The #nCoV2019 #coronavirus and the Non-Linearity and Exponential Risks

Sunday, February 2, 2020 by Aly-Khan Satchu
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27-JAN-2020 :: #WuhanCoronavirus #nCoV2019 #coronavirus
http://j.mp/2RxwB2l

President Xi warned The Corona virus is 'accelerating' [and the] country [is] facing 'grave situation'.
the only explanation left is artificial DNA modification
What is clear is that the CCP suppressed information until we reached a Groucho Marx "Who Ya Gonna Believe, Me or Your Own Eyes" moment.
Epidemiologists speak of Tipping Points. Malcolm Gladwell described the "Tipping Point" as the name given to that moment in an epidemic when a virus reaches critical mass. It's the boiling point. It's the moment on the graph when the line starts to shoot straight upwards.
In an article in 2014 about Ebola I called it the moment of "escape velocity" and wrote "viruses exhibit non-linear and exponential characteristics"
Given the new hyperconnectedness of the World [For example, did you know there is a daily Ethiopian Flight between Wuhan and Addis Abeba - As of Thursday Ethiopian Airlines, which has multiple daily passenger and cargo flights to China and Africa's busiest airport hub, said it was waiting for guidance from Ethiopia's Health Ministry on how to respond], I have to assume that the Corona virus is already in Africa but just not diagnosed. Thats a racing certainty.
Paul Virilio wrote "With every natural disaster, health scare, and malicious rumor now comes the inevitable "information bomb"–live feeds take over real space, and technology connects life to the immediacy of terror, the ultimate expression of speed"
And in his book City of panic he described The city reconstructed through the use mediatized panic.
Markets bought Gold and G7 Bonds on Friday as Investors dived into Safe Havens, Next week we could see these moves turn parabolic.
"But it is a curve each of them feels, unmistakably. It is the parabola. They must have guessed, once or twice -guessed and refused to believe -that everything, always, collectively, had been moving toward that purified shape latent in the sky, that shape of no surprise, no second chance, no return."
I’m not going to sugar coat things for you. I’m sure it makes you feel better convincing yourself that this is some media invention @StephenMcDonell
https://twitter.com/StephenMcDonell/status/1223893687039447042?s=20

This new modelling study estimates 75,800 individuals in the Chinese city of Wuhan may have been infected with 2019 novel coronavirus (2019-nCoV) as of January 25, 2020 - @TheLancet
https://twitter.com/TheLancet/status/1223258649822474241

Source: @TheLancet
▪ Estimates: multiple sources: 500,000+ infected: China. R0 2.5-3+ Doubling time 3 days. Unprecedented speed. @rtnarch via @ScottGottliebMD https://twitter.com/rtnarch/status/1223274733015195648

▪ Estimates: multiple sources: 500,000+ infected: China. R0 2.5-3+ Doubling time 3 days. Unprecedented speed. Fatality rate range .1-1%+: truly unknown. 2-14 day incubation. 20% diagnosed at hospital need critical care. If sustained transmission, could infect 15-20 percent world.

▪ This is not that good. 50% fatality rate? @DavidBCollum https://twitter.com/DavidBCollum/status/1223505262394429440?s=20

▪ they also found their models suggest potentially earlier epidemic start date around Dec 1-15th fit their results the best. @DrEricDing https://twitter.com/DrEricDing/status/1223667163447382020?s=20

▪ This is actually consistent with other previous @NEJM study that had indeed confirmed this in their figure 1:

▪ Looking at the phylogenetic tree recently published derived using all the full genome sequence, we see the 2019-nCoV virus does not have clear monophyletic support given the bootstrap value of 75 (Fig 1). http://j.mp/2S4by6y

