



How do they think?  
The likely psychology of extraterrestrial intelligence

Part 3: A rare window of opportunity

I'm 63 years of age, old enough to remember watching Neil Armstrong step onto the Moon; our television set was black and white back then, and the picture was fuzzy. Since the Moon landings of 1969 to 1972, it's been difficult to get really inspired by human space exploration, although I've followed the Curiosity rover Mars mission with some interest. The preventable tragedy of the Space Shuttle *Challenger* is something we've incorporated in our work as a lesson to illustrate several important points, using the BBC's excellent dramatic portrayal of the subsequent enquiry, *The Challenger Disaster* - which is available on YouTube.

Then, on 6th February 2018, I watched SpaceX's Falcon Heavy test flight. John Insprucker and Lauren Lyons, both SpaceX engineers, brilliantly set the scene and provided expert commentary throughout. The launch was powerful and the cherry-red Tesla car and Spaceman floating above our blue and white planet, accompanied by David Bowie's classic song *Is There Life on Mars?* playing in the background was novel and added interest. The raw enthusiasm of the ever-cheering SpaceX team, including an excited mature blond woman with her hands and arms raised upwards in celebration (Gwynne Shotwell), was infectious and a welcome difference to the stuffiness of NASA staff. But I was blown away to see the two side rocket first-stage boosters come back to land simultaneously. This was beyond special and I cried with joy for a long time at what was happening. I've since watched almost all of SpaceX's launches and landings. And, of course, I've followed intently the building, testing, and development of Starship and its Super Heavy booster at Boca Chica - thanks to Chris Bergin, Mary, and the team at NASASpaceFlight.com (which is unrelated to NASA). It's Elon Musk's dream to see us colonise Mars to make humans a multi-planetary species. Space exploration has become an exciting prospect again.

Human beings are at a critical point as an emerging civilisation. Technology is underway and accelerating. Medical advances are prolonging life. Information can be quickly shared globally. There's more so-called leisure time, during which we can contemplate and think more, rather than always being preoccupied with the basics of survival. We've just started our exploration of space. But it's also a devastating time for the natural world as we destroy habitats and push countless species towards extinction.

What's happening here on Earth has probably happened elsewhere many, many times before as emerging civilisations struggle to grow up through the troublesome "teenage years" before reaching the point of "coming of age" and beyond. The primary self-orientated psychology is capable of beauty and producing great achievements, but it is nevertheless immature and dysfunctional with consequences that are somewhat inevitable.

A crucial consideration is the timing of what's happening here and now on our planet. Mathematically, assuming that life commonly begins on habitable exoplanets and sometimes or often evolves into ETIs, it will be a rare event for this to be occurring anywhere else in our galaxy (or, indeed, within the neighbouring galaxies) at this same period of time. Before? Yes, definitely. Afterwards? Again, yes. But now, during the past hundred years or so and into the near future, what we are doing will be a "space oddity" (to borrow the title of another of David Bowie's songs). It's just a matter of timing.

We currently provide a rare window of opportunity to observe what's likely to be the latest chapter in a universal emergence of civilisation. Ours will be unique, just as every planetary story will undoubtedly have its particular differences. Assuming that advanced ETIs have the technological means to observe in detail what's going on here on Earth, it will be The Event in our tiny region of the universe. It will be much more than a mere galactic sociology study, surpassing the most tear-jerking love story, best Olympic Games ever, or most poignant historical drama that we've

watched on film. They will care about us many times more than human beings are capable of feeling. Even if we're still a semi-primitive species, ETIs will fully appreciate what we experience and go through. They'll be cheering us on, groaning as we mess up yet again (remember Yoda's ears drooping when Luke didn't quite get it right?), weeping extraterrestrial tears of immense empathy.

There'll likely be their versions of Shakespeare and Ridley Scott, bringing all the news and highlights of The Event via ET TV. Meanwhile, we'll be ignorantly carrying on building new-but-crude space rockets, raping innocent children, and everything else in between. In this context, perhaps the physicist Michio Kaku is correct in suggesting our current status as being mere "ants" unaware of a ten-lane superhighway next to us.

