Why Should we Invest Epistemic Labor in a World of Generative AI?

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Abstract

Generative AI can automate many tasks, potentially discouraging individuals from investing epistemic labor. Drawing on Self-Determination Theory (SDT), this paper argues that epistemic labor–the effort to aqcuire, process, and evaluate knowledge–remains vital for maintaining intrinsic motivation. SDT posits that motivation and well-being depend on satisfying three psychological needs: autonomy, competence, and relatedness. Automating tasks using generative AI can undermine these by fostering dependence, eroding confidence in one's competencies, and weakening meaningful human interactions. In contrast, engaging in epistemic labor supports self-determination, preserves declarative and procedural knowledge, and sustains interpersonal discourse. This paper highlights why balancing generative AI's affordances with epistemic labor efforts is difficult but crucial for maintaining human motivation and well-being.

Keywords

Epistemic labor, self-determination theory, basic psychological needs, well-being

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1 Introduction

I agree with the sentiment reflected in the description of the *Tools for Thought* Workshop at CHI'25: "Generative AI systems can provoke critical thinking, provide personalized tutoring, or enable novel ways of sensemaking, among other approaches." All of these uses of generative AI align with the idea of "protecting and augmenting thinking" – emphasizing AI as a tool that supports cognition rather than one that automates tasks. However, generative AI can also be an efficient tool for automating many tasks that previously required substantial cognitive effort.

Moreover, when we use these tools and perceive their outputs as being of such high quality that surpassing them would require significant effort, it becomes tempting to rely on them for automation rather than intellectual engagement (see also papers at CHI'25 that empirically show such effects [7]). The anticipated or actual benefits of generative AI may thus lead to a reduced investment in epistemic labor – the effort invested in acquiring, processing, and evaluating knowledge [3].

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In this paper I argue why it may still be a good idea to invest epistemic labor in a world increasingly shaped by generative AI. My arguments build on Self-Determination Theory (SDT) [12], a seminal theory of human motivation that posits intrinsic motivation arises from the fulfillment of three basic psychological needs: autonomy, competence, and relatedness. I contend that using generative AI to automate tasks that otherwise require epistemic labor can undermine these needs, potentially undermining well-being [13].

Participating in the *Tools for Thought* Workshop at CHI'25 would be a great opportunity for me, as I am eager to learn about the theories and perspectives that other researchers find relevant to understanding, protecting, and augmenting human thinking. Attending the workshop would also allow me to share my perspective, shaped by my background as a psychology researcher collaborating closely with scholars from law, philosophy, and computer science. My work with these colleagues focuses on understanding what it means to "understand" in the context of explainable AI (see e.g., in our prior work [6, 15]) and how to maintain meaningful work when collaborating with AI [5].

2 Self-Determination Theory and Epistemic Labor

Self-Determination Theory (SDT) posits that human motivation and well-being are rooted in the fulfillment of three basic psychological needs: autonomy, competence, and relatedness [12, 13]. Autonomy refers to the experience of control and volitional action, competence involves the need to feel effective and capable in one's activities, and relatedness concerns the desire to form and experience meaningful connections with others. When these needs are satisfied, individuals experience higher levels of intrinsic motivation, mental health, and overall well-being [13]. Conversely, when these needs are undermined, motivation declines which can lead to downstream negative effects on mental health and well-being. In the era of generative AI, which offers instant access to knowledge and where one key affordance of respective technologies may be to outsource epistemic labor and to automate tasks, it is essential to consider how reliance on such technology interacts with these fundamental psychological needs.

It is important to highlight that the division of epistemic labor is a fundamental aspect of how societies function [3]. Humans have always relied—-indeed, depended—-on experts and the community to access the breadth and depth of knowledge that no single individual could acquire alone [3, 8]. Generative AI could serve as a valuable tool for accessing this expert and community knowledge, and I do not see anything problematic about this—-setting aside, for the purposes of this paper, discussions on how to fairly compensate

or acknowledge those who have contributed the epistemic labor required to generate this knowledge [10].

Nevertheless, generative AI poses the risk of making it all too easy to prioritize efficiency over epistemic labor, leading individuals to automate tasks without engaging in meaningful intellectual effort. This risk is heightened when individuals recognize AI's high quality outputs, its ability to save time, and its widespread adoption by others [7].

