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Advisors

Manoj P.
Rajaram Nityananda
S Giridhar
Vinod Abraham

Publications Coordinator

Shantha K

Publications Associate

Shahanaz Begum

Illustrations

Vidya Kamalesh

Magazine Design

Zinc & Broccoli
enquiry@zandb.in

Printers

SCPL Bangalore – 560062
enquiry@scpl.net

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Editorial

Welcome to this special issue on the Pandemic. Our aim in this issue is to engage with the many ways in which the pandemic challenges our cognitive bias for certainty. A tendency, as the journalist Marcio Moreira Alves describes it, to *"suffer from an absence of doubt"*. Not just in our ability to access the physical, social, and psychological necessities for survival. But, also, in our tendency to seek the certainty of knowledge, of knowing, and of the many symbols, like words, that we use to capture and share this knowing. This is reflected in our quest and love for answers. The more definitive an answer, the more certain its wording, the more powerful its hold on us. The neurologist Robert Burton suggests that this *"...profound 'feeling of knowing' may act as a reward system that provides the positive feedback necessary for us to learn and to continue wanting to learn..."*

In contrast, the history of science, and perhaps all human endeavour, indicates that our understanding of ourselves and the world we inhabit is more likely to be rooted in groundlessness. What we 'know' is a function of what questions we ask, what tools we use to query the world, what interpretations we are capable of, as individuals and as a species, at this point in time. All of these are changing in this moment in multiple ways – imperceptibly shaping possibilities that we don't know of yet, and can't imagine exist. As the physician Lewis Thomas writes: *"Science is founded on uncertainty. Each time we learn something new and surprising, the astonishment comes with the realization that we were wrong before."*

Seen from this lens, the aim of teaching and learning science may be to encourage the ability to more thoughtfully question all finality, all certainty. And, in this questioning, find windows to individual and collective inquiry. Perhaps many of the questions that we ask today have been asked before, or seem irrelevant or unanswerable at the moment. But it is in engaging with these questions that we build the skill to recognise and ask better questions. As the biochemist and cell biologist Ronald D Vale puts it, *"You can't expect to wake up one morning and run a marathon without training. Similarly, asking good questions is a skill that requires practice, training, and mentoring. If a child (or adult) is placed in an environment that does not encourage active questioning, then that skill will not become an active habit of mind."*

This issue began with questions from science teachers from the Azim Premji Foundation. We hope that in responding to these questions, each author provokes you to ask deeper questions. Questions that help explore complex ideas, recognise assumptions, separate what we know from what we don't, and follow out logical consequences of thought. More importantly, we hope that this issue offers the opportunity to stay a bit longer with questions that allow our curious selves to observe with less fear and more wonder.

Which questions do you choose to stay with longest? Share them with us at iwonder@apu.edu.in.

Chitra Ravi
Editor

