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UFOS

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Preface

This may well be a book about a nonexistent subject.

I know that I may not make friends with this statement. UFO enthusiasts will be upset because I seem to be throwing their subject of study under the bus.

Conventional, conformist scientists will ask: “So why all the effort? Does he have no better things to do than chase illusions?” The answer I would give is that the claims are extraordinary, if not outrageous, and the evidence is not rich.

However, if only part of what has been observed, experienced, and claimed is true, the consequences and expectations are formidable. Take, for example, the kinetic flight characteristics of some of these objects. They exhibit a zigzag-style motion with abrupt and powerful changes in direction and velocity. These movements can be observed both by the naked eye and through radar or infrared sensors. The mere possibility of such seemingly “inertialess” motion is stunning and encourages radically novel ways of thinking about physics.

However, before I get carried away, I should remember that other scientific fields may experience similar situations. A friend in mathematics shared a story with me about a PhD thesis in abstract algebra that had promising representation theorems. Unfortunately, after the thesis was submitted, it was revealed that the only example was the empty set.

With that in mind, I acknowledge that I may be writing extensively about a category with no objects or only prosaic and mundane objects. Undoubtedly, “UFOs” or “UAPs”—in the literal meaning of Unidentified (Flying) Objects or Unidentified Anomalous Phenomena—exist. There will always be uncategorized entities populating the atmosphere, cruising the oceans, or navigating space. However, such appearances may have very prosaic, mundane explanations or simply be man-made phenomena, e.g., weather events such as atmospheric air lenses or ice crystals in the sky [322], aircraft, or other objects such as balloons, outdoor laser lights, and xenon aerial searchlights. Indeed, upon closer inspection and depending on the veracity of reports and the quality of sensor data, more than 95% (and sometimes even more than 99% [433]) of UFO sightings are found to have rather mundane origins.

Nevertheless, despite all the prosaic explanations and debunking, some sightings of “hard cases” remain unexplained and are the subject of speculation and debate.

These remaining cases are anomalies or phenomenological outliers: objects or phenomena in the sky that have not yet been identified or explained by conventional scientific knowledge. However, just because they appear sporadically, cannot be summoned up or replicated easily, and present the form of a phenomenological outlier or anomaly, this does not necessarily mean that one should dismiss “flying saucers.” Rather than look the other way and disregard those “hard cases,” one might better view them as challenges that may, at some point, greatly enhance if not revolutionize both our knowledge and our technologies. Methodologically and optimistically, I suppose that UFOs and UAPs represent an epistemic challenge, not an ontological one: we shall pursue the thesis that we do not know what they are, but in principle, that this ignorance can be overcome by scientific methods.

Scientists often have encountered strange phenomena which later turned out to be instrumental for entirely new capacities and capabilities. Take, for instance, the case of electric rays or torpedo fish, delivering to their prey what is nowadays conceptualized by electric charge. This phenomenon had been known since antiquity and later, with research by John Walsh, John Hunter, Henry Cavendish, and others, turned out to be an instance of “animal electricity” or bioelectricity. To draw another historic analogy: disregarding the “peculiar” (for contemporaries) and incomprehensible form of the blackbody radiation in fin de siècle statistical physics would have delayed the development of quantum mechanics. Planck’s “act of desperation” [212, p. 23], later extended by Einstein’s hypothesis on light quanta, initiated a pioneering research program that dominated the upcoming century of physics.

Why should we care about UFOs? Because caring about them may align with a highly successful principle that has often been wrongly [268] attributed to Galileo Galilei [508, p. 139]: “to measure what is measurable and to try to render measurable what is not so as yet.” However, we should be concerned about what exactly is still unmeasurable. It could turn out to be a great “nothingburger,” or, even worse, “bullshit” [172].

Let us quote Major General John Samford, the US Air Force’s director of intelligence, who, in reaction to the July 1952 Washington DC flyovers, began what was arguably the largest press conference since the end of the Second World War [289], in a well-prepared, serious, and sober demeanor, with the words [402, 462]:

“I am here to discuss the so-called flying saucers. Air Force interest in this problem has been due to our feeling of an obligation to identify and analyze to the best of our ability, anything in the air that may have the possibility of threat or menace to the United States. In pursuit of this obligation since 1947, we have received and analyzed between one and two thousand reports that have come to us from all kinds of sources. Of this great mass of reports we have been able adequately to explain the great bulk of them, explain them to our own satisfaction. We’ve been able to explain them as hoaxes, as erroneously identified friendly aircraft, as meteorological or electronic phenomena, or as light aberration.

“However, there have been a certain percentage of this volume of reports that have been made by credible observers of relatively incredible things.”

There is a long history of coping with “relatively incredible things,” or in more graphical terms, “the woo,” in a rational way. Hume discussed how to cope with miracles [170, 171, 231]. Laplace offered both encouragement and a critical warning [163, 285]:

“We are thus far from recognizing all the agents of nature and their diverse modes of action that it would be unphilosophical to deny the phenomena solely because they are inexplicable in the present state of our knowledge. However, we ought to examine them with an attention as much the more scrupulous as it appears the more difficult to admit them . . .”

The principle is known as the Sagan Standard and is frequently expressed as “extraordinary claims require extraordinary evidence (ECREE).” Bertrand Arthur William Russell, in a related mood, created a pragmatic teapot metaphor, often referred to as “Russell’s teapot,” for categories lacking empirical foundations (such as God, but that does not exclude direct knowledge by belief and providence [398]) [394]:

“Many orthodox people speak as though it were the business of sceptics to disprove received dogmas rather than of dogmatists to prove them. This is, of course, a mistake. If I were to suggest that between the Earth and Mars there is a china teapot revolving about the sun in an elliptical orbit, nobody would be able to disprove my assertion provided I were careful to add that the teapot is too small to be revealed even by our most powerful telescopes. But if I were to go on to say that, since my assertion cannot be disproved, it is intolerable presumption on the part of human reason to doubt it, I should rightly be thought to be talking nonsense.”

Russell’s teapot analogy argues that the burden of proof is on the believer in the absence of evidence and that it is not rational to believe in something just because it cannot be disproved. He compares the existence of a small, undetectable teapot in orbit around the sun to religious beliefs that lack evidence and suggests that, just as the teapot’s existence is highly unlikely, the same can be said for these religious beliefs. The fact that they cannot be disproved does not make them any more likely to be true.

In their book “The Demon-Haunted World: Science as a Candle in the Dark” [399], Carl Sagan and Ann Druyan argue similarly: their “baloney detection kit” contains advice about what not to do. One of these wrong principles is what they call “appeal to ignorance:” the claim that whatever has not been proved false must be true. However, absence of evidence is not evidence of absence.

Laplace and Russell's arguments can be transcribed into the position that believing in the existence of flying saucers solely based on unconfirmed anecdotal hearsay and the inclinations of their proponents is unreasonable, even if immediate dismissal cannot be justified. Support of highly speculative claims should be provided by the claimants. They must produce substantial, rather than just circumstantial, evidence.

In regard to acceptance of those phenomena, the situation is not entirely dissimilar to that of a cult: we are expected to give credence to hearsay and commitment to authority. This is true for those who are “in the know” about UFOs—usually so-called “experiencers,” which might just be a tuned-down form of “abductees.” There have been many reported sightings of UFOs throughout history, but there is no openly available conclusive scientific evidence to support the existence of extraterrestrial spacecraft or otherworldly beings visiting Earth. There are many speculative theories and hypotheses about the nature of UFOs and the possibility of extraterrestrial life, but these are largely based on speculation and are not supported by scientific evidence. The scientific community generally takes a skeptical approach to the existence of extraterrestrial life and does not consider “raw” UFO sightings as evidence of their existence.

However, cult-like adherence is often also implied by deniers, for representatives of organizations, corporations, and executives of the state and of the military who continuously argue that there is nothing to see here, and that all efforts going into researching that phenomenon—even if it exists—yield nothing useful and of value, and thus are wasteful and cause unnecessary costs.

Certainly, the fact that certain phenomena may appear anomalous or strange to us and cannot be explained by our current scientific understanding does not necessarily imply the involvement of aliens or entities from some unknown realm. However, should we throw out the proverbial “baby with the bathwater” and discard these phenomenological outliers entirely? This is an issue that most official committees of experts in the USA and UK have had to cope with. Almost always, their recommendations were paradoxical. While they weakly recommended further research, they mostly suggested the cessation of existing studies. Discarding empirical anomalies might save us from much effort, costs, and trouble, but it could potentially block the advancement of science. In any case, straightforward answers to these issues are not apparent, and we should be fully aware of the consequences of our decisions in this regard.

Let me finally make two confessions: first, I have never experienced a “live UFO broadcast” in real time. Therefore, I am not among those who are strong UFO supporters, “in-the-know” or damned [166], and do not require any further evidence.

Second, I may suffer from a cargo mindset, hoping that at some point, either voluntarily or forcefully, some inhabitants of these vehicles, if they exist, will divulge the secrets encoded in their propulsion drive. This would enable humankind to free itself from the bounds of Earth and travel quickly and conveniently to the stars, experiencing a smooth ride through the difficulties—“per aspera ad astra.”

It could be enjoyable to cultivate these sciences or technologies independently and autonomously, without any “alien Prometheus” who, similar to the figure in Greek mythology, might disobey nonfraternization and gift the “fire” of their knowledge to

humanity. However, I do not believe that at this point we need to, or can, take this step easily and purely on our own, without any help, advice, or guidance.

The quest for interstellar technologies may prove to be a lengthy and tedious one. While traveling between planets within our Solar System may be challenging yet endurable, embarking on a journey to a remote stellar system without rapid propulsion methods may not be a prudent decision. It may be more sensible to wait for technology to advance beyond our current capabilities before launching a spacecraft to such a far-off destination.

Nevertheless, we can still ponder over the peculiar flight features of unidentified flying objects and attempt to unravel the secrets behind their abilities. At the very least, exploring the potential of such capabilities could motivate us to push the boundaries of what is conceivable and achievable, and inspire further research.

In the worst-case scenario, our quest to understand the UFO phenomenon could evolve into a scientifically oriented cargo cult in its own right, driven by an unrealistic ambition to attain flight characteristics, methods, and capabilities that are either impossible to achieve in this universe or by far exceed our current technological capabilities. In this “cargo–driven” sense, the UFO phenomenon embodies our hopes, aspirations, and objectives, encompassing all that we endeavor to achieve, and we must be mindful of this, whatever the outcome.

This is why I believe that it is important to approach the topic of UFOs and extraterrestrial life with an open mind and healthy skepticism and to base any conclusions on solid scientific conduct—regardless where it leads us.

