Defining a human being:
a starting point for the science of education

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人間を定義する
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Ⅰ．Attempting to define a human being[1]

　　If I ask "what is a human being?", many people rack their brain, and answer using words like "reason", "culture" and "language". Many people tend to answer by comparison with animals, especially higher primates. Responses often converge around the following three: walking erect, use of language and producing tools.

　　If we accept these three as a definition of a human being, a newborn baby is excluded from inclusion as a human being. A baby is not able to walk erect, use language or produce tools. The three definitions will exclude even many people, who are unable to walk or speak.

　　If the definition of a tomato includes the word "red", then a green one is not a tomato. In the same way, a person who cannot walk erect is not a human being.

　　There is a way to include a newborn baby in this type of definition, which pay attention to functions of human being in comparison with other animals. "Potential" is the key word. Though the three definitions characterize a fully-developed adult human being, a newborn has the potential to fit the definition. We are accustomed with the solution "potential", because we live in the age of believing in the "development" of a human being and society.

　　If I were a newborn and could reason philosophically, I might say as follows: Am I only

potentially a human being? Please accept me from the beginning as a human being.

A green round tomato may have the potential to be red, therefore it could be recognized as a tomato, though it is not yet a tomato.

To salvage a baby's identity as a human being, let us consider the way of thinking about what a human being is, and about a definition of a human being based on the area of education. This is because the three definitions derive from the way of comparison of a human being with an animal as a means of characterizing a human being in the modern age. Therefore these three definitions of a human boil down to the following: an animal which can walk erect, an animal which can use language, and an animal which produces tools.

However we do not look at a baby in our life in comparison with an animal. We look at a baby as one of us: that means in relation to human being, and education is an effort to teach and care about relations among human beings.

The essential question for us about "what is a human being?" ought to be replied to in terms of our life. When we define a tool, we can use a way of definition by a purpose of its usage, and in this way we give meaning to a tool. For example a chair is a tool to sit on. However when a chair is used to hit another person, it is a weapon. When a desk is used to sit, it is a chair. Following this line of defining, we can say a new born baby is a human being, when we treat him/her as a human being.

Ⅱ．Meanings associated with being human

Sartre (Sartre, Jean-Paul) described a self-forming process of a human being in "Saint Genet, comédien et martyr" in 1952. "Je suis allé vers le vol comme vers une libération, vers la lumiére" (Sartre, J. P., 1952, p. 448), "Le regard des adultes est un pouvoir constituant qui l'a transformé en nature constituée" (Sartre, J. P., 1952, p.63). He goes on, "J'ai décidé d'être ce que le crime a fait de moi" (Sartre, J. P., 1952, p.63). Genet was inclined to steal, as if inclined to liberation and to light. The eyes of adults upon him possessed the power to construct him, and those eyes changed him into a constructed nature. He goes on that he decided to be himself, composed of criminality.

"You are a thief." When adults gave a meaning to Genet, he decided to become what was expected of himself. Genet made up his mind over a hundred times to obey a religion of evil from 10 to 15 years old. He built up an *engagement* self according to the given meaning of evil over a hundred times in anger against adults. "Cent fois l'enfant s'est voué au Mal dans la rage et puis il suffisait qu'un de ses juges lui sourie" (Sartre, J. P., 1952. p.64).

Being handicapped is a product of relationships. A person cannot stretch or catch over 60 cm, but he/she does not feel, and nobody would say, that he/she is a handicapped, because a 90 cm stretch is not expected. However, if a person can stretch his hands 30 cm, he/she may feel, and be called handicapped. But there is no need for the person to think in terms of being handicapped, when he/she can move easily 30 cm or stretch with

a tool. A person with glasses, for example, does not feel handicapped, even though he/she cannot see clearly without them. The person may only feel handicapped when he/she visits a noodle shop in winter, because his/her sight becomes clouded with vapor.

When adults expect a baby to walk erect, speak in a language or use tools, a baby will try to do so, according to this expectation. Expectation can serve as a driving force to be a human being. Expectation is a way to allocate meaning.

Ⅲ. Teachers' roles in defining a human being

A teacher can say "you are a thief". However a teacher can also say that he does not expect someone to be a thief. A teacher creates expectations.

