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Science and the Ability and Capability of the Human Being: the Vanished Flight 370 Tells Us the Truth

Frederick F. Wang^{*,Δ}

The new century is dubbed as an informationized era with “knowledge big bang” suggesting that the ability and capability of our human being is unprecedented. However, the fact is not that optimistic. The vanished Flight 370 en route from Kuala Lumpur to Beijing tells us that we are still helpless under some devastating conditions that beyond our abilities to be dealt with. Even science is marching forward, whereas the real ratio between the science advancement to trouble-solving ability is reduced dramatically compared to our ancestors. One bad manner that we human being cannot discard is finding excuses when facing unsolvable troubles. In fact, do we really need excuses for everything? One thing needing note is that science is science, and ability is ability. The more you know, the more you will find hard to deal with. ■

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ARE we human beings in “megalomania”? We can launch huge man-made rollers onto the surface of the Mars, and we know the cellular functions of our body, and we suppose we are evolved from the Apes. Yes, we can do innumerable things and we know much of this world. This is the very reason why we are arrogant and high profile in facing difficulties today. Nevertheless, when the scenario was turned to another side, what could we see? Over thousands and millions of vic-

tims from the tsunami evoked by earthquakes, and periodic epidemics and mounting cancerous cases, and disastrous consequences due to human excessive activities, and yes again, we have too much questions in the mist. We know many, but much we don't know.

The disappearance of the Malaysia jetliner MH370 on March 8th, 2014, with 239 people on board while on a flight from Kuala Lumpur to Beijing led aviation experts to assume that whatever happened was too

quick to leave the pilots no time to place a distress call. For this vanished airline, overwhelmed supposes appeared within hours as showed in the Table 1. In following days, more than two dozen countries have plunged into the “long march” of the searching, which Malaysia was overseeing. In the days since the search has shifted to remote areas of the Indian Ocean, several countries have deployed planes and ships for the effort, including China, Australia, Malaysia, the U.S., Britain, New Zealand, Japan

and South Korea. For this, some thought that the search would have been the showcase of individual country's capabilities in science and military. All these were the facts, but also they are the reflections of our human being's real abilities in dealing with disasters.

We today have lots of cutting-edge technologies with well-known scientific bases, and also we can do things far more effective than ever before. Does this mean we can do everything? As the hunt for the Malaysia Airlines Flight 370, it has given us the answers. The radars were scanning when the flight took off, and the satellites outside of the earth were spying the activities on the ground, and the missing Boeing 777 equipped with modern components and parts that were designed and produced in advanced industrial assembly line. However, all these man-made proud products yet did not guarantee the safety of the flight. What's more, we cannot find any clues of the flight, then. This is just the thing we should focus on. It was a farcical performance we could see now. Why no physical trace of the plane has been found despite the more than two-month multi-agency international search effort?

Did the missing flight make a puzzle for us, or something else? It is the nature of our human being to deny our own responsibilities when the situation is getting complicated. For the flight search itself, some thought China was reaping what he has sown because China is bad blood with virtually all of its neighbors, many of whom are key players in the search. China has territorial disputes with India, Japan, the Philippines and Vietnam, and many other countries in the region are wary of its efforts to exert more control over Pacific shipping lanes that could impact their freedom of trade. Moreover, the Malaysia Airline even criticized China for being provided "misleading" signals at the earlier stage of the search that dramatically delayed the black box signals were caught. However,

Table 1. Some of the Possible Causes for the Plane Disappearing.

A Catastrophic Structural Failure. Most aircraft are made of aluminum which is susceptible to corrosion over time, especially in areas of high humidity. But given the plane's long history and impressive safety record, experts suggest that a failure of the airframe, or the plane's Rolls-Royce Trent 800 engines, is unlikely. More of a threat to the plane's integrity is the constant pressurization and depressurization of the cabin for takeoff and landing. In April 2011, a Southwest Airlines Boeing 737 made an emergency landing shortly after takeoff from Phoenix after the plane's fuselage ruptured, causing a 5-foot (1.5-meter) tear. The plane, with 118 people on board, landed safely. But such a rupture is less likely in this case. Airlines fly the 777 on longer distances, with many fewer takeoffs and landings, putting less stress on the airframe.

