The Effects of Using AI in the Criminal Justice System on Black Americans: An

Interdisciplinary Approach

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Abstract

This article explores the use of artificial intelligence in the criminal justice system and its impact on black Americans. The disciplines of ethical philosophy, biology, and criminal justice law are all analyzed so that there is a deeper understanding of the problem. The solution of adopting a regulatory agency is mentioned, and it includes the inclusion of many disciplines so that AI can be fully balanced and no possible issues are ignored. While the use of a regulatory agency is broad in comparison to the topic problem, it is still a great solution due to the amount of expertise that will be centralized within the agency. Overall, the article addresses the important topic of how AI can impact the criminal justice system and its potential consequences for minority groups such as black Americans.

Keywords: artificial intelligence, criminal justice, black Americans

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Artificial Intelligence is a rapidly advancing technology with vast potential for aiding humans in a multitude of ways. From speech recognition in virtual assistants like Amazon's Alexa, to algorithms used by social media sites, and even complex problem-solving tasks, artificial intelligence has become pervasive in various domains. In recent years, artificial intelligence has also found its way into the criminal justice system, where it is used to assist in making unbiased decisions, such as predictive policing, sentencing, and facial recognition. However, the use of artificial intelligence in the criminal justice system also raises concerns about potential biases and disparities, particularly with regards to black Americans who have historically faced systemic injustices in the criminal justice system. In this article, I will explore perspectives from multiple disciplines and analyze proposed solutions to better understand the impact of artificial intelligence on black Americans in the criminal justice system, and how these challenges can be mitigated by creating transparent tools, implementing them gradually, and adopting a proactive approach.

Why use an Interdisciplinary Approach?

Interdisciplinary research is similar to a mosaic. It involves the use of different components that come together to create one big picture. Interdisciplinary research is used to incorporate the collaboration between different disciplines because they bring perspectives that can create complete understanding of a complex issue and possible even solve it. In this paper the fields of ethical philosophy, biology, and criminal justice law will be studies and then

intertwined so that a deeper understanding of artificial intelligence in the criminal justice system and its effects on black Americans will be understood. The use of AI in the criminal justice system is a complex subject because it is projected to be this useful tool that will have a set algorithm to make choices compared to a human who is inclined to use bias, but it also raises concerns about fairness and ethical implications, especially when it comes to its impact on marginalized communities, such as black Americans. The best way to get a holistic view of the problem is to combine the perspective of multiple view, so that an optimal solution can be proposed.

Ethical Philosophy

Ethical Philosophy is one of the disciplines that will be used to examine the effects of using artificial intelligence in the criminal justice on black Americans. In ethical philosophy, there is a subject that investigates the different forms of punishment and their effects. Retributivism and utilitarianism are two punishment theories that can be used to describe the U.S criminal justice system. The different methods that are use throughout the system can be described to either promote a retributive or utilitarian system. Some of the effects that artificial intelligence will have in the criminal justice system can be predicted by analyzing the characteristics of the punishment theories and determining what theory does the use of artificial intelligence promote.

First, to provide a basis of knowledge, a definition and brief history of both punishment theories should be provided. Utilitarian theorists believe that general punishment will deter the public from committing crime. They seek to find the punishment that will have the most positive impact on society as a whole. Utilitarianism also focuses on giving individuals specific punishment because it reduces recidivism. In contrast, retribution theorists believe that the

punishment should be equal to the crime. For example, a person convicted of murder may receive a life sentence or even the death penalty with the goal of reducing the chance of that person committing crime again. If it was the reasoning from a utilitarianist, they would claim that the punishment was to deter others from committing murder. Retributivism is more of a backward-looking theory that places heavy focus on the crime committed. Utilitarianism has a forward-looking approach, which can be described as aiming to improve lives by minimizing negative effects. Ultimately, the goal of both theories is to promote a safe society and maintain a functioning criminal justice system.

In the article, *Criminal Justice: A Comparative Analysis Under Different Theories of Punishment*, the article examines how automation is used in different areas of criminal justice and how it should be used by using punishment theories. The two main theories that the articles look at is retributivism and utilitarianism. It claims that the use of certain AI that include predictive features example a growth away from retributivism and more toward utilitarianism. (Carrera, 2020). Shifting to a utilitarian system will allow AI to become a more dependable tool, as it will have forward-facing aims and will be less problematic due to its lack of morality (Carrera, 2020). The movement toward using automation in the criminal justice system has great potential due to its focus on utilitarianism, which will be based on an algorithm rather than decisions being subjected to the biases of individuals. This could potentially help to address current problems brought upon by the use of a retributivist system, such as mass incarceration and high rates of recidivism. This is an important factor because black American are historically known to be mass incarcerated and experience repeated offending, so this could have a huge impact on black communities.

