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‘Aha!’ moments are great for solving problems but less so for creative judgements

We are all familiar with the feeling of “Aha!” that accompanies the sudden realization of our next big ideas. Notably, these insights arrive with a peculiar sense of authority — you don’t just know; *you know you know*.

Decades of research suggest this confidence is usually merited. Across anagrams, riddles and word problems, solutions that arrive as a sudden Aha! are more likely to be correct than through step-by-step reasoning. Researchers term this finding the Eureka Heuristic, or idea that insights act as cognitive shortcuts, telling us that a given solution is likely to be correct, against our background knowledge.

Crucially, past work investigated whether insights predict solution quality in problems with one, verifiable answer. But what happens when there isn’t one?

UC Santa Barbara researchers Jacqueline McGuinness, [Jonathan Schooler](#), [Shelly Gable](#) and [Madeleine Gross](#) posed that question in a recent [featured article in the *Journal of Intelligence*](#). Their answer: in open-ended creative work, the Aha! experience is less a signal of accuracy, and more an illusory sense of brilliance — a phenomenon they refer to as the *Aha! glow*.

“Insights tell us that an idea is promising, but primarily when there is a correct answer to be had,” said McGuinness ’25, manager of Schooler’s META Lab in UCSB’s

Department of Psychological & Brain Sciences. “When we widen the solution space in creative contexts, the feeling of insight can inflate our perception of how good our ideas really are.”

Evidence for the *Aha! glow* first comes from re-analysis of a daily diary study that tracked professional writers and physicists over two weeks. Every night, participants logged their best idea from the day, along with how creative they thought the idea was, and whether or not it came as an “Aha!” moment. Six months later, they were asked to rate the creativity of each idea again.

These professions were chosen as real-world proxies for two types of problem-solving. Physicists tend to work on problems with a single, defined solution. Creative writers, in contrast, face problems where many ideas could work, and the value of each only reveals itself once fully developed.

The findings revealed a striking difference between professions: writers rated their Aha! ideas as highly creative at the time of idea generation, but much lower 6-months later. On the other hand, physicists rated their Aha! ideas as more creative over time. So when an idea arrives with a flash of insight — an Aha! moment — writers come to think less of it over time, while physicists come to think more of it. Crucially, this divergence only occurred for insights; ideas arrived at through analytical reasoning improved slightly over time for both groups.

A second study had 100 participants complete two laboratory tasks: a word problem task with one answer per problem, and the alternate uses task, where participants provide unusual uses for common objects like a brick or tin can. On the alternate uses task, stronger insight experiences predicted how creative people *thought* their ideas were, much more than creativity judgements of independent raters. Within the same participants, the association between insight intensity and idea quality was nearly four times stronger in the word problem task, compared to the creative idea generation task.

“That’s the part I find illuminating,” said Schooler, a distinguished professor of psychological and brain sciences and director of UCSB’s Center for Mindfulness and Human Potential. “For the very same person the experience of aha is well-calibrated to the quality of their ideas on the one task, but produces an Aha! glow on the other.”

Yet the team suspects that the glow remains useful. Across both studies, Aha! experiences also predicted greater task enjoyment, confidence, and self-reported motivation to continue working.

“In creative work where there is no singular way of assessing solution quality, it often takes months or even years to assess whether an idea will be any good,” added Gross, a project scientist in the META Lab. “So a boost of confidence, although not always warranted, might be what you need to stick with an idea long enough to find out.”

In other words, the researchers said, Aha! moments in creative contexts such as the arts may be less a verdict than a motivational impetus — one that those laboring on ideas unfinished have reason to accept, even if exaggerated.

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