

## THE PARADIGM OF SCIENCE-RELIGION INTERCONNECTION IN THE STUDY OF LANGUAGE: THE CASE OF ORIGINS OF LANGUAGE

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### ABSTRACT

*Language is the most important single characteristic that distinguishes human beings from other animal species. Human language appears to be a unique phenomenon. The ability of human to communicate with one another in intelligent, symbolic, often abstract speech and writing is considered as a complete mystery to evolutionists. Even, they are unable to elucidate how language originated. The linguists, then, propose various theories on the origins of language. Unfortunately, there is also insufficient theory which explains not only how human speech came about, but also why there are many different languages which have been developed in the world. In the paradigm of science-religion interconnection, such case can be connected to the exploration of verses of Qur'an which discusses human's language. As a permanent miracle which was revealed by God the prophet Muhammad (peace and blessings of God upon him) during twenty-two years of Muhammad's messengership, the Holy Qur'an profoundly speaks about human linguistic communication. This discusses the theory of origins of human language based on perspective of Qur'an and science. The evidence conclusively implies that God creates humans with the unique ability in oral and written communication, and even teach them to speak.*

**Keyword:** science-religion interconnection, human language, divine theory

### A. Introduction

In discussing about the origins of human language, there is a clear question on how the human *species* developed overtime so that they became capable of using language and what an amazing development this was. No other natural communication system is like human language. Human language can express thoughts on an unlimited number of topics and it can be used not just to convey information, but to solicit information (questions) and to give orders.

The study of human language is multidisciplinary field and not the monopoly of linguistics alone. Other disciplines of knowledge such as psychology, sociology,

anthropology, philosophy, and even religion relate to the study of language. Historically, linguistics is a science which developed from the needs of anthropologists to better understand a community which becomes subject of their study. On the other side, language evolves under theological influences. Linguistics has been struggling under the influence of religious beliefs, especially superstition, and ethnocentrism for centuries. The role and nature of human language was perceived through the world views preached by various religions. One of the scientific truths that can be explored from Qur'an is about human language issues. This paper explores some verses in Noble Qur'an that have a strong correlation to the issues of human language. It focuses on the origin of language in the view of Qur'an, and the miracle of Qur'an on brain and language.

## **B. Discussion**

### **1. The Origins of Language Theories**

The linguists propose seven theories on the origins of human language, which are: the divine source, the natural sound source, the social interaction source, the physical adaptation source, the tool-making source, and the genetic source (Yule, 2010:1-7). In discussing the theory of divine source, in most religions, there appears to be a divine source who provides humans with language. In an attempt to rediscover this original divine language, a few experiments have been carried out, with rather conflicting results. The basic hypothesis seems to have been that, if human infants were allowed to grow up without hearing any language around them, then they would spontaneously begin using the original God-given language.

Then, a quite different view of the beginnings of language is based on the concept of natural sounds. The basic idea is that primitive words could have been imitations of the natural sounds which early men and women heard around them. When an object flew by, making a *caw-caw* sound, the early human tried to imitate the sound and used it to refer to the thing associated with the sound. Then, when another flying creature made *acoo-coo* sound, that natural sound was adopted to refer to that kind of object. The fact that all modern languages have some words with pronunciations that seem to echo naturally occurring sounds could be used to support this theory. In fact, this type of

view has been called the “bow-wow theory” of language origin. Words that sound similar to the noises they describe are examples of onomatopoeia.

Another proposal is the social interaction source. This theory places the development of human language in a social context. Early people must have lived in groups, if only because larger groups offered better protection from attack. Groups are necessarily social organizations and, to maintain those organizations, some form of communication is required, even if it is just grunts and curses. For this reason, human sounds, however they were produced, must have had some principled use within the life and social interaction of early human groups. This is an important idea that may relate to the uses of humanly produced sounds. It does not, however, answer our question regarding the origins of the sounds produced.

Instead of looking at types of sounds as the source of human speech, there are the types of physical features humans possess that can be observed, especially those that are distinct from other creatures, which may have been able to support speech production. This fact indicated that human ancestors made a very significant transition to an upright posture, with bipedal (on two feet) locomotion, and a revised role for the front limbs.

