

Medical Technologies vs Human Dignity: Commodification of the Human Body and the Moral Cost

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1. Introduction

In recent times, the development of medical technologies is remarkable. Organ transplant, reproductive medicine, gene therapy, robot operation, etc. Generally speaking, the development of these medical technologies is surely the gospel for humankind. The development of medical technologies has been contributing to lifesaving, life extension, or improvement of QOL of an individual patient.

However, as a matter of course, these medical technologies give not only a benefit to an individual, but also give various influence to our society, like as every technology does. Technologies change humans and the society. For example, Regardless of whether it is desirable or not, organ transplant, widely speaking transplant medicine, causes human body parts to become resources and commodification of the human body. And it seems to give influence to the "human dignity. "

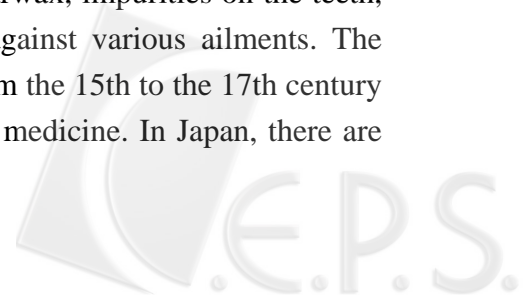
In addition, reproductive medicine and gene therapy may be the opening to complete eugenic human-species remodeling. Here, I focus on the issue about the relationship between becoming resources and commodification of the human body, and the human dignity.

2. Reality of the Utilization and Commodification of the Human Body

The human body has been utilized for various purposes from the past until the present.

(1) Traditional Utilization

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. By the way, it seems that the champion of cannibalism is China. 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 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 human fat taken from the dead body was also utilized as medicine. In Japan, there are



examples of the brain, liver, lungs, heart, bone, flesh, and fetus being utilized as medicine in past times.

Third is the utilization of parts of the human body as tools. Whistles and pipes made from bone, or bowls (Kapara etc.) or toys (Damaru) 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. 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 and Commodification of the Human Body

(a) Utilization and commodification for transplant medicine

Organs such as a kidney, heart, liver are widely utilized for transplant. In some countries like India and the Philippines, organ sales especially kidney sale have taken place. These kidneys are of course commodity.

Human tissues are utilized for transplant, too. For example, there are many tissue banks in the USA. These tissue banks extract bones, cartilage, 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 known as "processing fees." These tissues are, in substance, 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.

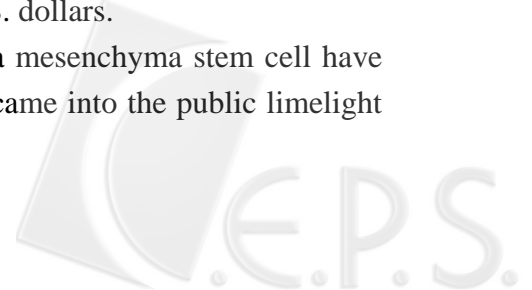
Another example is durae. They were sold as "freeze-dried dura." In Japan, at present, their sale has been stopped due to Creutzfeldt-Jakob disease. The dura is materials wrapping whole brain. When a skull and a brain are damaged by traffic accident etc., a freeze-dried dura is used. Naturally it has a price tag; It is 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).

(b) Utilization and commodification for medical experiment, research and education

Up to now, the whole human body, whether living or dead, has been utilized for various medical experiment and research. There is an example of dead bodies being used for experiment of car collision in the USA. As a little special utilization, there are examples that the severed heads from dead bodies being used for the training of dental implantation. Needless to say, specimen of skull and skeleton, and plastination for medical education are examples of the utilization of the human body also.

Human tissues, cells, and genes are widely utilized for medical experiment and research in the world. (Organs are also utilized, but, not so often as tissues and cells.) These organs, tissues, cells, and genes are openly sold by catalog or through the Internet, listed in the same way as a rat or a guinea pig. These are commodities in substance. For example, 250←\$B&L←(Bg of RNA of humanadrenal gl and from one company in the USA is 255 U.S. dollars.

