Orienting Technologies to Exploit Minorities: From Genocide to Human Rights Violations

SAURABH SINGH
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The world is witnessing a massive technological expansion. The advancement is such that we have entered in to a phase where separating technologies from our lives is nearly impossible. These technologies are now programmed in such a manner that it can easily modify and change the behavioral pattern of the individuals by greatly influencing their understanding, thinking and decision-making ability over a short period of time. Technology was created for the advancement of human race, but every coin has two sides. This issue brief attempts to understand and highlight the cases where the use of technology at the hands of biased, opinionated and racially charged regimes and societies wreaked havoc in order to carry out actions and operations to achieve political agendas and oppress the minorities.

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Introduction[#]

The world is witnessing a massive technological expansion. The advancement is such that we have entered into a phase where separating technologies from our lives is nearly impossible. These technologies are now programmed in such a manner that it can easily modify and change the behavioral pattern of the individuals by greatly influencing their understanding, thinking and decision-making ability over a short period of time. Technology was created for the advancement of human race, but every coin has two sides. It was created by humans who have motifs. Biasness, propaganda, and the will to rule are some of the pre-dominant traits embedded in humans. When these motifs entangle with these pre-dominant traits along with the motivation to use technology, the results can be nerve-racking. Throughout history, the use of technology has always been a question of ethics and morality.
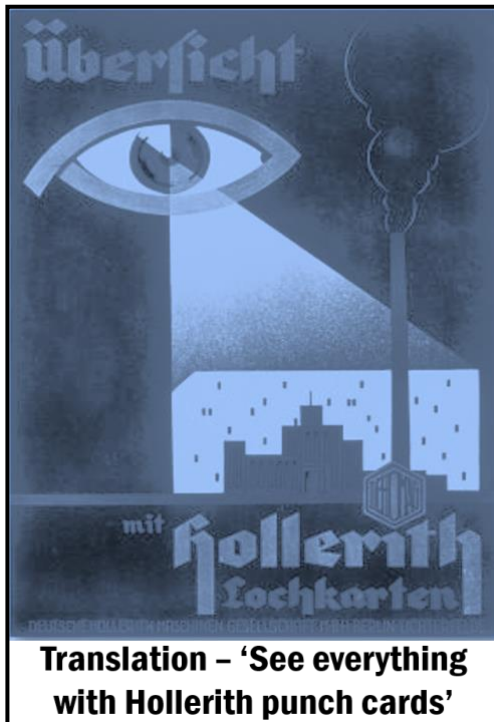
Authoritarian regimes and racially biased societies have always used technology in the most insensitive and infernal manner to achieve their objectives, agendas, and narratives in order to attain supremacy.[1] The issue brief tries to understand and highlight the cases where the use of technology at the hands of biased, opinionated and racially charged regimes and societies wreaked havoc in order to carry out actions and operations to achieve political agendas and oppress the minorities. Minorities throughout history have suffered at the hands of those who influence power and manipulate public policies and opinions to entice hate, biasness, and discrimination. Aiding such actions with technology can have disturbing implications.

The Holocaust and IBM Punch Cards

Holocaust will always be a painful and dreaded chapter in the world history. The mass atrocities committed by the Nazis during the Second World War inflict fear and horror in the minds and hearts of those who have actually suffered from the real trauma and those who read about it even today. Researchers, till to this day, often question and validate the reasons behind such mass murders, but seldom question how a select few were able to carry out such an organised and planned massacre without much difficulties. The mass killing in such large numbers were seamlessly organised, recorded and catalogued. It seemed rather a difficult task to identify and separate the Jews from the rest of the German population and send them to ghettos and later

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[#] *Pictures used in this brief retrieved from open source using google image search.*
[1] Frederick, R. F. and K. (2019, March 15). The Autocrat's New Tool Kit. Wall Street Journal.
https://www.wsj.com/articles/the-autocrats-new-tool-kit-11552662637/

Translation – 'See everything with Hollerith punch cards'

implement the same model to the rest of the German-occupied European territories. Unfortunately, technology called International Business Machines (IBM) came handy to Hitler's Nazi Party.[2] It made the entire process streamlined right from the beginning of identification of Jews to the final stage of extermination in the concentration camps across Germany and German-occupied countries. Hitler's targets were not only Jews who practised Judaism, but anyone who shared a Jewish bloodline, people of intermarriages and anyone who converted to Christianity. The collection and storage of this kind of sophisticated data was difficult to be handled and catalogued manually and probably it would have taken years just to identify such a group of people from the huge German population.[3] IBM's Punch Card technology made the work much easier and simpler.