Furthermore, the theory of the tool-making source discusses that the human brain is not only large relative to human body size, it is also lateralized that is, it has specialized functions in each of the two hemispheres. Those functions that control the motor movements involved in complex vocalization (speaking) and object manipulation (making or using tools) are very close to each other in the left hemisphere of the brain. It may be that there was an evolutionary connection between the language-using and tool-using abilities of humans and that both were involved in the development of the speaking brain.

Finally, the theory of genetic source contains the speculations about the origins of language moving away from fossil evidence or the physical source of basic human sounds toward analogies with how computers work (e.g. being pre-programmed or hard-wired) and concepts taken from the study of genetics. The investigation of the origins of language then turns into a search for the special *language gene* that only humans possess.

## 2. The Human Language in the View of Qur'an

### 2.1 The Origins of Human Language

One of the theories that discusses about the origin of language is the divine source theory. This theory resulted from an interest in human origins and human nature. Since language appeared so uniquely human, it is believed that if humans know how, when, and where language arose, it leads them to know how, when, and where the human species arose. Thus, this theory recognizes the role of God in creating language and providing humans with language.

The belief in the divine origin of language has continued through the ages. Moreover, this theory is closely tied to the debate among the linguists. Some linguists provide a detailed defense of this theory, and others persevere to refuse it. The refusal on the theory appears since the information on the origin of language is just based on myths, customs, and superstitions that have no scientific dimension. This refusal becomes a challenge for the proponents of this theory to explain the rationality of all statements in the scripts that contain information on the origin of language.

In Islamic teaching, Qur'an contains scientific indication in explaining the origin of human language. The term of scientific indication means that the statements of Qur'an contain the principle of noncontradiction. In this case, the verses of Qur'an emphasize the interconnectedness of the empirical and the transcendental. This principle becomes one of the requisites to categorize all statements or information as revealed in Qur'an as rational knowledge (Safi, 1996:174-179). Moreover, Qur'an makes the revelation (*wahyu*) abundantly clear that it consists of verses (*ayat*) whose understanding is integrated with the process of thinking, contemplating, and reasoning as stated in the following verses:

*Verily, in these things are signs for those who consider (Noble Qur'an, ar-Ra'd, 13:3); We detail our signs for people who know (Noble Qur'an, al-An'am, 6:97).*

In the view of Qur'an, since language is one of the most important things for humans, it becomes the first thing which is taught by God to Adam as the first human. Qur'an states that the origin of spoken language is the instruction from God as said: (31). *And He taught Adam all the names (of everything), then He showed them to the angels and said, "Tell Me the names of these if you are truthful."* (32). *They (angels)*

said: "Glory is to You, we have no knowledge except what you have taught us. Verily, You are the Knower, the Wise." (33). He said: "O Adam! Inform them of their names," and when he had informed them of their names, He said: "Did I not tell you that I know the Ghayb (unseen) in the heavens and the earth, and I know what you reveal and what you have been concealing" (Noble Qur'an, al-Baqarah,2:31-33). According to Ibnu Abbas that God taught Adam all the names that people use, such as human, animal, sky, earth, land, sea, horse, donkey, and so forth, including the names of the other species.

Language on its capacity as the formulation of concept provide the possibility for humans to learn all conceptions of their thought through the method of symbolism. In philosophy, the term of name is used sometimes to describe any word or phrase that can refer and sometimes in the more restricted sense of a word that uniquely identifies an individual (Chapman and Christopher, 2009:142). Moreover, learning the names of all things refer to learning the sentences that describe conceptions or meanings as whole. When humans use a name of "horse" for a group of certain animals, they indeed use a symbol of language which indicates a concept or a whole meaning which are appropriate with others horse. Thus, the verse which states that God taught Adam the names of all things can be understood that He taught him a language which is used to name all things. Briefly, He taught Adam all names which describe the existing concept.

Furthermore, learning a name of thing will describe certain concepts that contain knowledge about distinctive attribute and characteristic that are found in all entities of such concepts. When humans learn about how to use the word of horse for indicating all kinds of horse, it means that they have known all kinds of horses with their certain characteristic. For this reason, in teaching Adam about the name of all things, God also taught their characteristics, distinctive attributes, and behavior (Al Maraghi,139:1992).

