HUMAN NATURE THROUGH THE PERSPECTIVE OF EVOLUTIONARY THEORY OF STEVEN PINKER

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Abstract

The theory of human nature plays an important role in life. It acts as a trigger as well as a purpose for human life itself. Theories of human nature presented by Religion and Empirical Theory are widely believed to date. Nonetheless, it seems like they have reach an absolute point, thus closed the possibility for new questioners to find novelty in their explanation. This research is made by conducting critical analysis on two classical notions that explained human nature, namely religious explanation and the empirical (the blank slate theory) explanation. Through critical analysis, it is found that new explanations are needed in the conception of the theory of human nature, with the research questions: What kind of human nature theory can embrace human being as of today? Therefore, through the alternative explanation method, the author offers an alternative conception of the human nature. Human Nature is a combination of the innate mechanism and the environment. This conception was born through a critical analysis towards some works with the evolutionary theory perspective, primarily the work of Steven Pinker, who believed that there were innate mechanisms in human beings, as a result of evolution so far.

Keywords: Human nature, innate mechanism, survival, environment, variable/s, complexity, evolution.

Introduction

The debate about human nature is a debate that is constantly being carried out as long as humans are still living in this world (Stevenson & Haberman, 1998, p. 3). This debate occurs because human nature is assumed to be the basis of human behavior. Human nature is a concept that determines an individual to see his purpose in life, what must be done to fulfill his life, how his behavior is in society, and so on. The concept becomes an important concept because all aspects of human life depend on it both individually and in community groups.

“So much depends on our conception of human nature: for individual, meaning and purpose of our lives, what we ought to do or strive for, what we may hope to achieve or to become; for
human societies, what vision of human community we may hope to work toward and what sort of social changes we should make.” (Stevenson & Haberman, 1998, p. 3).

The concept of human nature is a conception that is capable of forming humans at a certain level. If human beings base themselves on the concept of Christianity, then what he does is in accordance with the theory of human nature stated by Christianity, that he is the *Imago Dei*. With that definition of his nature, every action he does is an act that represents the image of God in this earth. Turning to the theory put forward by John Locke, that man is the blank slate (Pinker, *The Blank Slate: The Modern Denial of Human Nature*, 2002, p. 5). The concept of this blank slate of human nature, forms an awareness that every experience that humans face is like strokes of a pen that will fill the blank slate up through his experiences. The most recent development of the theory of the human nature has turned to scientific facts which state that man is not blank, but that he is a creature that has a certain mechanism within him that is formed through the process of evolution by natural selection.

In an effort to explain human nature, the first question that must be asked is the question of the world in which humans live. In the view of Christianity, the world and all its contents are divine creations so that humans who are representations of the creator have a purpose to continue to do the will of God in this world (Stevenson & Haberman, 1998, p. 75). Another theory that we can see is the empirical theory of a world full of experience. With the condition of the world thus is human beings should always meet with the experience of his life. It is experience that makes up the human being to discover his identity. There is no identity outside the human experience itself (Pinker, *The Blank Slate: The Modern Denial of Human Nature*, 2002, p. 6). Both of these views, both Christianity (read: religion) and the empiricist view of the world have found its absolute point. In the sense that they are unable to provide more accountability to new questioners in relation to the present human conditions in this world. Religion has been unable to provide satisfying answers to questions about humans and their world for a long time. They are just fixated on a belief that is believed to bring salvation for the believer to the later after-life experience. The achievement of the after-life experience is the major thesis of the theory, so we can assume that the present-life world condition is not a major concern for religious believers. They focus more on the achievement of the after-life which is believed to be far better than the present world. On the other hand, the explanation of the natural condition of humans by the empiricists is still fixated on a world filled with experience. The human world is a place where humans get every particular experience that ultimately influences the source of their identity and knowledge. The explanation given by religion and empiricists is insufficient to describe the existence of the world today and the reason/s of living it.

