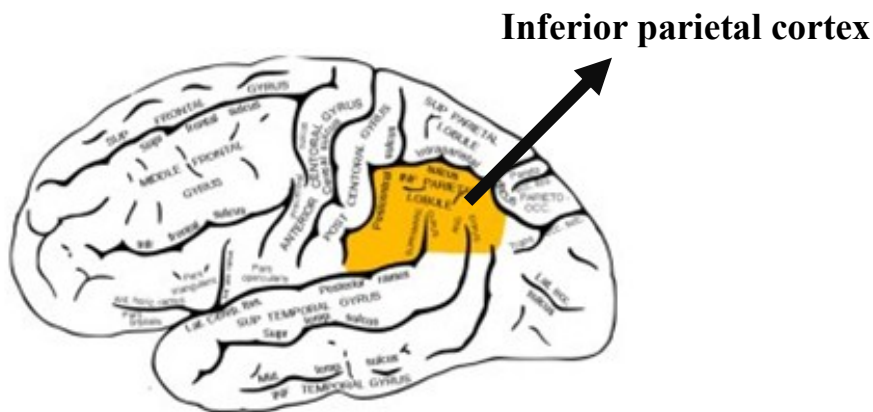


Figure 5. Inferior parietal cortex

4. Name of Allah: Al-Hakam

Meaning in English: The Judge/ Arbitrator

Intelligence: Judgement

An example of a Quranic verse (s) containing this God's Name

Allah will **judge** between you on the Day of Resurrection concerning that over which you used to differ." Surah Noah. Verse 22.69

What Neuropsychology sciences say

In an article titled “The Legal Brain: How Does the Brain Make Judgments about Crimes?” Johannes Haushofer & Ernst Fehr (2009) tried to know how “the brain enables judges, juries, and you and me” decide whether someone is guilty or innocent.

Thanks to functional magnetic resonance imaging, (fMRI) researchers were able to “watch the brain “in action” as normal human participants make decisions about responsibility and punishment”. Furthermore, they mentioned that Buckholz and colleagues “found a peak of activation in the right dorsolateral prefrontal cortex (rDLPFC), a brain region on the top surface of the right frontal lobe that is known to be involved in high-level cognitive processes such as reasoning and decision-making”.

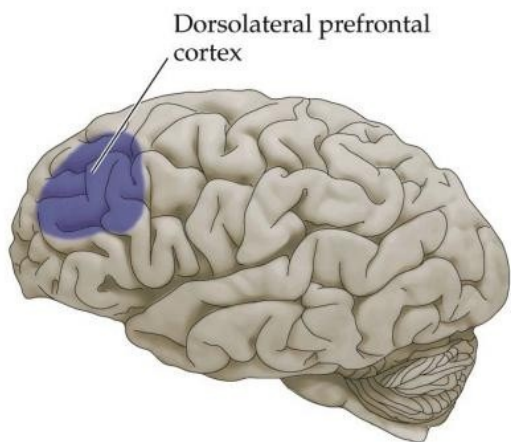


Figure6. Dorsolateral prefrontal cortex

5. Name of Allah: Al Kareem

Meaning in English: The Generous

Intelligence: Generosity

An example of a Quranic verse containing this God's Name

O mankind, what has deceived you concerning your Lord, the Generous.

Quran. Surah Al-Infitar [82:6]

What Neuropsychology sciences say

Patricia Lockwood (2016) from Oxford University, led a study to know “where exactly the generosity is ‘located’ in the brain.” She and her team had an fMRI look at volunteers’ brain while they were deciding on giving rewards to other volunteers. Interestingly, they found that generosity can also be a learned behavior, though it takes a bit longer to learn it than those which benefit yourself. In the end, they were able to identify a particular brain area involved in giving the best result for other people. She found out that ‘A specific part of the brain called the subgenual anterior cingulate cortex was the only part of the brain that was activated when learning to help other people. Put another way, the subgenual anterior cingulate seems to be especially tuned to benefiting other people.

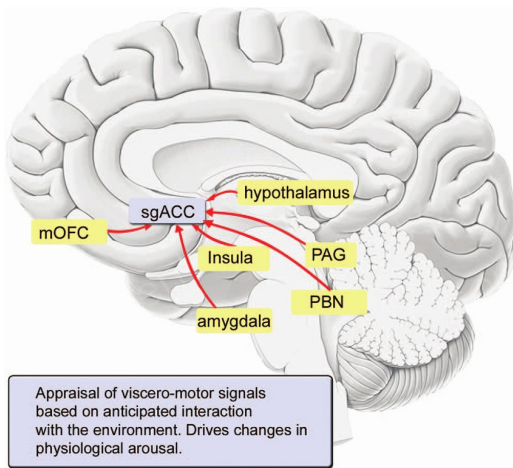


Figure 7. The subgenual anterior cingulate cortex (sgACC)

6. Name of Allah: As-Samee

Meaning in English: The All-Hearing

Intelligence: Auditory

An example of a verse in the Quran containing this God's Name

And [mention] when Abraham was raising the foundations of the House and [with him] Ishmael, [saying], "Our Lord, accept [this] from us. Indeed, You are the **Al-Hearing**, the All- Knowing.

What Neuropsychology sciences say

According to ScienceBeta (2016) The auditory cortex (figure 8) is the part of the temporal lobe that processes auditory information in humans and many other vertebrates. It is a part of the auditory system, performing basic and higher functions in hearing, such as possible relations to language switching.