The learning process which are experienced by Adam as a father of all humans, also experienced by all humans. Since their childhood, humans have identified that some objects are similar to certain characteristics, and different to others. It is impossible for humans to comprehend all things and respond them as an independent entity. On the contrary, humans need to simplify their process of understanding towards

various objects throughgrouping certain objects which have same characteristics, and creating a certain concept for them. Simply, the concept of an object is the mental representation of a given object. That is, the concept is what the mind can comprehend about the object. The comprehension of an object, or its conceptualization, means that one has been able to identify the constituting components encompassing intrinsic and extrinsic component (Safi,1996: 76).

After creating a concept which describes certain objects or things, humans need to create names which illustrate the concepts appropriately. Humans' ability in learning language plays to create quickly the concepts and their use in the process of thinking and learning new information and fact. By using certain concepts in the process of thinking and using sentences for such concepts, humans can learn all objects and a thing in their mind through the method of symbolism.

In relation to language production, it is without doubt that speech requires a complex activity. This activity needs the manipulation of the tongue, lips, vocal cords, lungs, velum, and all parts that are called the vocal tract (Crane, 1999:14-15). Physiologically, it requires such complex integration of nerves and muscles. When humans are speaking, the tongue is inconstant motions, and its position in relation to other elements of the vocal tract is essential to the production of appropriate sounds. In producing speech, the brain conceives the notion to say something and sets in motion a series of electrical impulses to all the muscles of the vocal tract. These muscles, in turn, set up a complex sound wave, and the result is that something what spoken language is.

Formally, it is believed that a language consisted of a series of habits, skills and aptitudes, and is acquired by exercises, repetitions, generalizations and associations. Nevertheless, humans do the activity of language production unconsciously and they do not know how it can occur. In this case, Qur'an states that God taught humans to speak as stated in the following verse: *The most Merciful (God) has taught this Qur'an. He it is Who created man and taught him speech (Noble Qur'an, ar-Rahman, 55:1-4)*. This verse states that God taught humans to be able to communicate by means of spoken language (Taslaman, 2006:186). It means that God bestows the potential for humans to be able to think and express meanings through sounds and written form. Scientifically,

the verse signs that God creates humans with the potential biologically to acquire a language.

According to Chomsky, humans have capacity to acquire language since they are born with minds that contain innate knowledge concerning a number of different areas. One such area or faculty of the mind concerns language (Steinberg, 2001:291-308). Chomsky states that such faculties of the mind are relatively independent of one another. Thus, language acquisition is independent of intelligence and logic. He refers to the set of innate language ideas that comprise the language faculty as the Universal Grammar (or the UG). This Universal Grammar underlies the specific grammars of all languages. Human being is born with UG which is used to acquire any particular grammatical in the world. Thus, the UG is not a grammar of any certain language, but it contains the essentials with any particular grammar can be acquired. In short, language acquisition is determined by humans' abstract cognitive ability since God equips them with special abilities how to discover the regularities of language.

Furthermore, it is assumed that humans have used language since about 45.000 years B.C. The total of language in the world is approximately about 6000 languages (Budiman, et al. 2007:184). In Indonesia, there are about 370 clients and almost all of them have their own language. In the view of Qur'an, the diversity of human language becomes one of the signs of God's power as stated in the following verse: *And among the sign of His power is the creation of the heavens and the earth and diverse language and skin color. Surely, in that situation actually there are signs for people who know (Noble Qur'an, ar-Rum, 30:22)*. This verse indicates that the language that is used by humans in the world is a creation of God. Thus, the diversity of language is the characteristic of the earth.