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Acronyms

AAF	United States Army Air Forces
AARO	All-domain Anomaly Resolution Office
AATIP	Advanced Aerospace Threat Identification Program
AAWSAP	Advanced Aerospace Weapon Systems Applications Program
AIAA	American Institute of Aeronautics and Astronautics
APRO	Aerial Phenomena Research Organization
ATIC	Air Technical Intelligence Centre
BAASS	Bigelow Aerospace Advanced Space Studies
CIA	Central Intelligence Agency, civilian foreign intelligence service of the federal government of the United States
CNWDI	DOE Critical Nuclear Weapons Design Information
DIA	Defense Intelligence Agency
DSTI	Directorate of Scientific and Technical Intelligence
DOD	Department of Defense
DOE	Department of Energy
DSS	Defense Security Service
FBI	Federal Bureau of Investigation
FOIA	Freedom of Information Act
FSWP	The Flying Saucer Working Party
FTD	Foreign Technology Division
JIB	Joint Intelligence Bureau
MOD	Ministry of Defense (UK)
MUFON	Mutual UFO Network
NICAP	National Investigations Committee on Aerial Phenomena
NRO	National Reconnaissance Office
OUSDAT	Office of the Under Secretary of Defense for Acquisition and Technology
OSI	Office of Scientific Intelligence (of the CIA)
RAAF	Royal Australian Air Force
RD	DOE Restricted Data
SAP	special access program

SAPOC	Special Access Program Oversight Committee
SCI	Sensitive Compartmented Information
SCIF	Sensitive Compartmented Information Facility
UAP	unidentified aerial phenomenon or unidentified anomalous phenomenon
UAP	unidentified flying object
USA	United States of America
USAAF	United States Army Air Forces
USAF	United States Air Force
USAP	unacknowledged special access program
WWII	World War II or the Second World War

Part I

**UFO look-and-feel: A glance at historic
sightings**

*“...for this one thing I confidently pronounce for a truth, that I lie:
and this, I hope, may be an excuse for all the rest, when I confess what I am faulty
in: for I write of matters which I neither saw nor suffered, ...”*
in “A True Story” [301] by Lucian of Samosata (circa 125 – after 180 CE)

Chapter 1

Early UFO sagas and legends prior to Trinity (July 1945)

Abstract The study of unidentified flying objects has a long history, stretching back to ancient times. Throughout history, people have reported sightings of mysterious aerial phenomena, including luminous discs, elongated objects, and glowing shields. These sightings have often been interpreted through religious or cultural lenses and have been used to legitimize political power. In recent history, the perception of unidentified flying objects has been heavily influenced by technological advancements in aviation and the recognition that meteorites could fall from the sky. “Foo fighters” were sporadically recorded during World War II. Trinity, the explosion of the first nuclear device, seemed to be a significant turning point in the history of UFO sightings.

Ancient tales of entities in the sky abound and are difficult to evaluate and categorize. Reports of UFO sightings can be found dating back to the earliest times and have been described as luminous discs, shields, globes, and elongated objects.

According to a RAND corporation report [273], based on studies by Brinsley Le Poer Trench [286] and Jacques Vallee [465], as well as more recent accounts by Jeffrey J. Kripal [279], Diana Walsh Pasulka [357], and Tom DeLonge and Peter Levenda [118, 119], these events were often interpreted in a religious context.

The repeated appearance of a kind of UFO phenomenology at Fatima, Portugal, in 1917 was witnessed by a crowd of 70 000 people, including scientists, reporters, and faithful Catholics. The phenomenon was described as a luminous and shining disk with shifting tints that spun rapidly, not like the Moon or the Sun seen through a fog. In hindsight, when viewed through contemporary eyes, there is no material basis to assume that any of these sightings were of alien origin.

Kings and emperors in ancient times often justified their privileges and origins by claiming that they were descendants of sky people and sky crafts. Religion and myths were often used in a symbiotic relationship with secular leaders, as leaders received legitimacy from being blessed by supreme creatures from the heavens—“of God’s grace”—in exchange for supporting religion by worldly power.

In hindsight, could there be more to the ancient mythology of, for example, the Greek god Prometheus, who challenged the gods by stealing fire from them and providing it to humankind in different forms, such as technology, knowledge,

and the broader concept of civilization? Perhaps some alien beings either created humankind or showed us mercy by revealing knowledge that we could use to our advantage. Alternatively, did the ancient gods amuse themselves by handing out weaponry and encouraging wars? Any outrageous claims of this nature are likely to result in a drastically revisionist history.

In the last 200 years or so, the history of the perception of unidentified aerial phenomena seems to have been heavily stimulated by three significant events. To begin with, the first “aerostatic” flight by the Montgolfier brothers at Versailles in 1783, which demonstrated that humans could be lifted off the ground using a lighter-than-air vehicle. Second, the first flight using a steam-powered airship by Henri Giffard in 1852, which demonstrated that it was possible to use a powered engine to propel an aircraft through the air. And finally, the recognition that stones (aka meteorites) could fall from the sky. Between 1794 and 1798, four falls of stones were witnessed and widely publicized [309]. In 1803, nearly 3 000 stones fell from the sky at L’Aigle in Normandy.

Those events resulted in people looking very differently into the skies and led to a flurry of strange UFO sightings, many driven by projections of the mind and anxiety, which were exploited in the emergent news media market.

1.1 An alien Sumerian civilization

Carl Sagan may have been the first to spell out in a scientific article that human civilization could have been significantly influenced by extraterrestrial contacts. He speculated that [397, p. 496] “there are . . . legends which . . . deserve serious study in the present context [[of extraterrestrial contact with Earth during historical times]]. As one example, we may mention the Babylonian account of the origin of Sumerian civilization by the Apkdu [[or Apkallu or Abgal]] of an advanced, nonhuman and possibly extraterrestrial society.”

Sagan quotes [397, 419, 525] the following fragment [95, pp. 56,57]:

“At Babylon there was (in these times) a great resort of people of various nations, who inhabited Chaldea, and lived without rule and order, like the beasts of the field.

In the first year there made its appearance, from a part of the Erythraean sea which bordered upon Babylonia, an animal endowed with reason, who was called Oannes. [. . .] This Being, in the day-time, used to converse with men; but took no food at that season; and he gave them an insight into letters, and sciences, and every kind of art. He taught them to construct houses, to found temples, to compile laws, and explained to them the principles of geometrical knowledge. He made them distinguish the seeds of the earth, and showed them how to collect fruits. In short, he instructed them in everything which could tend to soften manners and humanise mankind. From that time, so universal were his instructions, nothing material has been added by way of improvement.

When the sun set it was the custom of this Being to plunge again into the sea, and abide all night in the deep; for he was amphibious."

Unlike the restrictive exchange of knowledge and technologies depicted in the ancient Greek legend of Prometheus, the Babylonian tale portrays a more favorable and fortuitous series of events [522]. In the Babylonian narrative, the flow of knowledge and technologies appears to be more open and benevolent.

1.2 The Razing of Saubha: Krishna's Battle Against a Flying Fortress

"The Razing of Saubha" is a tale that recounts the epic battle between Krishna, an incarnation of the Hindu god Vishnu, and Shalva, a rival king who possessed a powerful flying fortress called Saubha. The story tells how Shalva, driven by anger over the death of a friend and enemy of Krishna, laid siege to the city of Dvaraka, causing widespread destruction and loss of life by the deployment of Saubha. Despite Krishna's absence, he eventually returned to defend his people and successfully defeated Shalva, destroying the formidable Saubha in the process [111, 473].

The story is told in the Bhagavata Purana. In Bibek Debroy's translation [111, Chapter 10(76)]:

"Shalva . . . asked [[the lord and god Pashupati aka Shiva]] . . . for a vehicle that would be able to go anywhere at will and would be impenetrable by gods, asuras, humans, gandharvas and rakshasas . . . terrifying. . . . Maya, the conqueror of enemy cities . . . constructed such a city, made out of iron, and gave it to Shalva. [[“The city could fly through the sky and was known as Saubha”—from now on called Saubha.]] . . . that vehicle . . . was enveloped in darkness. It could travel anywhere at will and was impossible to assail. . . . Shalva used it to go to Dvaravati [[aka Dvaraka]]." Shalva "showered down weapons from [[Saubha,]] that supreme vimana [[a mythological flying palace or chariot]] on the turrets, gates, palaces, mansions, terraces and pleasure gardens [[of Dvaraka]]. Rocks, trees, bolts of thunder, snakes and hailstones rained down. There were fierce whirlwinds and the directions were enveloped in dust. . . . Krishna's city [[of Dvaraka]] was thus severely afflicted by Saubha. . . . However, [[Saubha]] had been fashioned by Maya and was full of maya. It would appear as one and as many. It would be visible and would not be visible. The enemy found it impossible to determine where it was. It was sometimes on the ground and sometimes, it was in the sky. Sometimes it was on the summit of a mountain and sometimes it floated on water. Saubha whirled around like a circle of fire and was never in a single spot."

The Bhagavata Purana describes the annihilation of the flying fortress Saubha by the following terms [111, Chapter 10(77)] “Using a club, he shattered the enemy’s Saubha. The club wielded by Krishna’s hand shattered it into one thousand fragments and it fell down.”

A complementary narration of the same story [473, pp. 253-267] can be found in the Vana Parva, The Book of the Forest, the third book of the Mahabharata. This version describes the downing of Saubha by Krishna using his Sudarsana Chakra, a spinning, celestial discus with 108 serrated edges, rather than a club. Krishna commands the destruction of the flying fortress Saubha with a specific order [473, p. 266]: “ ‘Now smite with your prowess the Saubha and whoever are my enemies inside.’ . . . It approached the now lackluster Saubha city and aloft it cut it in two as a saw cuts a log. Severed in twain at the impact of the force of Sudarsana, [[Saubha]] fell down like the Three Cities razed by the Great God. When Saubha had fallen, the discus returned to [[Krishna’s]] hand. Whirling it once more, [[Krishna’s]] told it, ‘Now hurry to Shalva!’ Just as Shalva was aiming a heavy mace in that battle royal, the discus cut him in two, and it blazed with its power.”

In the introduction to his translation of Vana Parva, The Book of the Forest, Johannes Adrianus Bernardus van Buitenen, a renowned Dutch Indologist at the University of Chicago, described the Saubha story as an example of “early science fiction” [473, p. 182]. He even speculated why Erich von Däniken, a Swiss author known for his controversial theories about extraterrestrial beings [479] (see also the earlier Robert Charroux [55]), did not make more use of it [473, p. 202].

1.3 The Second Punic War sightings, at 218–201 BC

Throughout the Second Punic War between 218 and 201 BC, reports of strange aerial phenomena emerged, such as descriptions of gleaming phantom ships and shields in the sky. Livius critically noted that many of these reports were too readily believed [448]. The *Annales maximi* of Rome also recorded several of these sightings, which frequently occurred during wartime and were observed by numerous individuals.