![Fig 1](source: jameslyonsweiler.com)
There is no doubt that there is a novel sequence in 2019-nCoV; we confirmed this via sequence alignment. Here's the DOT plot:

http://j.mp/2S4by6v

Option 4. A recombined virus made in a laboratory for the purpose of creating a vaccine.
The disease progression in of 2019-nCoV is consistent with those seen in animals and humans vaccinated against SARS and then challenged with re-infection. Thus, the hypothesis that 2019-nCoV is an experimental vaccine type must be seriously considered.
Evidence for: Sequence homology between INS1378 to pShuttle Coronavirus vaccine; presence of a SARS-like Spike protein in bat coronavirus, otherwise most similar to bat coronaviruses; low bootstrap value.
Evidence against: Low sequence homology (but highly significant). NB these viruses are RNA viruses and they can evolve quickly, even under laboratory conditions.
Status: Most likely.

China Virus Cases May Be Undercounted Even With 3,000% Surge @BloombergQuint
http://j.mp/2vFBhL1

The number of confirmed cases of the new coronavirus in China has skyrocketed to more than 9,000, surpassing the official count during the SARS epidemic.
But the true number of infections may be even higher, as health workers struggle to catch up with the disease.
A shortage of testing kits and overworked hospital staff are straining China's health system, hampering efforts to accurately track the virus.
Jonathan Yu, a doctor at a university hospital in Wuhan, is on the front lines, testing patients for the coronavirus.
Accurately spotting the virus isn't easy and can take several attempts, he said. "A patient may be found as negative for the first or second test, and then found to be positive the third time," said Yu.
"It is like fishing in a pond: You did not catch a fish once, but that does not mean the pond does not have fish."

▪ "viruses exhibit non-linear and exponential characteristics" @nytimes
https://twitter.com/alykhansatchu/status/1223265445287006208?s=20

▪ If we cannot trust China, how about the rest of the world? Non-China infections (orange) 6 to 153 in 10 days. @biancoresearch
https://twitter.com/biancoresearch/status/1223855221581000709?s=20
Dear @biancoresearch I think as you suggested we need to study evacuee infection rate and extrapolate from there #coronavirus sample size might be small but infinitely more accurate @DrEricDing
https://twitter.com/alykhansatchu/status/1223868842700656640?s=20

27-JAN-2020: number is massively undercounted #WuhanCoronavirus #nCoV2019 #coronavirus
http://j.mp/2RxwB2l

#coronavirus Coronavirus: China accused of 'burning bodies in secret' @nzherald
http://j.mp/2RlzuwP

Chinese-language news outlet Initium interviewed people working at local cremation centres in Wuhan, who said bodies were being sent directly from hospitals without being properly identified and added to the official record.

27-JAN-2020 :: Gladwell "Tipping Point" It's the boiling point. It's the moment on the graph when the line starts to shoot straight upwards "escape velocity" "viruses exhibit non-linear and exponential characteristics" #nCoV2019 #coronavirus http://j.mp/2RxwB2l https://twitter.com/alykhansatchu/status/1223241034316111874?s=20

It certainly feels like a decade of "semiotic arousal" when everything, it seemed, was a sign, a harbinger of some future radical disjunction or cataclysmic upheaval.
http://j.mp/2tfjfOe
- At 500-1000 cases cities will likely, completely rationally, shut down. I estimate 1-2 weeks for Beijing, Shanghai, 2-4 weeks for Singapore. @EMostaque https://twitter.com/EMostaque/status/122388374039306241?s=20

- And in Inner Mongolia, there is another 40-year-old male patient who was confirmed to have contracted the virus even though he never left his city, never got close to anyone being feverish @WilliamYang120 https://twitter.com/WilliamYang120/status/1223938286512590848

- And in Inner Mongolia, there is another 40-year-old male patient who was confirmed to have contracted the virus even though he never left his city, never got close to anyone being feverish, never went to any agricultural trading market and never been around wild animals.