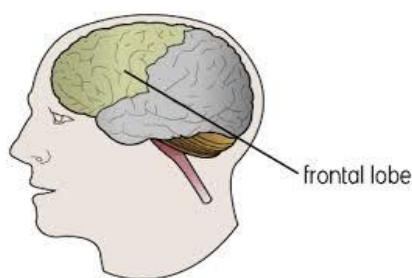
The humans' activity in the process of oral communication continues to writing skill. Writing allows the preservation of communication over space and through time, and its great importance in human history and in complex societies would be hard to overestimate. Through writing humans can transfer knowledge from generation to generation. Since writing is important for human civilization, God did take an Oath by a Pen as stated in the following verse: *Nuun. By the Pen and what they (humans) inscribe (Noble Qur'an, al Qolam, 68:1)*. The contemporary *tafsir* (the interpretation of Qur'an) states that the term of pen as mentioned in this verse may refer to the pen that people use. This God's oath indicates is extremely powerful because it writes down ideas,

history, theory, identity, plan for human civilization. It also writes down what people think, feel, experience and much more. For this reason, if the pen of humans is meant, then 'wa maa yas turuun' – *and what they inscribe*- means that human history which men write out.

Humans could hardly have survived, if their ability to produce speech is deprived from the beginning of their days. The Quran's statement that the first human being was taught to speak is very important in this context. God equips humans with the mental capacity, with an ear ready to receive what he hears, and a mouth and tongue to express their intentions. Coincidences cannot account for the perfect and complex creation of our ear, mouth and tongue. It is eminently reasonable to conclude that God's gift of language to humans could be accepted in faith and praise to Him.

## 2.2 Human Brain and Language

Qur'an contains amazing statements on the brain mostly about the area of frontal lobe. The frontal lobe is the part of the brain that controls important cognitive skills in humans, such as emotional expression, problem solving, memory, language, judgment, and sexual behavior. It is, in essence, the control panel of humans' personality and ability to communicate. As its name indicates, the frontal lobe is at the front of the brain. The right hemisphere of the frontal lobe controls the left part of the body, and vice versa. The frontal lobe is also the most common place for brain injury to occur. Damage to the frontal lobe can create changes in personality, limited facial expressions, and difficulty in interpreting one's environment, such as not being able to adequately assess risk and danger.



*Figure 1: The position of frontal lobe. Source:*

*[www.healthline.com/human/fronta-lobe/male](http://www.healthline.com/human/fronta-lobe/male)*

According to El Nagggar (2010:235), Qur'an has described the relationship between the frontal lobes of the brain, and the ethical behavior of human beings, as in



the following verse: "*Do you see who forbids a servant of Ours (God) when he (turns) to pray? Do you see if he who prays follows the guidance and enjoins righteousness? Do you see if he who obstructs rejects (Truth) and turns away? Does he not know that God sees? Let him beware! If he desists not, We (God) will punish him upon his forehead - a lying, sinful forehead! (Noble Quran, al 'Alaq, 96:9-16).* The Almighty also says: *There is no living creature that moves on the earth, but he (God) holds its forehead completely (Noble Quran, Hud, 11:56).*

The word used in the last two verses above is *an-Nasiyah*, which means "the forehead". The forehead in this statement obviously refers to the frontal lobes of the brain which lie behind of posterior to the frontal bone in the forehead. In the context of language use, this area is responsible for telling lies and the truth.

The speech of lying is initiated by the mental activities which occur in the frontal lobes. The instruction of the frontal lobes are then carried out by the speech organs during the act of lying. Similarly, sins are planned in the frontal lobes before they are carried out by the eyes, hands, sexual organs, etc.

Perhaps for the above mentioned reasons, God orders us to perform *sujood*, (place our foreheads on the ground), as stated in the continuation of the Qur'anic verses above: *Then let him call his associates. We will call on the angels of punishment. Then follow not him, but prostrate yourself and draw nearer to Us (God). (Noble Quran, al 'Alaq, 96: 17-19).* This order to perform *sujood* means that people should place the center of the will and decision making upon the ground to show the absolute submission to God.

Qur'an has described the role of the forehead, or more specifically the function of the frontal lobes of the brain, in making decisions, and in the control and direction of human behavior, including how humans to speak pragmatically. Moreover, the function of the forehead has been recognized by modern comparative anatomy.

### **C. Conclusion**

The facts about human language in Qur'an can be explained scientifically. These facts provide clear evidence that the Qur'an is not the word of man. Thus, Qur'an is the word of the Almighty God, the Creator of human, the Originator of everything and the One Who encompasses everything with His knowledge. These fact also strengthens that

there is the interconnection between science and religion-Islam- in studying linguistics, especially about the theory of origins of human language.

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