The Punch Card, also known as Hollerith cards, was named after one of the founding members of IBM – Herman Hollerith.[4] Punch Cards and the card sorting system was the nascent technology at that point of time. These are often regarded as predecessor to the computer systems for data storage and management. These punch cards work in a simple manner. The information is stored in the holes that are punched in the form of rows and columns which are later identified and read by a Tabulating Machine. It was mainly designed to organise and collect data for the census, but was later modified to collect and read any tabulation or information with the help of punch cards. The soldiers were properly trained and educated on how to use the punch card technology.[5]

The entire operational details of the horrendous event right from the beginning of identification to the last stage of extermination were catalogued in the Punch Cards. The technology perfectly aided the Nazi Germany in achieving its determined objective. Even today, it is still hard to digest that Nazis once had a global monopoly on the emergent technology and they used it primarily to

[2] Black, E. (2001, March 18). IBM and the Holocaust. Archive.nytimes.com. https://nyti.ms/3w0d0cp/
[3] Delio, M. (2001, February 12). Did IBM Help Nazis in WWII? Wired. https://www.wired.com/2001/02/did-ibm-help-nazis-in-wwii/
[4] IBM and the Holocaust. (2021, February 18). Begin-Sadat Center for Strategic Studies. https://besacenter.org/ibm-holocaust/
[5] Burkeman, O. (2002, March 29). IBM "dealt directly with Holocaust organisers." The Guardian. https://www.theguardian.com/world/2002/mar/29/humanities.highereducation/

wipe out an entire Jewish population of around six million people consisting of men, women and children. Such a state-sponsored persecution with the help of technology is still considered as one of the cold-hearted massacres in the human history.

Rwandan Genocide and RTLM Radio

"the graves are not yet full"

SLOGAN BROADCAST ON THE RTLM RADIO DURING THE GENOCIDE
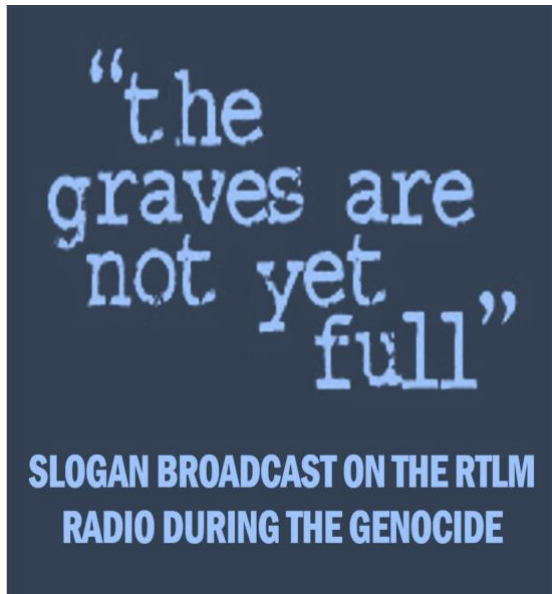
Rwandan genocide too, experienced the use of technology to entice hate, fear, anguish and biasness against the Tutsi population, one of the ethnic minority groups in Rwanda. One of the primary factors which aided such a massacre was the use of RTLM Radio by the Hutu Rebel Forces and the state military. RTLM - 'Radio Television Libre de Mille Collines,' was the privately owned radio station of the Hutu hardliners who massively used it to spread hate and anti-Tutsi propaganda.[6]   It is said to have played a significant role in inciting the genocide and mass killing of the Tutsi population. The power of media and technological support of a Radio could not have been used in a more ruthless manner. [7] Radio seemed to be a perfect choice to entice hate and anti-Tutsi narratives throughout the country as most of the population was illiterate. Television and newspapers were not so popular at that time and the country lacked resources for the same. Radio was the best available option for spreading Hutu ideology. It was easily accessible to most population, mainly the young Hutu rebels. Minute to minute update of the situation was available round the clock. The Hutu rebels were provided with live feed of the entire operations against Tutsi people. The Radio was also used to disseminate information and whereabouts of the Tutsis who were trying to hide or escape. Many times, names of the most prominent people to be targeted and killed were read out on the radio. During the genocide, RTLM was considered as a de facto government communication channel.[8] The deadly massacre which went on for 100 days between 7th April and 15th July 1994 was responsible for the cold-blooded murder of around 800,000 people in Rwanda by the Hutu

