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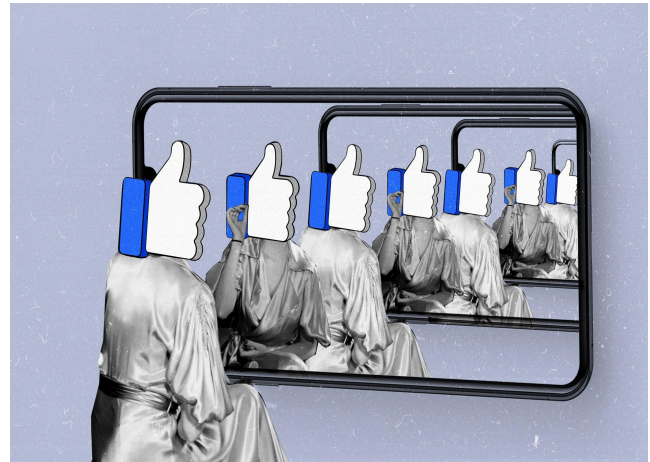
## Social Media and AI Algorithms Unchecked in a Consumer Society

To start off with an analogy, imagine a world in which some ‘gummies’ are the only source of positive and negative entertainment people desire, with each gummy designed to induce some kind of effect on the user. However, whether the gummy inspires the users to do incredible things or tears them apart is entirely up to the system handing them out. Acting in a similar way, there is an interlinked system of AI at the source of nearly all social media content distribution. The algorithms design the gummies not to what is best for the user, but what the system believes will keep them coming back for more. Sometimes, these interlinked systems are designed specifically to carefully shift what the user thinks is a good gummy flavor. It has to be understood that even though the algorithm shows something and it *could* be right, that doesn’t mean it always will be. Compounding slight alterations of the truth repeatedly is all it takes to convince someone to support something they otherwise would have opposed. With the perspectives of several authors who have carefully observed the effects of social environments and social media intake on a person’s belief system, I will dig deeper into how and why the AI algorithms that run social media are dangerous and need to be fixed before things get out of hand. I will specifically focus on some of the effects of personalized scrolling algorithms in both influencing an individual’s worldview and shifting the perspective of an entire society, stemming from bias regarding the control of the flow of information. These algorithms have increased their reach to go beyond the social media platforms they run, sometimes even directly leading to physical conflicts and changes in the results of elections and wars.

Such a heavy reliance is currently placed on social media as the biggest and best source of information, since there is more activity within these apps than anywhere else in the world. The goal of these platforms was originally to serve as a place for people to unite and connect on a global scale, but recently, some of the divisive effects have become evident. The heavy reliance and acceptance we have for these platforms and the communities we believe we’ve shaped all by

ourselves can lead to a bias, with users believing that whatever the algorithm shows them first is the truth of a situation. This epistemic bias has made it impossible for individuals to think for themselves and take time to consider multiple or opposing perspectives. As a result, social media has become known as arguably the biggest divider in our society, with power extending as far as the ability to influence elections as well as wars.

While many might think that the connections and communities social media forms can only be good, bringing people together to agree on difficult topics can actually have the opposite effect. The formation of these groups creates an isolated environment with a lack of disagreement. Isolation is particularly dangerous because it takes away any ability for compromise with other groups. When several of these parties congregate separately and only talk about their solutions, they become so enthralled in what they already believe and leave no space for hearing any other arguments. A lack of disagreement may be good in the short-term, but in the long-term it can be very detrimental. Too much association of what a person sees with what they believe reduces the likelihood to use multiple sources of information. Believing the information from one single source leads to a lack of disagreement and tears apart democracy



because it allows only the loudest voice to be heard. Only believing what the majority says will lead to a static and low-growth society. These situations appear mostly due to so-called ‘echo chambers’. These echo chambers trap the user in an environment where their ideas are no longer challenged; only reinforced by others with similar views. Echo chambers are formed by AI algorithms because of the most basic design principles for recommending media (Brown, Megan). The primary goal of social media after all, is to show users what they are most likely to resonate with or respond to. Why this primary goal can be both a blessing and a curse is due to the fact that “our sense of self can be altered by electronic technologies” (Korte). This incorporates the idea that algorithms directly shape us, with the power to both inspire and manipulate us. This idea that our personality and character can be directly shaped by the content

