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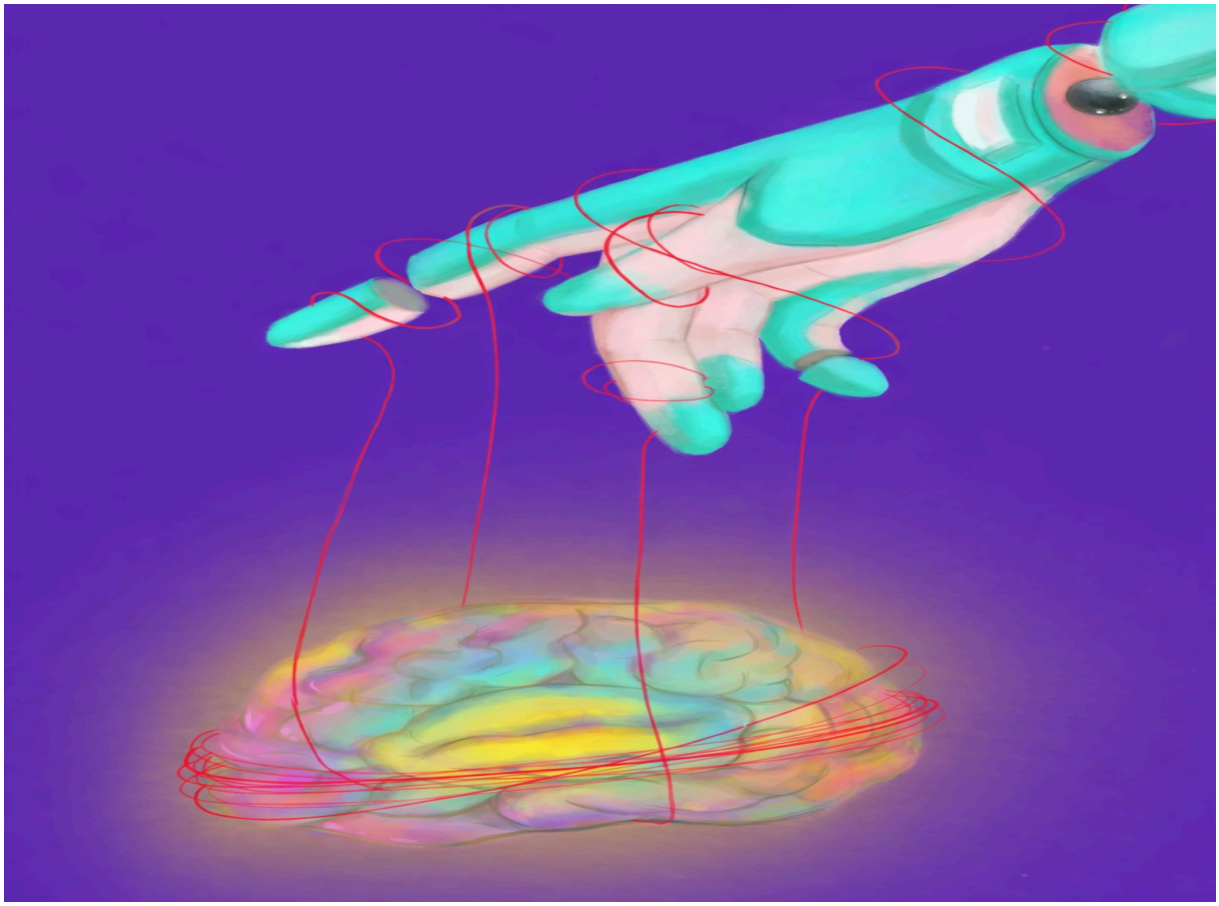
The Dance of Neurons and AI



In the age of digital media, we often believe that we are actively searching for information, but in reality we are often just "responders" guided precisely by algorithms. Once algorithms detect our interests and preferences, platforms continue to push similar content, encouraging us to join discussions, keep searching, and even gradually shaping the topics we focus on and the direction of our thinking.

British journalist Mary Harrington points out in Thinking Is Becoming a Luxury Good that short-video platforms such as TikTok and YouTube compete for users' attention and traffic. The core logic of their algorithms is not to prioritize the depth or value of content, but to maximize reach and viewing time. Under the logic of capitalism, platforms tend to promote emotional, fragmented, and even controversial content in order to increase interaction. In this process, the media is no longer just a tool for spreading information; it gradually becomes a force that shapes cognition and even pushes political agendas. Over time, users' judgment may be weakened, and their thinking patterns may be influenced without them realizing it.