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[6] Kellow, C. L., & Steeves, H. L. (1998). The Role of Radio in the Rwandan Genocide. Journal of Communication, 48(3), 107–128. https://doi.org/10.1111/j.1460-2466.1998.tb02762.x/
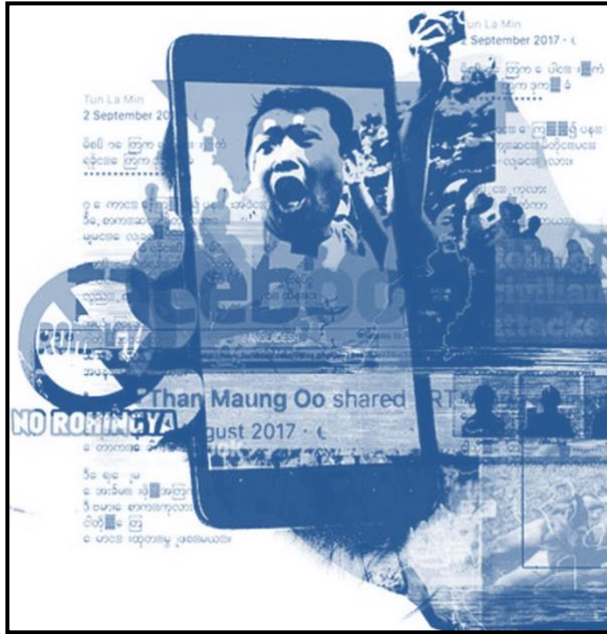[7] Kennedy Ndahiro. (2019, April 13). Rwanda shows how hateful speech leads violence. The Atlantic. https://www.theatlantic.com/ideas/archive/2019/04/rwanda-shows-how-hateful-speech-leads-violence/587041/
[8] Swart, M. (2020, June 7). "Music to kill to": Rwandan genocide survivors remember RTLM. Aljazeera.com; Al Jazeera. https://www.aljazeera.com/features/2020/6/7/music-to-kill-to-rwandan-genocide-survivors-remember-rtlm/

extremists.[9]   The targeted people were mostly the Tutsis along with various other political opponents.

Rohingya crisis: Smartphones and Facebook Factor

The modern ethnic cleansing in Myanmar predominantly owes its recognition to the social media giant Facebook.[10]   For a country which had just come out of a military authoritative regime in 2011, introduction to Facebook and internet seemed to be a horrendous mistake. Internet literacy was something which the people had never been familiar with before. The country was already divided on ethnic lines and tensions between the Buddhist majority and other minority groups (mostly Rohingya Muslims) were on the rise. It was easy to manipulate people with the help of disinformation campaigns as they had no prior knowledge of how internet actually worked and how to classify between authentic and false news stories being circulated online.

According to a report in 2018 by the UN Fact Finding Mission in Myanmar, internet became synonym for Facebook in this south-east Asian country.[11]   The smartphones which were sold in the open market were pre-installed with Facebook application. The only thing a user was required to do was activate the SIM card and make a Facebook account, as simple as that. Another reason for which Facebook was preferred more in Myanmar was due to the fact that it was the only social media company that was providing services in the regional languages.[12] It meant that anyone without any formal education could easily access the internet. The platform was significantly used to amplify hate speeches and false and misleading news stories about Rohingyas. These kinds of horrific messages and violence enticing images and posts have been circulated within the Facebook

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[9] BBC News. (2019, April 4). Rwanda genocide: 100 days of slaughter. BBC News.
https://www.bbc.com/news/world-africa-26875506/

[10] Stevenson, A. (2018, November 6). Facebook Admits It Was Used to Incite Violence in Myanmar. The New York Times. https://www.nytimes.com/2018/11/06/technology/myanmar-facebook.html/

