

CRIMINAL "LOCK"DOWN - AN ANALYSIS OF CRIMES DURING LOCKDOWN

***SUTIKSHAN RAINA**

HISTORY¹

The analysis of public genome sequence data from SARS-CoV-2 and related viruses found no evidence that the virus was made in a laboratory or otherwise engineered.

"By comparing the available genome sequence data for known coronavirus strains, we can firmly determine that SARS-CoV-2 originated through natural processes," said Kristian Andersen, PhD, an associate professor of immunology and microbiology at Scripps Research and corresponding author on the paper.

In addition to Andersen, authors on the paper, "The proximal origin of SARS-CoV-2," include Robert F. Garry, of Tulane University; Edward Holmes, of the University of Sydney; Andrew Rambaut, of University of Edinburgh; W. Ian Lipkin, of Columbia University.

Coronaviruses are a large family of viruses that can cause illnesses ranging widely in severity. The first known severe illness caused by a coronavirus emerged with the 2003 Severe Acute Respiratory Syndrome (SARS) epidemic in China. A second outbreak of severe illness began in 2012 in Saudi Arabia with the Middle East Respiratory Syndrome (MERS).

On December 31 of last year, Chinese authorities alerted the World Health Organization of an outbreak of a novel strain of coronavirus causing severe illness, which was subsequently named SARS-CoV-2. As of February 20, 2020, nearly 167,500 COVID-19 cases have been documented, although many milder cases have likely gone undiagnosed. The virus has killed over 6,600 people.

Shortly after the epidemic began, Chinese scientists sequenced the genome of SARS-CoV-2 and made the data available to researchers worldwide. The resulting genomic sequence data has shown that Chinese authorities rapidly detected the epidemic and that the number of COVID-19 cases have been increasing because of human to human transmission after a single introduction into the human population. Andersen and collaborators at several other

¹ Kristian G. Andersen, Andrew Rambaut, W. Ian Lipkin, Edward C. Holmes, Robert F. Garry, **The proximal origin of SARS-CoV-2**. *Nature Medicine*, 2020; DOI: [10.1038/s41591-020-0820-9](https://doi.org/10.1038/s41591-020-0820-9)

research institutions used this sequencing data to explore the origins and evolution of SARS-CoV-2 by focusing in on several tell-tale features of the virus.

The scientists analysed the genetic template for spike proteins, armatures on the outside of the virus that it uses to grab and penetrate the outer walls of human and animal cells. More specifically, they focused on two important features of the spike protein: the receptor-binding domain (RBD), a kind of grappling hook that grips onto host cells, and the cleavage site, a molecular can opener that allows the virus to crack open and enter host cells.

EVIDENCE FOR NATURAL EVOLUTION²

The scientists found that the RBD portion of the SARS-CoV-2 spike proteins had evolved to effectively target a molecular feature on the outside of human cells called ACE2, a receptor involved in regulating blood pressure. The SARS-CoV-2 spike protein was so effective at binding the human cells, in fact, that the scientists concluded it was the result of natural selection and not the product of genetic engineering.

This evidence for natural evolution was supported by data on SARS-CoV-2's backbone -- its overall molecular structure. If someone were seeking to engineer a new coronavirus as a pathogen, they would have constructed it from the backbone of a virus known to cause illness. But the scientists found that the SARS-CoV-2 backbone differed substantially from those of already known coronaviruses and mostly resembled related viruses found in bats and pangolins.

"These two features of the virus, the mutations in the RBD portion of the spike protein and its distinct backbone, rules out laboratory manipulation as a potential origin for SARS-CoV-2" said Andersen.

Josie Golding, PhD, epidemics lead at UK-based Wellcome Trust, said the findings by Andersen and his colleagues are "crucially important to bring an evidence-based view to the rumours that have been circulating about the origins of the virus (SARS-CoV-2) causing COVID-19."

"They conclude that the virus is the product of natural evolution," Goulding adds, "ending any speculation about deliberate genetic engineering."