When algorithms understand our preferences well enough and shift our attention toward what we like, building mature models that act like a fortress keeping focus outside, human thinking may become more passive. Frequently switching video images and rapidly delivered information enter the brain in fragmented forms, constantly interrupting our cognitive rhythm. For example, after waking up, many people first pick up their phones, or during an exam, a phone ringtone interrupts thinking. In this kind of environment, fragmented information disrupts the rhythm of use, and being able to stay focused may even become a luxury good. As mentioned by Joseph Kelly in his article titled How Attention Fragmentation is Reshaping Our Psychology

and Society published on Medium, psychologists point out that continuous distraction weakens deep processing ability, and long term exposure to information overload may increase the risk of anxiety and emotional changes. The rapid flow of fragmented information makes the marks left in the brain more and more shallow, while constantly shifting attention changes the way we focus on problems themselves. When the time needed for deep thinking is continuously compressed, rational judgment is naturally affected

However, according to the survey conducted by my group, we received 52 responses,（ mainly from young people around 18 years old, with a small number from other age groups.） Most respondents believe that social media does have a certain negative impact on personal thinking and cognition, but this impact depends on the type of content. Some participants also said that they verify information instead of accepting everything completely. This shows that users are not completely passive or deprived of thinking ability. Even in an algorithm dominated information environment, individuals still retain a certain level of reflection and awareness. Although the sample size is limited and cannot represent the overall population, it at least shows that technology has not completely deprived individuals of judgment. Therefore, in today's algorithm dominated era, ordinary citizens should pay attention to participating in promoting more fair and transparent algorithm mechanisms, while improving personal media literacy and awareness of privacy protection.

When we discuss the negative impact of digital media, the topic often focuses on whether electronic screens make children less intelligent, but this often ignores structural differences between the rich and the poor. In Thinking Is Becoming a Luxury Good, Harrington points out that there are clear differences in how children from low income families with annual incomes

below 3,5000 dollars and high income families with annual incomes above 10,0000 dollars use electronic devices. Wealthy families often set stricter limits on technology use and value long form reading, while children from low income families are more likely to use electronic devices for entertainment. She further points out that long form reading may gradually become exclusive to the elite class, religious groups, or conservative families. Relevant data does show that long hours of screen use may lead to vision problems, lack of sleep, and decreased attention. However, directly attributing differences in literacy, language ability, or attention among low income children to screen time is too simple.

Low income families often face problems such as a lack of books, unstable housing, and limited parental education levels. A report by Priya Menon from the Department of Psychology at the Indian Institute of Technology Delhi,points out that economic pressure, parents' education levels, and domestic violence are closely related to children's cognitive development and emotional health. In this case, even if the impact of screens were completely removed, cognitive gaps might still exist. This shows that screen use may amplify inequality, but it is not the root source of cognitive gaps among children.

More importantly, these gaps did not begin with the rise of smartphones. Before digital media became widespread, there were already differences between social classes in language ability, reading habits, and career outcomes. If we only focus on screen time, we are actually shifting attention away from the unequal distribution of educational resources. If long form reading is really becoming elite only, the problem is not that children from low income families overuse electronic devices, but that quality educational resources have long been concentrated in the hands of a small number of people. Therefore, it can be seen that the educational resources

and cultural capital possessed by wealthy families are the lasting foundation of cognitive differences.

Therefore, I do not fully agree with Harrington's argument that mainly attributes children's literacy rates and reading habits to the way families use electronic devices. She overemphasizes the educational self discipline of elite classes, religious groups, or conservative families, while relatively neglecting the impact of structural poverty. This comparison based on class differences, if lacking analysis of institutional variables and family background factors, easily turns social problems into cultural or even moral issues, thus weakening attention to institutional inequality. For example, the article mentions:" The ascetic approach to cognitive fitness is still niche and concentrated among the wealthy". This statement, to some extent, turns structural problems into issues of individual behavioral choice.

In today's technological era, the problem becomes more complex. Facing the negative impact of technology mentioned by Harrington, we can also try to look for solutions. With proper guidance, AI may also become a new tool. Training classes are expensive, and children from low income families can use AI's problem solving logic and personalized tutoring to improve learning efficiency. Creators can earn income through short videos in a difficult job market. Children who cannot afford extracurricular classes can also learn programming, design, and other people's study methods through YouTube. From this perspective, technology does not necessarily expand inequality, and its impact depends on how technology is used in different fields.

On the other hand, we can also use the idea that thinking becomes a luxury to understand the arrival of AI. Some students may use AI's fast processing ability to complete papers, which

raises concerns about academic independence. However, capitalism often quickly turns this anxiety into new market opportunities. Many websites and software that reduce AI detection rates or test AI percentages have appeared, and students are willing to pay for them. Under market logic, this forms a closed loop where technology creates new problems and the market then sells solutions to those problems. In the operation of the market, cognitive ability and thinking become commodities for transaction.

We may realize that thinking is not judged by how long we spend on it or by the level of cognitive ability. The main reason thinking becomes a luxury good is whether one has the conditions to block internal and external distractions, keep the brain focused, and identify valuable and accurate information from massive amounts of information. Technology changes the form of cognition, but capital structures determine how cognitive resources are distributed. When the time, space, and educational resources needed for deep thinking are highly unequal, thinking will naturally show class differences.

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