Biology

The next discipline I would like to discover is biological. The use of biology in artificial intelligence is a fairly new idea. An increasing number of studies are being conducted on the use of machine learning tools that utilize biometric within the criminal justice system. Different factor such as facial features, mental health conditions, and biomarkers are some of the factors that are implemented into algorithms in order to make decisions. In an article by Xiaolin Wu and Xi Zhang, there were the finding of a studying that look at accuracy of predicting criminality based of facial features. They hypothesized that "the faces of law binding public have a greater degree of resemblance compared with faces of criminals" (Wu & Zhang, 2016). The article gained a lot of attention because of the cultural and racial insensitive tones that it displayed. While the article may have had gathered solid evidence, there is a hidden message that can be taken from the research. The use of biometrics in artificially intelligent tools may have use in predicting crime in the future, but while it is being perfected and honed there needs to be a cognizance of the known biases. When making and creating algorithms the implementation of biological characteristics into decision making have to be used sparingly because if these tools are used to predict trends, they can result in racism that can be hidden by this "black box" effect.

A subfield that is connected to the biological discipline is the emerging subject of neurolaw. Neurolaw is an intersection between neuroscience and the law, and it seeks to use the brain to improve legal decision-making. The field prides itself on having a goal toward promoting ethical decision-making in the legal system. A big practice in the field is the use of neuroprotection, which involves the use of artificial intelligence and machine learning tools that use neuroimaging to aid in things such as lie detection and determining the chances of recidivism (Tortora et al., 2020). When looking at the implications of biological characteristics being

considered in decision-making, the field is aware of the danger of bias. The most well-known case is the COMPAS algorithm that was used to predict the chances of reoffending. The algorithm ended up being extremely biased against Black defendants. Those in neurolaw believe that the use of neuroprediction lowers the risk of bias because of the factors it uses, which are neuroimaging. The COMPAS algorithm makes decisions based on previous criminal proceedings, while AI neuropredictions will be based on previous neuroimages (Tortora et al., 2020). Implementing neuropredictions can help with the ongoing issue of unfairness in the criminal justice system. It can also be used to help safeguard AI biases by using non-biased characteristics.

Criminal Justice and Law

The last discipline that will be used to understand the use of artificial intelligence in the criminal justice system is the discipline of criminal justice and policy. This discipline looks at how artificial intelligence is already incorporated in the criminal justice system and analyzes its effects. The criminal justice system has undeniably been changed by the use of automation within the multiple domains of the system. The artificially intelligent tool geospatial modeling has helped predict areas of crime concentrations which has helped in preventing some crime from occurring. Another use is the automation that courts use to calculate the likelihood of recidivism in order to determine bail. There is even the use of automation in prison to track patterns and detect if anything is unusual. While all of these implications sound like great inventions, they could be the reason for unjust outcomes (Sushina & Sobenin, 2020). As mentioned earlier, the "black box" effect is heavily emphasized when talking about the use of artificial intelligence in the criminal justice system. Black box is a term that refers to the anonymity of how artificial intelligence makes decisions (Završnik, 2020). This problem makes

it hard to regulate the AI tool because how can you implicate regulations on something that cannot be explained. If the black box effects persist, the use of tools in the criminal justice system can lead to decisions that have an unknown reasoning. From the criminal justice and law perspective, one of the best ways to safeguard the rights of citizens, is to create regulations that maintain the transparency of these artificially intelligent tools.

Comparing the Disciplines

Together, these disciplines can be used to infer how African Americans will be affected by automation in the criminal justice system. The common ground of all these disciplines is that artificial intelligence and machine learning need to be safeguarded. There is a common understanding that AI has potential dangers, and if there are no proactive measures, they could have detrimental effects. The difference between the disciplines lies in nuanced variations of what problems they could cause. They also differ in how they believe the possible problems should be approached. In the articles by Zarvsnik and Tortora, they both provided cautions about AI, while the article from the UCLA Journal of Law and Technology highlights AI effects that are currently prevalent and predicts the future philosophical shift of the criminal justice system. All of these disciplines can be used collectively to show the effects and propose solutions to the negative effects on black Americans. The issues, such as the continuance of bias, unequal targeting, and mass incarceration of black Americans, are all problems that could be continued and possibly amplified by the use of AI in the criminal justice system. Although there is no research strictly done on black Americans, these articles can be used to loosely hypothesize the effects that AI has on black Americans and possibly inspire research to be conducted.

What are the issues and how do we fix them?