Bad Weather. Planes are designed to fly through most severe storms. However, in June 2009, an Air France flight from Rio de Janeiro to Paris crashed during a bad storm over the Atlantic Ocean. Ice built up on the Airbus A330's airspeed indicators, giving false readings. That, and bad decisions by the pilots, led the plane into a stall causing it to plummet into the sea. All 228 passengers and crew aboard died. The pilots never radioed for help.

Pilot Disorientation. The pilots could have taken the plane off autopilot and somehow went off course and didn't realize it until it was too late. The plane could have flown for another five or six hours from its point of last contact, putting it up to 3,000 miles (4,800 kilometers) away. This is unlikely given that the plane probably would have been picked up by radar somewhere. But it was too early to eliminate it as a possibility.

Failure of Both Engines. In January 2008, a British Airways 777 crashed about 1,000 feet (300 meters) short of the runway at London's Heathrow Airport. As the plane was coming in to land, the engines lost thrust because of ice buildup in the fuel system. There were no fatalities. Loss of both engines is possible in this case, but Hamilton said the plane could glide for up to 20 minutes, giving pilots plenty of time to make an emergency call. When a US Airways A320 lost both of its engines in January 2009 after taking off from LaGuardia Airport in New York it was at a much lower elevation. But Capt. Chesley B. "Sully" Sullenberger still had plenty of communications with air traffic controllers before ending the six-minute flight in the Hudson River.

A Bomb. Several planes have been brought down including Pan Am Flight 103 between London and New York in December 1988. There was also an Air India flight in June 1985 between Montreal and London and a plane in September 1989 flown by French airline Union des Transports Aériens which blew up over the Sahara.

Hijacking. A traditional hijacking seems unlikely given that a plane's captors typically land at an airport and have some type of demand. But a 9/11-like hijacking is possible, with terrorists forcing the plane into the ocean.

Pilot Suicide. There were two large jet crashes in the late 1990s – a SilkAir flight and an EgyptAir flight – that are believed to have been caused by pilots deliberately crashing the planes. Government crash investigators never formally declared the crashes suicides but both are widely acknowledged by crash experts to have been caused by deliberate pilot actions.

Accidental Shoot-Down. There have been incidents when a country's military unintentionally shot down civilian aircraft. In July 1988, the United States Navy missile cruiser USS Vincennes accidentally shot down an Iran Air flight, killing all 290 passengers and crew. In September 1983, a Korean Air Lines flight was shot down by a Russian fighter jet.

Alien Capture. May be this is an excuse cause. Some believe the UFO, but some not. For scientists, they have a *de facto* belief for the existence of alien outside our planet. If the flight was really captured by some alien, it would be "good news" because we can still hope the passengers could come back someday. ■

Table 2. Amazing Facts Highlighted by Malaysian Airliner Mystery.

The coordinated search for missing Malaysia Airlines flight 370 has highlighted some interesting facts about the world and airplanes, including just how easy it is for a Boeing 777 airplane to simply vanish, despite the seeming pervasiveness of modern technology and network location services. There was still much we have yet to learn about the details of the case, but amid all the theories and conjecture, ABC News has gleaned some impressive nuggets of information over the course of the two-week long investigation. Here are 16 of them.