- Life in the time of #coronavirus @AFP http://j.mp/2RRdXCH

- Wuhan, January 26, 2020. (AFP / Hector Retamal) http://j.mp/2RRdXCH

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*Source: AFP/ Hector Retamal*

- Un homme gît sur la chaussée à Wuhan, dans la province chinoise de Hubei. Le 30 janvier 2020. (AFP / Hector Retamal) http://j.mp/2RRdXCH
African countries are scrambling to avert an outbreak of the rapidly spreading coronavirus strain, as health officials warn that the poorest countries are ill-equipped to combat the deadly disease.

There have been no verified infections in Africa to date, but deep trade links with China and often overstretched healthcare systems are raising concerns about the capacity to respond to an outbreak.

The World Health Organization (WHO) on Thursday declared a global emergency as coronavirus infections spread, after initially downplaying the threat.

"Our greatest concern is the potential for the virus to spread to countries with weaker health systems," WHO chief Tedros Adhanom Ghebreyesus said.

J. Stephen Morrison, director of the Global Health Policy Center at the Center for Strategic and International Studies in Washington, said the disease risked taking root if it reaches certain African countries.

He warned that such a scenario could usher in a "global pandemic".

The Ebola virus raged through Liberia, Sierra Leone and Guinea in 2014-2016, killing about 11,300 people.

Mosoka Fallah, the head of Liberia’s public health institute, told lawmakers this week that the rapid spread of the new coronavirus was "catastrophic".

"Steps must be taken as early as possible to prevent it from entering here," he said, adding that the government had ramped up airport checks.

Anciao Fabiao Paulo, an Angolan student, told AFP that "it’s over" if coronavirus reaches his country.

"Our health system is vulnerable and there are no good specialists. With malaria, people are already dropping like flies," he said.
Coronavirus has killed more than 200 people in China -- where it emerged in the central city of Wuhan -- and infected thousands more.

- Screenings at airports -
  At Senegal's Blaise Diagne International Airport, health officials peer into a small thermal camera before the passport check.
  "The first sign of these communicable diseases is a fever," said Barnabe Gning, in charge of sanitary control in the West African country's airports.
  However, Gning cautioned that thermal cameras are not foolproof.
  Similar thermal cameras which detect feverish passengers are now going up across African capitals.
  These allow people with a high temperature to be identified -- the camera screen shows their body heat -- and then quarantined pending a lab test confirming a coronavirus infection.
  Egypt, Morocco, Ethiopia, Kenya, South Africa, Rwanda and Mauritius are expected to "enhance screening" because of frequent traffic with China, he said.

- 'Avoid Chinese shops' -
  Elsewhere, governments have enacted travel bans or urged people to remain indoors, adding to a sense of alarm.
  Fears of an outbreak were rife in Nigeria this week, when authorities shut a Chinese supermarket in the capital Abuja. But they did so to remove expired products.
  The southern African country of Botswana announced a suspected case on Friday, also sparking fears.
  "The first thing is to avoid going to Chinese shops as much as possible," said Mqondisi Dube, a journalist in the capital Gabarone.
  And in the West African archipelago of Cape Verde, locals are rushing to buy fennel because of false claims it heals coronavirus.
  In a sign of extreme caution, some governments are also asking Chinese nationals to remain indoors.
  Nigeria has urged any person arriving from China to "self-isolate" for at least two weeks, even if they are not ill.
  The Chinese embassy in Mauritania has similarly asked its recent arrivals in the West African country to remain indoors for two weeks.
  In Mozambique, the government has suspended visas for Chinese citizens and forbidden its citizens from travelling there.
  South African authorities are checking passengers' temperatures at airports and have listed 11 hospitals that will deal with emergencies if they arise.