1.4 Flaming Shield in 776

During a military attack on the town of Sigiburg (now Dortmund) in what is now Germany, a strange object resembling two large flaming shields appeared in the sky. The object was described as being reddish in color and seemed to be floating in the air. The advancing Saxon army was reportedly so frightened by the sight that they abandoned their siege of Sigiburg and retreated.

This event is recorded in the *Annales Laurissenses Maiores*, a series of Latin annals that document the history of the region from 741 to 829 AD. It is believed

that the Annales Laurissenses maiores were compiled from accounts written by eyewitnesses at the time of the events described.

1.5 Flying plate or hat observed hovering over a church in 1665

Erasmus Francisci reported an “air vision” that was observed on April 8th, 1665 [483] in the city of Stralsund. A flat, round object resembling a plate or a hat was seen hovering over a church. It had the color of the rising moon and remained stationary until evening. The fishermen who witnessed the phenomenon were concerned and later reported experiencing tremors and pains in their limbs and head.

1.6 Flying saucer with a cigar-shaped form of 1882

On the night of November 17, 1882, a UFO was reportedly observed by a number of distinguished scientists in the United Kingdom and over continental Europe [322, Chapter 7]. The object was described as a flying saucer with a cigar-shaped form, and it was reportedly the best-observed flying saucer in history. The event is considered one of the most difficult to explain. E. Walter Maunder, a Greenwich astronomer, and J. Rand Capron, a spectroscopist, observed the event from England, while Dutch scientists professors Audemans and Zeeman also witnessed it. Zeeman eventually received a Nobel Prize for his work on magnetism.

1.7 Mystery airship wave of 1896–1897

A series of reports about mysterious airships began in California in 1896 and spread throughout the United States, with many of the sightings moving from west to east. Some of these reports included descriptions of visible occupants on the airships and encounters with the pilots. These airships were described as being larger, faster, and more advanced than any aircraft at the time, and some were even equipped with giant wings [105, p. 131,462]. The reports of these airships from 1896 to 1897 were thoroughly investigated, with researchers examining nearly 1500 newspaper files from across the United States.

The occupants of these airships were often reported as appearing human. In some cases, the occupants claimed to be from Mars. Many of these reports were investigated and found to be misidentifications of planets and stars, hoaxes, or practical jokes, but a small number remain unexplained. Examples of unexplained incidents include an alleged airship crash in Aurora, Texas, on April 17, 1897, whose deceased pilot was reported to be a native of the planet Mars, and an alleged airship encounter

involving calf-napping on the ranch of Alexander Hamilton at Leroy, Kansas, on April 19, 1897 [403].

1.8 Mysterious airships with searchlights of 1909

In December 1909, there were multiple reports of unidentified flying objects (UFOs) in the New York Tribune and the New York Sun. These reports recounted sightings of “mysterious airships” or other objects in the sky over different locations in Massachusetts and Connecticut. The objects were characterized as having bright lights or searchlights and were observed hovering or moving slowly through the sky [167, New Lands, Chapter 15].

1.9 The War of the Worlds scare of 1938

On October 30, 1938, the radio program “The Mercury Theatre on the Air” aired an adaptation of H.G. Wells’ novel “The War of the Worlds.” Directed and narrated by actor Orson Welles, the program was presented in the form of a simulated news bulletin, causing widespread panic among listeners who believed that a Martian invasion was taking place.

The “War of the Worlds” broadcast remains one of the most famous events in radio history and serves as a powerful example of media’s influence on public perception and belief. Despite causing widespread panic, the broadcast was a highly creative and well-crafted piece of storytelling that helped popularize the science fiction genre and establish Orson Welles as a prominent figure in entertainment.

1.10 Crash retrieval in Cape Girardeau, Missouri, in the spring of 1941

In the spring of 1941, Reverend William Huffman, a Baptist minister, was allegedly summoned to the site of a plane crash outside of Cape Girardeau. When he arrived, he found a strange craft—a saucer-shaped metallic object that had been broken open. Inside, he saw a small metal chair, gauges, and dials, along with inscriptions and writings that resembled Egyptian hieroglyphics. There were three entities or nonhuman people lying on the ground, two outside the saucer and one further away. Reverend Huffman prayed over them, giving them last rites, and observed that they appeared to have no bone structure and were soft-looking with crinkled, soft aluminum foil-like skin. The entity he saw up close was approximately 4 feet tall with very long hands and fingers [519, pp. 34–43].

1.11 The Battle of Los Angeles of 1942

The Battle of Los Angeles, also known as the Great Los Angeles Air Raid, took place on February 25, 1942, during World War II. The incident involved the firing of 1400 anti-aircraft shells at an unidentified flying object over Los Angeles, California.

At 2:25 a.m., air raid sirens sounded across the city, and witnesses reported seeing an object flying at high altitude over the city. Initially, thought to be a Japanese aircraft, the object was eventually identified as a UFO. The military fired at the object for several hours, but it is unclear whether any damage was inflicted.

The UFO disappeared from sight at approximately 7:00 a.m., marking the end of the incident.

The event has been the subject of speculation and debate, with some believing it was a genuine UFO encounter, while others suggest it was a false alarm or a misidentified object, such as a balloon, triggered by “war nerves” over fears of a Japanese attack. There is no conclusive evidence to support either explanation.

1.12 Roman Sabinski's June 1942 encounter with a foo fighter

Here is a dramatic story involving a foo fighter reported in the June 1992 issue of Mufon UFO Journal [190], as well as in Keith Chester's book “Strange Company: Military Encounters with UFOs in World War II” [56]. Another book on this topic is Graeme Rendall's “UFOs Before Roswell: European Foo-Fighters 1940–1945” [382]. More unconfirmed dramatized foo fighter stories are told in “Chapter II: The Coming of the Foo Fighters” of the book “Flying Saucers on the Attack” [516], by the British journalist Harold Tom Wilkins, who specialized in all kinds of mysteries [514, 515].

On June 25, 1942, Flight Lt. Ronan Savinsky and his Squadron 301 of the Royal Air Force Polish Division were flying over the Ruhr Valley in Germany on a bombing mission. After completing the mission successfully, they were returning over Holland. Savinsky's rear gunner reported an approaching aircraft, which prompted Savinsky to instruct him to open fire if the object got too close. Savinsky believed it to be a German fighter equipped with a searchlight and was not willing to take any chances.

As the object approached from the right (starboard) side of the aircraft, the rear gunner opened fire, aiming at a range of approximately 200 yards. From their distance, the object might have been about the size of the Moon and was potentially even much larger than that. While the rear gunner was shooting, the trajectory of the tracer shells could be followed as they entered the target. However, the peculiar thing was that they did not fall away but instead simply entered and disappeared.

This lasted for approximately two minutes. After this time, the shiny object changed position and moved at terrific speed over the aircraft to the other (left port) side, remaining at approximately 200 yards from the wing. This time, both the rear and front gunners were ordered to open fire on the object. Again, the airmen observed

that the tracers were entering the target from different angles and disappeared “inside” the object.

Eventually, the object took off at a fantastic speed at a 45-degree angle and disappeared into the stars. The aircraft behind the observer allegedly had a similar experience a few minutes later [56, Chapter 3,note 64] and [190].

Here is another (undocumented) foo fighter report quoted by Wilkins [516, Chapter II]: On December 22, 1944, Lt. David McFalls and Lt. Edward Baker were flying at 10 000 feet, south of Hagenau in Alsace-Lorraine, the German Elsaß Lothringen, 20 miles north of Strasbourg, and 16 miles west of the Rhine. McFall recalls:

“At [[night]] 0600 (six pm) near Hagenau, at 10 000 feet altitude, two very bright lights climbed toward us from the ground. They levelled off and stayed on the tail of our plane. They were huge, bright orange lights. They stayed there for two minutes. On my tail all the time. They were under perfect control. Then, they turned away from us, and the fire seemed to go out.”

Two days afterwards, on December 24, 1944, the same crew had another strange encounter: “A glowing red ball shot straight up to us. It suddenly changed into an airplane which did a wing over! Then, it dived and disappeared.”

Chapter 2

UFO sagas and legends from Trinity (July 1945) until the Robertson Panel (January 1953)

Abstract Trinity—the code name of the explosion of a nuclear weapon that was ignited at 5:29 a.m. on July 16, 1945, at [33.67722° N longitude \(-\)106.47527° degree W latitude](#), located 210 miles south of Los Alamos, New Mexico, on the plains of the United States Army Air Forces (USAAF or AAF) Alamogordo Bombing Range known as the Jornada del Muerto—was a turning point in the history of UFO sightings and may have “triggered” a flurry of UFO-related events and sightings, some of which are reviewed.

After Trinity, the can of flying saucers seemed to begin to cook with such an intensity that some UFOs spilled out of it and could no longer be neglected. However, the US Air Force, established in 1947 from the United States Army with the enactment of the National Security Act of 1947, seemed to react ambivalently, depending on the persons involved. While Nathan Farragut Twining [458, 523], third chief of Staff of the United States Air Force and later chairman of the Joint Chiefs of Staff, as well as William Madison Garland [371, 456], chief of the Air Technical Intelligence Center at Wright-Patterson Air Force Base, Ohio, seemed to have leaned towards the extraterrestrial hypothesis, Hoyt Sanford Vandenberg [457], second chief of Staff of the United States Air Force remained unconvinced.

Some officers and functionaries within the CIA—Marshall H. Chadwell, the Assistant Director of CIA’s Office of Scientific Intelligence (OSI), and maybe to a lesser degree Allen Dulles, the Deputy Director of the CIA (DDCI)—became increasingly concerned about the hysterical character of the saucer scare that might even have been stimulated from Stalin’s Soviet Union to gain advantages in a first strike with nuclear weapons by clogging military communication channels in the USA [195]. The multi-authored book “UFOs and Government: A Historical Inquiry” [436] by Michael Swords, Robert Powell, Clas Svahn, Vicente-Juan Ballester Olmos, Bill Chalker, Barry Greenwood, Richard Thieme, Jan Aldrich, and Steve Purcell gives a detailed analysis of the people involved.

2.1 UFO intercept attempt at Hanford nuclear plant in July 1945

In July 1945, an unidentified flying object was detected by air defense radar above the secret Hanford Nuclear plant, which was established in 1943 as part of the Manhattan Project. The site was home to the B Reactor, the first full-scale plutonium production reactor in the world.

