

Research: Leaders Undervalue Creative Work from AI- Managed Teams

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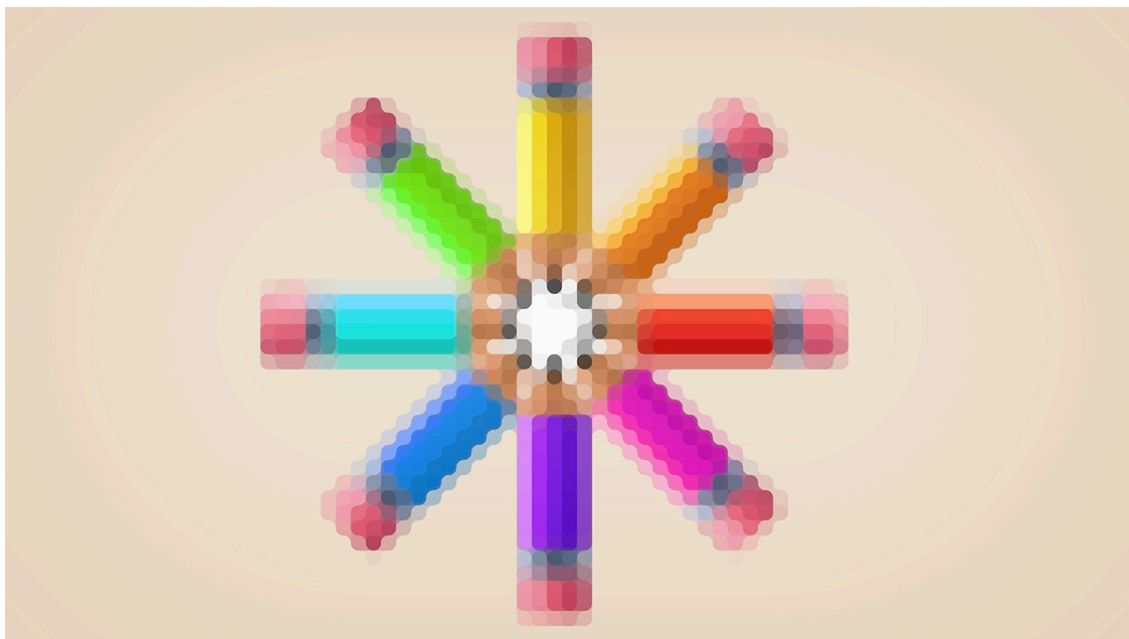


Illustration by Eddie Guy

Summary. Because of AI's ability to learn from vast amounts of data and maximize efficiency, companies have predicted that humans working with it will be able to free up their time and expand their creative efforts, thereby driving greater innovation. But, despite the enthusiasm of tech gurus and companies alike, is this really how adopting AI tools will play out? A series of experiments that how algorithmic tools changed the consideration and resources workers were given for creative and innovative work suggest that these tools — specifically, the

algorithmic tools that oversee employee productivity — could actually undercut employees' ability to do this work, and that companies that deploy these tools haphazardly could find their optimism souring. [close](#)

How will creative work be impacted by artificial intelligence (AI)?

With AI's immense and growing capabilities — it can do everything from structuring work schedules, managing administrative tasks, and giving advice to decision-makers — industry thought leaders are understandably optimistic about its potential. Much of this optimism hinges on the claim that, because of AI's ability to learn from vast amounts of data and maximize efficiency, humans working with it will be able to free up their time and expand their creative efforts, thereby driving greater innovation. Numerous analyses and corporate reports have been written in favor of this claim.

But, despite the enthusiasm of tech gurus and companies alike, is this really how adopting AI tools will play out? To answer this question, we ran a series of experiments to test one way algorithmic tools changed the consideration and resources workers were given for creative and innovative work. Our results suggest that these tools — specifically, the algorithmic tools that oversee employee productivity — could actually undercut employees' ability to do this work, and that companies that deploy these tools haphazardly could find their optimism souring.

Rather than assuming that AI will enable humans to focus on the creative side of the job by default, leaders need to account for organizational reality — and how algorithmic tools change their ability to assess performance. In most organizations, it is top management's perception of who has creative potential that dictates which teams will receive support from the top to pursue innovative endeavors. In our research, we found that leaders' assessment of creative potential declined when AI managed part

of their work process. If that's the case, then these tools will actually end up hurting employees' ability to be creative and drive innovation.