The intersection between artificial intelligence (AI) and the criminal justice system has been a topic of significant concern in recent years, particularly in terms of how these technologies may exacerbate existing biases and discrimination against certain marginalized groups such as black Americans. The use of AI in the criminal justice system has the potential to impact a wide range of societal issues, including issues of race, bias, fairness, and inequality. To gain a better understanding of these issues, an interdisciplinary approach is essential, drawing from fields such as ethical philosophy, biology, and criminal justice law.

To address the effects of AI in the criminal justice system on black Americans, the collaboration of many experts and professionals is needed to work on preventive measures. One of the best ways to help mitigate the issues associated with AI is to establish an agency that will regulate all artificially intelligent products. An agency is the best approach because there will be a central place for professionals who routinely deal with the issues surrounding AI subjects. Instead of delegating the responsibility of determining if certain AI tools are fair and beneficial to the criminal justice system, it should be delegated to a government-funded agency. This macro approach will ultimately yield better results due to the highly skilled professionals who will be employed by the agency.

What would the agency consist of?

The agency would be specifically for the regulation of artificial intelligence. So instead of creating a micro approach to resolving the issues associated with AI in the criminal justice system, there will be an agency with many sub-departments that deal with different scopes. There will be a department that handles the implementation of AI to be used within the criminal justice system. The agency will be able to publish guidelines so that AI developers can tailor their products to be in regulation, allowing them to be used in the criminal justice system. Some

of the requirements would involve the need for developers to explain the algorithm mechanics thoroughly and effectively to eradicate the "black box" effect. With input from neurolaw, it would also be required that AI tools that use biometrics must use precedented imaging (such as geo-mapping or neuroimages) instead of precedent man-made decisions. Another process within the agency will include multidisciplinary testing of the AI with a check and balance system. A team consisting of ethical assurance professionals and legal scholars will need to test the tool extensively. By conducting scenarios that simulate how the tool will be used if implemented, a percentage of the negative effects can be caught and fixed before it is used in the criminal justice system. The collaborative team will be able to provide insights into the legal and ethical implications of using AI in the criminal justice system, including issues of due process and the constitutional rights of defendants. After testing, they can then share their knowledge with the developers so that they are able to improve their AI tool, making it eligible for approval by the agency.

In addition to the implications of an agency, broader societal and political changes may also be necessary to address the issues raised by the use of AI in the criminal justice system. For example, structural inequalities that underpin the criminal justice system, such as the over-representation of black Americans, may need to be addressed. This could involve addressing issues such as poverty, education, and access to healthcare and mental health services, all of which can impact an individual's interactions with the criminal justice system. There may also be a need for greater public awareness and engagement on these issues, including through public education campaigns, community organizing, and political advocacy.

Overall, an interdisciplinary approach is essential to gaining a comprehensive understanding of the effects that AI in the criminal justice system can have on black Americans.

By drawing on the insights and perspectives of ethical philosophy, biology, and criminal justice law, we can develop a more nuanced understanding of these issues and propose solutions that are grounded in both legal and social considerations. Ultimately, it will be essential to work towards a criminal justice system that is fair, just, and equitable for all, regardless of race, ethnicity, or socio-economic status.

Citations

Carreras, A. (2020). The Moral intelligence Problem of Artificial Intelligence in Criminal

Justice: A Comparative Analysis Under Different Theories of Punishment. UCLA Journal of

Law and Technology, 25(1), 1.

Sushina, T., & Sobenin, A. (2020). Artificial Intelligence in the Criminal Justice System:

Leading Trends and Possibilities. In *Proceedings of the 6th International Conference on

Social, economic, and academic leadership (ICSEAL-6-2019)*.

https://doi.org/10.2991/assehr.k.200526.062

*THE MORAL (UN)INTELLIGENCE PROBLEM OF ARTIFICIAL INTELLIGENCE IN

CRIMINAL J. . .: EBSCOhost*. (n.d.).

https://web.s.ebscohost.com/ehost/pdfviewer/pdfviewer?vid=0&sid=c568eb79-89bf-

4e9c-82c4-469ef397c2f8%40redis

Tortora, L., Meynen, G., Bijlsma, J. W. J., Tronci, E., & Ferracuti, S. (2020). Neuroprediction

and A.I. in Forensic Psychiatry and Criminal Justice: A Neurolaw Perspective. *Frontiers

in Psychology*, *11*. https://doi.org/10.3389/fpsyg.2020.00220

Wu, X., & Zhang, X. (2016). Responses to Critiques on Machine Learning of Criminality

Perceptions (Addendum of arXiv:1611.04135).

Završnik, A. (2020). Criminal justice, artificial intelligence systems, and human rights. *ERA Forum*, *20*(4), 567–583. https://doi.org/10.1007/s12027-020-00602-0