Every human being has a desire to know the origin of himself. Human consciousness is an awareness that seeks to find out what is in the past and even in the future (Pinker, *The Blank Slate: The Modern Denial of Human Nature*, 2002, p. 1). Human consciousness is an awareness that is able to determine the past he has and the future conditions he wants. Such awareness is not found in living things other than humans. Thus, human desire to know its origin is a normal desire because of the awareness he has at that level. However, what explanation about the origin or the world can we put as a backrest to explain human nature?
In answering the question about the origin or the human world, epistemic normativity is needed as a guarantee of the validity of the answers that will be given. In this case the epistemic normativity which I consider most likely to examine and be accountable for the present human world is naturalistic (read: scientific). In the scientific view, in my opinion, the most answer that is reliable to give the explanation on human nature, is evolution. Evolution is a form of development of living things in relation to nature around them. Humans and other living things are the result of millions of years of evolution that have taken place in nature. In his writings on *Philosophical Implications of Charles Darwin's Theory of Evolution*, Eko Wijayanto argued that in the theory of evolution, every living creature must pass through natural selection, and to pass through it every living creature must be able to adapt to the environment in which it lives (Eko Wijayanto; Herdito Sandi Pratama; Irianto Wijaya; Noviar Andayani; Saraswati Dewi, 2009, p. 26). From this statement it appears that humans who are living beings who lives in a nature that by chance doing selection, as a force to make humans being survive in life. The natural environment he inhabits is a world loaded with selection and then produces evolution.

When we talk about evolution then we are talking about a change that occurs in time. In the sense that within a certain period of time there is a change in something and it is produced by certain causes. In the case of living beings, certainly the view of evolution will be reminiscent of a Charles Darwin that is believed to be the originator of evolutionists that is the most influential to this day. Darwin's version of evolution is that living things that exist today are living beings that are able to escape natural selection. Darwin's view of evolution is said to be the most satisfying theory because it shows how change occurs from something simple to something complex because of the natural selection that befell it. As Richard Dawkins said: "Darwin's theory of evolution by natural selection is satisfying because it shows us a way in simplicity that could change into complexity, how unordered atoms could be grouped into ever more complex patterns until they ended up manufacturing people" (Dawkins, 1989, p. 12).

Natural selection is the controller of evolution. A human being who is still alive to this day should be grateful to their ancestors who is able to pass through natural selection that befell them. They are able to transmit excellent and endurance qualities to their offspring to be able to survive in nature which continuously creates selection towards them.

The human’s world is also contained with the environment that surrounds them. Nature is the first environmental variable encountered by living things. It is the nature that ultimately selects every living creature that aims at it. Climate, weather, humidity, soil conditions, water and everything born of nature is a form of selection for living things that live in it. When humans meet this nature, then humans also have to experience the selection in it. Humans try to survive through natural selection, and in fact humans managed to escape natural selection to this day. Human is succeeded in being able to escape natural selection. This is a success obtained through a series of processes of adaptation to the environmental conditions in where they live. In other words, that there are certain conditions in this nature that requires humans to adapt to their environment in order to survive.
Human Being and Innate Mechanism

In his view about living things that evolve, Herbert Spencer States that life is a process of adjustment between the internal relation with external relations (Durant, 1961, p. 279). Internal relations in this case constitute the initial form of our understanding of the mechanisms that take place within humans. The mechanism that takes place in human beings is a form of the performance of the brain that are interconnected with one another. Every nerve in the human brain sends and receives signals which then produce output which can be actions, smells, or words. Likewise, with the chemical released by certain nuclei in the human brain, they are able to combine with millions of nerves in them to create a certain procedure. Thus we can draw an initial conclusion that in the human brain there is a mechanism that regulates all aspects of his life. Simply put, the mechanism by Steven Pinker is referred to as innate mechanism (Pinker, 2002, p. 101).

The human brain is the one which captures every information obtained through human’s experience. The human brain is the source of all neural currents that move certain functions in the human body. The formation of the nervous system in the human brain is the work of evolution by natural selection that shaped it to the present. The human brain can be said to have almost the same function as the brains of other animals - especially primates - which undergo evolution, but it is the human brain that distinguishes itself from other living things around it. In the human brain there are millions of nerves that react with one another. The most complicated structure in the human brain is called cerebral cortex. Cerebral cortex has at least thirty billion nerves or nerve cells, and a quadrillion connections or commonly referred to as synapses (Edelman, Second Nature: Brain, Science, and Human Knowledge, 2006, p. 18). Synapses is a very important element in the brain that guarantees the performance of each circuit contained in the brain. This is because the synapses regulate the region between the pre-synaptic neurons (the nerve that sends the signal into the synapses network) to the post-synaptic neuron (the nerve that receives the signal sent earlier) (Edelman, 2004, p. 17). Every nerve that transmits signals in the brain is regulated in certain chemicals which are referred to as neurotransmitters.