[11] Special Reports. (2018, August 15). Why Facebook is losing the war on hate speech in Myanmar. Reuters.
https://www.reuters.com/investigates/special-report/myanmar-facebook-hate/

[12] Choudhury, A. (2020, August 25). How Facebook Is Complicit in Myanmar's Attacks on Minorities.
Thediplomat.com. https://thediplomat.com/2020/08/how-facebook-is-complicit-in-myanmars-attacks-on-minorities/

ever since it made a stronghold in the country since 2010.[13] Facebook was quite smart with its marketing tactics and strategy. It initially allowed its services to be used free of cost i.e. without incurring any data charges. Overnight, it gained massive popularity which at that point in time nobody thought would be a devastating turning point in the history of Myanmar. Researchers around the world are still trying to contemplate various perspectives through which Facebook is centred around this cold-blooded massacre and further what role did it play in provoking a series of conflict enticing situations in and around South Asia and South-East Asia resulting from the exodus of millions of Rohingya refugees.

When the crisis started to heavily unfold in 2015, Facebook was used as a de facto government channel of communication.[14] There were posts of hate speeches and anti-Rohingya propagandas being shared by the Buddhist and military leadership to provoke people to attack Rohingyas.[15] Such foul blend of political leadership, hate speeches, disinformation campaigns and the use of technological giants like Facebook to spread, amplify and entice fear and violence resulted in the displacement of more than 800,000 Rohingya Muslims with many being killed, gang raped and massacred at the hands of Myanmar military forces.

Uyghur Muslims, Tianfu Cup and the Great Hack

China has long been fascinated with creating an army of world-class hackers, who are so competent that they can bring down an entire country on its knees. In 2018, the Chinese hackers were able to identify that iPhones are susceptible to a great hack.[16] They were able to find a series of vulnerabilities in the iPhones which can be easily exploited and can be used to monitor anyone - digitally as well as physically. The hack was so sophisticated that the Chinese government did not feel obliged to inform the company about this great exploit rather used it to foster its surveillance mechanism. The award-winning hack was identified during the Tianfu Cup in 2018 – China's state sponsored elite hacking competition. The winning team takes home a whopping million-dollar cheque while the Chinese government exploits the vulnerabilities identified in various software and technologies during the competition. The hack as reported by the MIT Technology Review

[13] Saira Asher. (2021, February 4). Myanmar coup: How Facebook became the "digital tea shop." BBC News. https://www.bbc.com/news/world-asia-55929654/
[14] Mclaughlin, T. (2018, June 7). How Facebook's Rise Fueled Chaos and Confusion in Myanmar. Wired. https://www.wired.com/story/how-facebooks-rise-fueled-chaos-and-confusion-in-myanmar/
[15] Douek, E. (2018, October 22). Facebook's Role in the Genocide in Myanmar: New Reporting Complicates the Narrative. Lawfare. https://www.lawfareblog.com/facebooks-role-genocide-myanmar-new-reporting-complicates-narrative/
[16] EDT, N. C. O. 5/6/21 at 2:21 P. (2021, May 6). How China used award-winning iPhone hack to spy on Uyghur Muslims detailed in report. Newsweek. https://www.newsweek.com/how-china-used-award-winning-iphone-hack-spy-uyghur-muslims-detailed-report-1589322/

