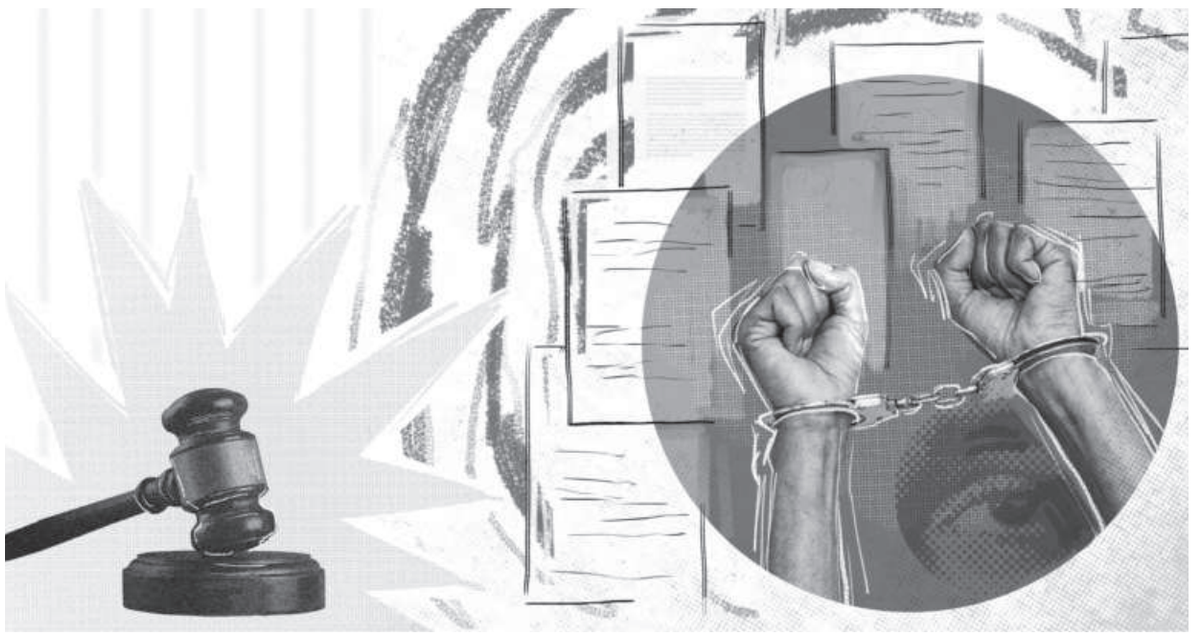

VISUAL: **REHNUMA PROSHOON**

The snowball effect of academic crimes

BLOWIN' IN THE WIND

Dr Shamsad Mortuza
is a professor of English at Dhaka University.

SHAMSAD MORTUZA

I am trying to decode the symbolism of a murder that occurred 17 years ago. In February 2006, a professor of Rajshahi University was killed after he detected plagiarism and piracy in 10 of the 11 research papers submitted by his junior colleague as part of his promotion application. Prof Syed Taher Ahmed would have "turned-him-in." The applicant realised that his career would end if he allowed his senior colleague to reveal the academic forgery. Mia Muhammad Mohiuddin, an associate professor in Taher's department, reacted the only way he could – resorting to violence. Emboldened by his political connections, thanks to his minister brother-in-law, he hired men to end Taher's life. The body was dumped into the septic tank in the victim's house. Two days later, the putrid smell of the missing professor's decaying body filled the air and brought the crime to the public's attention.

In a rare show of dexterity and courage, in less than two months, police charged six people, including Mohiuddin, his brother, the Rajshahi University unit president of Islami Chhatra Shibir at the time, and a university staff member. A judgment announced on May 22, 2008 acquitted two charge-sheeted accused. But the trial dragged on, and bail was given to one main accused. Prof Ahmed's daughter, Shegufta Tabassum Ahmed, who had just started studying law as an undergraduate student when her father was murdered, resolved to seek justice. Ironically, it was her father who had convinced her to become a lawyer. He assured her that she wouldn't need to practise law in a courtroom. She could use her expertise in teaching or consulting. But as fate would have it, this young lawyer would have to move mountains to guarantee justice for her wronged father. The powerful lobby behind the murderers kept delaying the trial process to deny justice for Shegufta's family.

