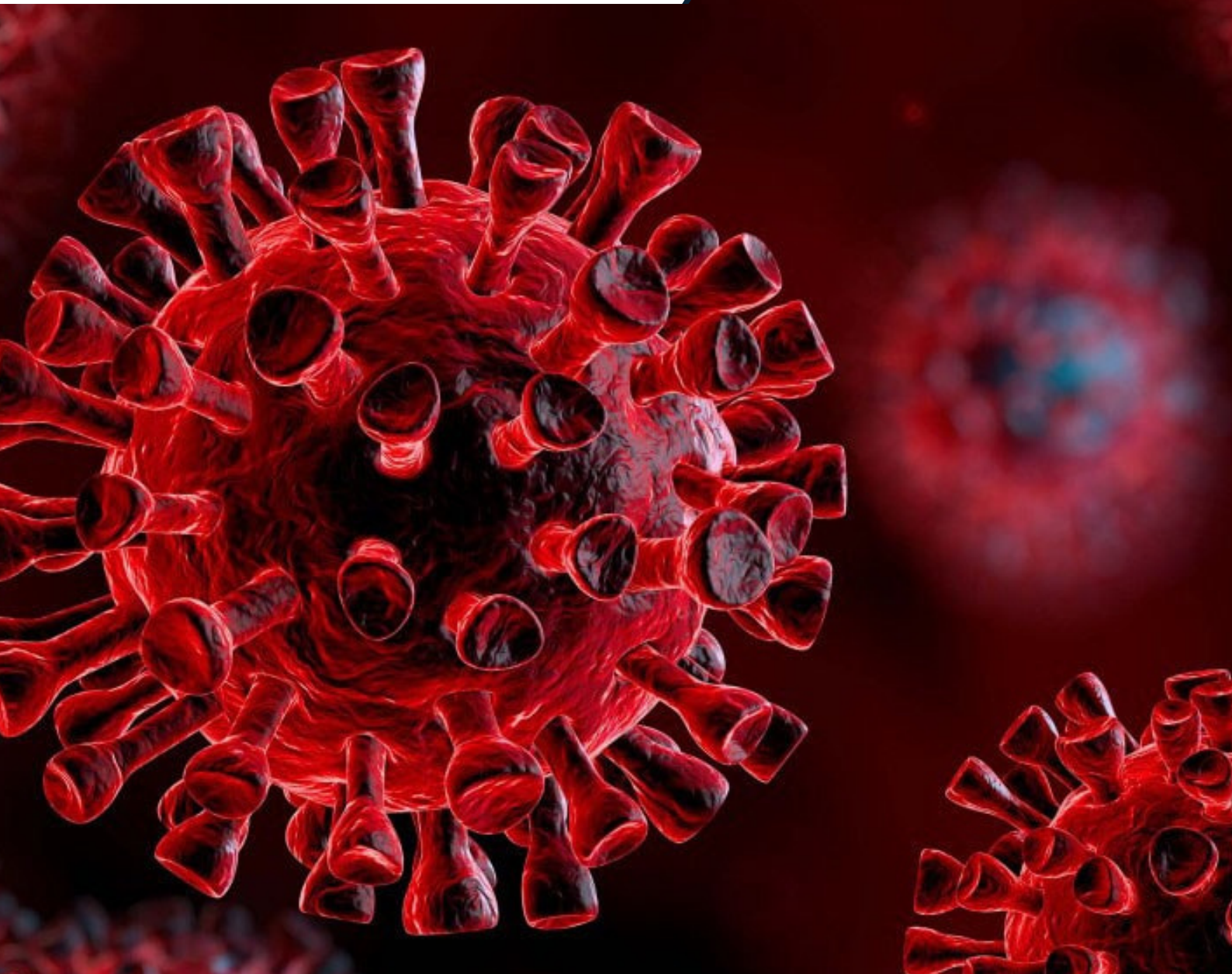


PRAYAS4IAS

AN INITIATIVE BY THE PRAYAS INDIA

SPECIAL ISSUE MAY WEEK 4

COVID ORIGIN



Special Issue

May (Week 4)

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All about WhatsApp's arguments to fight the traceability clause in IT Rules 2021

(Source: [Indian Express](#))

Context: Facebook-owned messaging platform WhatsApp is taking the Indian government to court over the traceability clause in the new IT Rules 2021. WhatsApp's lawsuit has been filed in the Delhi High Court on May 26, the last day to comply with the new rules.

Details:

- The new IT rules include a traceability clause that requires social media platforms to locate the “the first originator of the information” if required by authorities.
- It should be noted that this rule will impact most messaging apps such as Signal, Telegram, Snapchat, Wire and others. Signal and Telegram have recently gained popularity in the market. Signal is completely end-to-end encrypted (E2E) and, in fact, WhatsApp relies on the Signal protocol for its own encryption.
- But given WhatsApp has close to 450 million users in India, the impact of this rule will definitely be significant on the platform.

What does WhatsApp's lawsuit state?