Six pilots in Grumman F6F Hellcat fighter planes were sent to investigate and upon arriving at the site, they observed a saucer-shaped object that was bright, extremely fast, and very high in the sky. Despite attempting to communicate with the object and fly as high as 42 000 feet, well above their rated ceiling of 37 000 feet, the pilots never reached the object, which stood motionless above Hanford. They had to land when the fuel reserve became critical and the engines started to fail one after the other due to the excessively high altitude they had reached. Finally, the tower operator told them to glide back toward the airport.

The object hovered above the secret Hanford Nuclear plant for an further twenty minutes before disappearing. The local newspaper did not report on the incident, and it is believed that the government suppressed the information due to war security measures. The principal witness, Roland Powell, one of the pilots, estimated that the event occurred around the middle of July—and thus close to Trinity, the detonation of the first nuclear bomb on July 16, 1945—and described the object as being the size of three aircraft carriers placed side by side, oval-shaped, very streamlined like a stretched-out egg, and pinkish in color. It was emitting some sort of vapor from its edges, which Powell speculated was used for disguise. The object was observed at noon in clear skies at an estimated altitude of 65 000 feet [367]. One explanation discussed is Japanese “Fugo balloons” launched during WWII [192].

2.2 Trinity crash in August 1945

The United States Department of Defense’s All-domain Anomaly Resolution Office (AARO) has been ordered to reinvestigate the alleged crash of a mysterious, avocado-shaped UFO in New Mexico in August 1945, which occurred spatially close to, and shortly after Trinity. The crash, also known as the “Roswell before Roswell,” has piqued the interest of many researchers, including Jacques Vallée, a former contractor for the government’s UFO office and coauthor of a book on the case. Vallée and Italian UFO journalist Paola Harris’s book [472] includes testimony from three witnesses, including a B-52 bomber pilot and two young sons of a rancher on whose land the UFO supposedly crashed.

Vallée and Harris interviewed the family of Lt. Col William Brothy, who revealed in the years after the incident that he was sent out to survey the crash site on August 16, 1945. One witness to the crash was a bomber pilot who was coming in for landing at Alamogordo, the neighboring airbase. The pilot noticed a communication tower that had lost signal and, upon flying over it, saw that it was bent, as if it had been hit by something very hard. He then saw an egg-shaped object in the vegetation some

distance away and two children on horseback next to the object, whom he referred to as “little Indians.” These two children were Jose Padilla, who later became a Highway Patrol officer, and Reme Baca, who became a US Marine and later a senior staffer for Washington Governor Dixy Lee Ray. The children kept their stories secret for more than 50 years. A recent post has raised doubts about the authenticity of this narration [77, 251].

2.3 Flying saucers or pelicans in V-formation—Kenneth Arnold's sighting on June 24, 1947

Kenneth Arnold was an American pilot and businessman who claimed to have witnessed nine unidentified flying objects (UFOs) near Mount Rainier, Washington, on June 24, 1947. His report of the incident was the first modern UFO sighting and is credited with popularizing the term “flying saucer.” The incident received widespread media attention and spurred a wave of UFO sightings across the United States. Arnold’s UFO sighting is often considered one of the most famous in history and has been the subject of numerous books and articles.

An extended discussion by Bruce Maccabee [303] and a dissertation by Kate Dorsch [141] are available for further reading. Here is Arnold’s own report to the US Army Air Force [19]:

“The following story of what I observed over the Cascade mountains, as impossible as it may seem, is positively true. I never asked nor wanted any notoriety for just accidentally being in the right spot at the right time to observe what I did. I reported something that I know any pilot would have reported. I don’t think that in any way my observation was due to any sensitivity of eye sight or judgment than what is considered normal for any pilot.

On June 24th, Tuesday, 1947, I had finished my work for the Central Air Service at Chehalis, Washington, and at about two o’clock I took off from Chehalis, Washington, airport with the intention of going to Yakima, Wash. My trip was delayed for an hour to search for a large marine transport that supposedly went down near or around the southwest side of Mt. Rainier in the state of Washington and to date has never been found.

I flew directly toward Mt. Rainier after reaching an altitude of about 9500 feet, which is the approximate elevation of the high plateau from which Mt. Rainier rises. I had made one sweep of this high plateau to the westward, searching all of the various ridges for this marine ship and flew to the west down and near the ridge side of the canyon where Ashford, Washington, is located.

Unable to see anything that looked like the lost ship, I made a 360 degree turn to the right and above the little city of Mineral, starting again toward Mt. Rainier. I climbed back up to an altitude of approximately 9200 feet.

The air was so smooth that day that it was a real pleasure flying and, as most pilots do when the air is smooth and they are flying at a higher altitude, I trimmed out my airplane in the direction of Yakima, Washington, which was almost directly east of my position and simply sat in my plane observing the sky and the terrain.

There was a DC-4 to the left and to the rear of me approximately fifteen miles distance, and I should judge, at 14 000 foot elevation.

The sky and air was clear as crystal. I hadn't flown more than two or three minutes on my course when a bright flash reflected on my airplane. It startled me as I thought I was too close to some other aircraft. I looked every place in the sky and couldn't find where the reflection had come from until I looked to the left and the north of Mt. Rainier where I observed a chain of nine peculiar looking aircraft flying from north to south at approximately 9500 foot elevation and going, seemingly, in a definite direction of about 170 degrees.

They were approaching Mt. Rainier very rapidly, and I merely assumed they were jet planes. Anyhow, I discovered that this was where the reflection had come from, as two or three of them every few seconds would dip or change their course slightly, just enough for the sun to strike them at an angle that reflected brightly on my plane.

These objects being quite far away, I was unable for a few seconds to make out their shape or their formation. Very shortly they approached Mt. Rainier, and I observed their outline against the snow quite plainly.

I thought it was very peculiar that I couldn't find their tails but assumed they were some type of jet plane. I was determined to clock their speed, as I had two definite points I could clock them by; the air was so clear that it was very easy to see objects and determine their approximate shape and size at almost fifty miles that day.

I remember distinctly that my sweep second hand on my eight day clock, which is located on my instrument panel, read one minute to 3 P.M. as the first object of this formation passed the southern edge of Mt. Rainier. I watched these objects with great interest as I had never before observed airplanes flying so close to the mountain tops, flying directly south to southeast down the hog's back of a mountain range. I would estimate their elevation could have varied a thousand feet one way or another up or down, but they were pretty much on the horizon to me which would indicate they were near the same elevation as I was.

They flew like many times I have observed geese to fly in a rather diagonal chain-like line as if they were linked together. They seemed to hold a definite direction but rather swerved in and out of the high mountain peaks. Their speed at the time did not impress me particularly, because I knew that our army and air forces had planes that went very fast.

What kept bothering me as I watched them flip and flash in the sun right along their path was the fact that I couldn't make out any tail on them, and I am sure that any pilot would justify more than a second look at such a plane.

I observed them quite plainly, and I estimate my distance from them, which was almost at right angles, to be between twenty to twenty-five miles. I knew they must be very large to observe their shape at that distance, even on as clear a day as it was that Tuesday, In fact I compared a zeus fastener or cowling tool I had in my pocket with them—holding it up on them and holding it up on the DC-4—that I could observe at quite a distance to my left, and they seemed smaller than the DC-4; but, I should judge their span would have been as wide as the furtherest engines on each side of the fuselage of the DC-4.

The more I observed these objects the more upset I became, as I am accustomed and familiar with most all objects flying whether I am close to the ground or at higher altitudes. I observed the chain of these objects passing another high snow-covered ridge in between Mt. Rainier and Mt. Adams, and as the first one was passing the south crest of this ridge the last object was entering the northern crest of the ridge.

As I was flying in the direction of this particular ridge, I measured it and found it to be approximately five miles so I could safely assume that the chain of these saucer like objects was at least five miles long. I could quite accurately determine their pathway due to the fact that there were several high peaks that were a little this side of them as well as higher peaks on the other side of their pathway.

As the last unit of this formation passed the southernmost high snow-covered crest of Mt. Adams, I looked at my sweep second hand and it showed that they had travelled the distance in one minute and forty-two seconds. Even at the time this timing did not upset me as I felt confident after I would land there would be some explanation of what I saw.

A number of news men and experts suggested that I might have been seeing reflections or even a mirage. This I know to be absolutely false, as I observed these objects not only through the glass of my airplane but turned my airplane sideways where I could open my window and observe them with a completely unobstructed view. (Without sun glasses.)

Even though two minutes seems like a very short time to one on the ground, in the air in two minutes time a pilot can observe a great many things and anything within his sight of vision probably as many as fifty or sixty times.

I continued my search for the marine plane for another fifteen or twenty minutes and while searching for this marine plane, what I had just observed kept going through my mind. I became more disturbed, so after taking a last look at Tieton Reservoir I headed for Yakima.

I might add that my complete observation of these objects, which I could even follow by their flashes as they passed Mt. Adams, was around two and one-half or three minutes—although, by the time they reached Mt. Adams they were out of my range of vision as far as determining shape or form. Of course, when the sun reflected from one or two or three of these units, they appeared to be completely round; but, I am making a drawing to the best of my ability, which I am including, as to the shape I observed these objects to be as they passed the snow covered ridges as well as Mt. Rainier.

When these objects were flying approximately straight and level, they were just a black thin line and when they flipped was the only time I could get a judgment as to their size.

These objects were holding an almost constant elevation; they did not seem to be going up or coming down, such as would be the case of rockets or artillery shells. I am convinced in my own mind that they were some type of airplane, even though they didn't conform with the many aspects of the conventional type of planes that I know.

Although these objects have been reported by many other observers throughout the United States, there have been six or seven other accounts written by some of these observers that I can truthfully say must have observed the same thing that I did; particularly, the descriptions of the three Western [Cedar City, Utah] Air Lines employees, the gentleman [pilot] from Oklahoma City and the locomotive engineer from Illinois, plus Capt Smith and Co-Pilot Stevens of United Air Lines.

Some descriptions could not be very accurate taken from the ground unless these saucer-like disks were at a great height and there is a possibility that all of the people who observed peculiar objects could have seen the same thing I did, but, it would have been very difficult from the ground to observe these for more than four or five seconds, and there is always the possibility of atmospheric moisture and dust near the ground which could distort one's vision.

I have in my possession letters from all over the United States and people who profess that these objects have been observed over other portions of the world, principally Sweden, Bermuda, and California.

I would have given almost anything that day to have had a movie camera with a telephoto lens and from now on I will never be without one—but, to continue further with my story. When I landed at Yakima, Wash., airport I described what I had seen to my very good friend, Al Baxter, who listened patiently and was very courteous but in a joking way didn't believe me.