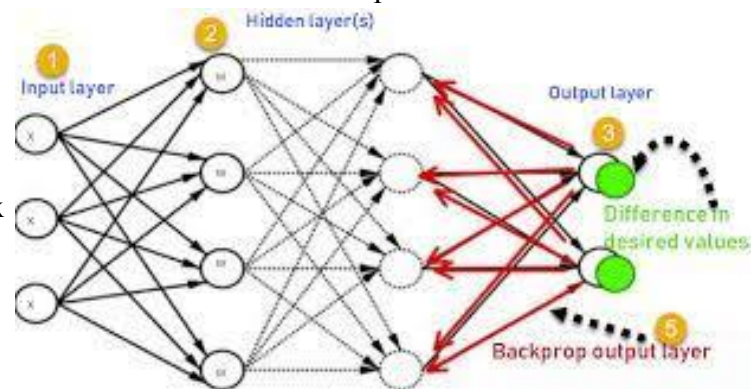
we are exposed to tells us that there is great responsibility when it comes to monitoring these AI algorithms.

As for how the algorithms work, most of the action happens where users can't see. What's most surprising can be found in the backend, within the functionality of the algorithms feeding users information. The AIs behind big social media platforms are made to read an individual's mind like a book. As stated before, the algorithms are made to predict what the user wants to see (or is most likely to respond to) based on previously recorded interactions.

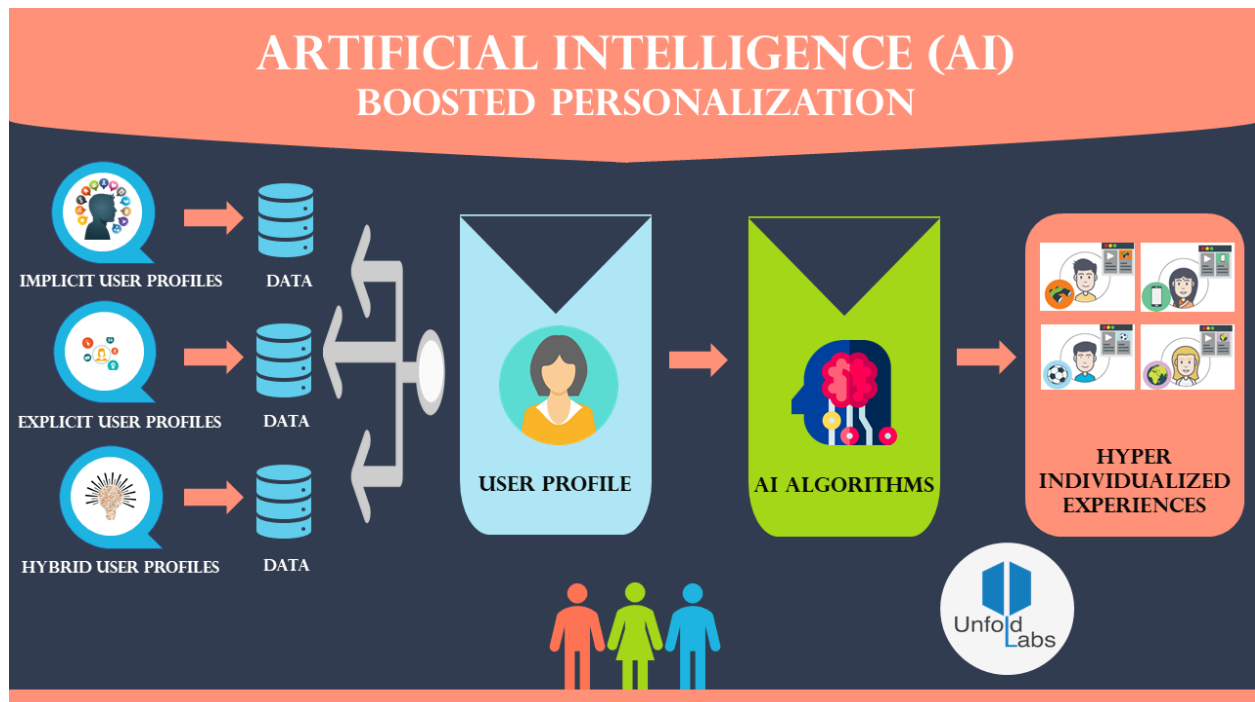
Currently, recommendation algorithms are monitored and trained to provide users with an individualized experience. As the