I argue that in line with SDT, investing epistemic labor plays a crucial role in fulfilling basic psychological needs. Regarding autonomy, if individuals reflexively rely on AI-generated answers without investing some epistemic labor, they risk losing the ability to make independent choices about whether and when to use AI. The autonomy to decide when to engage in epistemic labor is vital for maintaining a sense of self-determination [1]. When generative AI tools become the (perceived) default in a way that individuals feel that they cannot compete in a world where everyone is using these tools in their work this may foster dependence rather than choice. For instance, a scholar who believes colleagues widely use AI for writing and reviewing may feel pressured to do the same, reducing their epistemic labor in argumentation and research assessment. By actively engaging in epistemic labor, individuals could retain a sense of control over their how they want to invest their cognitive efforts.

Similarly, competence – the feeling that one's abilities and knowledge matter – requires engagement in epistemic labor. Consistently outsourcing thinking, reasoning, and problem-solving to generative AI may erode declarative and procedural knowledge, reducing confidence in one's competence [4]. This deskilling can create a self-reinforcing cycle where individuals feel increasingly incapable of engaging in epistemic labor without AI assistance [7]. For example, a teacher using AI to assess student essays may initially do so for efficiency but, over time, may feel unable to evaluate work or provide constructive feedback without AI. In contrast, investing in epistemic labor helps individuals maintain and refine their knowledge, reinforcing confidence in their own reasoning and expertise.

Finally, epistemic labor can sustain relatedness by facilitating meaningful engagement with others. Discussion and debate have historically played a vital role in forming relationships, fostering understanding, and generating knowledge [11]. If individuals overly depend on generative AI for information, insights, or even conversation starters, they risk diminishing their capacity to engage in genuine intellectual exchanges [16]. Much like the use of search engines can lead to the use of these external sources rather than engaging in critical discussions (e.g., [14]), reliance on AI-generated insights could lead to a erosion of interpersonal interaction. For instance, a psychotherapist who initially consults AI for feedback on complex cases may, over time, avoid discussing them with colleagues or supervisors—perhaps to avoid burdening others or fearing judgment of their opinions and skills. By engaging in epistemic labor, individuals preserve their ability and their belief that they can meaningfully connect with others without having to first ask an AI tool about what could be a good topic to talk about, and then asking the tool about how to make the conversation more interesting.

In light of Self-Determination Theory, investing in epistemic labor may be important for sustaining autonomy, competence, and relatedness in an age of generative AI. Investing epistemic labor can help to ensure that individuals remain in control of when they want to and when they do not want to use AI tools, maintain their declarative and procedural knowledge, and continue to participate meaningfully in human discourse. Overall my sentiment is that despite the temptation to automate thinking with AI, we may want to consider taking the effort to invest epistemic labor to satisfy fundamental psychological needs and promoting long-term well-being.

3 Concluding Thoughts

There are several counterarguments to my sentiment that investing in epistemic labor is important for our well-being. First, generative AI itself can help to satisfy basic psychological needs [2]. Generative AI can aid to feel more autonomous by automating tasks that we dislike or by having the option to ask an AI tool instead of having to ask others for help on sensitive topics. Generative AI can help acquire knowledge and skills more quickly and can thus foster perceived competence, and it can help building meaningful interpersonal relations by, for instance, providing a testbed for conversational training. However, all of this seems to require some own epistemic labor, for instance, in learning how to use AI tools effectively for these aims and in critically reflecting on its outputs rather than blindly relying on them.

Second, generative AI can also support meaningful epistemic labor. I again refer to the description of the *Tools for Thought* workshop, which states that generative AI can "provoke critical thinking, provide personalized tutoring, or enable novel ways of sensemaking" – all of which align with the idea that AI can foster meaningful engagement with knowledge. However, the most immediate use of generative AI may simply be to instruct it to "do this task for me," thereby automating work instead of augmenting thinking. Considering the fulfillment of basic psychological needs provides an argument for why we should not always rely on AI to automate tasks.

Third, how much epistemic labor is enough? As mentioned earlier, society functions in part due to a division of epistemic labor – we rely on and depend upon experts and communities for knowledge [3, 8]. Excessive epistemic labor can become overwhelming and may even undermine psychological needs. For instance, it can threaten autonomy by limiting control over how time is allocated. It can diminish competence by making individuals feel incapable of keeping up with vast amounts of available information. In extreme cases, excessive epistemic labor can foster distrust by leading individuals to question facts and experts, potentially contributing to misinformation and conspiracy theories [9].

Fourth, does epistemic labor really feel meaningful when we know that AI tools can provide the same information and produce the same outputs more quickly? With the availability of generative AI tools the perceived value of our own epistemic labor may diminish once individuals realize the ability of AI to generate high-quality outputs faster than they ever could. This, in turn, could further reduce motivation to engage in epistemic labor. I anticipate that determining when epistemic labor is meaningful will be an ongoing challenge – one that I would be eager to explore and discuss at the *Tools for Thought* workshop.

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