I did not accurately measure the distance between these two mountains until I landed at Pendleton, Oregon, that same day where I told a number of pilot friends of mine what I had observed and they did not scoff or laugh but suggested they might be guided missiles or something new. In fact several former Army pilots informed me that they had been briefed before going into combat overseas that they might see objects of similar shape and design as I described and assured me that I wasn't dreaming or going crazy.

I quote Sonny Robinson, a former Army Air Force pilot who is now operating dusting operations at Pendleton, Oregon: 'What you observed, I am convinced, is some type of jet or rocket propelled ship that is in the process of being tested by our government or even it could possibly be by some foreign government.'

Anyhow, the news that I had observed these spread very rapidly and before the night was over I was receiving telephone calls from all parts of the world; and, to date, I have not received one telephone call or one letter of scoffing or disbelief. The only disbelief that I know of was what was printed in the papers.

I look at this whole ordeal as not something funny as some people have made it out to be. To me it is mighty serious and since I evidently did observe something that at least Mr. John Doe on the street corner or Pete Andrews on the ranch has never heard about, is no reason that it does not exist. Even though I openly invited an investigation by the Army and the FBI as to the authenticity of my story or a mental or a physical examination as to my capabilities, I have received no interest from these two important protective forces of our country; I will go so far as to assume that any report I gave to the United and Associated Press and over the radio on two different occasions which apparently set the nation buzzing, if our Military intelligence was not aware of what I observed, they would be the very first people that I could expect as visitors.

I have received lots of requests from people who told me to make a lot of wild guesses. I have based what I have written here in this article on positive facts and as far as guessing what it was I observed, it is just as much a mystery to me as it is to the rest of the world.

My pilot's license is 333487. I fly a Callair airplane; it is a three-place single engine land ship that is designed and manufactured at Afton, Wyoming as an extremely high performance, high altitude airplane that was made for mountain work. The national certificate of my plane is 33355.

/s/ Kenneth Arnold
Box 587
Boise, Idaho"

It is interesting to compare this narrative to the corresponding case discussed in the Project Blue Book entry [373]. According to this report, Arnold timed their travel between two mountain peaks:

Mr. [[Arnold]] timed the objects between Mt. Ranier and Mt. Adams and determined they crossed this 47 miles in one minute and forty-two seconds. This is equivalent to $[47 \text{ miles per } 102 \text{ sec} = 47/102 \times 3600 = 1658.82352941]$ 1656.71 miles per hour.

In a subsequent interview, Mr. [[Arnold]] described the objects as appearing like saucers skipping the water. This description was shortened to "Flying Saucers" by newspaper men and resulted in the popular use of this term.

A page in the Project Blue Book file, undersigned by J. Allen Hynek, criticized Arnold's report as follows:

Arnold made drawings of objects showing definite shapes, and stated that the objects seemed about 20 times as long as wide, estimating them as 45–50 feet long.

He also estimated the distance as 20–25 miles and clocked them as going 47 miles in 102 seconds. (1700 MPH)

These statements are mutually contradictory:

If the distance were correct, then in order for details to be seen, objects must have been of the order of 100×2000 feet in size.

If we adopt a reasonable size—[[Arnold's]] own estimate, in fact, of 50 feet long, hence about 3 feet wide, the objects must have been closer to a mile, obviously contrary to his statement.

If we adopt a reasonable limiting size to the objects of 20×400 feet, the objects must have been closer than six miles to have shown the details indicated by [[Arnold]]. At this distance, the angular speed observed corresponds to a maximum speed of 400 MPH.

In all probability, therefore, the objects were much closer than thought, and moving at definitely “sub-sonic” speeds.

Thus, if one concurs with Hynek, what Arnold saw may well have been birds, possibly “pelicans flying in V-formation” [303].

Let us cross-check Hynek’s calculations with an estimate. A US National Bureau of Standards publication that reviews visual acuity states that, “it is traditionally assumed that the finest detail that can just be made out by an eye with normal visual acuity, viewing black lines on a white background, with moderate levels of illumination, subtends a visual angle of 1 minute of arc” [228, p. 10].

By approximating $\sin(x) \approx x$ for $x \ll 1$, we can conclude that the smallest object discernable with human eyes at a distance d (in SI units meters) is approximately $d \times 2 \times \pi / (360 \times 60)$ m. That is, for 25 miles $\approx 25 \times 1609$ m ≈ 40233 m, the smallest object discernable for an average person is approximately $40233 \times 2 \times \pi / (360 \times 60)$ m ≈ 12 m or 40 feet. Therefore, if we assume that Arnold had good visual acuity and the lighting conditions were very good, Hynek’s estimate for a reasonable limiting size to the objects of 20×400 feet, as mentioned in the Project Blue Book file, could have been plausible and attainable at the maximal distance estimated by Arnold. Therefore, we cannot validate Hynek’s conclusion that, at such distances, the object needed to be about 100×2000 feet in size.

2.4 Roswell UFO incident on July 7, 1947

The Roswell UFO incident began on July 7, 1947, when rancher William Brazel discovered debris from a crashed object on his property in Roswell, New Mexico. Brazel contacted local authorities, who notified the military. The US Army Air Forces sent a team of military personnel to investigate the crash site and collect the debris. On July 8, the Roswell Army Air Field (RAAF) issued a press release stating that it had recovered a “flying disc,” which was later identified as a UFO. This announcement sparked widespread public interest and speculation, and news of the “flying disc” quickly spread around the world. However, the following day, the

Army retracted the statement and said that the crashed object was a radar-tracking (weather) balloon, not a “flying disc” [109].

In 1994, the United States Air Force published a report identifying their previously classified “weather balloon” as a nuclear test surveillance balloon from Project Mogul [276,491]. Despite this explanation, many people remained skeptical and continued to believe that the object that crashed at Roswell was an alien spacecraft [378]. Numerous postmortem investigations have been conducted in connection with the incident, such as deciphering the content of a note, sometimes referred to as the “Ramey Memo” [224], which is partially recognizable in an official photo of a press conference displaying balloon material.

Additionally, various conspiracy theories have been proposed. For instance, Annie Jacobsen was told by an alleged EG&G technician that the crashed craft had been of Soviet origin, a message delivered by Stalin to Truman, and that the recovered bodies were child-size aviators prepared by the NAZI doctor Mengele [247, Chapter 21]. In the book “The Day After Roswell” [94], Colonel Philip J. Corso claims that he was involved in the recovery and analysis of the wreckage from the Roswell UFO incident, and that the US government had covered up the truth about the incident for over 50 years. However, no concrete evidence has ever been presented to support the idea that the object that crashed at Roswell was of extraterrestrial origin.

In what follows, a different path will be pursued: we present a fictional account of what could have happened if the Roswell incident had been caused by the explosion of an extraterrestrial craft. The extraterrestrial craft (explosion) narrative was put forward by Friedman and Berlitz [31, 177] and later by Carey and Schmitt [48].

On the evening of July 2, 1947, a UFO that was allegedly in proximity to significant US nuclear sites encountered trouble during a severe thunderstorm. It is believed that the UFO may have been hit by lightning near Corona and subsequently exploded in the air. Witnesses reported hearing a sound distinct from thunder, and one witness observed a craft heading northwest from Roswell on the same evening. The reported trajectory of the craft was from northwest to southeast in central New Mexico.

Upon explosion, the craft did not completely disintegrate. The first part of the debris, along with two occupants, fell off the craft at the first debris site called “Dee Proctor (Body) Site,” which is two and a half miles east of the second, much bigger site, also called “Brazel debris field.” There, local rancher William W. “Mack” Brazel later discovered most of the wreckage in this second debris field, a pasture full of small pieces. A remaining portion of the craft, described as a “teardrop-shaped” inner cabin or escape pod, continued to fly southeast for another 30 miles before grounding, slightly damaged, 30 to 40 miles northwest of Roswell. This third debris site is referred to as the “impact site.” At this location, three of the original five occupants remained, and at least one of them was still alive.

On July 3rd, the day following the explosion, Brazel discovered the second “Brazel debris field,” without any bodies. The bodies at the impact site were not found until July 7th. At this time, two occupants were found dead, while one was still alive and moving around, still in the “escape pod.”

Two days before Brazel reported the debris field in Roswell, he noticed circling buzzards two miles away at the Dee Proctor Site. He went there together with Dee Proctor, a child of a neighboring rancher, to investigate.

The large Brazel debris field was covered with two types of debris, both mostly the size of a fist. One type was very light and thin, weightless, foil-like, metallic debris with a color of dulled aluminum. It had a memory characteristic: when deformed, it returned to its original shape.

After the military took control, farmers were threatened several times with increasing intensity to return any debris they may have collected. As Carey and Schmitt report [48], ranch houses were searched and ransacked. The wooden floors of live-stock sheds were pried loose plank by plank, and underground cold storage fruit cellars were emptied of their contents. Glass jars were scattered and broken on the ground. Ranchers and their families were threatened and intimidated by agents of the government to submit and not leave any evidence behind. Troops spent more than two days picking up every trace in the pasture using industrial vacuum cleaners. All that remained were a gouge in the land and tire tracks on the rocky terrain. Just as the ground had been stripped of all its secrets, so had the local residents. I should once more repeat that the entire narrative remains unconfirmed and should not be considered factual.

Let me conclude this speculative section on the Roswell incident with an even larger speculation, as discussed in Section 9.13: that Einstein was invited to the site where crashed material and a damaged craft from the alleged Roswell crash had been collected and that five or nine aliens, mostly deceased, were recovered. This story relies on a single eyewitness, Shirley Wright [521], who was one of Einstein's summer students [43].

2.5 Twining memo 1947

Dated September 23, 1947, Lieutenant General Nathan Farragut Twining of the United States Air Material Command (AMC) undersigned a letter titled "AMC Opinion Concerning 'Flying Discs'" [523]. The letter was addressed to Commanding General, Army Air Forces, Washington 25, D.C., and was sent to the attention of Air Force Brigadier General George Schulgen in response to his request for information on reports of "flying discs."

It is worth noting that, at the time, no one in the military could have foreseen the type of disclosure of US government and military communication that the Freedom of Information Act (FOIA) would make possible in 1966. Therefore, it is quite safe to assume that we can witness here an exchange that was never intended for outside scrutiny.

However, it may not be unreasonable to assume that some of the written exchange served bureaucratic purposes, documenting one's processes in view of possible later allegations and procedures by congressional oversight committees. I believe that if

the matter were very urgent and sensitive, those exchanges might have been conducted over personal or secure phone lines.