The part of the brain included in the subcortical region is hippocampus, basal ganglia, and cerebellum. Hippocampus is a part of the brain that deals with the regulation of the mechanism of human memory (Edelman, 2004, p. 21). Hippocampus are found on the left side and right side of the human brain, and these parts are commonly referred to as the right brain and left brain of humans. Cognitive processes of human beings are regulated in this hippocampus section. The process, according to Bernard Baars, is produced by two hundred million fibers that connect between the right and left parts of the hippocampus, which react to each other as much as ten times per second and thus produce signals of about two billion per second (Blackmore, 2005, p. 18). While the part of the brain that regulates the actions and motor activities of humans is called Basal Ganglia. In patients with Parkinson's disease, this part of basal ganglia experienced certain damages. Basal ganglia is located in the central part of the brain and is associated with cortex by thalamus (Edelman, Wider Than The Sky, 2004, p. 23). How the eye works closely with the ears while searching for a sound source is the work of the parts of the brain on this one.
While parts of the brain that are met by the learning mechanism is the hypothalamus (Edelman, 2004, p. 23). This section is filled with neurotransmitters which comes from nuclei. Each of them send axon repeatedly over-under in the nervous system through a pattern of spread. This part of the brain that affects every particular function of other parts of the body in humans. Any chemical sparks that is released that spur brain performance to understand the world around them through a variety of ways. Like dopamine, when it is released, the human brain will be filled with happy sensations as felt by people who are in love. Dopamine which exist in the human brain is capable of making someone feel pleasure, such as ecstasy, as well as being able to make someone be energetic or motivated (Eko Wijayanto; Herdito Sandi Pratama; Irianto Wijaya; Noviar Andayani; Saraswati Dewi, 2009, p. 210).

The connection between nerves in the brain is also a form of innate mechanism possessed by human being. Steven Pinker often provides examples of how humans are able to recognize certain languages (Pinker, 2000). This, according to Pinker is a combination of innate mechanisms possessed by humans who work together in their brains when they come into contact with external relations produced by the environment outside themselves (Pinker, 1997). Even Pinker stated that humans have had a language mechanism in their brains since they were born. This language mechanism is composed of modules that regulate certain variables in language (Pinker, 1994, p. 437). These modules will be combines with other nerves in the human brain that get in touch directly with reality and then it generated in the form of the language. Pinker states that more or less there are fifteen modules able to encapsulate the entire linguistic experience possessed by humans as evidence that there is an innate mechanism in humans, namely:

1. Intuitive mechanics: knowledge of motions, forces, and deformations that objects undergo;
2. Intuitive biology: understanding of how plants and animals work;
3. Number;
4. Mental maps for large territories;
5. Habitat selection: seeking of safe, information-rich, productive environments, generally savannah-like;
6. Danger, including the emotions of fear and cautions, phobias for stimuli such as heights, confinement, risky social encounters, and venomous and predatory animals, and a motive to learn circumstances in which each is harmless;
7. Food: what is good to eat;
8. Contamination, including the emotion of disgust, reactions to certain things that seem inherently disgusting, and intuitions about contagion and disease;
9. Monitoring of current well-being, including the emotions of happiness and sadness, and moods of contentment and restlessness;
10. Intuitive psychology: predicting other people’s behavior from their beliefs and desires.
11. A mental rolodex: a database of individuals, with blanks, for kinship, status or rank, history of exchange of favors, and inherent skills and strengths, plus criteria that valuate each trait;
12. Self-concept: gathering and organizing information about one’s value to other people, and packaging it for others;
13. Justice: sense of rights, obligations, and deserts, including the emotions of anger and revenge;
14. Kinship, including nepotism and allocation of parenting effort;
15. Mating, including feeling of sexual attraction, love, and intentions of fidelity and desertion. (Pinker, 1994, p. 437)

It is this language module that work and even then affect every behavior generated by humans. In life, people will be influenced by innate mechanism from these modules when the learning process to the environment begins.

Environment

As explained earlier in this chapter, all living things experience what is called natural selection in the process of evolution. This natural selection is a form of environmental conditions in which humans are living in. Nature is the first environment that humans encounter when humans are arrived in this world. The factor of humidity, temperature, and living area that causes a baby to cry when he just came out of his mother’s womb. The baby began to try to adapt to the new environment he met. The brain of the baby began to digest the humidity of the surrounding air, the temperature it feels, and so on. Natural conditions are a major factor in the continuity of human development and other living things in general.

The next environment that humans encounter in their phase of life is family. Here in this environment, he encounters other individuals for the first time in his life. The family becomes the closest and safest environment for him to continue to survive in life. The first interaction that parents usually do with their children is to teach their children to speak. Through this environment, the baby begins to develop the language skills he has. The first development of the language ability of a baby is through the family environment (Pinker, 1994, p. 261).