It is located bilaterally, roughly at the upper sides of the temporal lobes – in humans on the superior temporal plane, within the lateral sulcus and comprising parts of the transverse temporal gyri, and the superior temporal gyrus, including the planum polare and planum temporale . Unilateral destruction, in a region of the auditory pathway above the cochlear nucleus, results in slight hearing loss, whereas bilateral destruction results in cortical deafness.

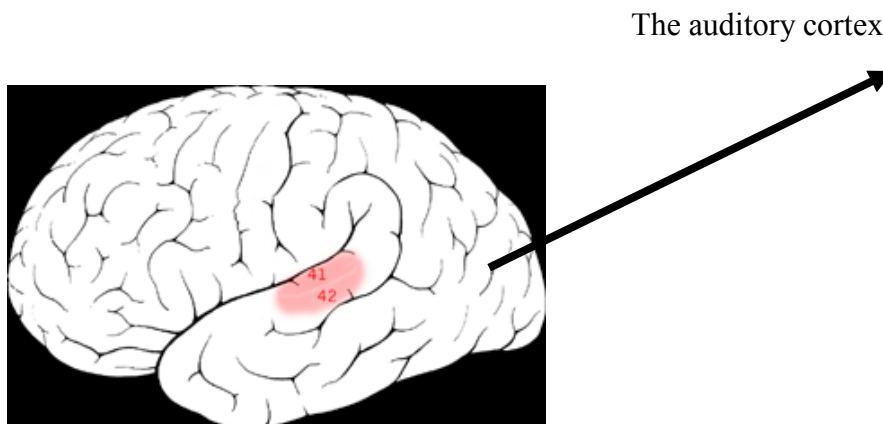


Figure 8. The auditory cortex

7. **Name of Allah:** Al-Baseer
Meaning in English: The All-Seeing
Intelligence: Visual

An example of a Quranic verse containing this God's Name

“Indeed, Allah commands you to render trusts to whom they are due and when you judge between people to judge with justice. Excellent is that which Allah instructs you. Indeed, Allah is ever Hearing and **Seeing.**” Coran 4:58 Surah Anissa (the Women)

What Neuropsychology sciences say

According to SpinalCord.com (2016) The occipital lobe (Figure9) is the seat of most of the brain's visual cortex, which allows us to not only “to see and process stimuli from the external world, but also to assign meaning to and remember visual perceptions”. It is located just under the parietal lobe and above the temporal lobe

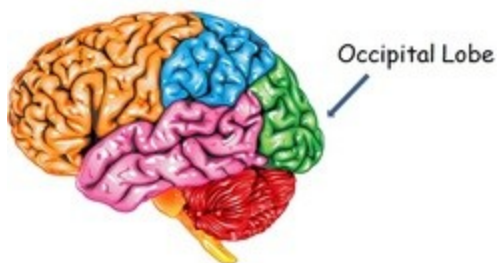


Figure 9. Occipital lobe

8. Name of Allah: As-Sabour**Meaning in English:** The Patient**Intelligence:**Patience**An example of a verse from the Quran containing this God's Name:**O you who have believed, seek help through **patience** and prayer. Indeed, Allah is with the **patient**.**Quran Surah Al Baqara (the Cow) 2:153****What Neuropsychology sciences Say**

In an experiment investigating patience, Jonah Lehrer (2010) stated that some people were given “a choice between receiving a larger amount of money next month, or a smaller amount right now”. This offer enabled the scientists to generate and understand different responses. For instance, “while most people would wait for \$35 next month as opposed to \$20 right now, they wouldn't wait when only offered \$21 next month”. Hence, our patience and tendency to delay gratification would depend upon the incentives. Jonah Lehrer (2010) also mentioned that some functional imaging studies have observed greater lateral prefrontal activity (Figure. 10) when some people choose larger, delayed rewards over smaller, immediate ones. Research is still at its beginning and new findings will certainly appear in the near future.

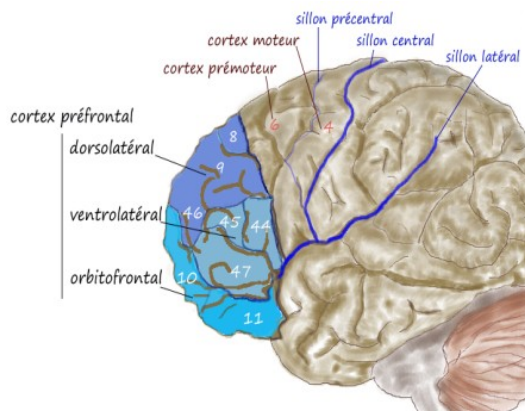


Figure 10. Lateral prefrontal cortex (cortex préfrontal)

Conclusion

Multiple intelligences theory has shown us that every single human thinks and learns differently. Each has a predominant intelligence which when it is used wisely it will yield great outcome. Moreover, thanks to neuropsychology and technology, religions, which were once regarded as a series of philosophical terms, have turned a rich field of research. As a reminder, There are many versions of the 99 names of Allah in Islam. A careful and specialized study is necessary to bring them closer to their true meaning. Being a religion chauvinist would never solve the problem. One should approach this topic scientifically and be equipped with the necessary scientific tools to do the job. This is why, as cited before, the participation of all scientists is not only a necessity but a MUST. Still, one is strongly recommended to read and search the Bible and the Torah, since they emanate from one same source, God. We hope that the suggestions we have provided in this section, will spur further research and application of the 99 names of Allah (ASMÂ ALLÂH UL HUSNÂ) to science and health issues.

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