With this caveat, we can proceed by enumerating some excerpts from Twining's letter (a full transcript is in the Condon report [84, AppendixR] and in Zabel's Medium blog [523]): based on preliminary studies of the Aircraft Laboratory and other United States Air Force (USAF) personnel, Twining's opinion was:

- a. "The [[flying saucer aka UFO]] phenomenon is something real and not visionary or fictitious.
- b. There are objects probably approximating the shape of a disc, of such appreciable size as to appear to be as large as man-made aircraft.
- c. There is a possibility that some of the incidents may be caused by natural phenomena, such as meteors.
- d. The reported operating characteristics such as extreme rates of climb, maneuverability (particularly in roll), and motion which must be considered evasive when sighted or contacted by friendly aircraft and radar, lend belief to the possibility that some of the objects are controlled either manually, automatically or remotely.
- e. The apparent common description is as follows:
 - (1) Metallic or light reflecting surface.
 - (2) Absence of trail, except in a few instances where the object apparently was operating under high performance conditions.
 - (3) Circular or elliptical in shape, flat on bottom and domed on top.
 - (4) Several reports of well kept formation flights varying from three to nine objects.
 - (5) Normally no associated sound, except in three instances a substantial rumbling roar was noted.
 - (6) Level flight speeds normally above 300 knots are estimated.
- f. [[. . .]]
- g. [[. . .]]
- h. Due consideration must be given the following:
 - (1) The possibility that these objects are of domestic origin—the product of some high security project not known to AC/AS-2 or this Command.
 - (2) The lack of physical evidence in the shape of crash-recovered exhibits which would undeniably prove the existence of these subjects.
 - (3) The possibility that some foreign nation has a form of propulsion, possibly nuclear, which is outside of our domestic knowledge."

In essence, Twining—who later became Chief of Staff of the United States Air Force and subsequently Chairman of the Joint Chiefs of Staff—considered flying saucers to be “real and not visionary or fictitious.” However, Twining denied the idea of crash retrievals from places such as Roswell by stating that there was a “lack of physical evidence in the shape of crash-recovered exhibits which would

undeniably prove the existence of these subjects.” This latter stance could be because the Roswell crash was fictitious, or Twining may have been ignorant of the fact that the Department of Energy or another unknown (government) entity such as the US Army carried out a possible crash retrieval in Roswell without knowledge of the newly founded Air Force. Another possibility is that there was an effort to conceal this issue. It may have been decided (e.g., by President Harry S. Truman) that the Commanding General, Army Air Forces, and in particular Schulgen, had no need to know [130, p. 44].

2.6 Submerged spinning wheels of light on November 14, 1949

On a clear, bright night with no Moon and good visibility, Commander of the U.S. Naval Reserve (Inactive), John R. Bodler, was on a merchant vessel passing through the Strait of Hormuz en route to India when the Third Mate on the bridge observed a strange phenomenon. A luminous band with a pulsating appearance was first seen on the port bow, close to the coast of Iran.

Upon closer inspection, as it drew nearer to the vessel, the disturbance was discernible as having a circular shape, approximately 1000 to 1500 feet in diameter. The phenomenon had revolving spokes of light that were like “the beams of search lights, radiating outward from the center and revolving” in a counterclockwise direction, like “the spokes of a gigantic wheel.”

The vessel remained situated in the center of this phenomenon for several minutes, with bands of light revolving rapidly about the vessel as a hub. Bodler believed that the illumination was caused by phosphorescence stimulated by waves of energy.

The same phenomenon was observed twice more, each time smaller and less impressive. Similar manifestations of geometrical and phosphorescent displays on the surface of tropical seas have been collected in Eberhart’s bibliography [147, Chapter 27]. The following early report can be found in Fort’s “The Book of the Damned” [166, Chapter 21]:

“I am tempted to ask for an explanation of the following, which I saw when on board the British India Company’s steamer Patna, while on a voyage up the Persian Gulf. In May, 1880, on a dark night, about 11:30 P.M., there suddenly appeared on each side of the ship an enormous luminous wheel, whirling around, the spokes of which seemed to brush the ship along. The spokes would be 200 or 300 yards long, and resembled the birch rods of the dames’ schools. Each wheel contained about sixteen spokes, and, although the wheels must have been some 500 or 600 yards in diameter, the spokes could be distinctly seen all the way round. The phosphorescent gleam seemed to glide along flat on the surface of the sea, no light being visible in the air above the water. The appearance of the spokes could be almost exactly represented by standing in a boat and flashing a bull’s eye lantern horizontally along the surface of the water, round and round. I may mention that the phenomenon was

also seen by Captain Avern, of the Patna, and Mr. Manning, third officer. Lee Fore Brace. P.S.—The wheels advanced along with the ship for about twenty minutes.—L.F.B.”

On May 17, 1879, almost exactly one year earlier, Commander John Eliot Pringle, Captain on the H.M.S. Vulture, recorded an almost identical encounter [370]:

“I noticed luminous waves or pulsations in the water, moving at great speed and passing under the ship from the south-south-west. On looking towards the east, the appearance was that of a revolving wheel with centre on that bearing, and whose spokes were illuminated, and looking towards the west a similar wheel appeared to be revolving, but in the opposite direction. I then went to the mizen top (fifty feet above water) with the first lieutenant, and saw that the luminous waves or pulsations were really travelling parallel to each other, and that their apparently rotatory motion, as seen from the deck, was caused by their high speed and the greater angular motion of the nearer than the more remote part of the waves. The light of these waves looked homogeneous, and lighter, but not so sparkling, as phosphorescent appearances at sea usually are, and extended from the surface well under water; they lit up the white bottoms of the quarter-boats in passing. I judged them to be twenty-five feet broad, with dark intervals of about seventy-five between each, or 100 from crest to crest, and their period was seventy-four to seventy-five per minute, giving a speed roughly of eighty-four English miles an hour.

From this height of fifty feet, looking with or against their direction, I could only distinguish six or seven waves; but, looking along them as they passed under the ship, the luminosity showed much further.

The phenomenon was beautiful and striking, commencing at about 6h. 3m. Greenwich mean time, and lasting some thirty-five minutes.”

2.7 Lubbock Lights in 1951

The Lubbock Lights were a series of strange lights observed in the sky over Lubbock, Texas, during the summer of 1951. They were first reported by a group of Texas Tech University professors, including Dr. Howard G. McCurdy, Dr. A.G. Oberg, and Dr. William G. Robinson. The professors claimed to have seen a formation of lights flying over the city several times, arranged in a V-shaped formation and moving silently through the sky.

The Lubbock Lights gained widespread public interest and media attention, with many people in Lubbock and surrounding areas reporting sightings. The origin of the lights sparked various theories, ranging from natural phenomena to extraterrestrial

visitors. Despite the number of witnesses and the attention it received, the true nature of the Lubbock Lights remains unknown and unexplained to this day.

2.8 New Castle AFB, Delaware at 2320 hours, 25 July 1952

The following report was given by Gilbert Levy, Chief of the Counter Intelligence Division of the Office of the Inspector General of the Air Force Office of Special Investigations (AFOSI) [304]:

“At 2320 hours, 25 July 1952, two (2) Air Force F-94’s were dispatched from New Castle AFB, Delaware, for the purpose of intercepting objects which have been sighted by radar. One of the F-94’s reportedly made visual contact with one of the objects and at first appeared to be gaining on it, but the object and the F-94 were observed on the radar scope and appeared to be traveling at the same approximate speed. However, when it attempted to overtake the object, the object disappeared both from the pursuant aircraft and the radar scope. The pilot of the F-94 remarked of the ‘incredible speed of the object.’

4) The Director of Intelligence [[Samford]] advises that no theory exists at the present time as to the origin of the objects and they are considered to be unexplained. Much of the publicity has been based on authorized news releases by the Air Force.”

The same report contains a paragraph on the Washington flyovers that took place before this event. According to information from the Current Intelligence Branch's Estimates Division at AFOIN (General Samford's office),

“[[. . .]] much of the publicity of the past few days is the result of a radar sighting of unidentified aerial objects by the Civil Aeronautics Administration at National Airport at 2115 hours, 25 July 1952. These sightings continued from 2115 hours, 25 July until 0010 hours on 26 July, and were described by radar operators as “good sharp targets.” They were observed in numbers from four to eight.”

2.9 Aerial Phenomena Research Organization (APRO)

In the summer of 1934, three young girls were playing hopscotch on a sidewalk in Wisconsin when one of them, Coral Lightner, saw a strange object in the sky that looked like a parachute but had no strings. She watched it until it disappeared over

the horizon in the northwest. She was puzzled by the object and told her father about it, but there was no explanation for what it was. Three years later, she shared the incident with her family doctor, who suggested she read books by Charles Fort. This sparked her interest in UFOs.

On June 10, 1947, Coral Lightner, later known as Mrs. Coral Lorenzen, witnessed a strange light while observing the southern sky in Arizona. The light appeared on the side of a mountain, transformed into a small ball of light, and then shot up into the sky before disappearing at nearly zenith. This occurred two weeks before Kenneth Arnold reported seeing nine discs in the sky over Mount Rainier in Washington, leading to the term “flying saucers” being coined. Around the same time, miners in Bisbee, Arizona, reported seeing nine silvery discs.

In 1951, Mrs. Lorenzen founded the first civilian UFO research organization in the world [298]. She started a group to record and investigate UFO sightings, which eventually became the Aerial Phenomena Research Organization (APRO). Its digitized Bulletins collection is a fascinating resource [209].

At approximately 7 p.m. on May 21, 1952, hundreds of people witnessed a UFO at Sturgeon Bay, Door County, Wisconsin, for approximately 40 minutes. By chance, Mrs. Lorenzen was present and recalled this encounter [298, Chapter 3].

One of the first things she did was to ask for binoculars. Lorenzen also measured the angles of the object and used triangulation to estimate its size and distance from the ground. She estimated that it had traveled slowly at an approximate altitude of forty miles above the ground and had a diameter of 780 feet.

Upon receiving binoculars, Lorenzen recalls seeing a “silver, ellipsoid object [[. . .]] we saw the thing as a clearly defined, apparently metallic object. The glow on the bottom was a deep red through the [[field]] glasses” [298, pp. 31, 33].

Lorenzen also reported her sighting to the police and asked them if a radio car was “up north,” which was indeed the case. Both policemen in the radio car who subsequently observed the object were veterans and capable observers. From their position, they reported the object, not as an ellipsoid, but as an almost perfect circle, with a brilliant round red light approximately one-third the diameter of the object in the center.

The sighting was never fully explained, but General Mills Co. of Minneapolis, who then engaged in the manufacture and launching of huge “skyhook”-type balloons for upper-air research, stated to the press that the object might have been one of their balloons, that had been launched that morning and could have been over Door County at the time of the sighting [298, p. 34]. Mrs. Lorenzen pointed out that this would not explain the red light, but one might interpret this light as the Sun which had not yet gone down.

