Analysis on Whether DNA Database Should Be Built According to Its Morality

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ABSTRACT

Nowadays, criminal is an essential social issue which needs to be solved. In order to increase the efficiency and accuracy on those crimes, more and more countries began to use DNA database as a method to figure out the criminals or their features. However, the biggest problem of DNA database is losing the privacy since all the information of a person can be showed through DNA sequence. During this essay, the methodology of comparison and data collection was used to figure out the view of different ethical theories, including Deontology, Aristotle theory, Consequentialism and Confucianism on DNA database. Overall, most theories suggested that DNA database should be justifiable, even though some improvements are necessary. The government should figure out a system which no one can stole the information from the DNA database.

Keywords: Ethics, moral issues, DNA database, privacy

1. INTRODUCTION

DNA database is used mainly for the government to determine the criminals. By taking some DNA from the crime scene, the experts can identify the criminal precisely and quickly through the help of the DNA database. The first DNA database in the world is the United Kingdom National DNA Database (NDNAD) [1]. Before April 2021, the total number of individuals in the database is 5,671,965 while there are 665,969 crime scene samples [2]. Therefore, DNA database is already a nearly mature system in countries such as Britain.

DNA database takes an important role in identifying the criminals. Not only can it find the criminal him/herself, but DNA database also allow the police to do familial searches [3]. By building a database, the police can compare the DNA remained in the criminal scenes and find the family of the criminal [4]. We can also determine the facial features of the criminals through DNA database [5]. The advanced technology now enables us to create precise pictures of a person's face [6]. These technologies enable the countries equipped with DNA database finding criminals faster and more precisely than those who are not equipped with.

However, DNA database also have several disadvantages. One of the disadvantages is the offense to privacy, identity, facial features, age, biological sex and zooculture can all be determined through DNA sequence [5]. As a result, lots of people are afraid that their privacy would be known by everyone, which would lead to panic. In addition, the privacy problem of DNA database is still a problem that needs to be solved for all of the countries since it is the problem of human kind as a whole.

The methodology is analyzing opinions of different theories in order to reach a conclusion that whether DNA database is justifiable on a public basis. The purpose is to find out the moral problems that need to be solved.

2. OPINIONS OF DIFFERENT ETHNIC THEORIES ON WHETHER DNA DATABASE IS JUSTIFIABLE BY COMPARING THE ADVANTAGES AND DISADVANTAGES

2.1. Negative opinions by Deontologists

Deontologists focus on the nature and instinct of the issue. Deontologists are absolutists who believes everything unnatural is wrong and should be eliminated

[7]. Based on Deontological views, DNA database should not be justified since it is unnatural for the government to collect everyone's DNA and use them to figure out the criminals. Therefore, DNA database should not be adapted.

However, deontological views have several shortages. First, the definition of 'natural' is not clear. The word 'natural' itself is often used as the opposite of 'artificial' [8]. However, the word itself can also be defined as normal and instinctive [9]. Second, it is hard to say that natural things are equal to good things. For instance, earthquakes would never be beneficial since they are natural. On the contrary, no one would be blamed of saving people from an earthquake.

As a result, even though deontologists suggest that DNA database is useless, it cannot be taken into account since deontological issues are too ideal and not realistic enough. The definition of nature, which is the main theory of deontology, is not clear enough. That is also the reason why most countries do not apply deontologist while making some moral laws. However, it doesn't mean that DNA database is right since there are other problems includes the danger of losing privacy. As a result, the views of other philosophy theories should be taken into consideration too.

2.2. Positive opinion by Aristotelians

Aristotle theory seems to be the same as the deontological issues. However, Aristotelians gives a clearer range of what people "should do" and "shouldn't do". What's more, Aristotelians focus more on the acquisition of a character than the character itself [7]. According to Aristotle, a people who do something because it is moral is more moral than a people who do the thing just because he/she must do that [7]. Therefore, DNA database should be built according to Aristotelians.

DNA database is built because it is moral. The purpose of building a DNA database is to decrease the amount of crime. Thus, the initial purpose of DNA database is moral. In addition, the government build this database voluntarily since it is not ruled by law that a country must build a DNA database.

The main theory of Aristotle is the importance of virtue and the initial purpose of doing a thing. If someone is virtuous, he or she do something because they are volunteered but not force [7]. In the other words, if someone did something moral voluntarily, them he or she is more virtuous. The initial purpose of the governments building DNA database is that this can decrease crime. Therefore, they build this voluntarily, which makes the governments virtuous and makes DNA database justifiable according to the virtue theory (Aristotle theory).