The next environment is social community. In the community, people began to see the culture, customs, manners, even school. In this environment humans start doing a process known as learning. Humans begin able to distinguish where the environment of place of their residence and which are not, by identifying the culture, customs, and habits done by the surrounding community. Humans begin to find norms between what can be done and what not to do. Society begins to fill the human brain with moral considerations between what is appropriate and inappropriate. Religion began to be introduced to humans as a symbol of absolute truth that can guarantee its safety if it adheres to the rule of the religion. He began to know that there were rules in society. Every rule has a difference for each main road user, for example when riding a motorcycle on the main road must use a helmet, or when passing the traffic light and it lights up in red then every driver must stop. Society becomes an environment in which the development of knowledge possessed by humans (Hammond, 1975, p. 30).

As evolution occurs within the individual, from a single cell with another cell and then grow and develop into a whole personal, as well as the community. The community is composed of one individual who was closely related with the other individual, who then by input of proper
nutrition will grow and evolve into a community figure intact. Herbert Spencer once realized that the elements forming communities is the environment that exists in the vicinity (Durant, 1961, p. 284). For Spencer, religion is a primitive society-forming elements. The limitations of knowledge in the primitive society makes them creating religions as part of the formation of survival from the community. While in an environment that already has adequate facilities to understand reality, economic conditions become a consideration in building a society. Education and culture can also be a nutrient input that is important for the development of a society that can continue to survive in the environment in which it is located.

The next environment that people meet is the very complex world. In this world there is interaction between the community, customs, culture, technology, media, politics, art, and so on. Humans enter the realm that is often referred to by the postmodernists as the realm of hyper reality (Featherstone, 1991). Where the boundary between the original reality and the imitation is no longer visible. Everything mingles in one particular code and that is hyper reality. Humans not only live in interaction with nature, or only with close family and surrounding communities, but also live in a global world. "In a further move ... we are thinking to exist in a world of hyper reality, in which images are self-generating and entirely detached from any supposed reality" (Pinker, 2002, p. 213). The easiest example we encounter is the world of Facebook which is very crowded by almost all people on earth. How humans are able to connect to each other on the internet network and make their own living in it. It cannot be distinguished between the real world and the non-real world, even the boundary between the two cannot be found in the world now.

In their encounter with humans, the environment often provides a variety of interactions. This is because the complexity in it also has a large quantity and quality. The most emerging variation is symbiosis mutualism, namely that there is a mutually beneficial behavior between humans and their environment. The environment presents variables that can make people feel benefited and able to make it take action that is reciprocal to the environment. This variation between human interaction with the environment can also be in the form of pressure, for example the environment pressurizes human beings to take certain decisions related to their lives. In the sense that humans are parties who are under environmental pressure within each behavior. However, every interaction generated by human encounter with the environment can be formulated through a combination that occurs between the two.

The Combination of Innate Mechanism with Environment

Innate mechanism which is owned by humans is the raw material of human knowledge. The raw material will be processed according to the environment from the man himself. When human beings encounter the realities that surround them, they are holding a combination of these facts with the mechanisms contained in the complexity of the nerves in the brain. The simplest thing happens in language, which is how humans are able to identify every object that they encounter with a single word or phrase. When a human sees something that squeaks, has a tail, and likes to scrape everything he encounters, then the human brain is able to combine these facts by calling it a mouse or rat. However, in a wider area of the environment the concept of mice can
change factually. For example, we see something that has a tail, but it cannot crape anything because it is only a stuffed rat, but in our brain something like that is able to be understood as a mouse. The human brain tries to combine the same features possessed by the stuffed rat with the original mice that he had met before. In the process of this combination, the human brain is able to recognize that the tailed object is a mouse even though it does not squeak or scrape something. It is because the innate mechanism possessed by humans still knows that the object is in the same environment as it is and thus calls it mouse. Also because the environment where the indigenous rats and the stuffed one was just the same (e.g.: in the doll’s owner’s house), then automatically the mice concept appeared in the human’s brain.