How Algorithmic Management Changes Leaders' Perceptions

Our recent research on algorithmic management — the use of AI algorithms to oversee the workflow of employees, set tasks, and evaluate performance — provides a surprising outlook on this issue and suggests we need to more carefully consider the AI systems we implement before making grand statements about their benefits. In a series of experiments, we found that members of work teams managed by an AI algorithm were viewed as less creative, not more, compared to teams managed by a human. These algorithm-led teams also received less funding specifically allocated for innovation projects.

In our first experiment, 180 individuals (average work experience of 16.52 years) participated in an online simulation of a marketing organization. The organization consisted of four levels: team employees, team supervisors, top management, and board of directors. Participants were assigned to top management and informed that they would oversee the teams.

Participants then received information about one of the teams, including the team supervisor. Some participants learned that the team was overseen by a computer algorithm, programmed to track and evaluate performance of the teams; other participants learned that the team was overseen by a human participant in the experiment. We then asked participants to rate their evaluations of the members of the team they learned about, where we discovered that team members overseen by an algorithm were viewed as less creative than team members overseen by a human. Furthermore, if algorithmic management affects how creative workers seem, then it should also affect how much managers are willing to invest in these teams' innovative efforts. So, we asked

participants who were acting as top managers to make a decision: their organization had a budget dedicated to driving innovation, which they could allocate between the teams at the company. We found that people chose to give less of these resources to teams managed by algorithms, further showing the ways in which algorithms can compromise teams' ability to be creative and generate innovation for companies.

In a second experiment, we looked at how the prevalence of algorithmic management in the company affected managerial views of employees. Like the first experiment, participants learned about a team overseen by either a human or an algorithm. But then they received another bit of information: some participants learned that only one team in the entire organization was overseen by an algorithm, while other participants learned that every team was overseen by an algorithm. After all, if rollout of algorithmic management is widespread in the company, maybe these human employees won't be singled out as less creative because the practice becomes normalized. The results, however, were less optimistic: human workers were viewed as less creative regardless of whether algorithmic management was widespread or more conservatively implemented; they were also given fewer resources dedicated to innovation.

Employees managed by algorithms are seen as less creative.

What are the implications of our findings for organizations and supervisors?

First, as an organizational leader, you need to be aware that automating management processes so that humans can excel in what they are good at — like creativity — may actually backfire, and often without you realizing it. With algorithmic management in place, you are likely to think less of your employees' creative potential and subsequently provide them with less support to thrive and innovate at work. This point makes clear that adopting

AI is not simply a question of the technology alone. It also requires leaders to consider how the mere presence of the technology inadvertently affects how you and others will evaluate and treat the human workforce. In this, leaders should always remember that algorithms don't change human workers' intrinsic abilities: with the proper support — with or without an algorithmic supervisor — humans can and do drive innovation for companies.

Second, if you are aware of the above risk, you might be tempted to do a slow rollout of algorithmic management to test the waters, or you might be more inclined to implement it all at once to turbocharge organizational adoption. Sadly, it's likely that neither approach will attenuate the negative effects on how you view your employees. Indeed, our experiments showed that algorithm-led teams were viewed the same regardless of a slow or fast rollout. Instead, leaders should focus on which specific tasks that algorithmic management does. For example, algorithmic management should never be in charge of uniquely human tasks, such as providing emotional support, and instead should take over more routine, mechanized tasks. In other words, let the algorithms only do what they do best, and let the humans handle the rest.

This point also brings us to the issue of “augmentation”: it's important that AI is adopted in a way that it is clear to everyone that the tech is there not because it is better than the human workforce. Otherwise, you will end up in the situation where employees working with AI are seen and evaluated to be less skilled. Instead, emphasize that AI can help humans to be even better. Using this lens can counteract automatic tendencies of leaders to see — as we demonstrated — employees as less capable when they are required to work with AI. Leadership deploying AI thus needs to communicate carefully and to the point on why AI is used and what its exact relationship is to the workforce.

Finally, our research highlights the ongoing need for companies to be deliberate in their implementation of novel technologies, carefully considering the ways in which these technologies may affect their human employees. Research already exists showing that being managed by algorithms undermines employee trust and job satisfaction. Taken together with our findings, this suggests a double-bind for algorithmic management: employees don't like it, and managers view these employees in a less favorable light. Even though the newest AI technologies are exciting and may improve organizational practices, they will only benefit your company in the long run if you carefully consider the ways it could also negatively impact the workforce and organizational practices generally.

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