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FEATURE

## Understanding curiosity

BY MITCHELL BENNETT ON NOVEMBER 22, 2018

A missing pilot, a hidden treasure, and a nameless dead man on a beach. It sounds like the synopsis to the latest summer action flick.

Those three elements are connected, but perhaps not in a way that would make it to the silver screen. Behind each of these tales is a person who has dedicated a vast amount of their life trying to place the final pieces in a puzzle, ultimately laying it to rest.

The people behind each of these mysteries are exemplary cases of how curiosity not only motivates us through life but how it can also shape someone's life. By understanding how curiosity works and how it has impacted these people's lives, we can come to understand the role curiosity plays in our own lives.

"It's the challenge together with that slight twinkle at the end of the tunnel giving you the feeling that, actually, this is solvable."

In 1948, a well-dressed, athletic man was found dead on Somerton Beach in Adelaide. Police were never able to identify the man, or determine the cause of his death. For the last 11 years, University of Adelaide Professor Derek Abbott has been trying to give the man his name back. The only clue police had was a small piece of paper in the man's pocket—torn from a copy of a Persian poetry book—and in finding the book they discovered what looked like code on the back cover. Mr Abbott set about trying to solve the code in 2007, but as time passed, his interest in the case broadened.

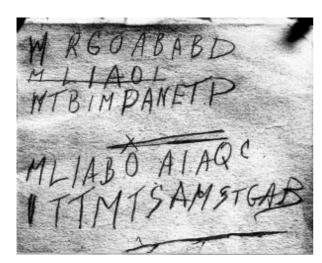
"I wanted to see if I could analyse [the code] in a way which would eliminate things and say what they're not, rather than what they are," he says. "What got me hooked is I had realised that to get further with these letters and what they may represent, I needed to know more about the context of the case."

University of California assistant professor of psychology Celeste Kidd is the primary investigator at the Berkeley-based Kidd Lab, which researches curiosity, exploration and learning. Kidd defines curiosity as "the driving force that moves people to seek out information".



Derek Abbott. Illustration by Yudhistira
Darwan.

She says: "We need mechanisms built in that give us neural rewards for finding out new stuff and getting our mental model of the world as close to reality as possible."



The code found on the cover of the poetry book. Source:
Public domain.

Those neural rewards don't come all at once. Every problem is comprised of smaller elements, and the small neural rewards we get when we discover and solve these smaller problems is very enticing.

Abbott quotes famous mathematician Paul Erdös, who said: "You always know when you've got a good maths problem because it fights back at you."

"This problem of solving who the Somerton Man is, is certainly a good problem," says Abbott. "It does fight back a lot. It tries to elude you, and that's what makes me even more determined. Yet, it's not just the challenge. It's the challenge together with that slight twinkle at the end of the tunnel giving you the feeling that, actually, this is solvable."

Along with the code were several phone numbers, one of which belonged to a local nurse who claimed she did not know the man, a claim Abbott believes is false.

The nurse had a son in 1947, a year before the Somerton Man was found and three years before she was married. Abbott believes the nurse fell pregnant with the Somerton Man's child outside of wedlock, as her son, Robin, shared multiple, distinctive physical traits with him.

Both the nurse and Robin had passed away by the time Abbott discovered this, but Robin had a child of his own who was put up for adoption. Abbott found Robin's daughter in 2010, and three days after meeting her, he proposed. Four months later they married, and now have three children together.



Both the Somerton Man and Robin had oddly-shaped ears and missing incisor teeth. Source: Public domain.

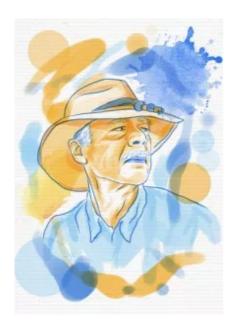
A forensic biologist specialising in ancient DNA is currently processing a hair sample Abbott successfully acquired, but it may be a year before any results are obtained. With the DNA sequenced, Abbott will restore the Somerton Man's name and perhaps his bloodline, and in time may come to understand what led him to his final resting place.

To better understand the role curiosity plays in life, Celeste Kidd says it's best to look back to the earliest parts of our existence, when we were a baby trying to figure out the world we had just entered.

"Infants have a tendency to want more of what they have partially-built representations of," says Kidd. If they understand a little bit about the existence of bunnies, but don't fully understand what they are, they may want more bunnies until they have that full concept."

Kidd says adults work the same way, albeit in more complex domains, being drawn toward subjects in which we already have a partially-built representation, because we seek to complete our understanding. It's a force so powerful it can motivate someone to dedicate a lifetime to a particular question or cause.

"What the Earhart mystery is, is a wonderful vehicle for exploring, demonstrating, and teaching how we go about figuring out what is true."



Ric Gillespie. Illustration by Yudhistira Darwan.

On July 2, 1937 at the height of her career, Amelia Earhart disappeared while attempting to circumnavigate the globe. Ric Gillespie has been searching for her for 30 years, having led 12 expeditions for the Pennsylvania-based The International Group for Historic Aircraft Recovery, the organisation he founded and directs.

There are many competing hypotheses around the circumstances that led to Earhart's disappearance, and countless books have been written about it, but Gillespie says there is only one credible theory.

"The only explanation supported by science-based documentation is that in failing to find Howland Island, she came upon another unnamed island," he says. "She was low on fuel and didn't have a choice, so she landed on the surrounding reef.

"Having successfully landed, she made distress calls for six days before rising tides washed the aeroplane off the reef, leaving her and her navigator Fred Noonan quite literally marooned on a desert island."

