

A case for fast science amid calls for slow science

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The ‘slow science’ movement advocates for extending research timelines, treating research pace as a proxy for scientific rigour. However, if the goal is to improve science, we must evaluate scientific rigour directly rather than police its imperfect correlates. In fact, promoting slowness may inadvertently harm science by delaying the incorporation of diverse perspectives, thwarting rapid responses to global crises and – most critically – disproportionately harming early-career researchers who cannot afford to prioritize a stylistic research process over productivity.

Evaluate rigour, not rhythm

The movement for ‘slow science’ argues that the relentless pressure to publish quickly undermines scientific rigour, inflates false positives, and rewards hype over substance. The proposed solution is simple: more time^{1,2} – longer project horizons, fewer ‘rushed’ outputs, and extended review cycles. This proposal is intuitively reasonable: when people work faster, they tend to make more mistakes ($|r| \approx 0.17$)³, which can undermine scientific quality. However, the correlation between work pace and mistakes is smaller than typical effect sizes found in social psychology ($|r| \approx 0.24$)⁴. When considered alongside other familiar correlations – such as the correlation between height and weight ($0.22 < r < 0.75$)⁵ – it becomes clear that inferring scientific rigour from research pace is even less sensible than estimating someone’s height with a bathroom scale.

Instead, we must promote quality research directly; scientific quality can only be assessed by the substance and contribution of the work, irrespective of whether it was completed in five hours or five years. In fact, there are three reasons why faster science may yield better outcomes than slow science.

First, science is a collaborative enterprise. One advantage of submitting a strong paper now, rather than a ‘perfect’ paper next year, is that it enables authors to engage with external perspectives earlier and more frequently throughout the research lifecycle. Peer review is not merely a gatekeeper, but a mechanism for iterative scientific refinement. A slow scientist may treat peer review



An early-career researcher attempts to navigate a fast-moving academic highway.

as the final examination of science, polishing their work in isolation until it feels flawless. The fast scientist, by contrast, can treat peer review as part of the scientific process itself, using it as an opportunity to integrate diverse perspectives, uncover blind spots, and strengthen ideas through revision. After all, manuscripts are almost never accepted without first undergoing major revisions, which underscores the fact that peer review is not a final test but an iterative process. Beyond peer review, fast scientists can also benefit from earlier scientific refinement through the dissemination of preprints and conference presentations, which foster collaborations, new ideas, and critical feedback that improve scientific outputs.

Second, sometimes slow science is not an option. Many phenomena – pandemics, natural disasters, political crises, technological innovations (for example, large language models and artificial intelligence) and medical discoveries – demand rapid and rigorous data collection and interpretation. Waiting for the perfect design, sample or phrasing can sometimes mean missing the phenomenon entirely or failing to meet urgent societal or scientific needs. The COVID-19 pandemic provides one recent example in which science was called upon to act quickly. The unprecedented speed of vaccine development probably saved millions of lives^{6,7}. Even beyond vaccines, scientists across disciplines – clinical researchers, epidemiologists, economists, psychologists, social scientists, and many other specialists – faced novel, time-constrained and societally critical research questions, many of which made profound societal impacts. Even the strongest advocates of ‘slow science’ might

pause to consider whether they themselves benefited from a scientific effort that unfolded at an unprecedented speed, before concluding that speed and quality are fundamentally incompatible. Sometimes speed is not a compromise – it is an ethical and empirical necessity.

A final but crucial point is that policing the speed of science risks disproportionately harming early-career researchers (for example, PhD students and postdoctoral researchers). This is because the slow science movement, although well-intentioned, imposes potential costs that can only be afforded by established mid- and late-career researchers who are insulated by the safety blanket of tenure and funding. For early-career scholars, productivity is not a stylistic preference but a condition of survival in a system that rewards visibility and impact. An early-career researcher who embraces slowness is at risk of self-sabotage, whereas their secure mid-career and senior counterparts are more likely to remain comfortably in place – continuing, perhaps unknowingly, to romanticize a luxurious model of scientific life that only they can afford. Slow science advocates may argue that their approach is intended to dismantle publish-or-perish culture, benefiting early-career researchers. Although this may be true, we should be cautious about encouraging early-career researchers to slow down while the current system is in place. Driving slowly may be safer in theory, but driving at 15 miles per hour on a highway is dangerous for drivers who do not yet have seatbelts.

Science can move fast or slow, but its goal remains the same: advancing truth

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with integrity and rigour. The real challenge is not choosing between speed and rigour – it is finding a way to make them work together.

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References

1. Frith, U. *Trends Cogn. Sci.* **24**, 1–2 (2020).
2. Lutz, J. F. *Nat. Chem.* **4**, 588–589 (2012).

3. Szalma, J. A., Hancock, P. A. & Quinn, S. *Proc. Hum. Factors Ergon. Soc. Annu. Meet.* **52**, 1513–1516 (2008).
4. Lovakov, A. & Agadullina, E. R. *Eur. J. Soc. Psychol.* **51**, 485–504 (2021).
5. Johnson, W. et al. *Ann. Hum. Biol.* **47**, 199–207 (2020).
6. Pischel, L., Yildirim, I. & Omer, S. B. *Chest* **160**, e1–e3 (2021).
7. Saag, M. *Physiol. Rev.* **102**, 1569–1577 (2022).

Competing interests

The author declares no competing interests.