

Hoarding toilet paper: The mystery of such panic buying explained

Singapore's dense, close-knit networks make people more prone to believe their contacts and take up mass behaviours, like buying toilet paper for no apparent reason, just because your WhatsApp chatmates are doing so

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For The Straits Times

Last Friday, just as supermarket shelves began being emptied of rice, instant noodles and toilet paper, our social media accounts started filling up with images of trolleys heaped with those very items. These displays of panic buying soon dominated social media chatter on closed platforms, such as WhatsApp chat groups, as well as more open platforms such as Twitter and Facebook.

Photographs of long lines of shoppers paying for mountains of products went viral quickly, along with memes and jokes ridiculing the selfish hoarding behaviour. What was to account for this descent into seemingly senseless and frantic purchasing? News reports suggest that a collective buying frenzy seemed to seize people across the island after the coronavirus alert level was raised to Disease Outbreak Response System Condition (Dorscon) orange. But was that the only trigger?

Disaster sociologists investigate human behaviour in response to extreme events such as natural catastrophes, mass power outages and terrorist attacks. They observe that there is a natural human instinct to prepare for rare contingencies by buying supplies, contacting loved ones and developing emergency plans. Panic buying is thus not unprecedented and has occurred in response to numerous disasters, both real and perceived.

During the 1962 Cuban missile crisis, Americans ran to grocery stores and stocked up on bread and milk after then United States President John F. Kennedy announced the Soviets' entry into Cuba. In the wake of the 2011 Tohoku earthquake in Japan, consumption of daily necessities surged, with households hoarding rice, bread and noodles. Panic buying thus seems to be a natural coping mechanism in the face of grave uncertainty.

However, this begs the question as to why the elevation to Dorscon



Near-empty shelves at a supermarket last Saturday, after shoppers across the island stocked up on rice, instant noodles and toilet paper. According to the writers, many Singaporeans might have equated the elevation to Dorscon orange with signalling an imminent lockdown of the country and were therefore galvanised into panic buying. ST PHOTO: JOEL CHAN

orange was perceived by so many to be such an imminent and harrowing threat as to require a supermarket sweep.

The answer lies perhaps in a social contagion that seems more lethal than the viral pathogen we are currently battling – the spread of misinformation.

Throughout Friday, there was rampant spreading of fake news reports about the upcoming closure of Singapore schools on Monday.

What was later revealed to be a premature leak of a government press release on the impending upgrade to Dorscon orange also raised anxiety levels as it was also quickly shared on social media.

Crucially, too, these local developments closely followed news reports emerging from Hong Kong of shortages of toilet paper and other necessities as early as four days prior.

Concurrently, panic buying of toilet paper had occurred in Taiwan, apparently triggered by falsehoods about raw materials typically used to manufacture toilet paper being diverted to make surgical masks.

Of course, the broader backdrop of the ongoing coronavirus crisis is the extreme containment strategy being undertaken in China, with Singaporeans having been able to observe via mainstream and social media what has been happening in Wuhan during the lockdown.

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Clearly, in a globalised world, our understanding of local situations is enriched but also complicated by perspectives extending far beyond our immediate environments.

As media consumers, we must contend not only with domestic information flows, but also manage the onslaught of international news, quite apart from having to discern between legitimate news and false rumours. In such a fraught media landscape, disinformation, rumours, untruths and misinformation can become virulent social contagions that trigger mob mentality and herd behaviour such as the panic buying we witnessed.

From the scientific perspective, a

more productive line of pursuit is not the anecdotal nature or origin of specific rumours, but how social contagions emerge and spread within social networks to overcome our common sense.

The smartphone and Big Data revolutions of the past decade have enabled social scientists to gain insight into the intricate mechanisms underlying the spread of social contagions.

Social networks, online and face-to-face, are key to the spread of collective behaviours, including social norms and innovation diffusion.

Collective behaviours among humans are remarkably similar to processes in the animal kingdom such as schooling among fish and flocking among birds. Like these collective animal behaviours, the propagation of collective human behaviours such as fads and mobs arises from complex repeated interactions among individuals.

Recent large-scale studies of social networks provide two important insights. First, the structure of online social networks can accelerate and amplify the process of social influence when there is considerable overlap in our social networks. In other words, when your different networks of friends are also friends with one another.

Second, the channels for the spread of social contagions are distinctly different from those of viral contagions. Notably, viral contagions from an infectious

disease are said to be simple contagious processes as they can be transmitted from a single contact.

By contrast, social norms and social movements are complex contagious processes involving contact with multiple sources of virulence. For instance, if tomorrow a majority of the MRT ridership wear masks, it is expected that the minority will feel compelled to start donning them too.