2.10 1952 Washington flyovers from July 12 to 29, 1952

The 1952 Washington UFO Flap was a series of UFO sightings that occurred in July 1952 over a period of several weeks in the airspace over Washington, D.C. and its

surrounding areas [393]. The flap was notable for the large number of UFO sightings reported by both civilian and military witnesses, including Air Force pilots and radar operators. It might be interpreted to come “close to a UFO landing on the White House lawn.”

The first sightings occurred on July 12, 1952, when two Air Force radar operators at Washington National Airport reported seeing several objects on their radar screens that appeared to be moving at extremely high speeds. Over the following week, more sightings were reported, including several by military pilots who claimed to have seen large, glowing objects flying at high altitudes.

The most significant incident of the flap occurred on July 19, 1952, when two Air Force F-94 fighter jets were scrambled to intercept a UFO that was spotted on radar approaching the city. The pilots reported seeing several bright objects in the sky, which they described as circular and white in color. They attempted to intercept the objects but were unable to catch up with them as the objects were moving too quickly and erratically.

The incident that occurred caused a sensation in the media [49]. As a result, the Air Force organized a press conference [402, 462] to address the situation. The Air Force explained that the objects were likely the result of temperature inversions [322, 323] that caused radar signals to bounce off of unusual atmospheric conditions, but this explanation was met with skepticism by many UFO researchers and enthusiasts [262, 263, 379].

The Washington UFO Flap remains one of the most significant UFO events in American history, and it has been the subject of numerous books, documentaries, and other media. While there is no conclusive explanation for the sightings, many people continue to believe that they were caused by extraterrestrial visitors. A 1956 documentary [253] contains a dramatization of the events.

At about the same time as the Washington flyovers, the evangelical minister Reverend Louis A. Gardner had asked Albert Einstein for his opinion on flying saucers [313]. In a letter dated July 23, 1952 [150], written on letterhead from the Institute for Advanced Study, Einstein allegedly responded as follows: “Those people have seen something. What it is I do not know, and I am not curious to know.” It is possible that Einstein had just returned from an incognito trip to Switzerland and Germany, and a letter dated July 22, 1952, documents this [269].

Recent comparisons of sky photography in the public domain suggest that around the time of the Washington flyovers, there may have been some background population of high-albedo objects, possibly in geosynchronous orbits around Earth. In particular, please refer to Candidate 5, observed on July 28, 1952 [476, Figure5 and Table3], as well as an object observed on July 19, 1952, mentioned in a forthcoming paper.

2.11 Rapid City incident on the night of August 12, 1953

The following incident, which took place on the night of August 12, 1953, shortly after dark, was vividly and in some detail recorded by Ruppelt [393]. Ruppelt's account is reproduced here without any changes:

Shortly after dark on the night of the twelfth, the Air Defense Command radar station at Ellsworth AFB [[Air Force Base]], just east of Rapid City, had received a call from the local Ground Observer Corps filter center. A lady spotter [[of the Ground Observer Corps, a Cold War organization performed naked eye and binocular searches to detect Soviet intrusions into US air space. Observations were telephoned directly to filter centers]] at Black Hawk, about 10 miles west of Ellsworth, had reported an extremely bright light low on the horizon, off to the northeast. The radar had been scanning an area to the west, working a jet fighter in some practice patrols, but when they got the report they moved the sector scan to the northeast quadrant. There was a target exactly where the lady reported the light to be. The warrant officer, who was the duty controller for the night, told me that he'd studied the target for several minutes. He knew how weather could affect radar but this target was "well defined, solid, and bright." It seemed to be moving, but very slowly. He called for an altitude reading, and the man on the height-finding radar checked his scope. He also had the target—it was at 16 000 feet.

The warrant officer picked up the phone and asked the filter center to connect him with the spotter. They did, and the two people compared notes on the UFO's position for several minutes. But right in the middle of a sentence the lady suddenly stopped and excitedly said, "It's starting to move—it's moving southwest toward Rapid."

The controller looked down at his scope and the target was beginning to pick up speed and move southwest. He yelled at two of his men to run outside and take a look. In a second or two one of them shouted back that they could both see a large bluish-white light moving toward Rapid City. The controller looked down at his scope—the target was moving toward Rapid City. As all three parties watched the light and kept up a steady cross-conversation of the description, the UFO swiftly made a wide sweep around Rapid City and returned to its original position in the sky.

A master sergeant who had seen and heard the happenings told me that in all his years of duty—combat radar operations in both Europe and Korea—he'd never been so completely awed by anything. When the warrant officer had yelled down at him and asked him what he thought they should do, he'd just stood there. "After all," he told me, "what in hell could we do—they're bigger than all of us."

But the warrant officer did do something. He called to the F-84 pilot he had on combat air patrol west of the base and told him to get ready for an intercept. He brought the pilot around south of the base and gave him a course correction

that would take him right into the light, which was still at 16 000 feet. By this time the pilot had it spotted. He made the turn, and when he closed to within about 3 miles of the target, it began to move. The controller saw it begin to move, the spotter saw it begin to move and the pilot saw it begin to move—all at the same time. There was now no doubt that all of them were watching the same object.

Once it began to move, the UFO picked up speed fast and started to climb, heading north, but the F-84 was right on its tail. The pilot would notice that the light was getting brighter, and he'd call the controller to tell him about it. But the controller's answer would always be the same, "Roger, we can see it on the scope."

There was always a limit as to how near the jet could get, however. The controller told me that it was just as if the UFO had some kind of an automatic warning radar linked to its power supply. When something got too close to it, it would automatically pick up speed and pull away. The separation distance always remained about 3 miles.

The chase continued on north—out of sight of the lights of Rapid City and the base—into some very black night.

When the UFO and the F-84 got about 120 miles to the north, the pilot checked his fuel; he had to come back. And when I talked to him, he said he was damn glad that he was running out of fuel because being out over some mighty desolate country alone with a UFO can cause some worry.

Both the UFO and the F-84 had gone off the scope, but in a few minutes the jet was back on, heading for home. Then 10 or 15 miles behind it was the UFO target also coming back.

While the UFO and the F-84 were returning to the base—the F-84 was planning to land—the controller received a call from the jet interceptor squadron on the base. The alert pilots at the squadron had heard the conversations on their radio and didn't believe it. "Who's nuts up there?" was the comment that passed over the wire from the pilots to the radar people. There was an F-84 on the line ready to scramble, the man on the phone said, and one of the pilots, a World War II and Korean veteran, wanted to go up and see a flying saucer. The controller said, "O.K., go."

In a minute or two the F-84 was airborne and the controller was working him toward the light. The pilot saw it right away and closed in. Again the light began to climb out, this time more toward the northeast. The pilot also began to climb, and before long the light, which at first had been about 30 degrees above his horizontal line of sight, was now below him. He nosed the '84 down to pick up speed, but it was the same old story—as soon as he'd get within 3 miles of the UFO, it would put on a burst of speed and stay out ahead.

Even though the pilot could see the light and hear the ground controller telling him that he was above it, and alternately gaining on it or dropping back, he still couldn't believe it—there must be a simple explanation. He turned off all of his lights—it wasn't a reflection from any of the airplane's lights because there it was. A reflection from a ground light, maybe. He rolled the airplane—

the position of the light didn't change. A star—he picked out three bright stars near the light and watched carefully. The UFO moved in relation to the three stars. Well, he thought to himself, if it's a real object out there, my radar should pick it up too; so he flipped on his radar-ranging gunsight. In a few seconds the red light on his sight blinked on—something real and solid was in front of him. Then he was scared. When I talked to him, he readily admitted that he'd been scared. He'd met MD 109's, FW 190's and ME 262's over Germany and he'd met MIG-15's over Korea, but the large, bright, bluish-white light had scared him—he asked the controller if he could break off the intercept.

This time the light didn't come back.

When the UFO went off the scope it was headed toward Fargo, North Dakota, so the controller called the Fargo filter center. "Had they had any reports of unidentified lights?" he asked. They hadn't.

But in a few minutes a call came back. Spotter posts on a southwest-northeast line a few miles west of Fargo had reported a fast-moving, bright bluish-white light.

This was an unknown—the best.

The sighting was thoroughly investigated, and I could devote pages of detail on how we looked into every facet of the incident; but it will suffice to say that in every facet we looked into we saw nothing. Nothing but a big question mark asking what was it.

Although reported by Ruppelt, who had by this time already left or was on the way out of Project Blue Book [393], I could not locate this report in the Project Blue Book files [36]. A very similar incident has been recorded by Project Blue Book identifier 1953-08-6979324-RapidCity-Blackhawk-SouthDakotaArea with the details mentioned as "5 August 53 6/0345Z in Rapid City, Blackhawk, South Dakota Area." This incident is also discussed in the Condon Report as "15-B. Blackhawk and Rapid City, S. Dak., and Bismarck, N. Dak., 5–6 August 1953, 2005-0250 LST." Both reports conclude that "they saw what was undoubtedly a meteor, judging from their description." The pilots were "probably chasing a star."

One wonders whether either Ruppelt made up the sighting on August 12 or the sighting on August 5 referred to in Project Blue Book and the Condon report was incomplete. Ruppelt himself had undergone a considerable change in the perception of UFOs. The original book of 1956 ended with the words, "maybe the many pilots, radar specialists, generals, industrialists, scientists, and the man on the street who have told me, 'I wouldn't have believed it either if I hadn't seen it myself,' knew what they were talking about. Maybe the earth is being visited by interplanetary spaceships. Only time will tell." The second edition of 1960 has Ruppelt agree with a quote by the ex-Lieutenant Andy Flues, who wrote, "Even taking into consideration the highly qualified backgrounds of some of the people who made sightings, there was not one single case which, upon the closest analysis, could not be logically explained in terms of some common object or phenomenon." However, it ends with

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“Project Blue Book will live on.” And effectively, it has lived on. At the age of 37, Ruppelt died of a sudden heart attack in September 1960.

Chapter 3

UFO sagas and legends after the Robertson Panel until 2003

Abstract As the number of UFO sightings increased, so did public interest and media attention. This led to the formation of organizations dedicated to collecting and investigating these events. This chapter covers some of the most compelling and well-documented cases of UFO sightings, as well as some dramatic anecdotes.

It is safe to say that most sightings or incidents have prosaic causes rather than extraordinary or “phenomenal” origins, as evidenced by sources such as Geipan [181], the Condon report [83], or David Clarke’s review [66]. However, neglecting the remaining less than 1% “hard cases” could be a mistake [433] because they might carry important evidence and phenomenology.

