Mental Simulation Thinking

Idea In Short

Before a surgeon cuts, a pilot lands, or a founder pitches, each runs the event in their head. Mental simulation is that rehearsal: building a vivid picture of what might happen and how it would unfold. Psychologists define it as an imitative representation of an event or series of events, and they find it useful for planning because it shows steps, obstacles, and feelings that abstract goals hide. It also carries a catch. Research shows that simulating an option can make people more likely to choose it, whether or not it is best. This article explains how simulation works, how to use it to anticipate problems, how to guard against its bias, and how to pair it with evidence.

A hospital operations manager must move an emergency department to a new floor over one weekend. The checklist looks complete. Then she closes her eyes and walks through the weekend as a nurse would. She imagines the first ambulance arriving while the old triage desk is half packed. The simulation reveals a gap no checklist showed, and she schedules a temporary desk.

What mental simulation is

Mental simulation is a form of imagination used on purpose. Shelley Taylor and colleagues at UCLA, in a chapter on envisioning the future and self-regulation, define it as the imitative representation of some event or series of events. They describe uses such as rehearsing future events and note that their research focuses on planning for future events.1

The chapter explains one reason simulations feel convincing: they are typically constrained by reality. When you picture a meeting, you picture real people, a real room, and the actual customer, and so the scene seems to be something that could happen.

That quality makes simulation useful for management. It lets you test a plan against a believable picture of the world before you spend resources on it.

The memory behind imagination

Simulation relies on memory. A review in the journal literature explains that episodic future thinking involves constructing possible future personal episodes, while episodic counterfactual thinking involves simulating alternative versions of past events that did not occur. It adds that it is widely acknowledged that memory and decisions are closely related.2

Daniel Schacter and colleagues at Harvard review the topic under the heading of episodic simulation of future events. They describe how remembering past events and imagining future ones draw on a shared brain network, which suggests that the details of your experience are the raw material for your forecasts.3

Practical lesson: richer experience gives richer simulation. A manager who has seen many launches can picture the failure points of a new one. A newcomer may need to interview veterans to borrow their memories.

Simulating the process, not just the prize

Many people simulate the happy ending. They picture the closed deal or the cheering team. That feels good and teaches little.

A more useful simulation walks through the process. Start with the first action, such as sending the proposal. Then imagine the reply, the objection, the delay, and your response. Keep going until you reach the end or a point where you do not know what you would do.

The places where the picture goes blank are the findings. They mark missing information, missing authority, or a missing plan. Write each one down and decide how to fill it before you commit.

The bias built into imagining

Simulation has a trap. A set of studies reported by researchers at Princeton, titled Imagine Before You Decide, tested whether simulation affects decisions by making people more likely to choose options they simulate. The work found that simulation caused a small but significant increase in the likelihood that a person would choose the simulated option over a

nonsimulated one.4

The authors suggest that simulation may feed a loop that reinforces preferences, since choosing what you simulate makes you simulate it more. For a manager, the implication is plain. The option you have pictured in detail will feel more real and more attractive than the one you have not.

The fix is fairness. Simulate every serious option with the same depth, including the one you dislike. Assign someone to simulate the rival plan and report what they see.

Simulating many futures

Single simulations feel convincing and can mislead. Run several. Imagine the base case, a version where a key assumption fails, and a version where a competitor responds sharply.

At the organization level, this practice becomes scenario thinking. The World Economic Forum describes scenario thinking as a pivotal tool in strategic foresight, used to anticipate plausible futures on horizons beyond ten years, and as an aid to decision making in contexts of deep uncertainty.5

Individuals can borrow the idea at a smaller scale. A personal set of three futures for a project, one good, one bad, and one surprising, prepares you for more of what may come than a single forecast does.

Using simulation before key moments

Choose moments where rehearsal pays: a negotiation, a difficult feedback talk, a launch, a crisis response. Spend ten minutes on each.

For a negotiation, simulate the opening, the counteroffer, the silence, and the point at which you would walk away. For a feedback talk, simulate how the person might react, and plan your calm reply. For a launch, simulate the first hour after release and the first call from an angry customer.

After the event, compare the real course with your simulation. Where did it differ? Over time, you learn how reliable your pictures are and where they tend to run too optimistic.

Making simulations concrete

Vague pictures give vague results. Add specifics: names, places, times, numbers, and the actual words people might say. Use the same details that you would see on the day.

Write the simulation as a short story in present tense. "It is Monday, 9 a.m. The client opens the dashboard and sees a blank panel." The format forces you to choose and reveals gaps.

Share it with someone who knows the setting. A colleague may spot an unrealistic step at once, and the conversation often adds details you did not think of.

Limits of the method

Simulation is only as good as the model of the world in your head. If you lack experience with a setting, your images may be wrong in ways you cannot detect.

It also favors what is easy to picture. Rare, abstract, or slow-moving risks, such as a regulatory change over three years, are hard to see in a scene, and they get less weight than they deserve.

Pair simulation with data. Use base rates for how often projects like yours fail, and let the numbers temper the story.

Building the habit

Make simulation a routine step in planning. Add a line to project templates: "Walk through the first week as the person doing the work, and list what surprised you." The line costs minutes and often saves days.

Keep a small log of simulations and outcomes. Note what you pictured, what happened, and the gap. After a few months, patterns appear, such as underestimating handoff delays, and you can correct for them in the next round.

Teach the method to your team. A shared habit of rehearsal makes planning meetings more concrete, since people talk about what will actually happen on a given day and not only about goals.

A hypothetical example

Imagine a hypothetical software firm planning to migrate customers to a new billing system. The project lead simulates the migration for her largest customer, hour by hour. She imagines the invoice run on the first day and sees that the old system will have closed the month while the new one is still open.

She also asks a skeptical colleague to simulate the plan to delay the migration. His picture shows rising support load from the old system. Comparing both, the team chooses a phased migration with a clear cutoff and a rollback step. The case is invented, but it shows how simulating both options exposes issues that a single story hides.

Cautions

Do not treat a vivid scene as a forecast. Vividness shows what is easy to imagine, and it says little about what is likely.

Avoid simulating only the option you prefer. Equal effort on rivals protects against the pull toward the pictured choice.

Finally, do not let simulation replace action. When a cheap real test is possible, run it. Use imagination to decide what to test, and let evidence settle the question.

- 1Envisioning the future and self-regulation
- 2Memory, imagination and decision making
- 3Episodic simulation of future events
- 4Imagine before you decide: episodic simulation increases the likelihood of choosing the simulated option
- 5Future thinking: how to prepare our minds for intergenerational decision-making

Summary

Mental simulation thinking means imagining a specific sequence of events so that you can foresee obstacles, prepare responses, and judge whether a plan is workable. Imagining the

process step by step helps more than imagining a happy outcome, and simulating several options helps more than simulating one. The method has a known bias, since simulated options feel more likely and more attractive, so leaders should simulate rivals fairly and check results against data. Used with care, it turns vague intentions into rehearsed plans. Choose an upcoming decision, simulate it from the first action to the first surprise, and write down what you would do when the surprise arrives.