- Suspected cases rising -
  Though Africa is one of the few continents not to have confirmed coronavirus cases, the number of suspected cases is increasing.
  Several countries, including Ethiopia, Kenya, Angola, Botswana and Ivory Coast, have signalled possible infections.
  But confirming coronavirus can take time, as health authorities lacking expertise have to send samples to labs in countries such as South Africa.
  "It is very possible that there are cases that are going on the continent that have not been recognised," John Nkengasong, the director of the Africa Centres for Disease Control and Prevention, told reporters this week.
Update on suspected #CoronaVirus in Botswana. Numbers now at 5. Healthy ministry await results to confirm their suspicion. #CoronaVirus #Botswana

https://twitter.com/VictorBaatweng/status/1223605528930213890

Source: Botswana Ministry of Health and Wellness
@flyethiopian do you employ brand and reputation management expertise? This decision is going to be diabolical. It’s wilful. And it’s scientifically outrageous. Cc @AbiyAhmedAli @PMEthiopia @DrTedros
https://twitter.com/alykhansatchu/status/1223516950715871234?s=20

Statement on Flights to China

China is one of the strongest and one of the oldest markets for Ethiopian Airlines. We have been connecting the great Chinese nation with the entire continent of African for almost half a century and it is our growth strategic market. We are operating our regular flights to all of our five gateways in China, Beijing, Shanghai, Guangzhou, Chengdu and Hong Kong with the usual supply and demand adjustment that we always make during the Chinese New Year Holidays. We are also working together with all relevant Chinese and Ethiopian Authorities to protect our passengers and our crew from the Corona Virus disease in full compliance with IATA, WHO, CDC guidelines. We would like to take this opportunity to thank the People and the government of China for their unreserved support and we would like to reassure our full commitment to stand with them at all times.

Source: Ethiopian Airlines

It's insane @mohammedhersi @flyethiopian are playing with millions of African lives
https://twitter.com/alykhansatchu/status/1223513998206865409?s=20
- It's also a brand Killer. Within a few days. Because the statistics mean zero. [https://twitter.com/alykhansatchu/status/1223514438097166336?s=20](https://twitter.com/alykhansatchu/status/1223514438097166336?s=20)

- This is the problem with term “evidence based.” Almost always used with great ignorance of emergence and downside asymmetry. @nntaleb @flyethiopian You have a great brand - Its Brand can be destroyed in an instant [https://twitter.com/alykhansatchu/status/122353165748500704?s=20](https://twitter.com/alykhansatchu/status/122353165748500704?s=20)

- Universities Scholars will study the date the reasoning the political leverage deployed the asymmetric power balance and how in the c21st mistakes such as these can turn out terminal @flyethiopian @PMEthiopia @DrTedros [https://twitter.com/alykhansatchu/status/1223533807837569024?s=20](https://twitter.com/alykhansatchu/status/1223533807837569024?s=20)

*Bole is the epicenter of China Africa connectedness*

Ethiopia airlines is maintaining flights to China with growing cases of coronavirus & over 50% outside Wuhan. Bole in Addis connects to 45 African destinations. It may end up becoming the Achilles heel for virus entry to Africa. Ethiopia airlines must suspend flights NOW Kwabena

Has coronavirus reached AFRICA? Sudan and Equatorial Guinea quarantine six patients with symptoms of the killer SARS-like infection @MailOnline [http://j.mp/2tlz9qZ](http://j.mp/2tlz9qZ)

The killer coronavirus sweeping the world may have reached Africa as Sudan and Equatorial Guinea have reported suspected cases.

Two citizens of Sudan are being monitored after displaying symptoms of the virus following a visit to Wuhan, local reports say.

And officials in Equatorial Guinea have quarantined four travellers who arrived from Beijing amid fears they may have the killer SARS-like infection.

The two patients in Sudan – a country in the northeast of Africa – had returned from Wuhan, the Chinese city at the heart of the escalating outbreak.

The man and woman are currently being monitored by doctors. Officials have not yet confirmed their identities or locations.

No other details have yet emerged for the Sudanese residents. The news agency Reuters said it was given the information by a minister.

Sudanese officials have already enforced strict screening of travellers arriving at airports and shipping ports to try and prevent the spread.

It came as Equatorial Guinea – small central African state – said it had quarantined four travellers who arrived from Beijing.