The next combination that we can explain between the innate mechanism and the environment is through perspective theory, the fastest connection between humans and the world around them. In his interview with Susan Blackmore, Daniel Dennet stated that complexity in human life is the result of the point of view that each human has. Every human being is in his own point of view and cannot enter the other person's point of view (Blackmore, 2005, p. 80). This means that in dealing with the world, humans has its own way. However, this method is a form of innate mechanism which they possessed. The way humans are able to perceive something and then mark it with a certain language term, it is a form of *innate mechanism* that processes that particular perception, the perception then is combined with the language that is also inside the mechanism, and then combines the reality that he faces at that particular moment. The historical period of humans in the way the get their perception and know many things through it, is something that greatly influences human ability to perceive something. *Innate mechanism* possessed by humans does form a pattern of human knowledge of the surroundings, but the formations are not absolute. It is rather a form of influence that marks the next reality.

This influence is derived from human interaction with the environment. Humans try to understand the environment in which they live. He learned everything in the environment that was able to make him survive. Variables in the environment that guarantee human survival will become aspects that are given far more attention than other variables that can trigger human extinction. Variables obtained by humans from the environment will eventually change into a factor that will be maintained continuously for its survival. We can explain the condition of religious people through this thought. When humans interact with society in general, religion has become an integral part. They became a living guide for almost all the inhabitants of the earth. Therefore, when humans experience the process of internalizing religion by the surrounding environment, then humans will mark religion as a factor that can guarantee its survival in the group. This comes from supposing that when he is not a believer, he might be eliminated from his community and also from life. Therefore, the religious variables obtained by humans from their environment continue to be maintained even today. The implication of this is elimination of all conditions that allow humans to be non-religious. This is done so that human extinction due to the absence of religion that can occur too early can be prevented. The fact that actually happened was that religion was only a nutrient created by primitive people because of the limited knowledge (Durant, 1961, p. 279). It is actually not a divine goal or even a plan of God, but an environment that is anxious about the absence of answers to nature in the past. Delusions of
human extinction if they are not religious should be abandoned. And humans actually have access to take it off and turn it into a novel conception on human nature.

Conclusion

From the explanation above I came to a conclusion which is the also the thesis that I try to propose through this research. It is: Human nature is a form of a combination of innate mechanism with the surrounding environment through evolution by natural selection. The combination that is formed between innate mechanism and the environment basically wants to create a life that is fulfilled by survivality. Survivality in passing any natural selection imposed upon him in an evolutionary process of life. Survivality ultimately creates human life that is loaded with values and influences from the surrounding environment. These environments shape humans into human beings who are not only adaptive to natural conditions but also adaptive to the cultural conditions that surround them.

Human nature by evolutionary theory perspective, is an understanding that differs from the classical understanding of human nature’s conception. In other words, this theory of human nature that is proposed through this research is a condition that resides out of the conception of the general human nature theories. When classical human nature’s theories understand humans as blank slate that will be filled with experience, then the perspective of the evolutionary theory is that humans are not blank slate. It is the unity of particles that have evolved along with the evolution of living things. The condition of the particles that make up the human self is a condition that is able to absorb and modify experience instead of just accepting it. The manifestation of evolutionary theory on human nature is only able to occur when it is met with the surrounding environment. Environmental conditions affect the object that is confronted with him. When the standard of deviation of the environment changes, it can be ascertained that the "normal" state of perspective of a human should change also. The complexity of the variables surrounding the man through the environment is a complexity that should put people in different circumstances from a state that he should consider as a "normal" state only.

In conditions that are affected by the complexity of various variables in the environment, the condition of the causal basis of human existence is a very important aspect. This causal basis builds human understanding of the environment. This understanding also develops along with the developments that occur in the environment. When the environment is started to change with certain conditions that make its effects on the changes in humans’ life, then any human nature theories should change to the manifestation and display that is capable of adapting to the environment. The complexity of the environment always assumed that changes through evolution is indeed supposed to keep going and people should be able to adapt to these changes. When humans are not able to adapt, then pathologies began to happen. The pathologies can be seen in the absolutization of any conception regarding human nature. This absolutism ultimately leads to an extreme fatalism condition and should not occur in a dynamic complexity as experienced by humans.

The natural condition of man through Evolutionary Theory perspective is formed from a combination of the particles that make up the human self (innate mechanism) with an
environment that exerts pressure through the infinite complexity of variables. When the nature of humans is able to combine with their environment properly, the human condition can also be on a good track. Variations of the deviations given by the environment to human existence are a maximization of the potential of each variable contained in its *innate mechanism*. This conception of human nature is what ultimately makes humans understand themselves and their environment in life for the sake of human survival continues to survive. This conception of theory of human nature through the perspective of evolutionary theory makes them survive for humanity.

**Bibliography**