² Kristian G. Andersen, Andrew Rambaut, W. Ian Lipkin, Edward C. Holmes, Robert F. Garry. **The proximal origin of SARS-CoV-2.** *Nature Medicine*, 2020; DOI: [10.1038/s41591-020-0820-9](https://doi.org/10.1038/s41591-020-0820-9)

POSSIBLE ORIGINS OF THE VIRUS³

Based on their genomic sequencing analysis, Andersen and his collaborators concluded that the most likely origins for SARS-CoV-2 followed one of two possible scenarios.

In one scenario, the virus evolved to its current pathogenic state through natural selection in a non-human host and then jumped to humans. This is how previous coronavirus outbreaks have emerged, with humans contracting the virus after direct exposure to civets (SARS) and camels (MERS). The researchers proposed bats as the most likely reservoir for SARS-CoV-2 as it is very similar to a bat coronavirus. There are no documented cases of direct bat-human transmission, however, suggesting that an intermediate host was likely involved between bats and humans.

In this scenario, both of the distinctive features of SARS-CoV-2's spike protein -- the RBD portion that binds to cells and the cleavage site that opens the virus up -- would have evolved to their current state prior to entering humans. In this case, the current epidemic would probably have emerged rapidly as soon as humans were infected, as the virus would have already evolved the features that make it pathogenic and able to spread between people.

In the other proposed scenario, a non-pathogenic version of the virus jumped from an animal host into humans and then evolved to its current pathogenic state within the human population. For instance, some coronaviruses from pangolins, armadillo-like mammals found in Asia and Africa, have an RBD structure very similar to that of SARS-CoV-2. A coronavirus from a pangolin could possibly have been transmitted to a human, either directly or through an intermediary host such as civets or ferrets.

Then the other distinct spike protein characteristic of SARS-CoV-2, the cleavage site, could have evolved within a human host, possibly via limited undetected circulation in the human population prior to the beginning of the epidemic. The researchers found that the SARS-CoV-2 cleavage site, appears similar to the cleavage sites of strains of bird flu that has been shown to transmit easily between people. SARS-CoV-2 could have evolved such a virulent cleavage site in human cells and soon kicked off the current epidemic, as the coronavirus would possibly have become far more capable of spreading between people.

³ Kristian G. Andersen, Andrew Rambaut, W. Ian Lipkin, Edward C. Holmes, Robert F. Garry. **The proximal origin of SARS-CoV-2.** *Nature Medicine*, 2020; DOI: [10.1038/s41591-020-0820-9](https://doi.org/10.1038/s41591-020-0820-9)

Study co-author Andrew Rambaut cautioned that it is difficult if not impossible to know at this point which of the scenarios is most likely. If the SARS-CoV-2 entered humans in its current pathogenic form from an animal source, it raises the probability of future outbreaks, as the illness-causing strain of the virus could still be circulating in the animal population and might once again jump into humans. The chances are lower of a non-pathogenic coronavirus entering the human population and then evolving properties similar to SARS-CoV-2

CRIMES DURING LOCKDOWN

India has been in lockdown since 25th March 2020 with only a handful of relaxations given by the Centre and the State Government respectively. As a result there has been a paradigm shift in the crimes committed. The crimes that were most common in some states of the country have seen a considerable decrease in the same. In Mumbai for instance, there were a total of zero cases relating to chain snatching in 94 police stations of the city⁴. Chain snatching had been a rising problem in Maharashtra and while the rapid actions and measures taken by the Mumbai police had brought down such cases in the city, it took a pandemic to completely wipe out the problem for a certain amount of time.

Another form of criminal offence did not seem to make its way through the month of April and that was the crime of Dacoity. Not a single case had been reported by the Mumbai Police in the month of April which persisted to the offence of Dacoity⁵. Dacoity is an offence defined under section 391 of the Indian Penal Code as

“When five or more persons conjointly commit or attempt to commit a robbery, or where the whole number of persons conjointly committing or attempting to commit a robbery, and persons present and aiding such commission or attempt, amount to five or more, every person so committing, attempting or aiding, is said to commit “dacoity”⁶.”