By the way, recently, a human embryo stem cell (ES cell) and a mesenchyma stem cell have begun to be utilized for research and commodified. These cells came into the public limelight



because it will become possible in the near future to make regenerated organs and tissues from these cells.

(c) Utilization and commodification for the manufacture of medicines Insulin, growth hormone, interferon, etc. are produced in a way of injecting a human gene into colon bacillus, and making them produce these. Here, human genes are utilized as a machine to produce a biomedicine. Of course, these medicines are commodities. By the way, human cells are also utilized for producing biomedicines.

(d) Utilization and commodification for the testing of medicines

For example, a reagent, liver microsome, made from smashed and ground liver, is utilized for the test of effectiveness and safety of drugs. Besides, every part of the human body is used for drug testing. These are commodities, of course.

(e) Other utilization and commodification

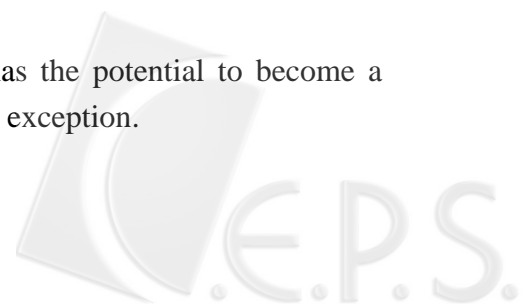
Human genes are utilized for gene therapy. Human genes are beginning to be utilized in various ways in the form of injecting them to animals. An animal pharmaceutical factory ("Animal Pharm") is the example. Cultured skin which is made with culturing oral mucous membrane has already been developed and made fit for practical use in the USA. Moreover, this cultured skin is in the process of commodification; same as cultured cartilage. 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. Tonics made from human placenta may also be added to the list of such commodities in Japan.

There are also various "special utilization of brain-dead bodies," such as for the training of dissection, surgical operations etc. for medical students and interns, the testing of drugs and diagnostic instruments, the conducting of medical experiments, the banking of organs, tissues, blood etc., the harvesting of them, and the manufacturing of hormones, antibodies etc. The possibilities for all these utilizations of the human body were pointed out in 1970s and have now, in part, become a reality. In France, the experiment of the use of anaesthetic gas to a brain-dead body was performed. In the USA, the experiments using brain-dead bodies for implantation of artificial hearts have been performed and also the experiment using a brain-dead body for testing of effect of a new drug have been performed.

(f) Cause of the commodification of the human body

Why have the human body parts become commodities? As medical technologies(including medicine and bioscience) have developed and the social, economic and legal structure has been established, the utilization of human body parts for transplant medicine, medical research, manufacture of medicines, etc. has become routine. As a result, organs, tissues and other body parts have become "medical resources" for these procedures and have begun to become "commodities .

" 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.



Commodification of the human body is a phenomenon derived from the thorough utilization of the human body. Here, we can see the structural outline that technologies, especially medical technologies, cause the utilization of the human body and the market economy cause the commodification. As was pointed out, while animals, plants, and natural environment such as land and natural resources, and human labor (a part of the "functions" of the human body) were commodified so far, the structure of the human body itself has begun to be commodified recently.

(g) Legislation

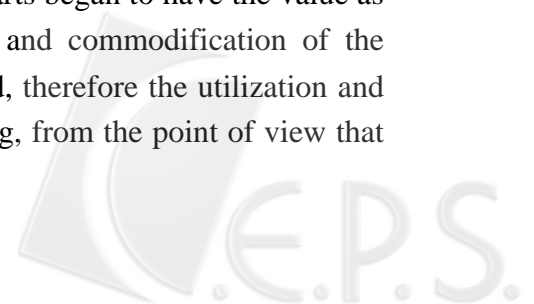
Here, I briefly describe the legislation about the utilization and commodification of the human body. At first, there are no countries that have the legislation regulating or controlling the whole utilization and commodification of the human body in the world. But, France performed bioethics legislations, which regulate the utilization and commodification of the human body fairly comprehensively. It goes without saying that the field in which the regulation progresses is the field of utilization of organs for transplantation. Many countries have laws about organ transplant which regulate or control the utilization of organs. Most of these laws prohibit organ sales. However, these laws put the commodification of the human body out of shot. As for the utilization of human tissues for transplant, for example, in the USA, FDA regulates it from a point of view of hygiene. In addition, State of California, New York, and Florida have the legislation in their own. Concretely speaking, these state laws stipulate the quality control of human tissues as a product, preservation of data, management of donor information, prohibition of the reward to a donor, informed consent, etc. By the way, so far such a legislation is not done in Japan.

