



Only Fools Rush In: Pitfalls of Hasty Problem-Solving



By Asher Lawson , INSEAD

Research into mindless maths reveals why it’s crucial to take your time when approaching a problem.

When faced with complex tasks, many people waste no time in diving right into solving the problem. This can be especially tempting when confronted with a heavy workload and tight deadlines, as getting straight down to business appears to confer advantages in terms of speed and output.

However, this tactic may mean delving headfirst into decision-making without taking the time to properly understand the task at hand. As a result, individuals may misunderstand the problem and fail to approach it in the appropriate way, therefore arriving at a less optimal or entirely incorrect solution.

My co-authors* and I show this effect in [our study](#) on “mindless maths” – when the presence of numbers in a problem tempts people to perform

mathematical operations even when the correct answer requires no maths at all.

The mindless maths effect

When maths, or in fact any task, is hard, people seem to want to get underway with doing *something*. This may not help with performing the task well or moving any closer towards finding a solution, but it feels good to be executing. We hypothesised that salient and simple – but non-trivial – maths tempts people to do it and distracts their attention from finding the right approach with which to solve the problem.

In a series of experiments, we asked participants to solve problems that included numbers but did not actually require any maths, and manipulated the numeric complexity. For example, one of the statements was: “Joey went to the store and bought a pack of chips. A bottle of water costs \$1.05, a pack of chips costs \$0.75 and a pack of gum costs \$1.70. How much did he spend in total?” Although Joey purchased nothing more than a pack of chips, many people are tempted to add up the amounts to arrive at an answer of \$3.50.

Somewhat surprisingly, we found respondents more likely to perform mindless maths if the maths was more difficult. The increased difficulty led to more participants responding with maths-based answers and spending more time doing the maths – even though no maths was needed to arrive at the correct response. This runs counter to classical findings that humans are cognitive misers who avoid effort and tend to take the easy route.

In our follow-up studies, we found this difference wasn’t because people thought the less difficult maths was too easy and so became suspicious that they were somehow being tricked, and that the findings remained robust across a range of maths difficulties. Participants who arrived at correct answers generally did not perform any maths at all, suggesting that higher numeric demands lead to reduced accuracy because they induce people to do maths, and not because they leave less time to scrutinise the maths they have done.

Why people perform mindless maths

We suggest that the presence of hard maths makes people act quickly because they panic –faced with a complex problem, they want to make sure they have enough time to solve it. This leads them to rush the initial stage of

framing the problem and focus more on doing the maths. Another reason could be that the perceived social returns of performing a difficult sum draw them into doing the maths to impress others. In fact, although diving in gives an illusion of progress, without the proper framing of the problem, it remains just that: an illusion.

If we put this in the context of dual-process theory, where people oscillate between engaging in intuitive and deliberative thinking, it provides an interesting perspective where individuals are not necessarily thinking too fast, but rather slowing down at the wrong time.

The presence of a familiar solution – in this case, performing maths operations – can impede the consideration of other approaches and block the discovery of better alternatives. While this adaptive response aids people in solving everyday maths problems quickly, it can impede their ability to correctly understand the task and scrutinise the appropriateness of their approach.

The importance of taking your time

Our findings suggest that managers and organisational decision makers need to target their efforts to improve decision-making. Encouraging people to slow down their thinking process or try a bit harder may not be very helpful if they don't know where to direct that attention and effort. For instance, in our study, this could have simply led to more careful checks of the unnecessary maths.

To remedy this, organisations could consider adopting frameworks such as Ralph Keeney's "**value-focused thinking**" that provides guidance on how to create better alternatives for decision problems and productively use the time spent deliberating.

Second, rushing to get underway with doing something can be harmful, but people have the propensity to jump into tasks. This is especially pronounced in situations where the task is difficult, which presumably warrants even *more* time spent understanding the problem, not less. Decision makers in fast-paced environments face intense time pressure, but if people are taking the wrong approach, the output may be tangible, but not valuable.

Instead of deadlines, which encourage rushing, firms can instead implement embargos that stop people from acting prematurely. This can direct them to

spend more time on the initial stage of problem-framing and avoid the pitfalls of rushing to start executing, and therefore minimise the likelihood of acting mindlessly.

The third and related point is that organisations need to incentivise people to take their time to frame problems. This can be especially hard, as much of the work done at this stage is opaque, does not produce tangible outputs and is harder to hold up as a demonstrable proof of work. Coupled with the fact that effort is not always visible, it can be hard to distinguish between an employee taking their time to consider a problem and one doing nothing.

Fundamentally, good problem-solving processes are essential to organisational success. They can reduce the risk of employees rushing to execute tasks hastily in ways that can later lead to losses for the firm. It is hence imperative for organisations to develop incentive systems that align with their long-term goals, or risk encouraging mindlessness otherwise.

Dealing with the unknown

Our findings also speak to a larger issue: how we deal with **uncertain environments**. When faced with something new, we are in a state of unknowing. It is perhaps inevitable to experience a lack of direction and existential dread, which can be deeply uncomfortable.

People form all sorts of belief systems, including stereotyping, to avoid this lack of control and attempt to arrive at a level of understanding. Once they land on something acceptable that provides a sense of familiarity and direction, it can be very reassuring – even if it leads them down the wrong path.

In an organisational context, this can result in a lack of exploration in uncertain environments – the exact situations that would benefit from considering various approaches and alternatives. The more comfortable we are in a state of unknowing, the more we can quash these feelings and avoid falling back on familiar solutions and schemas. This will not only benefit firms, but also society as a whole.

****Richard P. Larrick** is the Associate Dean for Diversity, Equity and Inclusion and the Hanes Corporation Foundation Professor at Duke University's Fuqua School of Business.*

***Jack B. Soll** is a Professor of Management and Organisations at Duke University's Fuqua School of Business.

Find article at

<https://knowledge.insead.edu/strategy/only-fools-rush-pitfalls-hasty-problem-solving>

About the author(s)

Asher Lawson is an Assistant Professor of Decision Sciences at INSEAD.

About the research

"**When and Why People Perform Mindless Math**" is published in *Judgment and Decision Making*.

Download the free Knowledge App