Others have already speculated that the spurt of our technological advancement, including nuclear power and weapons, would prompt interest from our galactic neighbours. This could be true, although I somewhat doubt it - at least not on any scale that could be conceivably called The Event. But the timing of a significant evolutionary step forward from the self-orientated psychology to non-selfishness would be of definite interest. It's not that they'll be gambling on exactly when we'll wake up, think more clearly, focus effort, and struggle over the Great Hurdle. But they will be urging us on from afar if they're ahead of us. Such wide yet specific concern is part of the much bigger capacity of non-selfish psychology.

How might we be being observed I can't begin to guess. We've already worked out how to send relatively small probes beyond our own planet. Plus we've accomplished satellite surveillance. And we're just "ants". Would it involve tiny probes? Or some other means?

The subject of UFOs, alien abductions, etc has been largely left to the fringe element. There's the gullible, the hoaxers, the conspiracy theorists, and the let's-storm-Area-51 dreamers. There are misidentifications. Most who "study" reports of alleged UFOs are at each other's throats in a series of bizarre turf wars, though not with the physical violence of drug dealers, each trying to outdo or ridicule their rivals. Books are written, conferences attended, podcasts broadcast. Jan Harzan, Executive Director of the Mutual UFO Network (MUFON) was arrested by the police on 3rd July of this year on charges of soliciting sexual activity with a 13-year-old girl (although I'm not suggesting such criminal activity is necessarily as common amongst ufologists as it is with priests, vicars, and other preachers). Anyone delving into the twists and turns of "witnesses" and government explanations of what might or might not have happened at Roswell in 1947 will end up with a bad headache. If this human mess-up or stink isn't bad enough to put you off, you've also got the debunkers. Whereas they're possibly less nutty, at least on the surface, they are similarly self-obsessed, albeit at the opposite end of the spectrum. Cognitive bias reinforcement rules, one way or the other, and it's apparently acceptable to pick and choose "the facts" that "fit" your particular "theory". I'm far from being an expert in this muddy field, although I know enough to provide this sad overview.

There's been the occasional needle in the haystack, the odd seed within the chaff, trying to make some sense of what might possibly be happening. The astronomer Dr J Allen Hynek was brought in by the US Air Force in 1948 with its Project Sign, which became Project Blue Book, to help debunk alleged UFOs. He was initially highly sceptical, knowing for example that Venus could be misidentified as a mysterious light in the nighttime sky, commenting "the whole subject seems utterly ridiculous". However, Hynek's opinion completely changed after many investigations and interviewing credible witnesses, finding a small percentage of cases genuinely puzzling and unexplained. In 1973, he founded an organisation for the scientific study of UFOs. Shortly afterwards he was the consultant for *Close Encounters of the Third Kind*, making a brief appearance in the film towards the end.

In France, the COMETA 90-page report - written by 13 retired generals, scientists, and space experts - detailed the findings of an investigation from 1996 to 1999. It cautiously concluded that about five percent of sightings seemed to be “completely unknown flying machines with exceptional performances that are guided by a natural or artificial intelligence” which could be “craft of extraterrestrial origin”.

Military pilots are amongst the most credible witnesses. General Parviz Jafari (Ret.) of the Iranian Air Force was a Major and squadron commander of Phantom F-4 II jets when he was scrambled on the night of 18th/19th September 1976 to investigate an unknown object circling over Tehran. (This was before the Iranian Revolution, so modern high-tech US fighter planes were available.) First, two of his pilots had been ordered to chase the UFO, but their effort was frustrated by instrumentation failure when closing in, regained when the F-4 moved away. Jafari and his co-pilot then moved in on the diamond-shaped object which was flashing intense red, green, orange, and blue lights. As they approached it, the UFO evaded their attempts by making a series of instant “jumps”. Jafari tried to fire at it, but his weapon jammed. A smaller object came out of the primary object and speeded towards the F-4. Thinking he was now under attack, Jafari selected an AIM-9 heat-seeking missile to fire back but, again, his control panel was suddenly not working. Furthermore, his communications system had also failed. Close to a decision to eject, the secondary object suddenly stopped before rejoining the primary one. Then another object came out of the primary one and started circling around the F-4. Yet again, Jafari experienced instrumentation failure. When it moved away, the controls became operational again. With communications regained, Jafari and his backseater were ordered to return to the military air base. On their descent, both pilots noticed another object was following them on their left side. The four pilots were not the only witnesses to this event; staff in the control tower and at the command post also saw the UFO - plus citizens of Tehran who had initially called the authorities to report it. Parviz Jafari remains convinced decades later that he encountered something unknown, stating “It was not a flying object that human beings on Earth can make.”