1. Some parts of the Indian Ocean can reach 25,000 feet deep. That's 20 times the height of the Empire State Building, which measures 1,250 feet tall.
2. Brain death can occur at 45,000 feet in the air. Airplane oxygen masks can only provide about 10 to 15 minutes of air for passengers, which is more than enough time for a pilot to return a plane to lower altitude.
3. Two passengers used stolen passports -- one from Austria and one from Italy -- to board the flight. After the 9/11 terrorist attacks, Interpol introduced a worldwide database of lost or stolen passports, which has details of more than 40 million stolen or lost travel documents (passports, identity documents, visas) from 167 countries. The only countries that regularly check travelers against the database are the United Arab Emirates, the U.S., Britain, France and Switzerland according to Interpol officials.
4. Intense focus has been placed on finding the plane's black boxes, consisting of a cockpit voice recorder and a flight data recorder. Both are bright orange and each about the size of a coffee maker. Searchers only have about 30 days to find the boxes before the box stops pinging, making it much more difficult to locate. Even after the pinging stops, the batteries last for years and the data should be intact.
5. The flight data recorder will detail the last 25 hours of the plane's activity, from engine performance to the position of flight control surfaces, while the cockpit voice recorder tapes the sounds on the flight deck and cycles after two hours.
6. Both cockpit voice and flight data recorders work to an ocean depth of 20,000 feet, with a signal range of about 2 nautical miles, depending on variables like sea conditions. The signals are located using a device operated on the surface of the water or towed to a depth. The deeper the water the more difficult it will be to detect the pings.
7. There are approximately 41,821 airports in the world, 13,513 in the United States alone.
8. Kuala Lumpur, Malaysia, is the world's 28th busiest airport with a yearly estimated traffic of more than 37 million travelers. Atlanta, Ga., ranks first, with more than 92 million people passing through and second is Beijing's Peking Airport with more than 78 million.
9. Flying is still one of the safest methods of transportation. On average, travelers would need to take one flight a day for about 10,000 years before they would be involved in a fatal crash.
10. The European Transport Safety Council (ETSC) estimates 90 percent of aircraft accidents worldwide are survivable.
11. The best option to maximize your chances of walking away from a plane crash is to sit in the rear end of the plane. One study found those sitting near the plane's tail are 40 percent likelier to survive than those in the first few rows.
12. The search is taking place in an extremely remote part of the Indian Ocean between Australia and the Antarctic known as the "roaring forties" for its sharp westerly winds and rough waters.
13. The ocean surface current in the Indian Ocean close to the equator is around 1 to 2 knots. A drifting object in the water around the equator can shift between 26 to 52 miles a day (728 miles in 14 days). But around 200 miles further from the equator, the current is much weaker at less than 0.5 knots.
14. A Boeing 777-200 is 70 yards long and needs at least 4,000 feet of runway to land safely. But the plane would not be able to take off again on a runway of that length.
15. Many pilots use flight simulators. They can be assembled at home and range from simple software on personal computers that can be purchased off the Internet for \$30, to sophisticated full-motion simulators for professional pilots, which cost thousands.
16. A pilot's experience is calculated in flight hours. The Malaysian plane's captain, Zaharie Ahmad Shah, had more than 18,000 flying hours. Most major airlines require pilots to have at least 2,500 flight hours under their belt, while regional carriers generally require a minimum of 1,500 hours. ■

the Malaysia Airlines is most likely happy if the missing plane could not be found. If missing Flight 370 would be found and it could be proven that Malaysia Airlines or the Malaysia government was responsible for the fate of the plane (as showing the Malaysian Airliner Mystery in

Table 2), the cost for the airline and the government could be devastating. Malaysia's government did not search for the plane for four hours after its disappearance. With every day that has gone by since the plane vanished on March 8, 2014, so has the chance of finding evidence that