In Haryana, the crime rate declined in an unprecedented way. The state saw a decrease of 50% in heinous crimes as compared to the same time last year. The number of murders went significantly down from 94 in April 2019 to a mere 49 in April 2020. This is a fall of almost

⁴ <https://indianexpress.com/article/cities/mumbai/crimes-during-lockdown-no-chain-snatching-dacoity-6407213/>

⁵ <https://indianexpress.com/article/cities/mumbai/crimes-during-lockdown-no-chain-snatching-dacoity-6407213/>

⁶ Indian Penal Code(1860), Section 391

49.1%⁷. The offence of murder was not the only one which saw a downward trend, the offence of grievous hurt and simple hurt also went significantly down from 221 from April 2019 to 149 in April 2020. There was also a drastic plunge in the cases of kidnapping and abduction of that of men. A total of only 7 were abducted in the month of April 2020 as compared to 42 in that of April 2019. This marks a drastic fall of 84% for the offence of abduction⁸. The offence of wrongful confinement was also seen to have a downward trend as only a total of 225 cases were reported in the month of April 2020 as compared to 965 in that of 2019. There has been a decline of 35% in the offence of burglary in April with only a mere 358 cases being registered as compared to 556 in April 2019. The offence of theft saw even a more pronounced plunge in the statistics. The offence of theft saw only 365 cases in April 2020 as compared to 1961 in that of April 2019 which is a drastic decrease of 82%⁹.

The Capital city Delhi also saw a drastic fall in the conventional crimes. The total number of crimes dropped to 1890 from 3416 in the previous Year. Cases of molestation of women dropped to 72 this year from 144 in the previous year. There was also a drastic decrease in the rape cases in the capital. The capital recorded an unprecedented fall of 83% in the rape cases as compared to the data of the same month in the previous year¹⁰. The number of kidnappings also dropped to 150 from 259 while the number of robberies fell to 53 from 109. Motor vehicles theft also recorded a statistical decrease, there were only 1243 thefts as compared to 1982 in the previous year¹¹. In addition to the drastic fall in the crime rate, there is also a decrease in the road accidents and the fatalities caused by road accidents. In Kerala, there has been a significant decrease in suicides, unnatural deaths and that of fatalities caused as a result of road accidents. The number of missing cases in the year 2020 has been 132 as compared 851 last year. The state of Kerala also saw a plunge in the cases of suicide as the numbers fell from 445 last year to 192 this year. The number of unnatural deaths were 1052 last year as compared to 630 this year. The number of people who lost their lives on roads was restricted to only 13 as compared to 185 persons last year¹².

⁷ <https://timesofindia.indiatimes.com/city/gurgaon/haryana-witnesses-unprecedented-decline-in-criminal-cases-during-lockdown/articleshow/75614045.cms>

⁸ <https://timesofindia.indiatimes.com/city/gurgaon/haryana-witnesses-unprecedented-decline-in-criminal-cases-during-lockdown/articleshow/75614045.cms>

⁹ <https://timesofindia.indiatimes.com/city/gurgaon/haryana-witnesses-unprecedented-decline-in-criminal-cases-during-lockdown/articleshow/75614045.cms>

¹⁰ <https://www.thehindu.com/news/cities/Delhi/83-drop-in-rape-cases-during-lockdown/article31342419.ece>

¹¹ <https://www.businesstoday.in/latest/trends/coronavirus-lockdown-crimes-in-delhi-drop-by-80-as-people-stay-indoors/story/400142.html>

¹² <https://indianexpress.com/article/india/coronavirus-covid-19-crime-rate-road-accidents-suicides-6386519/>

However not all types of crimes went down, it is undoubted that according to the data referred above the conventional type of crimes affecting human body or property have gone down but the menace of domestic violence has seen a steep rise in the cases. The primary reason that has attributed to a steep rise in the offence of domestic violence is the uncertainty that the virus carries with it. The people who had secure jobs have not been paid salaries to its fullest, many people have also lost their jobs or livelihoods owing to this pandemic, all of which has resulted in frustration which has been taken out on either the kids or women. The National Commission for Women(NCW) received a total of 587 complaints from March 25th to 16th April 2020 out of which 239 were of Domestic Violence, in comparison to a total of 123 complaints between February 22 to March 22¹³.

