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Question: What, if anything, should Congress decide are permissible uses for facial recognition technology?

Facial recognition technology is the use of algorithms to detect and identify human faces. This technology has a myriad of applications including but not limited to law enforcement, personal security, medical use, and marketing (Seepter, 2019). The technology is still in an infantile stage but is rapidly being picked up by governments and businesses to assist in decision making and services offered. Because it is such a new technology not only are there flaws and growing pains in the technology itself, but there are also few laws and regulations on the books to handling the technologies impact in society. Issues have arisen from application of this technology in government use, such as law enforcement, as well as from the private sector with invasions of privacy. There is an ongoing discussion of how this technology should be regulated, if at all, and whether or not it has a place in our current society. In this paper I will go over a historical analysis, a legal analysis, an ethical analysis, and end with my own personal opinion on what, if anything, Congress should decide are permissible uses for facial recognition technology from a legal and ethical standpoint.

Historical Analysis

The technological capacity for facial recognition software to exist has only been around for a short while. There is a tremendous amount of computing power required that did not exist even two decades ago. The concept, however, has been around much longer (Gates, 2004). Throughout human history we as a civilization have tried, and implemented, many different methods for detecting a person or information about a person using phrenology and physiognomy (Storey, 2020). The desire to gather as much information as possible from as little data collection as possible stems back past written human history. Implementation of these methods have always been short term, as they are often debunked or just generally found to be useless in what they were originally intended to detect (Olry & Haines, 2020).

In written record the earliest known application of physiognomy dates back to Aristotle, where he wrote at length on the practice (The Editors of Encyclopedia Britannica, n.d.). Physiognomy and Phrenology was used to try and distinguish an individual's character based on a set of physical and biological traits that the individual possessed. The practice was largely popular up through medieval times, with a waning but often popular resurgences after (The Editors of Encyclopedia Britannica, n.d.).

Some individuals claim that given current use patterns, facial recognition technology is just a resurgence of the historical practices of phrenology and physiognomy (Arcas, 2017). This is an issue because of the deep racist and sexist history of these practices that have been used for centuries to oppress minority groups using the baseless pseudoscientific claims (Chinoy, 2019). The link here is that facial recognition technology detects physical and biological differences (as well as superficial differences) to differentiate faces. While that alone is not the issue, the problem lays in the use of the technology. Like its pseudoscientific predictors, machine learning and artificial intelligence picks up on physical and biological traits that have no relation to the aspects the algorithms are trying to predict (Arcas, 2017).

The recent boom in facial recognition is due to the rapid advancement of technology that allows for the CPU intensive algorithms to operate on more widespread machines. The concept of detecting human faces with machines dates back to the 1960s, a time where computers (as we know them today) were just being born (Balaban, 2020). Not only are these algorithms CPU intensive, but they also require vast and fast storage on top of high-resolution cameras. All of which were not available until relatively recently. As these technologies continue to boom, the development of facial recognition technology will follow, and thus the demand for regulation will increase.

Legal Analysis

There are at least two large issues surrounding the application of facial recognition technology; discrimination and privacy. The use of physical appearance and correlational data, I believe, can only lead to differential treatment based on superficial physical features and has been a hallmark of past policies based on physical traits. Privacy is not only a concern in potential application, but also a concern in data storage. Facial recognition is a powerful tool for surveillance in both the private and public sector (Ghaffary, 2019). Facial recognition technology allows non-stop monitoring and identification of individuals without the need of human labor. This is an enormous leap in surveillance ability that required a human to manually monitor and identify. This ability for constant surveillance leads to questions of when is one being monitored without their knowledge, where does monitoring begin and end, and how much control is offered to the individual being monitored? On-top of this surveillance superpower there is the issue of data storage. The data collected has to be stored somewhere, and when data is stored it is at risk of being leaked. Facial recognition data can contain legal information, identifying information, medical, etc. (Ghaffary, 2019). Both of these concerns, application and storage, are a concern to populations as a whole as wide spread use of facial recognition technology begins to roll out (Ghaffary, 2019).

