

# THE HUMAN BODY AS A NEW COMMODITY

Tsuyoshi Awaya

## 1. THE "HUMAN REVOLUTION"

In the past, technologies have transformed and thoroughly utilized the natural environment, animals and plants. They were the direct target of technologies. But now human beings ourselves are becoming the direct target of these technologies. That is to say, technologies, especially medical technologies, are beginning to transform and utilize the human being itself. Here, the know-how cultivated in the transformation and utilization of animals and plants are fully made use of. I call this phenomenon the "Human Revolution due to medical technologies."<sup>1</sup>

This Revolution is not only changing our bodies, it will eventually entail a revision in the conventional notion of how we regard our persons and humankind itself. One direction this revolution is taking is the creation of human chimera and cyborgs. Moreover, it seems that brain transplants (i.e. body transplants), cryonics, human cloning, artificial intelligence, brain technology, etc. will also contribute to this revolution. To this can be added personhood theory, evolution into more advanced species, etc., although these do not result from technology.

Though it has been said that the Information Revolution follows the Agricultural Revolution and the Industrial Revolution,<sup>2</sup> I would like to suggest the "Human Revolution" instead of, or parallel to, the Information Revolution. As long as civilization is a system by which human desires are fulfilled, it is considered that this Human Revolution is almost inevitable.

So far, a kernel concept of this Human Revolution is the thorough transformation and utilization of the human body.

## **2. UTILIZATION OF THE HUMAN BODY**

### **(1) TRADITIONAL UTILIZATION OF THE HUMAN BODY**

In the past, Human body parts were utilized for various purposes.

First is the utilization of the human body as food : i.e. cannibalism. It is said that people ate human flesh, whether as an exception or as a norm, from the time of Cro-Magnon man and Neanderthal man. There is an enormous amount of evidence about cannibalism.

Second is the utilization of the human body for medical treatment and as medicine. The use as false teeth of teeth extracted from dead bodies in ancient Etruria is an example of the utilization of the human body for medical treatment. The dead bodies of condemned prisoners have been utilized for dissection in the West and the East, an instance of the human body being used for more general medical purposes. The old Chinese pharmaceutical work "Bencaogangmu" (1596) describes how most parts of the human body, including bones, nail, hair, dandruff, earwax, impurities on the teeth, feces, urine, sweat, organs etc. can be used as medications against various ailments. The utilization of mummies as medicine was in fashion in Europe from the 15th to the 17th century where, it is said, human fat taken from the dead body was also utilized as medicine. There are examples of the brain, liver, lungs, heart, bone, flesh, and fetus being utilized as medicine in Japan in past times.

Third is the utilization of parts of the human body as tools. Whistles and pipes made from bone, or bowls made from skulls are examples of this utilization.

Fourth is the use of the human body in art. For example, a famous church in Rome has ornaments made of many skulls and other bones. And a famous Buddhist temple in Japan has statues of Buddha made of large amounts of human ashes after cremation. These are examples of the utilization of the human body in art.

### **(2) CONTEMPORARY UTILIZATION OF THE HUMAN BODY**

Human organs, tissues, and cells are widely utilized for transplants,

medical research, biotechnology, drug tests, etc. By the way, the possibilities for various “special utilization of brain-dead bodies”, such as for the testing of drugs and conducting of medical experiments were pointed out about 25 years ago<sup>3</sup> and have now, in part, become a reality.<sup>4</sup>

### **(3) FUTURE UTILIZATION OF THE HUMAN BODY**

Incidentally, these forms of utilization of the human body may possibly be followed by “neo-cannibalism” : utilization of human flesh as processed food in the form of tablets in the future.<sup>5</sup> This would be the ultimate recycling of the human body.

### **(4) THE RELATIONSHIP BETWEEN UTILIZATION AND COMMODIFICATION OF THE HUMAN BODY**

One phenomenon deriving from the quest for the thorough utilization of the human body is its commodification.

## **3. REALITY OF COMMODIFICATION OF THE HUMAN BODY**

### **(1) COMMODIFICATION OF TISSUES, CELLS, GENES, ETC.**

While the sale of human organs is becoming prohibited around the world, at the same time, the whole human body is becoming a commodity.

Most kinds of human tissues for transplant have already become a commodity in substance. There are many tissue banks in the US. These tissue banks extract bones, cartilage, skin, fasciae, durae, pericardia, cardiac valves, tendons, ligaments, blood vessels etc. from dead bodies. After inspection, sterilization and processing, these tissues are kept in storage. After that, the tissue banks deliver the tissues according to the requirements of hospitals. These tissues have price tags in the name of “processing fees”. These tissues are, in substance, commodities. (However, they are described as “products” ; they are not described as “commodities.”) For example, one heart valve and conduit from a certain company in the U.S. is 6,950 U.S. dollars. One

tendon is 2,500 U.S. dollars.