- WhatsApp is invoking the 2017 Justice K S Puttaswamy vs Union Of India case to argue that the traceability provision is unconstitutional and against people's fundamental right to privacy as underlined by the Supreme Court decision.
- The plea states that the court should declare the traceability clause as “unconstitutional” and should not allow it to come into force.
- It is also challenging the clause which puts “criminal liability” on its employees for non compliance, it is learnt.

What has WhatsApp said about ‘traceability’?

- The company has issued a detailed blog post explaining why traceability will not work. A WhatsApp spokesperson said that the requirement to ‘trace’ chats would be the “equivalent of asking us to keep a fingerprint of every single message sent on WhatsApp.”
- This would mean that the platform will have to break end-to-end encryption, which is turned on by default for all messages.
- Traceability would mean re-engineering the app just for the Indian market, which is unlikely to happen. End-to-end encryption ensures that no third-party, not even the messaging app itself can track or read messages.

Why is WhatsApp against finding the originator of a message?

- End-to-end encryption ensures that no one can read the message, except for the sender and the receiver.
- This includes WhatsApp itself. Nor does the app keep a log of who is sending what message and to whom.
- And given it cannot read the contents of a message, finding the originator is even harder. Further many of the messages are just copied or forwarded by users.
- WhatsApp says that if it had to trace an originator, then it would have to “store information”. The argument is tracing even one message means tracing every single message on the platform.
- In order to trace messages, WhatsApp will have to add some sort of “permanent identity stamp” or effectively ‘fingerprint’ each message, which it says will be like a mass surveillance program.



But why can't WhatsApp impose traceability? What is the harm, even if it has to rely on 'fingerprinting' techniques?

- WhatsApp's argument is that traceability, even if enforced, is not foolproof and could lead to human rights violations.
- Further, they will have to "turn over the names of people who shared something even if they did not create it, shared it out of concern, or sent it to check its accuracy."
- In its blog post, it notes that "innocent people could get caught up in investigations, or even go to jail, for sharing content that later becomes problematic in the eyes of a government." It also adds that such an approach will violate "recognised principles of free expression and human rights."
- Internet experts have also argued against digital fingerprinting techniques to achieve traceability, cautioning these can be easily impersonated.
- Experts are clear that fingerprinting techniques are open to abuse, and in the end will undermine encryption entirely. Apps would have to remove encryption in order to implement such digital signatures on messages.
- The post says in order "to trace even one message, services would have to trace every message", because "there is no way to predict which message a government would want to investigate in the future". "In doing so, a government that chooses to mandate traceability is effectively mandating a new form of mass surveillance."
- To comply, messaging services would have to keep giant databases of every message you send, or add a permanent identity stamp — like a fingerprint — to private messages with friends, family, colleagues, doctors, and businesses," it says, explaining that this would mean companies would be "collecting more information about their users at a time when people want companies to have less information about them".

What is WhatsApp's argument on why traceability won't work?

- WhatsApp too states that tracing messages will be "ineffective and highly susceptible to abuse."
- "If you simply downloaded an image and shared it, took a screenshot and resent it, or sent an article on WhatsApp that someone emailed you, you would be determined to be the originator of that content," notes the blog post.
- Further, they state "traceability" goes against the basic principles of how law enforcement and investigations work. "In a typical law enforcement request, a government requests technology companies provide account information about a known individual's account. With traceability, a government would provide a technology company a piece of content and ask who sent it first," explains the blog post.

Can WhatsApp help law enforcement without traceability?

- WhatsApp says it has a dedicated team, which "reviews and responds to valid law enforcement requests."
- It says it has always responded to "valid requests by providing the limited categories of information available to us, consistent with applicable law and policy."
- It also notes that they have a "team devoted to assisting law enforcement 24/7 with emergencies involving imminent harm or risk of death or serious physical injury."

All about the origins of COVID-19

(Source: [Indian Express](#))

Context: Scientists are revisiting a central mystery of COVID-19: Where, when and how did the virus that causes the disease originate? The two prevailing competing theories are that the virus jumped from animals,



possibly originating with bats, to humans, or that it escaped from a virology laboratory in Wuhan, China. The following is what is known about the virus' origins.

Why is the lab in Wuhan a focus on interest?

- The Wuhan Institute of Virology (WIV) is a high-security research facility that studies pathogens in nature with the potential to infect humans with deadly and exotic new diseases.
- The lab has done extensive work on bat-borne viruses since the 2002 SARS-CoV-1 international outbreak, which began in China.
- The search for its origins led years later to discovery of SARS-like viruses in a southwest China bat cave.
- The institute collects genetic material from wildlife for experimentation at its Wuhan lab. Researchers experiment with live viruses in animals to gauge human susceptibility.
- To reduce the risk of pathogens escaping accidentally, the facility is supposed to enforce rigorous safety protocols, such as protective garb and super air filtration. But even the strictest measures cannot eliminate such risks.

Why do some scientists suspect a laboratory accident?