There are multiple rules in legislation already surrounding discrimination and privacy rights, as well as rules surrounding data collection, data storage, and surveillance. While the use of facial recognition is new and growing, laws already enacted and enforced have some influence on, and protection against, facial recognition technology. Discrimination and privacy have been long standing issues in the United States so legislation has been constantly evolving to keep up with modern issues as they arise, and facial recognition technology is no different.

United States law prohibits discrimination based on the following attributes: age (Age Discrimination in Employment Act of 1967), disability (Americans with Disabilities Act of 1990), sexual orientation (Civil Rights Act of 1964), parental status (Executive Order 13152), religious practices (Civil

Rights Act of 1964), national origin (including ancestry, culture, linguistics, etc.) (Civil Rights Act of 1964), pregnancy (Civil Rights Act of 1964), race (Civil Rights Act of 1964), and gender (Civil Rights Act of 1964). While none of these laws are specific to technology, they do contain wording relevant to issues that arise from use of technology for decision making based on the aspects that would be picked up by facial recognition technology such as gender, age, race, etc. United States law also protects privacy in the Privacy Act of 1974.

In application the Civil Rights Act of 1967 prevents the use of race, gender, and age in decision making. Considering Facial recognition technology uses physical traits as race, gender, and age, these features, and the software results, would be prohibited from use in many applications such as employment, finance, education, etc. Facial recognition in surveillance in all but public settings would be prohibited under the Fourth Amendment, which safeguards against unwarranted search and seizures. This pushes facial recognition technology into the public space for non-decision-making purposes.

With the current legislation on the law books I believe it is unlawful for the use of facial recognition technology in law enforcement without a warrant, or for general government surveillance in anything but public spaces where there exists no expectation of privacy, thus a search warrant is not needed. I believe the technology could have warranted applications in law enforcement under the Fourth Amendment. It is also unlawful for businesses or organizations to use facial recognition in employment situations, financing situations, and other business-related settings where decisions will be made based on the outcomes of facial recognition algorithms.

Ethical Analysis

Ethically facial recognition technology does not have any real issue. The mere capability of detecting faces and biological features is objective and without consequence. The application and use of facial recognition technology however does carry concerns with it. How the technology is used is far more

important than how the technology works. Ethical rationalizations exist in facial recognition technology from the development to the application and everywhere in between.

In the development stage I believe obedience, conformity, and futility are common rationalizations. Software developers are often just doing their jobs, programming what they have been instructed to program in order to keep their jobs and provide for their families. I believe the rationalizations of hurry, ends justify the means, and fixation are commonly found in the policy development and implementation stage. Where these programs offer great strives and advantages so that the downfalls and unethical reasoning fall by the wayside.

When it come to what ethical values are involved with facial recognition technology I believe there are two perspectives. There is the facial recognition side and the consumer side. On the side of facial recognition there is safety, happiness through safety, and accountability. Safety is afforded through the use of the technology in law enforcement, helping speed up investigations and increase security effectiveness. Happiness is a result of a decrease in overall crime and an increase in security and safety. Accountability comes from the inability for wrong doers to act anonymously, going hand in hand with safety. On the other hand, the use of this technology removes trust, equality, privacy, and autonomy. As a good facial recognition system removes the need for trust and in doing so removes privacy. Autonomy is no long as prudent as accountability is high and privacy is low, reducing, and restricting any given individual's actions. Equality is diminished because by nature facial recognition systems are flawed and biased. It is up to society to determine which set of the values is the preferred combination.

My Opinion

I feel that it is a difficult task to determine what actions Congress should take when it comes to use of facial recognition technology. There are currently laws that can be used to enforce restricted use of the technology and there are also enough loopholes in those laws that the widespread

implementation of the technology is permissible. Ethically there are multiple sides to the subject, both with the goal of improving society overall. I do not believe there is no single solution that is best for our current society, nor is there one that will be of benefit for individuals in the near future. Given the current laws and values we have now, I believe our best practice would be to limit facial recognition to identification-based systems much like we have now. Using biometrics is common in today's environment and facial recognition is very similar. I do not believe facial recognition use is permissible in law enforcement nor in situations where it is use for prediction-based decision making. I believe if congress were to enact legislation to limit the usage of facial recognition to non-decision-based situations and limit it to identification based scenarios then that would be the most in line with both current laws and ethical values of equality and happiness.

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