Another example is *durae*, which are imported from Germany and sold in Japan by the name of "freeze-dried *dura*." (At present their sale has been stopped due to Creutzfeldt-Jakob disease.) Naturally they have a price tag ; they are simply a commodity. For example, one full calot *dura* from a certain company in Germany is 480,000 Japanese Yen (about 3,700 U.S. dollars). Tissue services have already become big business. This is not a judgment of the situation ; merely a description of how it is.

Human cells and genes for research and educational purposes have already become commodities. They are openly sold by catalog or through the Internet, listed in the same way as a rat or a guinea pig. For example, 250 $\mu$ g of RNA of human adrenal gland from one company in the U.S. is 255 U.S. dollars.

Blood, though not organs, of course, is already traded as a regular commodity. Blood, whether donated free or for money becomes a commodity which is called "hematic medicine." Hair and spermatozoa may be added to the list of such commodities. By the way, tonics made from human placenta may also be added to the list of such commodities in Japan.

## (2) COMMODIFICATION OF ORGANS

Generally speaking, organs are halfway to becoming commodities. Organs' potential as a commodity has not yet become clear with the exception of the cornea. The cornea, which is usually categorized as an organ, has become one in substance.

For example, in Japan, the cornea is put into the category of an organ by the Japanese Organ Transplant Law, and a transplant patient pays for the cornea as "material fees" to the hospital. This means that a price is attached to the freely donated cornea. At present the price is just 90,000 Japanese Yen (about 690 U.S. dollars). It is a fixed price. Here, we can clearly see the cornea's potential as a commodity.

Incidentally, While I have seen a kidney in a bowl of icy water immediately after its removal and just before the transplant, I have yet to see a kidney which has been freeze-dried or frozen and packed.

Why have not the kidney and other organs been treated as commodities in the same way as the cornea and tissues? Is the obstacle the influence of ethical considerations? Is the obstacle the influence of ethical considerations? It seems not; rather it seems that the technology for the long-term preservation of these organs has yet to be developed.

By the way, if the technology for long-term preservation of these organs is developed, we could, at least theoretically, obtain suitable organs from anywhere in the world which have little or no likelihood of rejection. If this does become a reality, it will be very good news for patients who need a transplant. For example, we can imagine the following: "By the computer of the World Transplant Network, a kidney perfectly matching your requirements has been located in Capetown, South Africa. Do you wish to import it?" This is a scene from the age of "flying organs." When this can happen, won't organs have a price tag?

#### **4. THE CAUSE OF COMMODIFICATION OF THE HUMAN BODY**

Why have the human body parts become commodities? As medical technology has developed and the social, economic and legal structure has been established, transplants have become routine. As a result, organs, tissues and other body parts have become "materials" for these procedures and have begun to be regarded as property. As transplant medicine continues to advance, more organs, tissues, etc. are becoming "medical resources", and their commercial value as commodities is increasing. Biotechnology which utilizes human tissues, cells, etc. as materials contributes to the commodification of the human body also.

Fundamentally, in a market economy, everything on earth has the potential to become a salable commodity; human organs, tissues, cells and genes are no exception. Both the development of technology, especially medical technology, and the progress of the market economy cause the commodification of the human body.

In fact, the commodification of the human body is an extension of the commodification of the natural environment such as land and

natural resources, of animals and plants, and of human labor (a part of the “functions” of the human body).<sup>6</sup>

## 5. THE TREND TOWARD COMMODIFICATION OF THE HUMAN BODY

Now, should humankind stop this trend toward the commodification not just of organs but of the whole human body on the grounds of current societal values and ethics? Here, I would conclude, hypothetically, that we should stop it. Could this be done? Even if we had the will to do so, it is hard to imagine how this could be done. The reason for this is that commodification of the human body is just one of the strong currents of the “Human Revolution” as mentioned above, and since each current is connected with the others, it is difficult to stop only one current. For example, unless we put a stop to the total utilization of the human body, it is hard to stop its commodification.

## 6. CONCLUSION

We are entering a new era in which human body parts are becoming commodities available for distribution. How should we respond to this? It seems that almost the only response available is to calmly recognize this new reality. This means that we need new societal values and morals. From a legal aspect, it is inevitable that current legislation prohibiting organ sales in the world will be reconsidered in the future. It seems that it is necessary to make worldwide uniform regulations to encompass the commodification of the human body and the sale of organs.

## REFERENCES

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#### ADDENDUM

This article, THE HUMAN BODY AS A NEW COMMODITY, is the text of my oral presentation at the 4th World Congress of Bioethics, which was held in Tokyo, Japan, Nov. 4th-7th, 1998.

This article is based on my latest paper, “Organ Transplantation and the Human Revolution,” in *Transplantation Proceedings*, vol. 31, 1999, pp. 1317-1319. I wrote this article by deleting some parts and adding some new parts, including most of the references, to the paper published in *Transplantation Proceedings*.

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