Story-telling about this world and about oneself display meanings in connection with the world. An adventure tales tells that this world is interesting and worth living in. A good story gives children a basis of meaning for life. A story which tells that this world is beautiful, insists that the world is worth living in and encourages one to do so. When J.F. Herbart, who is a founder of the scientific theory of education, said that the main work of education is to show the world as beautiful, thus recognizing the importance of describing a world worth inhabited with morality, he insisted that the main role of education is to create a world view. (Herbart, J. F., 1804)

Scientific knowledge also presents a view of the world. The essence of science, which is represented by rationality, reproduces possibility and critical thinking, endowing us with a stable basis of this world viewpoint. Inquiry into a question and confirmation of knowledge mean the world is worth questioning, and has a reliable base.

Our modern world consists of a science-based knowledge, upon which communication and globalization have developed. A human being in our world compared to one in the past, for example in the Stone Age, is different in our sight and reaching distance, even if the length of his/her arms is the same. According to such developments, expectations also become more ambitious, and the period of education becomes longer.

When we reflect, the results of the modern world do not always contribute to the welfare of human beings, as exemplified by the A-bomb, Minamata and Fukushima in Japan, which symbolize the dark sides of science. In spite of the disasters of the modern age, we expect children to live and attempt to contribute towards world peace.

Therefore scientific knowledge consists not only of words to memorize, but the total knowledge of science, including ethical judgments, has its own image of humanity, of how to understand this world, and how to act in it.

Ⅳ. Ways of defining a human being

A human being has been defined in many ways other than the three definitions mentioned previously: animals possessing reason, animals forming a polis (community in ancient Greek), socialistic animals, homo sapiens, homo faber, animals with religion, metaphysical animals, animal with symbols, animals with hope, homo ludens, and so on.

By that reasoning, a human being could be defined as an existence, which begs the question of what a human being is.

Looking at many kinds of definitions, we can say that many tend to define humans in comparison with animals. But this is only one of the ways of definition.

Ⅳ-1. Comparison with non-human existence

According to the Christian tradition, mankind is created in the image of God. The explanation "God created human beings in his own image"（Genesis 1:27）, has supported for a long time the identity of humanity. Human beings have been defined in relation to God.

Compared with the perfect God, human beings always exhibit shortcomings, and so should be repentant in the face of God. Beyond myself, a perfect existence is watching me, which causes me strain. He is beyond me, but I am always inside his world. He knows everything, but I am struggling, because of the freedom of choice. This process of struggling and repentance could provide evidence of humanity.

In the way of thinking of Zen Buddhism, existence of the self is denied. In the praxis of Zen, not only sitting but also in daily life, a human being has the potential to be Buddha himself. Losing oneself is recovering oneself as Buddha. So the praxis of Zen is a process of identifying with an existence beyond the self, and the process of recovering the self. What is a human being? Nothing, and at the same time everything. The way of thinking starting from the distinction of human beings from others will not realize what a human being is. The praxis of Zen to deny oneself and recover everything could be a process of self-education.

Ⅳ-2. Comparison with animals

The way of defining humans in comparison with animals, especially with anthropoid apes, spread in the second half of the 19th century.

In the middle of 18th century, a way of thinking about evolution appeared, against the background of French Enlightenment philosophy, in the book, "L' Histoire naturelle, générale et particulière, avec la description du Cabinet du Roi" by Buffon（Buffon, Georges Louis Leclerc, comte de,）in 1749. In the year 1766 Linné（Linné, Carl von）classified human beings as mammals. He puts Homo at the pinnacle of Mammalia, and explains its character as "walk erect"（Linné, C., v., 1802, P.7）.

In the year 1809, Lamarck（Lamarck, Jean-Baptiste Pierre Antoine de Monet, Chevalier de）discussed the system of evolution and wrote that living things gradually evolve from simple to complex. At that time many people began to think that humans were not created by God. However no alternative explanation about the birth of the species was given, leaving people groping in the dark.

Wallace（Wallace, Alfred Russel）and Darwin（Darwin, Charles Robert）put forward the idea of natural selection as a useful property of evolution. In 1859, Darwin published

"On the Origin of Species" and discussed evolution through continuous modification.

Huxley (Huxley, Thomas Henry) published "Man's Place in Nature" in 1863 and argued that the anatomical differences between humans and gorillas or chimpanzees are smaller than those between gorillas and lesser primates. The animal-originating story of human beings was spread, as Darwin published the book "The Descent of Man and Selection in Relation to Sex" in 1871.

From the second half of the 19th century, the theory of evolution spread as a social theory. H. Spencer (Spencer, Herbert) posited in "System of Synthetic Philosophy" in 1862 that human society also develops from a simple to a complex one.