TIGHAR continues to analyse the radio distress calls, historical photographs and artefacts, but there are no plans to return to the island. Gillespie stresses that time and environmental factors mean no one will ever find any further physical evidence of Amelia Earhart.



Kidd says we know curiosity is highly impacted by what we've seen or experienced, but that if something violates your expectations of how the world works, what you engage in can shift.

Ric Gillespie developed a passionate interest in aviation safety following a traumatic event.

"I went to an air race in Nevada and unfortunately there was a mid-air collision that killed four people right in front of me—two of those guys were my friends," he says. "Aviation had been a hugely positive thing throughout my life, and then I sat there and watched aeroplanes take two of my friends away from me and their families."

Gillespie worked as an accident investigator for 12 years before starting TIGHAR, but despite Earhart's disappearance being one of the organisation's first projects, he says what happened to her is not important.



Celeste Kidd. Illustration by Yudhistira
Darwan.

"What the Earhart mystery is, is a wonderful vehicle for exploring, demonstrating, and teaching how we go about figuring out what is true," he says. "People assume when your go on these expeditions to an exotic location, it's very Indiana Jones-like stuff—it's not like that at all. You get out there, and it's uncomfortable, it's tedious and it's disappointing.

"Where all the excitement happens—where the eureka moment happens that makes it all worthwhile—is sitting in front of my computer where I get an email with results from a scientific analysis. It's the knowing—it's the having the truth that's great."

In order to be curious, Kidd says, you must be conscious of what you don't know, but you must also be able to gauge how much you don't know. Being aware of the disparity between what you do know and what you could know is called an information gap.

She says a useful tool for understanding how these gaps work is to look at how clickbait websites operate. They exploit information gaps by revealing very little about the article in the headline and in

doing so, they make the reader acutely aware of how much they don't know.

The size of the gap is important, Kidd says, because the article needs to offer a worthwhile return. A large information gap offers a greater neural reward than a small information gap. It's this same mechanism that drives us to invest our time into solving large problems rather than small problems.

Information gaps don't just drive us in professional or academic realms, they permeate our personal lives and can motivate us to solve more novel problems.

"I think curiosity is an inherent trait, and I think it is why humans have advanced so far throughout history; because someone bothered to ask the question, 'what if?'"

For five years, Albuquerque realtor Sacha Johnston has been looking for a treasure chest hidden in the American wilderness by a man named Forrest Fenn, an eccentric artefact collector and dealer, who—following a brush with

As I have gone alone in there And with my treasures bold, I can keep my secret where, And hint of riches new and old.

Begin it where warm waters halt And take it in the canyon down, Not far, but too far to walk. Put in below the home of Brown.

From there it's no place for the meek, The end is ever drawing nigh;

cancer—put an estimated \$2 million of his fortune into a small bronze chest and hid it in the Rocky Mountains.

the back of the book were nine clues embedded in a poem. Before too long, it had captured the attention of thousands of people worldwide.

When Johnston was four years old, her mother left in the middle of the night, leaving her and her brother with a man who was not their father. Soon after, that man got remarried to a woman who Johnston says was insulted by her very presence, and instead of being treated like a child, Johnston was treated like a servant; cooking, cleaning, and only being allowed to sleep on the floor of the living room, well into her time at high school.

"My goal was to try to prove that I was worthy of her love," says Johnston.

Fenn self-published *The Thrill of The Chase* in 2010, and at

There'll be no paddle up your creek, Just heavy loads and water high.

If you've been wise and found the

Look quickly down, your quest to

But tarry scant with marvel gaze, Just take the chest and go in peace.

So why is it that I must go And leave my trove for all to seek? The answers I already know, I've done it tired, and now I'm weak.

So hear me all and listen good, Your effort will be worth the cold. If you are brave and in the wood I give you title to the gold.

"It never worked, but that feeling never went away, so by [finding the treasure], I would be proving to myself that I am smart and I am worthy, and I believe there are a lot of searchers who feel like I do."



Sacha Johnston. Illustration by Yudhistira Darwan.

What keeps someone engaged in a topic is the expectation they are going to keep acquiring more information. As you learn more, you're able to to determine further information gaps you have on a subject, which in turn drives you to learn even more again.

Sacha Johnston says: "I firmly believe curiosity has played into all of this, because without it, I wouldn't be able expand outside my thinking.

"Without saying, 'what is that, I wonder?' or, 'what's over there?' I wouldn't have gotten anywhere

"I've searched a lot of places that led me no closer to the treasure, but it was my curiosity that drew me to those locations."

Johnston believes humanity's intense desire to understand the world has played an integral part in shaping society.

"I think curiosity is an inherent trait, and I think it is why humans have advanced so far throughout history; because someone

bothered to ask the question, 'what if?'" she says. "Someone had the audacity to dare think that humans could expand outside of their current circumstances, and they proved themselves right."

Humankind's relationship with curiosity drives us to gather information on subjects in which we already have some understanding. It's a feedback loop that often leads to specialisation and is the reason our minds attach themselves to profound mysteries such as a missing pilot, a man with no name, or a hidden treasure. But, curiosity is so much more than that.

"Curiosity is not just the thing that allows you to engage in school or not," says Celeste Kidd. "It's also the thing that underlies all the millions of decisions you make in a day about who to talk to, what to talk about and where to look, and all of those decisions shape what you understand about the world. It's the guiding force behind everything we know, everything we're interested in knowing, and ever will know."