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Future-proofing for an uncertain and complex world

How do we prepare for a world that doesn't stand still and is at risk of fragmenting into diverse realities? **By Adrian WJ Kuah**

Today's emerging problems are a fusion of material and abstract concerns, transforming the complicated into the complex.
ILLUSTRATION: EPIPHANY DESIGN

THERE is a growing consensus that certain traits and skills will be indispensable for this brave new liquid world of continuous disruption: resilience, curiosity, imagination, critical thinking, empathy and the ability to solve complex problems, to name just a few.

How, then, do we teach these traits and skills? Can these things even be taught in the classroom, or are they cultivated in the proverbial "school of life and hard knocks"?

While such skills and traits are vital, baseline knowledge remains important. This baseline knowledge – the core knowledge needed to navigate a world of runaway technology – is rising all the time.

As the philosopher John Searle puts it: "(It) is not that the world has become unintelligible in some exciting and apocalyptic way, but that it is a lot harder to understand for the rather boring and unexciting reason that you have to be smarter and you have to know a lot more."

Complicated vs complex

Take the skill to solve complex problems. We are told we need more innovators, inventors, trailblazers and mavericks who can push the boundaries of the possible. We are also told we need to regain that problem-solving ability, the loss of which some ascribe to the complacency of spectacular progress. Here, we have to distinguish between complicated problems and complex ones.

Singapore's early years of independence were complicated ones, in the sense that their solutions were known and knowable ahead of time. For example: housing, public safety, sanitation, education as an instrument to solve unemployment, and so forth. Not to belittle those problems, but we knew what needed to be done to solve them.

Today's emerging problems, however, are different. They involve abstract and amorphous issues such as social justice, identity and rootedness, self-actualisation, entrepreneurship, and the contestation of values. And all of that overlaid on material bread-and-butter issues that persist with renewed emphasis. This fusion of material and abstract concerns transforms the complicated into the complex.

Singapore's development story reflects a mastery of complicated problem-solving. The early years followed a predictable trajectory, the so-called "flying geese" pattern with Japan in the lead and the Four Asian Tigers (Singapore, South Korea, Hong Kong, and Taiwan) flying behind. When "lead goose" Japan vacated the spot, Singapore stepped in.

A former Economic Development Board chairman once described the orderliness of our trajectory: In the beginning, we made biscuits and sold them to our neighbours. When they also started making biscuits, we made the equipment that made the biscuits and sold that instead, until our neighbours made those themselves.

So, then we created biscuit recipes and sold those, until our neighbours created biscuit recipes. And so, we exited the biscuit business and moved on to something else.

The challenge for Singapore is that, while we had a good sense of what new sectors to move on to in the past, we are not sure what the next "something else" is. That makes our next bet, or bets, highly and irreducibly uncertain.

So, how do we develop the ability to deal with the complexity and uncertainty at the heart of our social and economic evolution?

First, we must appreciate the limits and fallibility of knowledge. No body of knowledge is immune to error, or might not become obsolete. In other words, knowledge is unstable in the world of Industry 4.0. Critical thinking and rationality are the best ways to protect against hubris and errors, with humility and openness. History is replete with examples, such as the Roman Empire and various Chinese dynasties, where initial success from innovations and imagination eventually collapsed due to hubris and an inability to adapt to change.

Second, we must reconsider our relationship with uncertainty. We must embrace it, understanding that progress stems from uncertainty, which drives systemic change. Mystery is a part of life that cannot be totally eliminated. Indeed, it is a welcome part of being human. Uncertainty is the spur for evolution in the natural world, provoking the adaptations and innovations we see in all species of life. We need to recover, if not establish afresh, the spirit of openness and flexibility to better respond to the signals in our fast-changing environment.

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Negative capability

Finally, our ability to imagine and create must be protected from the false comfort of templates, dogmas, conventional thinking and false certitudes. All actions in complex and uncertain environments are essentially bets. And not all bets succeed.

The mindset we should cultivate is what the poet John Keats termed "a negative capability".

It is the ability to contemplate the world without imposing a false order and coherence onto something inherently messy. Being able to critically question the "why" of things, and being resilient and comfortable amid uncertainty are quintessential skills for thriving in this anxious world of disruption.

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