Years later, following a Freedom of Information Act search request, it emerged that the US government had taken this Iranian incident seriously. A once-classified memo from the Defense Intelligence Agency (DIA) was sent to the NSA, the White House, and the CIA. Major Colonel Roland Evans of the DIA wrote “This case is a classic which meets all of the criteria necessary for a valid study of the UFO phenomenon.” Back in Iran, the Shah visited Jafari’s squadron and took an interest, calling a meeting with a number of generals and the four pilots; the incident was not the first to have been reported to the Shah.

In 2017 and 2018, three videos that showed US Navy pilots encountering fast-moving unknown objects were made public by *The New York Times*. On 27th April 2020, the US Department of Defense (DOD) released a statement confirming these videos as genuine, stating “The aerial phenomena observed in these videos remain characterized as ‘unidentified’.” On 14th August 2020, the DOD announced the creation of the Unidentified Aerial Phenomena Task Force (UAPTF) to analyse and understand the “nature and origins” of UAPs.

The three videos are unimpressive when viewed in isolation. But they are recordings made by pilots of F/A-18 Super Hornets, utilising the latest high-tech equipment, shot in November 2004 and January 2015. When other factors are considered, it’s hard not to take these events seriously. Focusing on the “tic-tac” UAP of 14th November 2004, the *USS Nimitz* aircraft carrier and its strike force, including the guided missile cruiser *USS Princeton*, were conducting a training mission off the Californian coast. The *USS Princeton* was fitted with the sophisticated AN/SPY-1 radar to help protect the fleet, capable of detecting a golf ball sized object from in excess of 100 miles away. Groups of five to ten unidentified objects had previously been seen on dozens of occasions, descending from above 60,000ft at speeds faster than any known aircraft can travel, including on that day, before ascending again after several hours.

Commander David Fravor and his weapons system operator, plus two other pilots in a second Super Hornet, were airborne when they were given the instruction to divert to investigate one of these unidentified objects. They encountered a “tic-tac” UFO or UAP for a five-minute period, under perfect weather conditions in broad daylight. Afterwards, a third Super Hornet crew was told to make the video recording of the UAP. Commander David Fravor, now retired, has recently given a couple of lengthy interviews on what happened; his interview with Joe Rogan, for example, is available on YouTube. His account cannot be easily dismissed - and Fravor is just one of a number of US Navy pilots involved with this series of encounters. Armchair debunkers, of course, are doing their best to think up conventional explanations - everything from birds to black project aircraft - but they weren't there and they don't take into consideration all of the facts as they cherry-pick which bits to discredit.

The news media have invariably evoked the giggle factor when covering UFO stories - and, to be fair, there's hardly been a shortage of nutters willing to act as fodder. Any reports have usually been treated even lower than the “silly season” stories when politicians are away on holiday leaving journalists to scramble about for fluffy news. But when *The New York Times* started seriously reporting the three US Navy videos, other media outlets began to do likewise to varying degrees - although the giggle factor is still proving hard to shake off with some.

So, like it or not, it would be irrational and anti-scientific to ignore what is being reported. There must now be an attempt at serious investigation, to find out what can be established, even if the phenomena are likely beyond our control. We need precise detail, to be carefully considered by leading experts, and the world's military forces are probably best equipped to gather such data. Whereas it would be naive to think any country would be willing to share everything that they might discover - simply because any new knowledge gleaned could potentially give their military a distinct advantage if it could be translated into a technological step forward - it would still be reasonable to expect some degree of openness as to the findings of any study. Meanwhile, we shouldn't leap to any premature conclusions. That said, it would be foolish to dismiss the possibility that ETI craft are entering our atmosphere. The conversation or debate is perhaps starting to change, and this certainly isn't a laughing matter. It's no longer a question of “Is there something real happening?” but rather “What can we learn?”