Another type of crime which has seen the light of the day owing to the limited ways in which a person could release frustration is sextortion. Sextortion is an offence which means

"the practice of forcing someone to do something, particularly to perform sexual acts, by threatening to publish naked pictures of them or sexual information about them"¹⁴.

The founder of Akancha Foundation said that they had received a total of 412 complaints out of which 3896 were that of grievous nature ranged from abuse, indecent exposure, unsolicited obscene pictures, threats, malicious emails claiming their account was hacked, ransom demands, blackmail and more. They further said that after the commencement of lockdown they had been getting a total of 20-25 complaints on an average per day which was 10 before the lockdown was imposed.

The founder said¹⁵

"This is just the frustration and anger that is coming to the fore as there is no other release right now. This is a form of frustration as they (cyber criminals) are caged right now,"

¹³ <https://economictimes.indiatimes.com/news/politics-and-nation/india-witnesses-steep-rise-in-crime-against-women-amid-lockdown-587-complaints-received-ncw/articleshow/75201412.cms?from=mdr>

¹⁴ <https://dictionary.cambridge.org/dictionary/english/sextortion>

¹⁵ <https://www.hindustantimes.com/india-news/significant-increase-in-cybercrime-against-women-during-lockdown-experts/story-QNPwq5Jr1iAkAXzacLnc5K.html>

"Men are morphing images and threatening women. There is a whole racket going on where women are getting these emails that your phone and laptop has been hacked, and if you don't deposit money my account I will send your morphed images, and share it with all your contacts".

Online frauds like phishing have also seen a steep rise during this lockdown. Phishing is a method of trying to gather personal information using deceptive e-mails and websites. Fraudsters can send you unauthorised payment links via SMS. These fake bank URLs will look almost identical to the original URL. If in a hurry you click on that link, it will direct you to the UPI payment app installed on your phone and will ask you to select any of the apps for auto-debit. Once, you give permission, the amount will get debited from the UPI instantly. Another type of approach that the cyber criminals are following now is that of remote screen mirroring tool. The cyber criminals have unverified apps in google play or apple app store which when downloaded mirror the entire mobile phone and as a result of which the person is granted an easy access to the files which are private ranging from personal pictures to account details. The cyber frauds are on a surge owing to the limited ways of release of frustration and ample of time to deceive a common man who is not technologically as advanced as the perpetrator. Hence it is extremely important that the citizens should make themselves aware of the various threat the cyber world is likely to pose to them. The citizens, especially those who are operating from home for their banking transactions should keep the information secret. They should not share the information with anyone, especially their passwords. They should further be aware of the person who is asking for such information and after being satisfied beyond doubt, should only the information be shared. The citizens should be aware of their official banking websites or net banking as the practice of phishing has become so sophisticated that it is almost impossible for a person to be sure of the website. One such example is that of www.mybanker.com and www.my.banker.com. The two websites may appear to be same but the first website is the official website of a bank and the other is a phishing website.

Hence the citizens should be absolutely careful and should know each click that they do on their computer. In addition, the citizens should also install some antispam and antimalware software from valid websites to protect personal information.

CONCLUSION

Hence it can be consciously derived that the balance in the criminal system has been equally maintained and that the criminal equilibrium has been achieved. Where there was a decline in physical crimes such as kidnapping or murders, there was an equal or more increase in the number of cases recorded that did not require any physical connection. Online cases saw an unprecedented increase in the number of cases. The primary concern of the police should be that it should be ready with the dynamic changes of the criminal realm. The police should equip itself with technology to catch the criminals of the online world. Since with the paradigm shift in the society and how it is going to work post pandemic, the police has to be extra vigilant in the technology that it I going to use.

Not only this, but the police should also be given training to operate such equipment as most of the police personnel are not technology friendly. A new hi tech department should be made in each and every police station to deal with such online frauds and crimes.