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The power of recommendation algorithms over our decisions

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We are in an era where we are exposed to an abundance of information in the digital medium. This abundance arouses the desire to absorb useful information to our interests, but it causes us to have trouble dealing with so much information, as the difficulty we have in making choices from the many possibilities. In this context, the recommendation algorithms come with the purpose to filter such abundance and thus providing more personalized options that bring results of greater interest to its users.

It is increasingly common to use recommendation systems to assist us with our choices. Such systems are present in various media in our daily lives, such as popular streaming platforms, Netflix, YouTube or Spotify, shopping platforms like Amazon, and also in social media, such as suggestions of connections from Facebook, LinkedIn or even Tinder. According to these organizations, these types of systems are designed to make it easier for users to choose because they are tailored to each individual's preferences.

These recommendations are not restricted only to the digital media, but also occur strongly within organizations, such as deciding who will or will not be granted credit, the type of health insurance to be offered, and even who will get hired or fired from an organization.

The way in which recommendation systems work is relatively easy to understand, due to the fact that they are nothing more than software with an algorithm that

performs a user interaction service by collecting their choice data, categorizing their choices and communicating likely upcoming choices based on previous ones, ie, it seeks to reflect on the user's past preferences to suggest content that adds value to future choices.

This type of service adds value to both the user, which saves time and effort to filter results of greatest interest within a huge set of possible options and the providers of service, as it tends to generate greater user loyalty by personalizing the service.

But like other technological innovations, recommendation services can lead to unintended or even undesired consequences. In this context, depending on the construction of the recommendation

algorithm and how its results are presented, users tend to make biased choices. This raises the question: Do these recommendations focus on the satisfaction of the user who uses the service, the increase in the profits of the company that makes the recommendations or, in fact, the search for a common good for both?

Complaints about the influence of Facebook's platform on shaping political opinion have stood out in major elections in recent years. There was a strong scandal involving this platform with Cambridge Analytica, where theft of users' personal data was reported. Complaints indicated that this data was used for content manipulation where users were exposed to strategically skewed information in their news feed. That is, the platform recommendation algorithm has been tampered with to highlight some specific issues.

The phenomenon of political polarization has been aggravated in several countries. The famous political bubbles, visibility of opinions mostly like those of users interacting with their own network, have limited the

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breadth of the field of access to information that social media users face in their daily lives.

The algorithm is gaining so much influence on audiovisual media that Netflix, for example, not only knows well what kind of video to recommend to its users, but also produces full-length series and movies based solely on content recommendation. In other words, complete audiovisual works are coming to depend on the way the algorithm suggests getting better results after being built, such as the House of Cards series that had almost all its conception designed by recommendation.

A recent MIT research, “The hidden side of recommendation systems”, demonstrates that recommendation services not only reflect user preferences but also shape them. In other words, recommendation systems have great power to bias our choices, which sometimes leads to unexpected or even undesired results by users.

In the field of behavioral psychology, a suggestion influences people's behavior according to the kind of patterns they're used to see or hear, and that depending on the type of instructions, they tend to make different choices. That is, people may be subject to possible manipulations in the psychological process of making their choice.

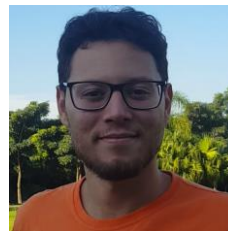
In this context, users end up being strongly influenced by suggestions that know deep aspects of their choices and depending on that depth, an algorithm can establish effective proximity to user needs.

This brings up the need to reflect on better ways to design recommendation tools, because as it adds significant value to both service providers and users who use it, it tends to be increasingly explored. But according to questions raised here about the possible effects of the recommendation, it is then necessary to reflect on alternatives of use that may benefit the common good.

Facebook, for example, recently chose to prioritize posts from friends and family in the news feed over content pages. Recent scientific research also seeks to investigate ways of generating recommendation algorithms that seek to cover ethical issues such as bias,

transparency and privacy, and not just the search for better recommendation efficiency as has been done.

However, efforts to deal with ethical issues in this field are still tiny, and at the same time, our relationship with this type of tool is becoming more and more constant. Perhaps the alternative of prioritizing algorithms that consider human relationships, not just platform engagement; or that take into account more user-friendliness, and not just data generation to increase funders' publicity, it would be a way to deal with some of these questions. Nonetheless, the effort to realize the need to consider better alternatives should not only depend on the decision-makers of these media but also researchers and field enthusiasts in a quest to unravel some of these problems and propose better ways to deal with such algorithms.



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This article is a result of the authors' ascertainment and analysis, without compulsorily reflecting CEST's opinion.