Using Artificial Intelligence in Lie Detection

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Date

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Alarie, B., Niblett, A., & Yoon, A. H. (2018). How artificial intelligence will affect the practice of law. *University of Toronto Law Journal*, *68*(supplement 1), 106-124.

In this article, the authors claim that artificial intelligence influences the law practice. in fact, the article shows that the lawyers, prosecutors and the judges as well as the police officers would be highly affected by the technological advancements. Firstly, the article shows that the lie detectors bring new aspect of determining a particular criminal case. For instance, the authors state that a judge may be forced to wait for the analysis from the lie detectors polygraphs to ascertain the claims by either of the claimant or the accused. Additionally, the lawyers are likely to broaden their area of practice by understanding these tools to ensure increased efficiency in their work. This article is significant as it offers some insight towards some of the impacts of the artificial intelligence in the legal field.

Balmer, A. (2018). *Lie Detection and the Law: Torture, Technology and Truth*. Routledge.

In this book, Balmer determines the effects of lie detecting tools in law. Primarily, the author concentrates on the effects on encouraging a truthful society. Additionally, the book demonstrates how technology influences the society in the reduction of lie inclining crimes. On the other hand, the author demonstrates how the lie detectors may pose as unnecessary torture to the upright people with other physiological defects that may lead to positive tests. For instance, lie detectors may not detect lies from a person suffering from blood pressure with any degree of accuracy. Therefore, lie detectors may not give the right outcomes while measuring the blood flow and pressure and thus the likelihood to torture an innocent person. This article shows how the artificial intelligence would lead to unreliable conclusions.

Farah, M. J., Hutchinson, J. B., Phelps, E. A., & Wagner, A. D. (2014). Functional MRI-based lie detection: scientific and societal challenges. *Nature Reviews Neuroscience*, *15*(2), 123.

This article demonstrates the challenges emerging from the use of the artificial intelligence developments. According to the authors, the courts have been questioned to agree with the conclusions from the lie detectors. Apparently, fMRIs are commonly being used to show how people develop lies from their brains. Further, this document shows the importance of using the detectors to enhance to societies. Notably, the author determine that the technology pose some challenges, both from societal and scientific perspective. For instance, the author depicts that the technology digs deep into human brain activities and that the operators need to have adequate skills and knowledge to interpret the results accordingly. The significance of this article is that the authors show the positive and negative aspects of the detectors.

Joh, E. E. (2017). Artificial Intelligence and Policing: First Questions. *Seattle UL Rev.*, *41*, 1139.

Artificial intelligence is a great achievement in the justice system. According to Joh, these scientific developments increase the policing in different societies. The author demonstrates that the detectors enhance the likelihood for people to tell the truth. It is apparent that despite the fact that people yearn for a true society, the same people deceive to get some favors. However, this article asserts that the lie detectors are able to read and analyze some neurological features linking to the blood flow. The author shows that more people are likely to develop tensions associated with lies. However, since the detectors have proved over 80 percent accuracy levels, many people are cooperating with the police as they tell the truth. The latter has improved the relationship between the police and the other members of the society.

Li, X., & Zhang, T. (2017, April). An exploration on artificial intelligence application: From security, privacy and ethic perspective. In *Cloud Computing and Big Data Analysis (ICCCBDA), 2017 IEEE 2nd International Conference on* (pp. 416-420). IEEE.

According to Li and Zhang, artificial intelligence is playing a great role in different areas. This article demonstrates the use of the artificial intelligence in law particularly in ensuring security, ethics and privacy among the people. Firstly, the authors claim that the introduction of lie detectors has changed the way people perceive their security as they fear what other features the tools can detect concerning their privacy. Notably, the lie detectors concerns the neurological aspects of the individuals that depict the way the body parts changes their functionality with the changes in the blood flow. The article shows that the lie detectors improve ethics among various groups and individuals for fear of being detected as liars in the society. Further, the detectors has increased the approaches the detectives use in carrying out investigations in ensuring security.

Osoba, O. A., & Welser IV, W. (2017). *An intelligence in our image: The risks of bias and errors in artificial intelligence*. Rand Corporation.

According to this article, the artificial intelligence and the use of lie detectors poses great risks to the society following their enormous errors and biasness in their conclusions. Firstly, the article depicts that the machines are likely to be fooled and thus giving wrong conclusions. In addition, the tools are threats to the human nature of confidentiality and privacy. According to this research, the technology may expose some of the person’s privacy while reading the mind. In addition, the use of these tools may lead some people to jails for wrong interpretation of the results or total default exercise. For instance, some people have some faint mental disorders and anxieties that may lead to delays in giving their responses. Some people develop fear of interrogation and that they are likely to hesitate and the hesitation may be interpreted as a lie. The author shows the unreliability of the detectors.

Srivastava, N. (2014). Lie detection system using artificial neural network. *Journal of Global Research in Computer Science*, *5*(8), 9-13.

Srivastava argues that artificial intelligence impacts largely to the society. Majorly, the author concentrates on the ethical impact of the developments. Notably, the author examines that the lie detectors examines the person’s brains. Accordingly, the brain controls different parts of the body. According to this article, a person intending to lie makes unnecessary pauses even when responding to the simplest questions. The functional mental resonance image demonstrates the brain changes. Notably, changes in the brains reflect to the heart causing increased heart rates, blood pressure and blood flow. This article is significant as it shows how the artificial intelligence on the lie detectors works.

Synnott, J., Dietzel, D., & Ioannou, M. (2015). A review of the polygraph: history, methodology and current status. *Crime Psychology Review*, *1*(1), 59-83.

According to the authors of this article, the use of artificial intelligence is important in the modern society. The researchers claim that the improved technology creates new approaches to lying among the people. Therefore, embracing artificial intelligence would increase the chances to detect the liars. For instance, many people would lie when filling an online form. However, using artificial intelligence, it is possible to detect the lies by analyzing the cursor movement. This document examines the history of the lie detectors and the current developments. However, the author claims that different experts agree that the tools are not perfect but helpful to the society with over 80 percent accuracy.