(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. The humankind performed cannibalism in the past. It is a taboo currently. But the humankind may possibly resume cannibalism in the different form, namely in the sophisticated way. This is a kind of science fiction. And this would be the ultimate recycling of the human body. Wonderful or horrifying future world of complete recycle: from soda can to human body. It seems that this neo-cannibalism is the terminal stage of the utilization of the human body.

3. The Utilization and Commodification of the Human Body, and the Human Dignity

The utilization and commodification of the human body currently in progress are fundamentally based on the utilitarian body-view, widely speaking life-utilitarianism. The utilitarian body-view is the thought that while the human body parts began to have the value as resources for medical treatment. etc., the effective utilization and commodification of the resources are useful for the happiness and welfare of humankind, therefore the utilization and commodification of the human body are good. Precisely speaking, from the point of view that



the time span of evaluation of action's utility is too short, it may be called shortsighted utilitarian body-view. Now, will there be any problem in the utilization and commodification of the human body based on the utilitarian body-view? I think common people feel there are problems in those, even though the feeling is vague. We must explain in words what we feel vaguely. I think that here, it is useful to bring up the notion of the "human dignity." By the way, there is the fact that the notion of human dignity is used as one of the basis of prohibition of organ sales. From this fact, we can guess that the utilization and commodification of the human body are related to the human dignity. Then may it be said that the utilization and commodification of the human body infringe on the human dignity? (I cannot say the utilization and commodification of the human body stand by and enhance the human dignity conversely.) When we think about this issue, the issue becomes more comprehensible and explicable by using the notion of "dignity of the human body," which is univocal and less ambiguous, than by using directly the notion of the human dignity. (Here, dignity of the human body is positioned as the notion that is derived from the human dignity.)

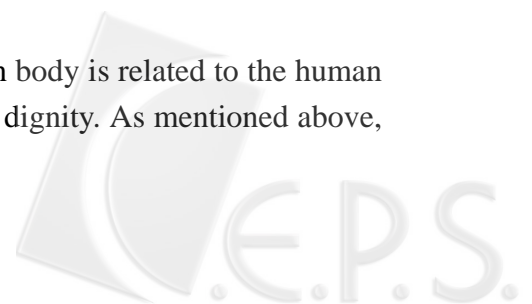
Therefore, here, I describe dignity of the human body. Though human is not a thing, but the human body is a thing. However, it is not a simple thing. It is a special thing. For example, though the dead body is unmanageable by nature, humankind has continued to pay respect to it and treat it politely. (There is a way of saying of "dignity of the dead body.") In addition, though there are bowls (Kapara etc.) made from skulls and whistles made from thighbone, those are purposely made in order to bring them special meaning at a religious ceremony or a funeral. These are just culture. Herefrom, we can guess humankind has continued to have the notion of dignity of the human body, whether strongly or not. (However, sometimes the human body was utilized as food for the supply of protein.) It seems that the humankind has continued to give the human body the position that it deserves dignity (or respect).

In addition, in the first place, so far, we cannot assume a human without the human body. Humankind has lived by being governed or regulated by the body since the birth. The situation will continue at least for the time being. If so, the notion of dignity of the human body is still useful for the time being .

Furthermore, I think that it is very useful to use the notion of dignity of the human body because currently, technologies and market economy have begun to exploit the human body extensively on a worldwide scale. By the way, so-called French bioethics legislation prescribes "respect of the human body."