Should we be worried? The very likely simple answer is “no”. First, there's no evidence of ETI aggression, if we work on the premise that craft of unknown origin have been encountered. Commandante Oscar Santa Maria Huertas (Ret.) was a 23-year-old Lieutenant in the Peruvian Air Force when he was ordered to engage a UFO on the morning of 11th April 1980. Despite his young age, he already had several years of military flying experience by then, and had been selected at the age of just 20 to test-fly Peru's newest supersonic Sukhoi jet. An unknown aerial object was observed beyond the end of the La Joya Air Force Base runway. Oscar Huertas was selected to take off and instructed to shoot it down. Once in the air, he closed in on the UFO and then shot a burst of 64 30mm shells. Some of the projectiles deviated from the target, but others hit it with precision. There was no apparent damage, although the unknown object rapidly flew off. A chase followed, with the UFO eluding further attempts whenever the Peruvian pilot tried to attack, until he was forced to return to base because of low fuel. Again, this is a credible military pilot who has provided much detail of his bizarre encounter. Huertas remains convinced that what he saw and went against in combat was a craft beyond what humans have so far constructed. He was debriefed and later found that the US DOD had been told of the event. He explains being able to fire his weapon because it was mechanically controlled, as different from involving electronic equipment as in the case of Parviz Jafari in Iran.

Psychologically, advanced ETIs will not want to engage in aggression if at all possible. Superior technology would assist with defensive capabilities. Again, the self-orientated psychology is dysfunctional - whereas non-selfish psychology involves a different paradigm of thinking, feeling, and

behaving. Not all ETIs will necessarily have evolved beyond the Great Hurdle, but the minority that haven't might either have sufficient insight to control their remaining lower animal characteristics or else be under the watchful eye of other more advanced ETIs. Of course, we don't yet know the actual reality, but what I am suggesting is both plausible and reasonable to expect, extrapolating from what little we do know.

Although I doubt we need to worry about aggressive ETIs, neither should we view or expect them to be our "saviours". The numerous problems on Earth are of our own making and it's up to us to solve them ourselves. Struggle is actually a good thing. Would someone in research and development prefer to work hard towards finding a solution, perhaps sharing the task and eventual success with colleagues, or merely be handed the answer on a plate by visiting ETIs? Laziness is bad enough already without any outside encouragement - and ETIs would know this.

At what point would there be open contact in the future? Presumably when we've grown up enough as a species to behave and engage with ETIs maturely - and that's not going to be the case anytime soon, for at least a few hundred years. Evolving our basic psychology is the key. (There's another scenario prompted by us travelling beyond our own solar system, encountering ETIs, but I'm guessing that if any such contact happened it would be deliberately limited to what might be necessary, based on the same reasoning.)

In conclusion, we have a credible reason - namely our, and their, psychology - to think that the Zoo Hypothesis explanation for the apparent Fermi Paradox is possible and likely. The authorities need to undertake serious investigation of UFOs/UAPs, with any unclassifiable data to be carefully considered by our best minds, as well as made available to the general public. Much more importantly, we need to develop a mentality for looking at our behaviour as human beings - in the context of further evolution and as an emerging civilisation - appreciating that a shift of psychology is the all-important way forward. We need to fully face the reality of our dysfunction and resulting problems. We need to learn about psychology, both selfishness and non-selfishness, with a precise "nuts and bolts" mechanical approach. Technology will only be able to help up to a point, whereas a fundamental overhaul of our psychology will open up even greater horizons. Until we do so, the Great Hurdle will not be overcome, and there's always the possible risk of annihilation with regards to our planet as a consequence of our own semi-primitive behaviour, even if I'm not an overall supporter of the Great Filter. It's up to us. We need to change.

Iain Scott, November 2020

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Essays in this first short series:

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