But Shegufta's persistence paid off. A six-member bench of the Appellate Division, headed by Chief Justice Hasan Foez Siddique, delivered the last verdict in the case on September 15 last year. The death sentences against two convicts were upheld, while the other two received life sentences. Two prisoners on death row were hanged on Thursday, 17 years after the murder. The soul of a dead father can now rest in peace. Rajshahi University can feel slightly relieved at the execution of the perpetrators of a heinous crime.

The saga, if I may use the genre to describe the event, has many layers. At a family level, a daughter rose to the occasion to pursue justice. A dead father, quite ominously, initiated her in an academic discipline that would secure justice for him in this earthly world. At an academic level, it goes on to show how an act of academic dishonesty keeps on snowballing. They say that lies breed lies. Here, crimes breed crimes.

A university teacher used pirated and plagiarised materials to claim authorship and climb up to the level of an associate professor. For the last rung of his academic ladder, he had to face Prof Taher Ahmed. In a Ludo game, Taher would have appeared like the big snake before you reached your goal. Mohiuddin's animal instinct came out. In the words of the judge who wrote the verdict, he "annihilated Dr Taher from this world presuming that if Professor Taher lived, the chance of his getting promotion would be zero." At a political level, the case showed much muscle-flexing as it both charged and acquitted a high-profile student leader. For justice to be delivered, the powerful bodies needed to be in cosmic alignment. Even the convicts knew that. According to jail witnesses, the prisoners on death row asked to say their prayers one last time after solace was offered to them by an Imam.

As an academic, what worries me is the exponential unfolding of a simple instance of academic dishonesty. The seed of violence was hiding the kernel of a criminal mind that felt it was his right to pursue wrong. The murder took place before this hullabaloo that we have over artificial intelligence acting as both perpetrator and police of a crime. The open-access ChatGPT is the e-genie that can write stuff for you at your command. Then again, there are other e-genies that can catch the theft. Whether we like it or not, machines will make our lives easier. And civilisation will always be comforted by the ease offered by technology. Nobody remembers number tables anymore, because our phones have an in-built calculator. You don't need to memorise your mother's phone number, because you can always speed-dial or give a voice command. How will this overreliance on someone else's efforts or memory affect us? The lure of presenting someone else's work as your own is as strong as ever. We are all being sucked into a logic of ease. They will soon dump anyone who gets in their way into the hole that man has dug.

The challenge is how to use this forgery in an ethical manner. Yes, you heard it right: how do you become creative in hiding the traces of your stealing and validate AI-driven research as your own? That is where the new focus of pedagogy is being shifted. Earlier this month, the University of Kentucky formed a new committee to look at the impact of artificial intelligence and tools like ChatGPT on higher education and to recommend effective uses of AI.

Perhaps, both Taher and Mohiuddin would have been alive if technology had been there to protect them from academic sacrilege. Seriously, though, we can blame the machine as much as we like, but it has become an integral part of our existence. Surely, without technology, the crime would not have been unearthed with such speed. It was humans who committed the crime. It was humans who felt wronged that a promotion would not happen because of a man, and therefore he deserved to die. His life was wasted and disposed of like filth. But from the dirty filth, the truth appeared. The victim's flesh and blood appeared in court and demanded justice in the name of the law. The convicts, convinced of their cold calculation, cold-bloodedly killed a man who would not deviate from telling the truth. The murder case of Prof Taher Ahmed reminds us of the human conundrum that often loses its way in the name of truth and falsehood. Technology is just a conduit through which this truth and falsity must pass!

How hot is too hot for the human body?

Dr Quamrul Haider
is a professor of physics at Fordham University in New York, US.

QUAMRUL HAIDER

In the months of April through July this year, skyrocketing temperatures have already broken records in many parts of the world. Thus, when the summer of 2023 ends, it will perhaps be the hottest in recorded human history, but it may also turn out to be the coolest we will ever enjoy again. That is because in the years ahead, a warming planet will make this summer feel comparatively cool and pleasant.