In addition, the analysis of relationship between the notion of dignity of the human body and the property right for the human body is needed. In other words , while at least about the human body parts (teeth, hair, blood, seminal fluid etc.), ashes, and the dead body, Japanese precedent, for example, has already admitted that they are things and has approved property rights on them, the analysis whether or not this is consistent with the notion of dignity of the human body is needed.

Next, I would like to mention about how the dignity of the human body is related to the human dignity. The dignity of the human body is not same as the human dignity. As mentioned above,

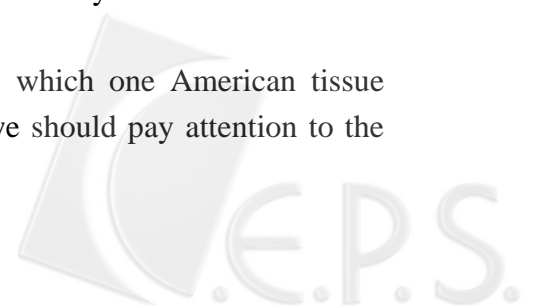


the dignity of the human body is basically positioned as the notion that is derived from the human dignity. Then, what kind of role does the dignity of the human body play in connection with the human dignity? I think that the dignity of the human body is the security for the human dignity. It may be said that the dignity of the human body is a breakwater of the human dignity. When the dignity of the human body collapses, the human dignity may collapse. The uneasiness let us hesitate to admit treating the human body as a thing, the utilization and commodification of the human body, and a sale of organs. But here, at least logically, it is possible to assume that the human dignity is not infringed even though the dignity of the human body is infringed. It seems that the utilization and commodification of the human body currently in progress basically means the challenge and besides infringement to the human dignity. But here is the issue that how big the value of the human dignity is. This issue is big. Judging from animals and plants except humans, the human dignity is only a product of the human egoism. Even if we put animals and plants out of shot, whether the human dignity has an absolute value or not is a big issue. It is simply a human-view which humans made that only humans have the dignity. It is not given. Perhaps it may be the "common illusion." If so, against the idea which criticizes the utilization and commodification of the human body on the basis of the human-view that humans have the dignity, namely on the basis of the human dignity, conversely, the idea is possible which forces to change the body-view which disapproves the utilization and commodification of the human body and besides, the human-view that humans have the dignity on the basis of the reality of the utilization and commodification of the human body and the utilitarian body-view as a theoretical prop that supports them. By the way, similarly, on the situation of organ transplantation, against the idea which criticizes organ transplantation on the basis of the body-view that the human body is not a thing and the dead body-view that the dead body should be buried or cremated intact, conversely, the idea is possible which forces to change such a body-view and dead body-view on the basis of the reality of organ transplantation and a utilitarian body-view as a theoretical prop that supports it.

4. Conclusion: Moral Cost

In reality, the utilization and commodification of the human body have rapidly been progressing. Here, the value judgment has already been made that the concrete value of the lifesaving, prolongation of life, and improvement of QOL of patients who need organs and tissues has priority to the abstract value of the human dignity. This is just a utilitarian value judgment. (In this case, it seems that the human dignity is one of the elements of utility calculation.) This value judgment leads to the new idea which forces to change the conventional human-view that humans have the dignity on the basis of the reality of the utilization and commodification of the human body and a utilitarian body-view as a theoretical prop that supports them.

Indeed the fact is very important that a small cardiac valve, which one American tissue processing company provides, saves a human life, but I think we should pay attention to the



next. Same as the environmental disruption happened because economy and economics calculate environmental cost as zero, exactly speaking, the advancement of economy and economics became one of the causes of the environmental disruption, if medicine, bioscience, and technology advance by calculating moral cost as zero or not taking moral cost into account, then it is likely that morals are destroyed, exactly speaking, the advancement of medicine, bioscience, and technology is likely to become one of the causes of moral destruction. The collapse of a building and the destruction of environment are visible, but the disruption of value or morals is invisible at least directly. It advances calmly and deeply...

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