algorithms get better at predictions, social media platforms are starting to rely more on neural networks (complex AI algorithms, shown to the right).

What's tricky about neural networks comes from the fact that they are



mostly self-trained, acting similar to neurons in a brain. The only controlled variables in these systems tend to be the input levels, with little known about what happens between the beginning and end of the system. The more complex the hidden center layers become, the harder it is to decipher what actually occurred to get a specific output. Social media algorithms, with the goal of maximizing the amount of attention they get, have similarly unknown center layers. This can sometimes cause algorithms to stray from their goal without a direct reason that implementers could predict. This is sometimes seen in poor decision making by the systems, sometimes recommending not what a person wants to see but what they most don't want to see. People with some knowledge of the algorithm tend to be skeptical because of this. The general concern is that people "[feel] uncomfortable and uneasy about the ways in which they perceive the Facebook algorithm to make decisions on their behalf, controlling what they see and do not get to see" (Butcher). From before, the individualized experience that the algorithm creates for each user has its own hidden central layers. What this effectively does is place users in their own bubble surrounded by everything they already believe, reinforcing or shunning ideas similar to their opinions. And the extent to which this is done depends on how much importance the algorithm predicts the user puts on each problem.



Another consequence of these algorithms is a bias towards popular and shared ideas, leading to the suppression of views that would challenge the norm. When the ideas of creators don't align with the shared majority, strategies such as "shadow-banning" are used by algorithms (and sometimes implementers) to suppress their reach, giving the voices of minorities far less value. This is mainly because these videos, as compared to content with more popular views, are less likely to steal attention from the largest audience. Rather than directly confronting the users presenting these unique views, shadowbanning "essentially blocks or hides a user's social media content in such a way that they are unaware that it's happening" (Brown, Annie). The algorithm can effectively decide on its own or with the help of developers that an entire belief system is unworthy of making anyone's content feed. What can be especially dangerous about these practices is the amount of power put into the hands of the developers running the algorithms. Along with this, many of the developers might also only have some knowledge of what steps an algorithm takes. In theory, they know how the algorithm was built and how it's supposed to work. Whether or not it does what is intended is still a big question. This puts the extremely powerful ability to influence an entire society's views into the hands of developers who sometimes haven't fully grasped their algorithm's capabilities. Going along with Escajeda's reasoning, it can be seen that the average human that isn't in control of or knowledgeable about

AI is quickly being passed up by those who are. Anyone without the ability to leverage the benefits and also see the negatives of AI will not only be left behind, but will also be put in a dangerous situation where they can be silenced at any moment.

