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ACDW101-Academic Writing UGTERM2Q

21 December 2024

The Future Puppets: How Data Collection Restricts Freedom of Thought and Reinforces Bias

We believe we are free - free to go anywhere we want, do whatever we love, buy whatever we desire, and vote for whoever we believe is the right one. But is this freedom really ours? What if the places we visit aren't of our own free will, the products we purchase aren't what we actually want, and what if the votes that we give are somebody else's opinion rather than our own? In the movie *Inception*, the story continues to introduce the idea of thoughts being implanted in people's minds, and later causing them to believe that those ideas are their own. A similar process exists in modern society on a much larger scale. In this data-driven world, most people are unwitting of the fact that all their thoughts and actions are taken care of and determined by stronger algorithms and corporations. Even people who notice these things often fail to understand the true magnitude of this issue. The biggest danger is a lack of awareness about this problem. Within the next few years, we might find ourselves not independent but puppets with all our decisions being fully governed by corporate interests. Everything from the music we listen to, the clothes we wear, the places we travel, and the food we eat everything will be minutely controlled. Corporations collect vast data sets and analyze trends of individual behavior to predict even the minutest actions almost with utmost precision. Machine learning

algorithms recognize these patterns so well that they can mimic our choices even if we are not alive. In case the predictive capabilities are hijacked, there is a major risk to our autonomy. This research paper will discuss in depth the ways in which corporations are shaping consumer behavior through gathered data and how this ultimately results in the perpetuation of biases and erosion of cognitive independence, making way for unprecedented levels of manipulability.

Data is considered as the backbone of the digital world, but it often makes people curious about how and why all this data is collected in such large quantities. Before looking at the "why," it is important to understand what data really is. Data usually means a collection of information; however, in the technological world, user data means a collection of a person's data and activities in the form of patterns, charts, graphs, and metrics. This requires the organization and analysis of records of a user's behavior, in the form of binary code(the language computers use)and then it is transferred across devices. This dataset includes everything from how a user interacts with others to what are there like dislikes, schedules, and even their habitual behaviors. Companies gather all these data in multiple ways. Whenever you share your location with any application or webpage, it records and makes conclusions like in which area you live or which are the places you visit frequently. Similarly, when you like a post or read an article, the platform gathers that as data to ascertain what you like and don't like. Then businesses use this information to predict the future behavior of such users and refine their strategy accordingly. According to Liam Hanham, a data science manager, there are three ways in which data collection can happen: direct, indirect, and through appending other sources of customer data (Hanham). For example, location-based advertising where companies use tracking technologies like IP addresses to deliver hyper-personalized content. Another method is through cookies.

Upon entering a website, companies usually store your login identification, password, and other personal details as cookies on your device. However, this process does not stop here. Whenever you visit other websites, these firms can use the same data that is already stored in your device by other platforms and share it with each other to build a more complete profile of your identity. Social media platforms are also considered as a strong medium of data collection and keeping track of metrics like engagement (likes, shares, and comments), reach, impressions, and demographics. So what makes this collection of data so important? The first reason is that it delivers a personalized experience to the user. Companies use this data for targeted ads, improving the user interface, and feeding the content that people are interested in. Enterprises are trying to increase user satisfaction and engagement simultaneously with the help of personalized experiences for users to achieve their marketing and developmental goals. For instance, real-time social media insights on consumer behaviors enable businesses to predict and adjust their advertising strategies toward optimizing ROI (Return on investment). Since billions of active users are present on these applications daily, social media provides unique opportunities for market research as well as customer engagement.