2.3. Positive opinion by Consequentialists

Different from the former two theories, the Consequentialists focus more on the consequence of an event than the origin or nature of an event [7]. Therefore, while considering the Consequentialists' views on DNA database, it is essential to find the advantages and disadvantages of the outcome of DNA database.

The impacts of DNA database are less crime and the fear of losing privacy due to the technologies such as familial research and facial features [4,6]. However, we should weigh the two outcomes since they lead to different conclusions. Lower crime rate is more important than the loss of privacy because of two reasons. First, the loss of privacy is just a possible outcome. In most situations, DNA database is controlled by the government, who has the most advanced technology to protect the privacy. Therefore, the possibility of loss of privacy is so low that cannot overweigh the benefit that decreased crime rate brings to us. Second, lower crime rate promote the safety of the people. Life always takes the privilege. Therefore, even with the danger of losing privacy, safety should be considered first.

Another reason why safety is more important is that building a DNA database is the best way to decrease crime rate because of its accuracy and efficiency. However, the problem of privacy can be solved through other process. For instance, the privacy system of the database can be enhanced in order to protect the data from revealing. There are other alternatives that helps solving this problem. Considering this aspect, safety outweighs in this comparison.

The consequentialists only focus on the consequence of a thing instead of the process. From the aspect of consequence, there are mainly two consequences of building a DNA database: the danger of losing privacy and less crime rate. Therefore, after comparing the weight of these two consequences, there comes the result that less crime rate is more essential than losing privacy since losing privacy is less privileged and there are some alternatives that helps solving the problem of losing privacy.

2.4. Positive opinions by Confuciaism

Even though Confucianism initiates from the very ancient period of China, it is still a philosophy that is supported by the government of China. However, there are good parts and bad parts in Confucianism. What we apply in the modern society are the theories of "Li" and "Ren", which means rules and kindness. Different from Western philosophies, Confucianism focuses more about the community as a whole instead of the individuals. Because of its complexity, the view of

Confucianism on the topic of DNA database can be divided into two aspects.

The first aspect is about the benefit of the community as a whole. Different from most Western philosophy theories, which focus on individuals more than the community, Confucianism focuses more on the community. In this situation, since DNA database decrease crime rate and improve the safety of the whole community [5], DNA database should be justified due to Confucianism. To allow DNA database means that the searching of the criminals would be more efficient and more precise through the technology of identification and facial features. As a result, more criminals can be found so that the number of crimes would decrease. In the end, the safety of the whole community can be improved. Therefore, for Confucianism, DNA database should be allowed since it helps to promote the society. Even though DNA database would cause loose of privacy of individuals, the disadvantage does not over-weigh the advantage it brings to the community, which makes it justifiable to adapt DNA database.

The second aspect is about the theories of Confucianism. Kindness is the most essential part in Confucianism [10]. According to the theory of kindness, we should love everyone in the community just as the way we love our family. If someone had been harmed by others, the family of this person would be activated to search out the criminals as soon as possible. Since people should love everyone based on the theory of kindness, the high efficiency and high accuracy makes developing DNA database beneficial according to the Confucianism issues. According to Confucianism, a country cannot live long if it cannot apply the concept of kindness to its people. Therefore, to make the country better, Confucianists would justify DNA database.

Different from western philosophies, eastern philosophies focus on the community instead of individuals, and Confucianism is a classic eastern philosophy. As a result, Confucianism would justify the DNA database since it doesn't focus on the harm DNA database brings to individuals but emphasizes its efforts to the community as a whole and the theory of kindness. Even though privacy may be violated, the safety DNA database brings to the whole society overweighs the problem of privacy.

3. CONCLUSION

Deontology, Aristotelianism, Consequentialism and Confucianism are some of the famous ethical theories in the society. Except deontology, which thinks DNA database is unnatural, the other theories would justify the DNA database because of its beneficial outcomes and that the beneficial outcome outweighs the problem

of privacy. However, that is on the basis of higher privacy of DNA database in the future. Therefore, DNA database should not be adapted immediately, but should first improve its technology to protect the privacy of the people so that DNA sequence would not be taken by someone who would harm the people.

Except privacy, there are other potential problems in DNA database. These problems includes the danger of DNA being used by criminals and hackers, the susceptibility of to human error including contamination of samples, and the different information storage process of different countries, which leads to danger of individual's information being exposed globally [11]. These problems are all necessary to be solved if a government wants to build up a DNA database. And all of the problems need improvements on technology and policy on DNA database. There are also some projects which goals to protect human right in DNA database in the society like the Forensic Genetics Policy Initiative [12]. Therefore, more debate is necessary to figure out whether DNA database is justifiable or not.

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