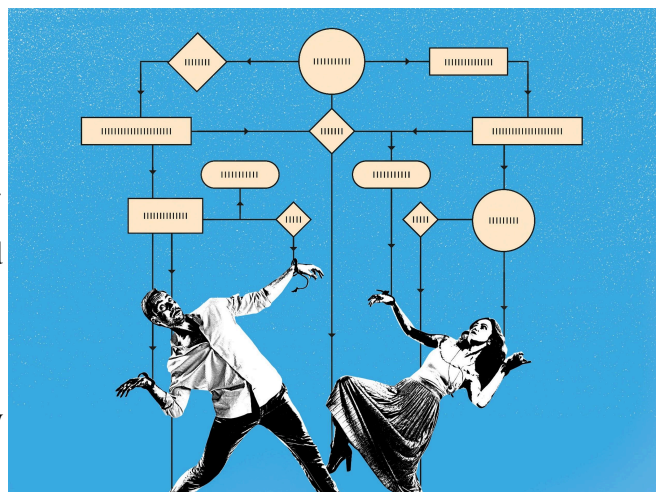
The repercussions of these shortcomings in the algorithms' decision-making are becoming quickly evident. Not only does it put people who want to share in a position where they have to give in to the majority for any hopes of being heard, but it also puts listeners in a position that influences them entirely based on the majority's views. There's a certain set of prerequisites for a post to go viral or garner the amount of attention the person posting wants. This is because the algorithm is designed to accept and repost some posts and decline others, which forces users to learn how to play the AI's game. By this, "adapting online behaviour to social media platforms and their operational logics can be seen as a form of optimisation, whereby content producers make their posts 'algorithmically recognizable'" (Butcher). Adaptation to what algorithms will show includes: removing unfavorable hashtags, changing the day of week and time of day posted, and even avoiding the use of specific sounds or effects (Brown, Annie). This can be particularly dangerous because the algorithm can have control over the entirety of users' attention, with sometimes nefarious or unknown goals. For example, one of the most influential factors currently in determining how much a post is shown is based on how likely a person is to react to it. This can be particularly negative because the algorithm doesn't know what the reaction will be, even if it's rage or sadness. Since negative emotions tend to make people the most reactive, the algorithm puts a high priority on the most harmful and negative content.



The main reason these algorithms are so powerful is a direct result of how much social media is used. Social media can have such a drastic effect on society overall because of the vast amount of daily content intake by a large portion of the population. To see how much people use their phone in general, a 2020 study on teens and young adults showed that "In the UK alone, ... 95% of people aged 16 to 24 years old own a smartphone and check it on average every 12 minutes" (Korte). Relative to this, the number of people that use social media is smaller but still a large portion of the world population. As of March 2023, Instagram recorded over 2.35 billion

users and TikTok recorded over 1.53 billion users, accounting for over 29 and 19 percent respectively of the world population (DemandSage). When such a large portion of a society is exposed to the same controlled flows of content, the ability to influence people goes through the roof. This was exemplified in the recent war between Russia and Ukraine, even referred to as “the world’s first TikTok war”, where the content each country allowed was exactly what the people were made to believe. In Russia, TikTok feeds banned all access to videos from outside of the country (Washington Post). The sway of these social media giants in influencing large decisions is showing up in multiple cases. As an example, Twitter and other platforms have even been used to form alliances and quickly communicate between countries’ governments (Brown, Sara).

Despite all the negatives and polarization caused by these social media algorithms, there’s plenty of potential to entertain while at the same time not let them influence us entirely. Rather than focus on the negatives and decide that AI’s implementation in social media is either all or nothing, we need to work together to compromise. It seems counterintuitive to need to compromise to fix the very thing splitting us apart, but just one agreement is all it will take to fix our situation. We need to collectively recognize that dealing with problems as they spring up will treat us far better than advancing our technology at the price of numerous built up issues. The new role of the AI developers at the forefront creating these vast and improving systems has to become one of great responsibility. It will be very dangerous for our society to continue on our current trajectory and to be influenced directly by whatever the algorithms determine. The question now becomes: ‘with humans left to listen only to what AI algorithms want them to, will the process of humans teaching robots flip entirely?’ The roles of student and teacher can’t possibly be the only roles of humans and AI. Such an influential relationship as this will leave one side entirely manipulated by the other, and if things go wrong, it could very quickly be humans forced into that position.



By Stiegler’s logic, our brains are made to develop alongside our generation, greatly influenced by the social environment and milieu we are surrounded by. How we respond to this

new AI pharmakon and end up with the algorithms either helping or destroying us will be entirely up to how well we can adapt alongside it.

While AI might have the potential to run free if we let it off the leash, it could also hold the secrets to building a stronger society. Through an effortful and careful approach to not let ourselves be entirely the consumers of what AI tells us, we can instead be the builders of our future around AI. This would allow us to harness the full capabilities of this new technology and make wondrous discoveries. It all starts with how governments decide to regulate these algorithms and how AI developers teach them to show less posts designed solely for attention and argument.



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