While this data is nearly used only for building a better user experience, there are so many different ways it can be used maliciously in order to trick the users without them realizing it. This manipulation is significantly contributed to by the continued exposure to the same content, commonly known as the "mere exposure effect." This implies that a person is often exposed to a certain stimulus at various times, therefore increasing one's chances of developing a

preference for that stimulus within a period of time. For instance, if a product is shown to a customer multiple times on social media or on streaming services then the possibility of thinking of its value increases, and this happens mainly because familiarity builds. In the beginning, there was no real interest in the product; however, exposure changes your outlook and makes you take action. The mere exposure effect can work very well in the realm of digital marketing. It is how platforms like Netflix continually refine their recommended lists based on your preferences to show you more rom-coms if that's what you've watched before. The more personalized experiences seem intuitive, but they may also make you subtly alter your preferences and influence your decisions. It's not just the platform that understands you, but you may be changing your tastes to match what it suggests, so it is a two-way street. This manipulation becomes even worse when applied in political campaigns or other influencing movements. When companies observe your data, including the language you use, the location you live in, or your hobbies, they target you with specific ads endorsing certain political views or parties, making it difficult for you to stay unbiased. For example, when companies repeatedly try to target certain advertisements toward individuals based on the preferences or beliefs they already established, continued exposure can lead to changing their minds subconsciously. In this way, data not only determines consumer behavior but can also influence governmental decisions, hence taking away the free will and the autonomy of thought that people should have. Furthermore, neuromarketing, which deals with the underlying needs and emotions of consumers, utilizes the same techniques that cause people to buy things without realizing the outcome. Fast food chains have a certain smell that creates an emotional reaction. Traveling agencies use pictures to create inspiration to go on holiday. These subtle tactics can be very powerful and result in decisions that are more emotional than logical. Ethical dilemmas arise when such manipulative strategies surpass what is

deemed acceptable, especially when the individuals themselves are not aware of the fact that their decisions are being altered by the unseen influences acting behind the interface. Advanced artificial intelligence, data analysis, and neuromarketing these three growing technologies are considered as a important tool in consumer experiences, but this brings a serious concern regarding the degradation of freedom of thought and autonomy.

The use of personal data in politics is especially dangerous when viewed through the lens of the Facebook scandal, where millions of users' data were harvested and misused during the 2016 U.S. Presidential Election. The basic concern here is how such information could be manipulated in the service of political advertising activity, something that was made possible by companies like Cambridge Analytica. Through apparently harmless quizzes and applications, these companies access the information of Facebook users and then take crucial insights into people's preferences, behavioral tendencies, and even psychological profiles. It is then used specifically to micro-target the voters through very personalized advertisements that exploit their fears, biases, and emotional responses to affect their political opinions. The controversy points to serious consequences of the misuse of data, which skews democratic practice and degrades the public's trust in the electoral process. Such type of targeted political campaigning, therefore, decreases the level of transparency in the election processes because voters do not understand how their personal data would be used to influence a decision and up to what extent. The 2016 elections show that such manipulation changes, not only the voting trend of an individual but may sometimes significantly affect the majority outcome of the election. The current situations

create major concerns for privacy and consent and the possibility of outside interference, thereby pressing for more stringent regulation and accountability in how personal information is collected, maintained, and used in political campaigns. The scope and magnitude of data collection in current campaigns far extend the previous campaign approaches. For instance, in Canada, the Conservatives and Liberals have established large databases through public records as well as through voluntary online interactions. Such data reservoirs allow the mobilization and identification of voters in ways that are simply not possible with traditional advertising. Modern voter profiles range from voting history to socio-demographic information, which means that campaigns can concentrate efforts on the likely supporters but can also make an effort to convert the undecided. However, this situation raises privacy concerns since people often do not know how the data is collected and used. There is a rising demand for government control on how such data is utilized with activists advocating for greater accountability and transparency in the process of acquiring and using the data in elections. With the ongoing progress of data analytics and artificial intelligence, the likelihood of influencing election outcomes will only rise.

Meanwhile, algorithms have also participated in the process of creating user experiences in the digital realm. Those algorithms that are housed within applications, such as YouTube and TikTok, further exacerbate existing inequalities in society by reinforcing users' preferences and biases. Those platforms are not just reflecting the interests of the users but rather shaping them through machine learning algorithms trained upon vast amounts of user data. For example, studies show how algorithms subtly influence the agenda of the content published in view of user activity patterns. If a person publishes something critical about the parent company Meta (formerly Facebook), it is likely that the reach of the post might get reduced, whereas favorable