- To some scientists, the release of a dangerous pathogen via a careless lab worker is a plausible hypothesis for how the pandemic started and warrants investigation.
- The Wuhan lab, China's leading SARS research facility, is not far from the Huanan Seafood Market, which early in the health crisis was cited as the most likely place where animal-to-human transmission of the virus may have taken place.
- The market was also the site of the first known COVID-19 superspreader event. Their proximity raised immediate suspicions, fueled by the failure so far to identify any wildlife infected with the same viral lineage and compounded by the Chinese government's refusal to allow the lab-leak scenario to be fully investigated.
- Scientists and others have developed hypotheses based on general concerns about the risks involved in live virus lab research, clues in the virus' genome, and information from studies by institute researchers.
- Although the Wuhan lab's scientists have said they had no trace of SARS-CoV-2 in their inventory at the time, 24 researchers sent a letter to the World Health Organization (WHO) urging a rigorous, independent investigation. The WHO's first such mission to China this year failed to probe deeply enough, they wrote.
- A U.S. State Department fact sheet, released before the WHO mission in the waning days of the Trump Administration, alleged, without proof, that several WIV researchers had fallen sick with symptoms consistent with COVID-19 or common seasonal illnesses before the first publicly confirmed case in December 2019.
- A May 5, story by Nicholas Wade in the Bulletin of the Atomic Scientists, said lab scientists experimenting on a virus sometimes insert a sequence called a "furin cleavage site" into its genome in a manner that makes the virus more infective.
- David Baltimore, a Nobel Prize-winning virologist quoted in the article, said when he spotted the sequence in the SARS-CoV-2 genome, he felt he had found the smoking gun for the origin of the virus.

What are the arguments for animal-to-human transmission?

- Many scientists believe a natural origin is more likely and have seen no scientific evidence to support the lab leak theory.
- Kristian G. Andersen, a scientist at Scripps Research who has done extensive work on coronaviruses, Ebola and other pathogens transmissible from animals to humans, said similar genomic sequences occur naturally in coronaviruses and are unlikely to be manipulated in the way Baltimore described for experimentation.
- Scientists who favor the natural origins hypothesis have relied largely on history.



- Some of the most lethal new diseases of the past century have been traced to human interactions with wildlife and domestic animals, including the first SARS epidemic (bats), MERS-CoV (camels), Ebola (bats or non-human primates) and Nipah virus (bats).
- While an animal source has not been identified so far, swabs of stalls in the wildlife section of the wildlife market in Wuhan after the outbreak tested positive, suggesting an infected animal or human handler.

Has new information emerged to lend credence to one theory over another?

- The scientists' March 4 letter to the WHO refocused attention on the lab-leak scenario, but offered no new evidence.
- Nor has definitive proof of a natural origin surfaced. U.S. President Joe Biden on May 26 said his national security staff does not believe there is sufficient information to assess one theory to be more likely than the other.
- He instructed intelligence officials to collect and analyze information that could close in on definitive conclusion and report back in 90 days.

All about the science and myth behind crocodile's tears

(Source: [Indian Express](https://www.indianexpress.com))

Context: *Mandeville's observation of crocodiles weeping while they devour men sealed the reputation of the reptile, although the first-second century Greek philosopher Plutarch and William Shakespeare — who wrote a couple of centuries after Mandeville was published — are also among those who have referred to crocodile's tears. In popular imagination, crocodile's tears mean an insincere display of emotion, especially sorrow, regret and empathy. Around the world it is most often used for politicians who are seen as being fake and theatrical in their reactions to misery and suffering.*

So do crocodiles actually cry?

- People have long tried to establish whether they do.
- In the early eighteenth century, the Swiss physician and naturalist Johann Jakob Scheuchzer declared as incorrect the widely prevalent belief that crocodiles cry while eating.
- Some two hundred years later, a scientist named George Johnson conducted an experiment, in which he rubbed the eyes of crocodiles with onion and salt.
- When they did not weep, he pronounced that “the popular notion of Crocodiles shedding tears is entirely a myth.”
- In 2006, neurologist D Malcolm Shaner and zoologist Kent A Vliet digitally filmed three American alligators, two common caimans, and two Yacare caimans — all close relatives of crocodiles — as they were fed on dry land in an alligator park, away from the water that naturally wets their eyes.
- “Five of the seven crocodilians developed moisture in their eyes, bubbles, or overflow bubbles within minutes before, during, or after eating,” the researchers reported. “One Yacare caiman and one common caiman did not lacrimate,” they said.





- The conclusion: crocodiles do indeed cry when they eat. Shaner and Vliet reported “the first unequivocal evidence that crocodilians lacrimate during meals and that they do so in a peculiar fashion”.

But what makes the crocodiles lacrimate — or cry?

- A possible reason is the aggressive movement of jaws while eating, which forces air into the sinuses of the crocodiles and stimulates the tear glands, Shaner and Vliet said.
- Crocodile tears, hence, are not from emotional distress.

And can a human being also ‘cry’ while eating?

- There is indeed something called “crocodile tear syndrome” or Bogorad syndrome. It is a medical condition in which patients who are recovering from Bell’s Palsy shed tears while eating or drinking.
- Bell’s Palsy is a rare condition in which facial muscles suffer from a temporary weakness or paralysis. It is the result of compression or swelling of a nerve that controls the facial muscles, and can be caused by a viral infection.