The four had arrived on Tuesday aboard an Ethiopian Airlines flight at the airport in the capital of Malabo, the government said.

- 27-JAN-2020 :: I have to assume that the Corona virus is already in Africa but just not diagnosed. Thats a racing certainty. #nCoV2019 #coronavirus [http://j.mp/2RxwB2l](http://j.mp/2RxwB2l)
TWO PEOPLE with high fever quarantined at KNH after they landed at JKIA. One from Beijing boarded KQ flight in Dubai, the other arrived on Southern China Airline from China. @NationBreaking
https://twitter.com/NationBreaking/status/1223942784945704961

STUDENT FROM China suspected to be having coronavirus admitted to Coast General Hospital private room; blood samples sent to Nairobi for analysis. @NationBreaking
https://twitter.com/NationBreaking/status/1223892199080976384?s=20
Markets

There is certainly a Fin de siècle even apocalyptic mood afoot. The conundrum for those who wish to bet on the End of the World is this, however. What would be the point? The World would have ended.


Sometimes, global macro investing comes down to a single focus, the moment when all other factors in a big and complex framework of understanding can be filtered out, because one factor overwhelms all others. We are at that point now.

1/ https://twitter.com/RaoulGMI/status/1223208150079344641?s=20
The bond market, already rallying on weakness saw the light immediately and 2-year yields collapsed, breaking key supports and a new cyclical low. @RaoulGMI
https://twitter.com/RaoulGMI/status/1223208178378256385?s=20

Source: @RaoulGMI

The Fed are going to have to cut aggressively and soon.

US 30yr treasury 5bps from its lowest close in history. @TheBondFreak
https://twitter.com/TheBondFreak/status/1223262315199508481?s=20

Source: @TheBondFreak
- The bond market trend is set. The reaction of central banks is understood. The commodity markets rightly got the signal fast too. The knock-on effects are now spreading slowly into the currency markets. @RaoulGMI
  https://twitter.com/RaoulGMI/status/1223208216496046081?s=20

- That is where I think where the next phase lies...

- The @jpmorgan EM currency index is going to break down... @RaoulGMI
  https://twitter.com/RaoulGMI/status/1223208215036469248?s=20

\[\text{Source: @RaoulGMI}\]

\[\text{Crude Oil and Copper Sink as Coronavirus Rekindles Global Growth Fears}\]
https://twitter.com/trdrtscdr/status/1223424358259089408?s=20

\[\text{Source: @trdrtscdr}\]
Emerging Markets

- Brazilian Real is about to break a gigantic cup and handle. You see, Brazil loses on the US/China trade deal and loses again as Chinese demand collapses for commodities. @RaoulGMI
  
  ![Chart of Brazilian Real](https://twitter.com/RaoulGMI/status/1223208206987644934?s=20)

  Source: @RaoulGMI

- I think that there is a not insignificant probability of an emerging market currency collapse and the markets aren't yet pricing it but the signs are there. Take the Korean Won, for example...not good. @RaoulGMI
  
  ![Chart of Korean Won](https://twitter.com/RaoulGMI/status/1223208186582306817?s=20)

  Source: @RaoulGMI
- The South African Rand is under-performing and we have been warning that this is an idiosyncratic story: @RobinBrooksIIF
   https://twitter.com/RobinBrooksIIF/status/1223584550607081472?s=20

- 15% real effective overvaluation
- current account deficit with increasingly tenuous financing
- heaviest foreign investor positioning across EM
- growth that has flat-lined

02-SEP-2019 :: the China EM Frontier Feedback Loop Phenomenon.
http://j.mp/2kokeYv

This Phenomenon was positive for the last two decades but has now undergone a Trend reversal.
The ZAR is the purest proxy for this Phenomenon. African Countries heavily dependent on China being the main Taker are also at the bleeding edge of this Phenomenon. This Pressure Point will not ease soon but will continue to intensify.