was used to monitor and spy on Uyghur Muslims, one of China's minority groups located in the Xinjiang region.[17] China has already deployed various facial recognition systems in the region to identify and increase surveillance on the Uyghur people. They are constantly monitored and forced to work in concentration camps run by the Chinese military. This is not the first time Chinese authorities have used such a hack to spy on their ethnic minorities.
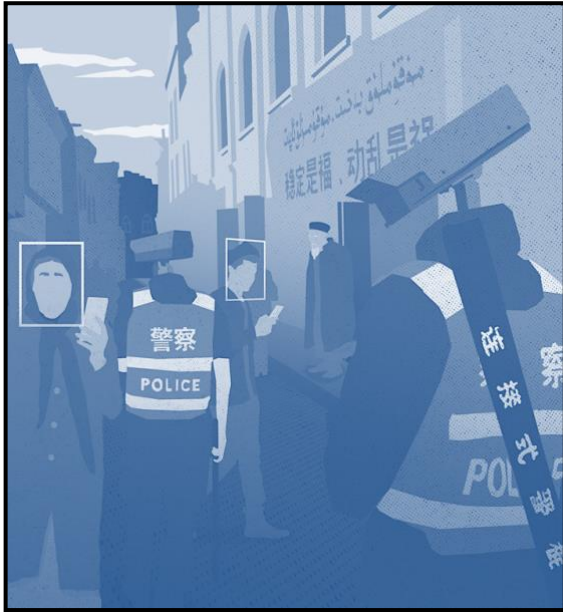
According to some reports, Chinese hackers spied on the minority groups by creating fake Facebook profiles of journalists of leading newspapers and magazines and activists from various human rights groups working on the issue of Uyghur Muslims.[18] They first try to build a sense of trust among them and trick them into clicking and forwarding malicious links in their mobile phones which makes it prone to hacking or any other form of cyber-attacks that can later be used for surveillance. Hackers mainly try to collect or look for specific piece of information which the Chinese intelligence agencies can later exploit and keep an eye on these individuals. China has been accused of violating human rights of the Uyghur Muslims and other minority groups by various countries.[19] There is a long history of abuses which the ethnic minorities in China have witnessed and experienced at the hands of the authoritative government. The policies of China towards these besieged groups are nothing but inhuman and torturous.[20] China is using information and technology in the most vicious manner to suppress the voice of its people in violation of their human rights. Over the years, China is perfecting the art of managing, modifying and manipulating big data. Its primary research interests are always its own people – mainly the ethnic minorities, who are easy to target and always kept under check.

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[17] Howell O'Neill, P. (2021, May 6). How China turned a prize-winning iPhone hack against the Uyghurs. MIT Technology Review. https://www.technologyreview.com/2021/05/06/1024621/china-apple-spy-uyghur-hacker-tianfu/

[18] Perlroth, N., Conger, K., & Mozur, P. (2019, October 22). China Sharpens Hacking to Hound Its Minorities, Far and Wide. The New York Times.

[19] Wang, Y. (2020, September 28). Chinese Tech Firms Fueling Beijing's Repression. Human Rights Watch. https://www.hrw.org/news/2020/09/28/chinese-tech-firms-fueling-beijings-repression/

[20] Branka Panic. (2019, December 22). Uyghur human rights violations and what does artificial intelligence have to do with it? Medium; The Startup. https://medium.com/swlh/uyghur-human-rights-violations-and-what-does-artificial-intelligence-have-to-do-with-it-8c46d2f9144/

AI, Algorithms and Racial Discrimination

Racial discrimination being practised through technologies is probably the least of all things human beings could have imagined. Everyone wanted technologies to be smart enough to figure out answers to some of the most complex problems, but none of us were worried about the biasness these technologies and automated systems would hold towards the human race in general.

In recent years, there have been an increasing number of cases in the US where the facial recognition system has been accused of racially discriminating African-Americans based on their skin colour.[21] These instances often led to a point where the individual has been exploited by the law enforcement agencies or became a victim of police brutality.[22] There have been number of debates and discussions with respect to the privacy concerns of the individuals while dealing with facial recognition technologies. Individuals are often harassed and many times end up being humiliated at the hands of crooked technology.

In 2020, majority of the cities in the US banned facial recognition systems from operating as the matter went haywire. There definitely seems to be a pattern of harm that disproportionately falls on vulnerable people of colour. It is quite evident that there has been a long history of data being weaponized against Black communities.[23] According to a study released by consulting firm McKinsey, Black Americans would lose thousands of jobs proportionally than white workers by 2030 due to automated systems.[24] There have been several instances where automated systems have found to be prejudiced, partial and unfair. In 2016, a shocking report came out where a

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[21] Buranyi, S. (2018, February 14). Rise of the racist robots – how AI is learning all our worst impulses. The Guardian. https://www.theguardian.com/inequality/2017/aug/08/rise-of-the-racist-robots-how-ai-is-learning-all-our-worst-impulses/

[22] Vogel, M. (2020, June 24). Biased AI perpetuates racial injustice. TechCrunch. https://techcrunch.com/2020/06/24/biased-ai-perpetuates-racial-injustice/

[23] Will Douglas Heaven. (2020, July 17). Predictive policing algorithms are racist. They need to be dismantled. MIT Technology Review. https://www.technologyreview.com/2020/07/17/1005396/predictive-policing-algorithms-racist-dismantled-machine-learning-bias-criminal-justice/