Unprecedented temperatures are being recorded at Death Valley in California, where the mercury in July has already reached 53 degrees Celsius. The valley holds the world record for the hottest air temperature – 56.7 degrees Celsius on July 10, 1913 at Furnace Creek, headquarters of the Death Valley National Park.

Braving the sweltering heat, tourists are nevertheless flocking to Death Valley in droves to experience extreme weather for themselves. And yet, there has been only one death in the park: a 71-year-old man collapsed and died on July 18 as temperatures reached 49.4 degrees.

On the other side of the globe, close to 100 people are reported to have died over a period of several days in June from heat-related illness due to a searing heatwave that swept across two of India's most populous states: Uttar Pradesh and Bihar. The deaths happened when temperatures soared to 45 degrees Celsius.

Despite only one death at Death Valley, why did so many people die in India where the temperature was eight degrees less than that in the valley? This raises the question: how hot is too hot for the human body? What determines how much of the punishing heat our body can take and still survive?

The answer lies in the wet-bulb temperature (WBT), which is not the same as the ambient air temperature. Measured by a thermometer wrapped in a water-soaked cloth, WBT takes into account both heat and humidity. It is the lowest temperature to which an object can cool down when moisture evaporates from it. For humans, WBT is 35 degrees Celsius, according to a study published in the journal *Science Advances* in 2020.

Like most warm-blooded mammals, we cool ourselves by converting sweat into water vapour around a constant body temperature of 37 degrees. This temperature maintains a constant balance between heat loss and heat gain.

The WBT will be high if there is more moisture in the air. A high WBT will hamper our body's ability to sweat and cool itself down to maintain its core temperature. As a consequence, the body will overheat, forcing blood to rush to our skin to try to release heat, thereby causing damage to the internal organs. Moreover, the body will become hypothermic (different from hypothermia, which happens when our body's temperature drops to dangerously low levels), leading to symptoms such as nausea, weakness, dizziness and dehydration, a rapid pulse, a change in mental state, fainting, coma and eventually death.

If the humidity is low but the temperature is high, or vice versa, WBT probably will not be near our body's tipping point. For example, if the temperature is 40 degrees and humidity is 20 percent, WBT is only 32 degrees, whereas when both the humidity and the temperature are very high, WBT can go up towards dangerous levels. Once WBT exceeds 35 degrees, it will be difficult to survive for an extended period of time. This is especially true for people who work outside, and those with underlying health issues.

Although survival becomes difficult at high WBT, lower temperatures can also be deadly. Studies show that the lower limit of our body's temperature is 28 degrees Celsius. Below that, the body expends more energy to maintain its core temperature. One of the ways it does this is by shivering, when our muscles involuntarily contract to produce heat. While the lower range has been established, the upper limit is still uncertain.

Now, back to fatalities at Death Valley and India. During heatwaves that engulfed Uttar Pradesh and Bihar in June, humidity was 53 percent, resulting in a WBT of 36 degrees Celsius, which is higher than the upper limit of human adaptability to heat and humidity. On the other hand, average humidity at Death Valley is around 15 percent. Therefore, when the ambient temperature is 53 degrees, WBT is a tolerable 29 degrees. Hence, the big difference in the number of deaths.

As for Dhaka, with an average July temperature of 33 degrees Celsius and 75 percent humidity, WBT is 29.2 degrees. Because WBT is low enough for the people to sweat profusely, there are seldom any heat-related deaths in Dhaka. However, that does not necessarily mean that life will be comfortable during heatwaves.

Humans are amazingly adaptable creatures, but there are limits to their adaptability. We can save ourselves from ferocious cyclones by moving to designated shelters. We can build elevated homes – *machas* – in areas inundated by devastating floods or by rising sea levels. But a blazing heatwave is a different beast. Unlike the rich who can keep themselves cool in the comfort of their air-conditioned homes and offices, or go on a long holiday to cooler haunts, adapting to sizzling temperatures for the homeless and poor folks, particularly those who have to work outside for a living and do not have the luxury of air conditioners or even fans in their hovels, is different than adapting to cyclones and floods.