The concept of evolution, including Social Darwinism, spread in Japanese society through the Jiyu Minken Undo (Movement for Liberty and People's Rights) at the end of the 19th century.

In the year 1856 Homo Neanderthalensis was found in Germany. In 1891 Pithecanthropus erectus was discovered on the island of Java of Indonesia, and in 1927 Homo Erectus Pekinensis were found, which are considered evidence of the evolution of human beings, who could walk erect, use fire and make stone tools.

The theory of evolution is new, and the way of characterizing humans in comparison with other animals emerged from this process. It was difficult for the people in 18th century Europe to imagine that human beings had developed linearly, as people in the modern age imagine. It was difficult in their age to consider modern humans as superior to those of the classical age. Compared to their miserable life at the beginning of the modern age, the classical world was highly developed. Comparing the superior sculptures and culture of Greece, huge buildings and water systems of Rome, the reality of their modern world seemed pitiful, as 160,000 people died in London in 1665, 300,000 in Austria in 1711, and the deaths of hundreds of thousands by plague ravaged 18th century Europe.

The theory of evolution played a role in separating a definition of humans from that of God. However, this relies on the basis of the concept of the continuity of human beings with other animals, and because it requires a means to define a human being by the comparison of a grown-up individual with other animals, the theory could not succeed in including a human baby without recourse to the concept of development. A tomato and a mammal will turn red and be a mammal without accepting a given meaning.

Ⅳ-3.　The human as a human being

The anthropology of humans in philosophy tries to see a human being for what it is. For example, A. Portmann insisted that human beings are special in his book "Biologische Fragmente zu einer Lehre vom Menschen" in 1951, even when collecting biological data.

All the primates except human beings have open eyes, developed sense organs and various abilities for movement when they are born. A human baby does not possess such

abilities. Helplessness is a characteristic of the human baby. However, this is not because a human baby is under-developed. A baby of a human being is heavier than any other ape (chimpanzees and orangutans are about 2,000g, and gorillas are 1,700g). The brain of a baby of a human being, at birth, is nearly three times heavier than an ape's. Therefore a human baby is born fully grown, but it is sleeping, as if unable to do anything. It seems like a baby bird in a nest, called "Nesthocker" by Portmann.

When we observe the increase in weight of a baby in comparison with primates, we find the point of birth could be one year later in the case of a human being. When we define a human being as a creature able to walk erect, use language and produce tools, a human being after one year old could be said to do so.

It would be better to think of a human baby as having been born one year earlier than is usual for mammals, and lying for one year in a nest. This is different from other mammals, including primates, and when we compare the bones and genome with other animals, it is difficult to identify these special ways of existence of the human being.

Portmann finds a positive meaning for the helplessness of a human baby. The baby has freedom in how to use its hands and legs, what to say and how to use its fingers. We know that a human baby raised by wolves was unable to walk erect, use language, or use tools. Portmann writes, "Actions of animals are bound to their environment, and guranteed by instinct. … Actions of human beings are open to the world and free for decision." (Portmann, A., 1951, pp.66-67) According to Portmann, the following is a decisive fact: a baby of a human being goes beyond the ability of a chimpanzee within 9-10 months, and reaches the stage to appreciate the combination of meanings and to understand meanings. This is a typical action and reaction of a human being.

Concerning the characteristics of a human being, words like freedom, decision and meaning are essential. We may find the characteristics of a human being not in comparison with others, but by means of seeing a human being as human.

On the background of anthropology A. Gehlen summed up what a human being is in his book titled "Der Mensh　Seine Natur und seine Stellung in der Welt" (1966). He writes "Er (der Mensh –note by the quoter) ist nicht "festgerückt" (by instinct –note by the quoter) heißt: er *verfügt* noch über seine eigenen Anlagen und Gaben, um zu existieren, er *verhält sich zu sich selbst*, lebensnotwendig, wie dies kein Tier tut; er lebt nicht, …, er *führt* sein Leben "(Gehlen, A., 1966, p.17)". He goes on to write that „die für den Menschen entsheidende Eigenshaft besteht … in einer *Instinktreduktion* "(Gehlen, A., 1966, p.26), „die Weltoffenheit ist … grundsätzlich eine *Belastung* "(Gehlen, A., 1966, p.36), and „der Inbegriff der von ihm ins Lebensdienliche umgearbeiteten Natur heißt *Kultur*, und die Kulturwelt ist die menschliche Welt" (Gehlen A., 1966, p.38).