[24] Manyika, J., Lund, S., Chui, M., Bughin, J., Woetzel, J., Parul Batra, Ko, R., & Saurabh Sanghvi. (2017, November 28). Jobs lost, jobs gained: What the future of work will mean for jobs, skills, and wages. McKinsey & Company. https://www.mckinsey.com/featured-insights/future-of-work/jobs-lost-jobs-gained-what-the-future-of-work-will-mean-for-jobs-skills-and-wages/

computer programme used by the US court for risk assessment was found to be biased against black prisoners.[25] In 2020, a man named Robert Julian was arrested for a crime which he did not commit just because a faulty facial recognition system painted him as accused in a larceny case.[26] These types of instances made the reasoning strong and worrisome as to why only a particular group of people belonging to a particular race or colour are always on the discriminatory end of such automated systems.

Automated Systems and Artificial Intelligence (AI) can be biased.[27] These systems and AI are mainly working on a Predictive Model as they help individuals decide to make a choice. What is mostly hidden in the process are the issues pertaining to human decisions, ideas and notions that are involved during the design and making of that particular technology. The code that governs the system or the AI is not directly written by the humans but with the help of machine learning algorithms with complex data patterns. But the most important question is how do these machines actually learn? The answer is from real life examples that are labelled and branded by people, carefully selected, sorted and chosen by people and inferred from people too. These machines and their predictions are not separate from people or from their biases.

The example of Microsoft's AI chatbot named 'Tay.ai' is best suited to support the notion.[28] In 2016, Microsoft launched a twitter chatbot Tay for conducting research on controversial understanding. The bot was based on a predictive model which was coded by programmers to learn and develop an understanding about various issues while interacting with the netizens on Twitter. Hours after launching, Microsoft had to shut down the project as the chatbot was corrupted by then.[29] It primarily developed a racist and misogynist understanding and started tweeting insensitive statements. How did it happen? Simple, the chatbot was learning from the data pattern collected and analysed while interacting with people. It was provided with data which was labelled, selected and derived from them. Most of the data was inaccurate and insensitive

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[25] Doleac, J. L., & Stevenson, M. (2016, August 22). Are criminal risk assessment scores racist? Brookings. https://www.brookings.edu/blog/up-front/2016/08/22/are-criminal-risk-assessment-scores-racist/
[26] Fussell, S. (2020, June 24). A Flawed Facial-Recognition System Sent This Man to Jail. WIRED. https://www.wired.com/story/flawed-facial-recognition-system-sent-man-jail/
[27] Heilweil, R. (2020, February 18). Algorithms and bias, explained. Vox. https://www.vox.com/recode/2020/2/18/21121286/algorithms-bias-discrimination-facial-recognition-transparency/
[28] Vincent, J. (2016, March 24). Twitter taught Microsoft's AI chatbot to be a racist asshole in less than a day. The Verge. https://www.theverge.com/2016/3/24/11297050/tay-microsoft-chatbot-racist/
[29] Victor, D. (2016, March 24). Microsoft Created a Twitter Bot to Learn From Users. It Quickly Became a Racist Jerk. The New York Times. https://www.nytimes.com/2016/03/25/technology/microsoft-created-a-twitter-bot-to-learn-from-users-it-quickly-became-a-racist-jerk.html/