As global temperatures rise, air will become warmer, and hence will be able to hold more moisture. That, in turn, will increase humidity and cause WBT to go up. They will be very high, last for weeks and months, as we are witnessing now, and blanket large areas. Consequently, heat-related deaths will rise, even in moderate summer temperatures.

According to Nasa, WBT in many regions, including South and Southeast Asia, the Persian Gulf and the Red Sea, Eastern China and Brazil, are likely to exceed the optimum value of 35 degrees Celsius by 2050. So, if we really want to save ourselves from being roasted by oppressive heatwaves, the simplest and sanest way is to force our government to stop burning fossil fuels without further delay.

People gather at an electronics shop to purchase rechargeable battery-powered fans during a countrywide heatwave amid power cuts in Dhaka, Bangladesh, on June 6, 2023. FILE PHOTO: **REUTERS**

CROSSWORD BY THOMAS JOSEPH

ACROSS
1 Takes the wrong way
7 Did garden work
11 Steamed snack
12 "Frozen" princess
13 Reluctant
14 Loft setting
15 Head out
16 Pastel shade
17 Sea eagle
18 Power problem
19 Bottle part
21 Spectrum color
22 Hairdos with a raised ridge
25 Stock holder
26 Cuban coin
27 Copy fixer
29 St. Petersburg's river
33 Twin of myth
34 Writer's work
35 Persia, today
36 Hidden
37 Overdue
38 Pay back
39 Winter glider
40 Swift fish

DOWN
1 Hackneyed
2 Show uncertainty
3 Clarifying words
4 Upstart
5 Different
6 Spot
7 Nun's wear
8 Just for fun
9 Ticks off
10 Cut a rug
16 Haas of "Witness"
18 Earthy color
20 Trade shows
22 Not state or local
23 Bring to life
24 Persuaded
25 Dangers
28 Ready to play
30 Bit of history
31 Brink
32 Modify
34 Bright star
36 Bounder

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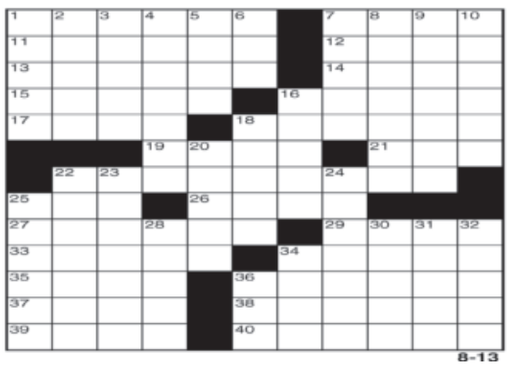

8-13

YESTERDAY'S **ANSWERS**

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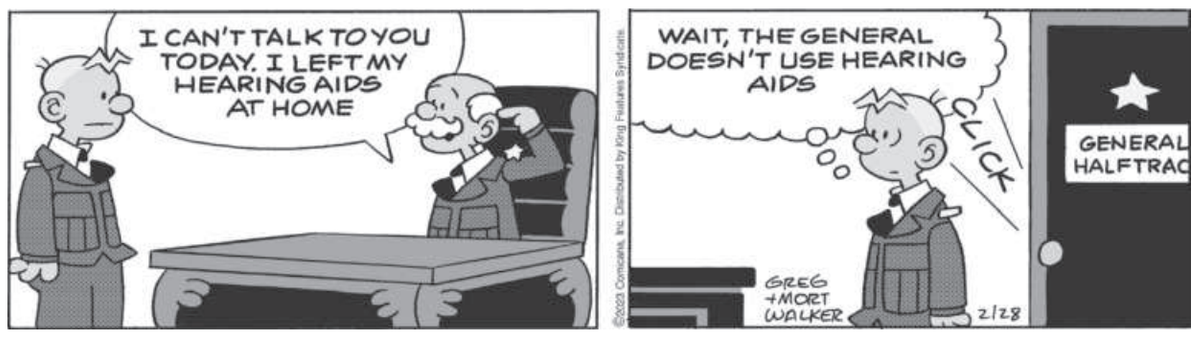
BEETLE BAILEY — BY MORT WALKER



BABY BLUES — BY KIRKMAN & SCOTT