content posts or something that fits corporate interests would be untouched and even promoted indirectly. These kinds of actions show how algorithms can serve corporate goals by influencing not only what people see but also which narratives obtain attention. Daman Preet Singh's study also highlights the degree of algorithmic bias. The experiment was designed to show how algorithms tend to favor content according to pre-existing biases and how such biases create a feedback loop of preferences. Singh concludes his analysis of YouTube and TikTok recommendation patterns by stating that algorithms systematically filter out content different from what a user has shown in the past, which can either expand or challenge users' horizons of understanding or beliefs (Singh). It can be seen how insidiously subtle and yet profound these platforms have been in the formation of cultural narratives and influencing the preference list of the users. These biases have far-reaching implications that go beyond personal lives. They create echo chambers, within which users are constantly fed content that supports their worldview and is used to marginalize alternative ways of thinking. This would not only stifle critical thought but cement societal divisions. The experiment shows that, even with all of the modern technology and intelligent algorithms, one still finds the biases reflected in their design and data inputs, which raise concerns regarding the social duty of the platform creator.

All these factors do not just shape our habits and interests but are fundamentally harming our cognitive processes in troubling ways. These algorithms are reinforcing our confirmatory biases with every passing day. The most frightening factor is that they are turning us into puppets, by which they are gradually and silently eroding our freedom of thought. From a very tender age, our opinions and judgments about society, religion, culture, etc. are shaped by our environment, mainly by our parents and communities. However, it is the time in life when

one is to question all these inherited beliefs by logical thinking and exploring divergent views. Unfortunately, these personalized feeds disturb this natural process. These algorithms feed the content based on our very first interests. So if a person has an interest in romantic movies in the early days, then all of their feeds get flooded by the same kind of content, and there will be no space for other new genres or new narratives. These things seem harmless in terms of entertainment, but the issue increases very much when the matter includes sensitive topics like politics, religion, caste, race, or history. Suppose, someone carries negative feelings or hate towards a particular religion; the algorithmic will amplify these biases by showing videos and articles that look similar or align with their existing thoughts. This continuous personalized loop increases their confirmatory bias and isolates them from exploring opposing perspectives. As time passes, their isolation stops their thinking capacity of evaluating things and other viewpoint rationally and logically. People unknowingly start losing the ability to think independently. Their actions what they are reading, what they are buying, or even whom they will vote for are no longer theirs. Behind each choice, there is an invisible force that is using data to shape and manipulate behavior. Humans are very predictable entities. Provided with the amount of data they require, the companies have control over what we can see, what we can believe, or even what we can do. They ensure that if there are other ways of thinking or ideas, then we never encounter them. So, the result is a population that is no longer free-thinking but programmed into a dictated path. And this digital control transforms man into puppets of a corporation, making him inanimate. We unconsciously relinquish our intellectual freedom in such a manner, so blinded by the curated content, that it will eventually be extremely hard to think beyond the scope of the algorithm. Finally, humankind will lose its identity and become just another tool, only in the hands of the designers of such systems.

In conclusion, the lines between personalization and manipulation are getting more hazy in a world where every activity can be tracked as data. Governments had the insight to introduce laws, like GDPR and CCPA, so users have transparency and power over their data, the rapidly evolving strategies of corporations often outpace regulatory frameworks. As data is so intangible and difficult to track through the complexity in which it's stored and analyzed, it becomes pretty hard to enforce such laws. Corporations continually find ways to exploit loopholes left by the legal system, and it calls for stricter, more coordinated global efforts to regulate the collection and usage of data. The unchecked power of data collection does not compromise only individualistic privacy but also poses a threat to such societal structures because it influences democracy and freedom of thought. While these algorithms grow more complicated, the ability to confirm bias and manipulate opinion becomes stronger and places users under threat of subtle, but effective, influence. Unless we have a better international governance structure and collective agreement on ethical data practice, we will be sitting as passive consumers in a world where our choices and thoughts are being curated by unseen forces. The future demands a two-pronged approach: a robust legislative framework that holds corporations accountable and an informed public, which understands the value as well as the vulnerability of personal data. As discussed, only through a combined sense of awareness, accountability, and innovative spirit we can hope for our freedom back as well as maintain the purity of our cyber existence. If we fail to act, this very concept of freedom may disappear before we know it and we just become puppets of players who control our data in this world they orchestrate.

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