which the chatbot picked and started developing an understanding of a particular issue.[30] In simple terms, it was trained and corrupted by the people over the internet within a short period of time.
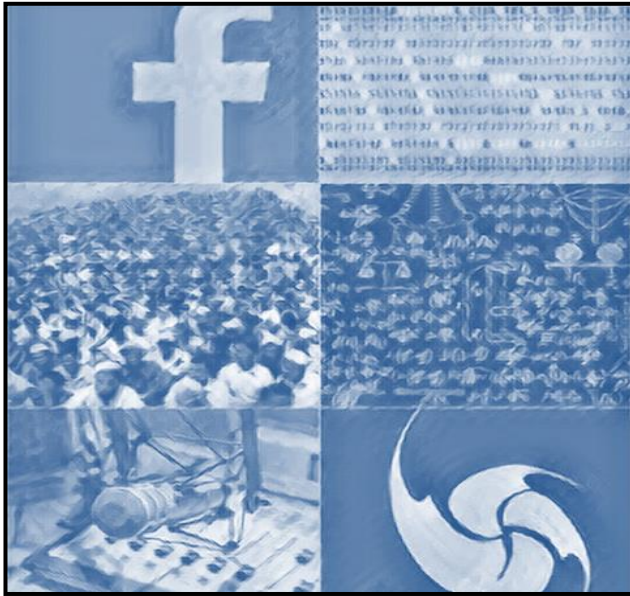
The major difference between a computer model bias and a human bias is that the former can be easily corrected. One can actually fiddle with the data set and label things with more caution and care. Such as being more sensitive towards a particular colour or race of people, people who are often found to be vulnerable towards the subjective AI hostilities.[31] The problem mainly lies at the very first step that is forming a question and posing a problem with the power dynamics already being laid and later set off in one trajectory or another. How do we get bias out of the algorithms and more importantly which algorithms should be used at all? Do we really need such predictive models of AI in our society such as the facial recognition system? The bigger question is which technologies should be preferred and how do they get deployed in our world? It all narrow down to power and resources. It's the power which decides whose interests will be served by a predictive model and which questions get asked. Businesses that are creating these automated tools using big data models may not necessarily share the interests of the people who are being targeted and exploited rather those of their clients i.e. people who influence power politics and shape biased public policies. So basically, it all boils down to the question whether these businesses and people associated with them are only accountable to their clients or are they also accountable to the general public and responsible for streamlining the policies for their wellbeing and benefits.

The Greater Responsibility

How we have handled the technologies till now have played a significant role in shaping the world and geo-politics around it. What is going to be even more important is how the emerging technology will be used? Whether technology is a boon or a bane to the society is still a hotbed for debate and discussion. Technologies can never be biased or racially charged, it's only the people who are handling it who are responsible for that. Technologies like Automated Systems and AI do not understand the power politics at play. They are only responsible for analysing a particular data set and derive various results and predictive models from complex data patterns to solve intricate

[30] Kalev Leetaru. (2016, March 24). How Twitter Corrupted Microsoft's Tay: A Crash Course In the Dangers Of AI In The Real World. Forbes. https://www.forbes.com/sites/kalevleetaru/2016/03/24/how-twitter-corrupted-microsofts-tay-a-crash-course-in-the-dangers-of-ai-in-the-real-world/?sh=4b6528ff26d2/
[31] Joss Fong. (2021, March 31). Are we automating racism? Vox. https://www.vox.com/videos/2021/3/31/22348722/ai-bias-racial-machine-learning/

problems. People associated with these technologies should have a high moral understanding and should work towards upholding the values of human rights.

Technologies are not disruptive in general, what decides their nature as disruptive is the question of how the said technology was intended to be used? And how it is actually being used? Usually, it ends up exploiting the vulnerabilities of a system or a society on the directives of those who influence or hold power. Such repressive use of technology aided by power politics often ends up destroying the social and cultural fabric of the societies around us. Whether these historic lessons learnt will be useful or not will be clear in the future course of time. Nevertheless, one thing which can be streamlined out of the entire context is that ethics and morality plays a crucial role while dealing with technology. The responsibility of deciding upon a preventive course of action to avoid such tyrannic idiosyncrasies in the future greatly lies on the shoulders of the IT industry giants.

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SAUARBH SINGH

Saurabh Singh is an alumnus of Symbiosis School of International Studies, Pune where he completed his Masters in International Studies. He is a graduate in English Language and Literature from Christ College, Rajkot. He is a keen learner and policy enthusiast. He has participated in various National and International Conferences. His research interest is mainly focused on the topics - Digital Diplomacy, Cyber Security, Disinformation, Climate Change, Deep Fakes, Artificial Intelligence (A.I.) and Automated Systems. He wants to be a researcher cum lecturer with specialization in Digital Diplomacy focusing on how states and non-states actors' practice public diplomacy on digital platforms and how it's complementing and challenging the conventional diplomatic practices. He is also keenly interested in research focusing on technology-driven interventions such as Internet, AI and Automated systems and its varied effects on individuals and their behaviour, climate change, disinformation campaign, international relations and society as a whole.

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