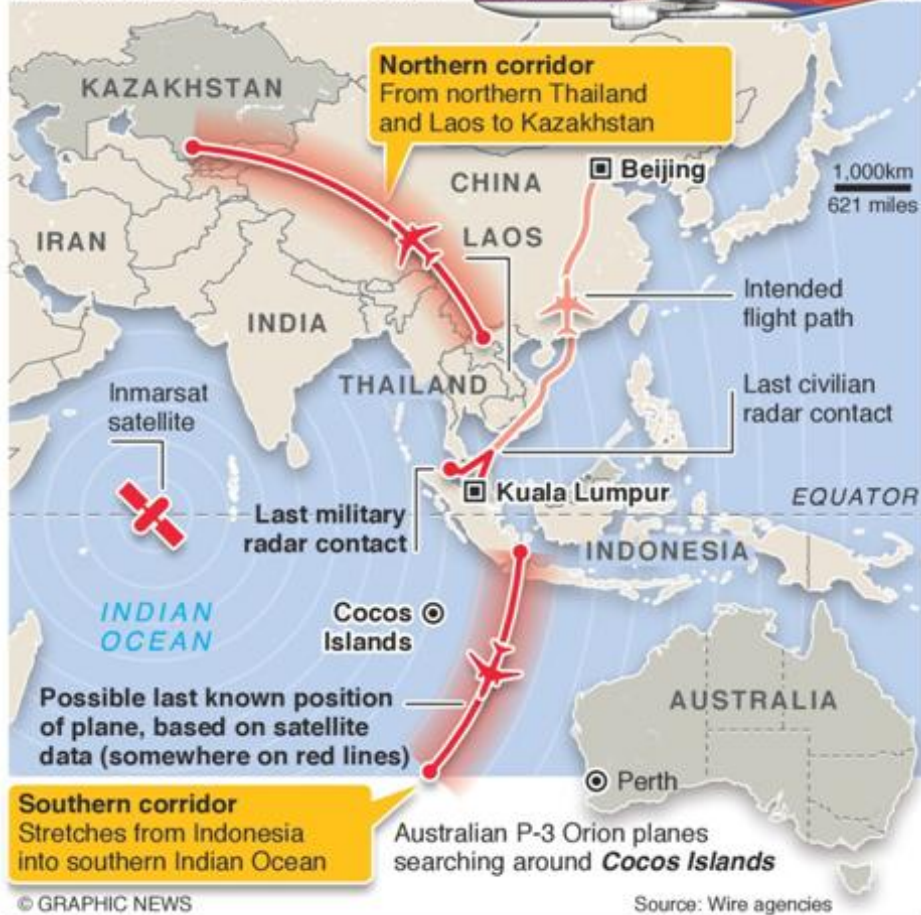
either one of the two parties could have been responsible. As reported by the *Mirror*, Australia is contributing almost \$90 million in the search for Malaysia Airlines Flight MH370, and other countries are also covering their own costs. What incentive is there really for Malaysia Airlines or

Air corridors searched for missing jet

The hunt for missing flight MH370, which disappeared during a routine commercial flight on March 8 with 239 people on board, now extends along two vast air corridors, covering a tenth of the planet

SEARCH CORRIDORS

Twenty-six countries looking for plane, with Australia leading southern search



Malaysia's government to find the missing aircraft? For Malaysia, they may really wish the vanished jet could not be found, it is unacceptable for the relatives of the plane's passengers. That is the fact so far that we did not find any meaningful clues of the Flight even hundreds of billions of dollars have been consumed by the searching. It is also a fact that we

cannot find the missing plane using cutting-edge scientific techniques even we know it was just there, below the deep sea or somewhere else, no matter how far our human being has reached our arms into far outer space. Maybe some day in the future, 10 years, 50 years, 100 years or more, the lost plane would be found occasionally and headlined the would-be

news, which is just the thing we human being can do.

Excuse is always there. If you are out to excuse something, you can always trump up a charge. In this case, the Malaysia government can excuse herself any time if she does not want to pay for the accident because the Malaysian police has invested the pilot for some clues. Could they find any from the already dead guy? For other entities, seeking "reasonable" excuses are not that difficult. The direct one is that "our science knowledge is limited in doing this, we need time".

Undoubtedly, science is science, and the only thing that science can do is making us live better and convenient than ever, and minimizing the damage once the disasters struck. When our ancestors were not yet understand the thundering storm and earthquake, they just escaped from it. For them, the daily work was to hunt and find safety habitat, but never thought about that one day their descendents can fly outside the planet. Today, we modern people know how the thundering storm and earthquake are, but can we avoid them? Only the same thing every day as our forefathers did: escaping and seeking for new safety places for living. Science is marching forward, but the ability and capability of our human being is still limited. The further you advance, the more you do not know. ■