These philosophical anthropologies open and explain the essential need of education to be a human being. And its culture (Kultur) should include science in the modern age.

Ⅴ．Definition of a human being in education

After I. Kant discussed the rationales which define a human being, Herbart insisted critically on the process of building up pedagogy as a science in which teachers cannot simply wait for reason to occur in children. He could not start from the definition of an accomplished human being in education. When we want to define a human being in education, we should start from the beginning of existence of a human being.

A human baby learns in one year how to walk, speak Japanese or other language and use a spoon systematically. A baby is free in how to walk, what kind of language to speak, and what kind of tools to use. Furthermore, ways of walking, speaking and using tools are organized systematically in each culture as if to achieve something according to his/her culture. A baby is encouraged to achieve certain things according to the prevailing culture. The smile of a mother invites a child to be a human being in each cultural circumstance. A baby learns a systematic way to walk erect, speak a language and use tools from its parents and other people by trying to respond accordingly. He/she learns meanings given by other people, and reacts according to such expectations in order to become a human being.

A baby and a child are expected to survive in our cultural systems as a human being as if wearing a culture on their naked body. In a mother's body babies cannot learn to walk, speak or use tools. They may have freely decided in their own mind over a hundred times to respond to the expectations of adults. What kinds of characteristics are possessed by an accomplished human being in each culture derived from the definition of a human being, which needs to learn. Without learning a baby cannot live and become an adult.

I would like to interpret the word education, which erases simple learning, with a broader interpretation. To give meaning, to create expectations, to show an image of a human being and to invite a child into a world of a cultural system are all included in education. Education is not only teaching but also caring with expectation. Caring for a baby is an essential part of an education aimed at becoming a human being. Not only babies, but also other people should be nurtured in expectation, and treated in relation to what it means to be human.

When we apply such a broad meaning to education, we can understand the thesis of M. J. Langeveld, who considered the anthropology of a child and defined a human being as "animal educandum". Here "animal educandum" means that a human being essentially needs education, or that the essence of a human being is realized by education. In other words, the needs of education are part of the essence of a human being and a human being exists in such a way.

I would like to modify this definition by Langeveld, whose thinking was still based on animals. When we recognize our existence is special, we should define a human being as "esse educandum". A human being is an existence, for whom education is an essential need. Education belongs to the essence of a human being and a human being is defined

by the need for education. Education does not occur in a vacuum, but in relation of people. The need for education defines not only a child, but also the role of an adult, who goes on to educate in a broader meaning in our society of human beings. "Esse educandum" is not only a definition of a child, but refers to the complex relationships of a human being in the social sphere. Education is what makes a human being human.

Note

1) Arnold Gehlen says at the beginning of his book titled "Der Mensh Seine Natur und seine Stellung in der Welt" that "Ob sich der Mensh als Geschöpf Gottes versteht oder als arrivierten Affen, wird einen deutlichen Untershied in seinem Verhalten zu wirklichen Tatsachen ausmachen; man wird in beiden Fällen auch in sich sehr verschiedene Befehle hören "(Gehlen, A., 1996, p. 9). His words suggest that an attitude could be different, depending on what kind of anthropological base is defined as a foundation of the science of education. In other words, the concern of this paper is a meta-theoretical one, and is to find a stable foundation of the science of education; but such a basis can bring about a difference of attitude in education.

　　Niklas Luhmann, who is seeking a "adäquaten soziologischne Gesellschaftstheorie", criticizes that the "humanistische Vorurteil scheint … zu den 》obstacles épistémologiques《 zo gehören, die den theoretischen Zugang zu einer hinreichend komplexen Beschreibung der modernen Gesellschaft blockieren" (Luhmann, N., 1994, p.56). He says that an „Orientierungen an 》Menschenbilden《 hat man so schlechte Erfahrungen gemacht, daß davor eher zu waren wäre "(ibid. p.55). But what he points out is for example „Rassenideologien", and "Unterscheidungen der Erwählten und der Verdammten" (ebenda). So they are rather practical images of human beings. Naturally what he is seeking is to explain education as a social system.

　　Jürgen Habermas points outs however "Luhmanns 》Reduktion von Komplexität《 deckt sich mit Gehlens zentraler Kategorie der >Entlastung<" (Habermas, J., Luhmann, N., 1971, p.157). And he says that „das Phänomen, das Luhmann vor Augen hat, ist von der Anthropologie der zwanziger Jahre als 》Weltoffenheit《 thematisiert worden" (ibid. p.156).

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