Interestingly, social epidemiology reveals that misinformation spreads most rapidly through dense neighbourhood networks and cohesive social settings. Pressure from a critical number of contacts in one's social networks – these may not be direct contacts but friends of friends – can create a form of social "momentum" that prompts action. For example, WhatsApp messages from multiple friends about toilet paper hoarding can snowball into a desperate need to buy toilet paper for no apparent reason.

People are also known to be more trusting of information shared by one's immediate social network and further let down their guard against possible misinformation.

Overlapping social networks of strong ties, connected via social media platforms, are thus highly efficient pathways for social contagions to spread across large and diverse populations.

The panic buying observed in Singapore, Hong Kong and Taiwan

last week demonstrates the complex spread of a social contagion in a hyper-connected and globalised world.

Our online social networks extend from Singapore to the broader Asian region and beyond. Fear of a toilet paper crunch in Hong Kong and Taiwan percolated to Singapore, where the highly overlapping nature of local social networks made it propagate like a wildfire. Little wonder then that official assurances about the adequacy of supplies took a while to sink in.

Therefore, even as we attempt to close our air borders to visitors potentially harbouring viral pathogens, the porosity of our information boundaries makes it impossible to keep out social contagions that race through digitally connected networks. Immunising people through timely and effective communication is thus key to tempering fears and combating complex social contagions such as disinformation, rumours, untruths and misinformation.

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China and fake news in the time of coronavirus

Yuan Yang

China's coronavirus has also sparked an epidemic of online panic. When the severe acute respiratory syndrome or Sars hit in 2003, 6 per cent of China's population were online; now almost 60 per cent are. The average user of WeChat, the country's dominant social media platform, spends 90 minutes a day on the app. As a result, while more than 40,000 patients in China are fighting the virus, the entire country is facing an onslaught of online media – much of it disinformation.

There are important upsides to the proliferation of social media in China. It enables citizen reporting of a kind rarely seen in the country – such as video blogs from Wuhan, the city at the heart of the epidemic. Such independent reporting is essential in China's

tightly state-controlled media environment.

At the same time, however, the flow of information is bigger than ever. Receiving information straight to your phone, in real time, can make you feel like the virus is closing in on you – even if it's not.

Being surrounded by panic-inducing headlines, whether true or false, has its own impact on health. A recent study in the Lancet about the impact of the Hong Kong protests on mental health found that spending more than two hours a day following such events on social media was associated with an increased likelihood of post-traumatic stress and depression, although the direction of causality is unclear.

Amid the deluge of coronavirus news, some find it hard to distinguish between real and fake. Last week, my grandpa texted me on WeChat: "Viruses are scared of acid. Twice a day... dab a cotton bud

with strong vinegar and stick it inside your nose. It will help greatly with the current virus outbreak."

I didn't reach for the cotton buds. Friends told me that they had received similar messages from relatives, asking them to dab sesame oil in their nostrils or avoid wearing wool. They often came via that most tricky of social arenas: the family group chat.

Many messages, like my grandpa's, were copy-and-paste rumours that looked at first glance like genuine texts. Many begin with conversational openings: "A friend who works in a hospital told me..." Others include a cry of urgency: "I just got this message!" Or: "Important news."

Such messages remind me of those that circulated ahead of last December's British election, after the Yorkshire Evening Post reported the story of a sick child forced to sleep on the floor of a hospital because of a lack of beds.

Others who seek to confront their relatives have been exasperated by the fact that they might trust a blog more than their granddaughter. "Grandparents buy into the Confucian idea that you shouldn't correct your elders," another said.

Once the story broke, social media posts trying to discredit it proliferated, often opening with: "A friend who is a nurse told me..."

In response, Mr James Mitchinson, editor of the Post, asked one critic: "Why do you trust (this social media account's) claim over the newspaper you've taken for years in good faith?"

In China, though, people are increasingly unsure whether they can take the state-censored media in good faith. There has been widespread anger at the government over its hushing up of virus cases in the early stages of the outbreak, and over the police punishment of the young whistle-blower doctor who had warned of a new strain of coronavirus, and who, tragically, died from it last week.

The first step in dispelling misinformation is establishing an alternative source of credibility. Conversations within families could

be one potent method for this. In reality, most of my friends here have decided the best way to deal with it is to let it be: "It's harmless," said one friend, who referred to the Chinese tendency to give health advice as an expression of care.

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There's also the question of where to start when unpicking a lie. While health rumours can often be corrected, pernicious conspiracy theories are another matter. One friend sent me a message from her grandma claiming the American Freemasons had created the coronavirus to kill off Chinese people. "I know my grandma sends these messages because she cares about me," my friend said.

As current events in China unfold, all of us will need to show patience – and care – in fighting back against falsehoods.

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