For an example of a famous yet controversial case, Lonnie Zamora, a police officer in Socorro, New Mexico, claimed to have seen a landed craft of unknown origin and two occupants in 1964. Some believe the incident was a genuine UFO sighting, while others suggest that it was a hoax or misidentification of a known object. Although the incident remains officially unexplained, it is one of the best documented UFO cases in history. However, there is no concrete evidence to support any theory, and experts have not even settled on the symbol written on the craft. In contrast, a similar incident in Valensole one year later may be a genuine “UFO sighting.”

It is thus necessary to sort out reliable reports and distinguish them from unreliable ones. Being in the “Russell’s teapot” scenario poses a challenge, as mentioned previously [300,394]. Making claims about extraordinary events such as alien landings or abductions is equivalent to claiming the occurrence of a Humean miracle, according to Sagan [120]. Any lack of complete or clear data or any single failure in the data can discredit the entire analysis in the eyes of skeptics. My personal impression is that the more one looks at the various sightings and anecdotes, some sightings get “harder” and “more believable,” perhaps gaining “substance,” while others tend to decay and fall apart, slipping like sand through one’s fingers.

3.1 Some literature

For solid investigative journalism accounts on UFOs and related phenomena, I recommend Ross Coulthart's "In Plain Sight" [97], Gideon Lewis-Kraus' New Yorker article "How the Pentagon Started Taking U.F.O.s Seriously" [289], Ralph Blumenthal's "The Believer: Alien Encounters, Hard Science, and the Passion of John Mack" [37], as well as Leslie Kean's "UFOs: Generals, Pilots, and Government Officials Go on the Record" [255].

For books of some early proponents of the extraterrestrial UFO narrative, I refer to the writings of Donald Edward Keyhoe [261–263] and James Edward McDonald [144,315].

Some of the early critiques include Donald H. Menzel [322,323] and Philip J. Klass [265,266]. A review of the literature can be found in Brenda Denzler's evaluation [121, p. 78]. For a contemporary "debunker," containing a "collection of accounts from people who have escaped from the rabbit hole," see Mick West's book "Escaping the Rabbit Hole" [496].

For a critical discussion of some of the sightings until approximately 1968, I recommend a report by the Rand Corporation, authored by George Kocher [273], a collection of arguments for and against the extraterrestrial hypothesis [400], a book by Stanton, L. Jerome [428], as well as a collection for the National Investigations Committee on Aerial Phenomena (NICAP) by Richard H. Hall [199]. Hall published a follow-up [200] in approximately 2001. An almost complete collection of APRO Bulletins from 1955 to the 1980s, published by the Aerial Phenomena Research Organization (APRO), presents a rich set of UFO encounters [209]. For numerous sightings investigated by the National Investigations Committee on Aerial Phenomena (NICAP), see their index page [336], as well as their selection of "good cases" [337]. See also the Sign Oral History Project [420] with its case studies. "UFOs: An Insider's View of the Official Quest for Evidence" [103] is a personal account by Roy Craig, who experienced the Condon study as an investigator.

Get a glimpse into the experience of being part of the bigger (maybe second tier jet set) "UFO (and related) researcher" community by reading Jacques Vallée's "Forbidden Science" chronicles [467–471], as well as Diana Walsh Pasulka's "American Cosmic: UFOs, Religion, Technology" [357]. These books offer a kind of "window-shopping" perspective into the "UFO wonderland/candy shop."

For a compilation of travels to exotic locations with supposed "preastronautic" connections, one can refer to Erich von Däniken's extensive and popular body of work, which is said to have sold 70 million copies [479]; in particular, I recommend his "Reise nach Kiribati" [478] (in German).

3.2 British Royal Air Force pilots "see things" in 1952–1953

3.2.1 Exercise Mainbrace UFOs in September 1952

Exercise Mainbrace was a NATO military exercise that took place in September 1952. It was one of the largest military exercises held in Europe at the time, involving over 200 warships, 1000 aircraft, and 80 000 personnel from various NATO countries. The aim of the exercise was to test the ability of NATO forces to defend against a potential Soviet invasion of Western Europe. The exercise included simulated amphibious landings, naval maneuvers, and air operations, and was seen as a show of force by NATO in response to Soviet aggression during the Cold War. The following UFO sightings during Exercise Mainbrace are taken from a National Investigations Committee on Aerial Phenomena (NICAP) collection by Richard Hall [198].

On September 13, Lieutenant Commander Schmidt Jensen and several members of the crew on the Danish destroyer Willemoes saw a triangular-shaped object emitting a bluish glow that moved at high speed towards the southeast. The object was estimated to be moving at over 900 mph.

Just before 11 am on Friday, September 19, 1952, in “the Yorkshire incident” [69], a British Meteor jet aircraft was being followed by a silvery object as it was approaching to land at Topcliffe, North Yorkshire, England. According to a statement made by the Air Ministry’s Flt Lt John Kilburn [72, 74, 446]:

“The object was silver in colour and circular in shape.” It first seemed to pursue the Gloster Meteor jet but then began to descend “swinging in a pendular motion [[. . .]] similar to a falling sycamore leaf. [[. . .]] Suddenly it accelerated at an incredible speed towards the west turning onto a south-easterly heading before disappearing. All this occurred in a matter of fifteen to twenty seconds. The movements of the object were not identifiable with anything I have seen in the air and the rate of acceleration was unbelievable.”

In his memorandum for the record on “British Activity in the Field of UFOs,” Marshall H. Chadwell, the Assistant Director of CIA’s Office of Scientific Intelligence (OSI) stated dryly [51, 72]:

“In some Royal Air Force (RAF) field [[RAF Topcliffe in North Yorkshire]], there was some sort of demonstration to which high officials of the RAF in London had been invited. During the show, a ‘perfect flying saucer’ was seen by these officials as well as RAF pilots. So many people saw it that many articles appeared in the public press. This is distressing to [[Dr (later Professor) Reginald Victor Jones who was Chadwell’s opposite number in the British MoD]] because he realises that the creation of the correction of public opinion is a part of his responsibilities.”

Jones had a significant involvement with unexplained aerial phenomena, which began during World War II and continued in the aftermath of the war. He served as

an intelligence officer for the Air Ministry, and he was tasked with investigating the sightings of "ghost rockets" in Scandinavia and parts of occupied Europe. Following his success in this role, Jones was appointed as the Director of Scientific Intelligence for the UK's Ministry of Defence by Prime Minister Churchill. Jones was well known for his scientific expertise, and his appointment was seen as a move to strengthen the country's military intelligence capabilities. Throughout his career, Jones remained fascinated by unexplained aerial phenomena, and he continued to study and investigate these phenomena long after he left his position at the Ministry of Defence. His contributions to the field of scientific intelligence and his efforts to understand these mysterious sightings have had a lasting impact on our understanding of the world around us.

Around September 20, personnel on the USS Franklin D. Roosevelt, an aircraft carrier participating in the Mainbrace maneuvers, observed and photographed a silvery, spherical object moving across the sky behind the fleet. The pictures were examined by Navy Intelligence officers and were said to be excellent.

Also on September 20, three Danish Air Force officers at Karup Field observed a shiny, metallic disk that passed overhead from the direction of the fleet and disappeared in clouds to the east. The following day, six British pilots flying a formation of RAF jets above the North Sea saw a shiny sphere approaching from the direction of the fleet, but the object eluded their pursuit and disappeared. Later that month, on September 27/28, there were widespread UFO reports throughout Western Germany, Denmark, and southern Sweden, including sightings of a brightly luminous object with a cometlike tail and a cigar-shaped object moving silently eastward.

3.2.2 RAF Little Rissington incident in the afternoon of October 21, 1952

This incident was first published by Air Marshal Sir Beresford Peter Torrington Horsley [223, Chapter 10], who served as Equerry to the Duke of Edinburgh. His account is summarized in Section 6.2.3. However, Horsley never could research this case. David Clarke took up this task for the British Broadcasting Corporation (BBC) Radio 4 Series Britain's X-Files back in 2001. Flt Lt (later Air Commodore) Michael Swiney, who was a student sitting in the front row of the Gloster Meteor VII jet, along with his flight teacher Lieutenant David Crofts at the back, shared the following details with Clarke in this BBC interview [74, time=43m00s]:

“We broke through some Cloud at about 14 000 feet and, in front of me, in front of the aircraft there appeared to be what I took to be perhaps three people coming down in parachutes. So I grabbed control of the aircraft from the student instructor [[Crofts]] behind me to make sure that if they were parachutes we didn't go through the middle of them. [[. . .]] They were directly in front of the windscreen and that is why I took the aircraft to one side to make sure that I didn't go up through them [. . .], but it was soon quite apparent

that um that they weren't but there were three um circular white or off-white discs [[which appeared like the bottoms of wine glasses]] straight in front of me, two on a level heel and one that is slightly canted [[tilted]] to one side. I can't remember which side that was [...] I have no idea how far away they were because um I didn't know what size they might have been, but I know that they were above us and we continued climbing until such time as they lost their disc appearance and took on a sort of flat plate. [...] It's 50 years ago [...] I don't honestly remember but it was quite a long time. It was minutes rather than seconds.

[[Instructor Crofts behind Swiney]] certainly did [[see the craft]] because um I managed to put my head to one side and he was able to look past my open shoulder as it were, and he could quite clearly see what I could see. [...] when we spotted them we were at about uh 14 000 feet, I think, and we continued the climb until we got to 35 000. When we were just trying to explain what we were looking at, we were trying to tell ourselves that there was some funny light reflections or refractions in the windscreens or in the canopy, but clearly it wasn't. We were seeing something. [...] We tried very hard to explain away what we were looking at, but there's no way we could do that, um there was, there was something there. [...] that absolutely no doubt about it was not a reflection. [...] At the time I didn't feel frightened, I did subsequently feel that we were looking at something that really we shouldn't be seeing and I remember being told on landing by um either the ground crew or somebody who came out to the aircraft to meet us that I looked fairly shaken—almost as if I'd seen a ghost"

Radar had also picked up a signal. The RAF Southern Sector, headquartered in Wiltshire, detected the entry of three objects into their airspace at a velocity of 3000 miles per hour. ATCC Gloucester, located at what is now Gloucestershire Airport, verified the sighting of three objects reported by the pilots. RAF Fighter Command dispatched two Meteor aircraft to intercept the objects, which were traveling eastward at a speed of 600 knots. However, the fighter planes were unable to establish any further contact with the objects.

3.3 Hearsay about Wernher von Braun 1959

Wernher von Braun was a member of the prewar NSDAP in Nazi Germany since 1937 and was promoted to SS-Sturmbannführer in 1943. He was later transferred to the USA as part of the Operation Paperclip, as detailed in [248]. He continued his work on rocket propulsion, which eventually led to the use of the Saturn family of rockets in NASA's Apollo program.

In various UFO talk shows and publications, von Braun is (mis)quoted in the UFO context. It is based on a certain "Dr. Stalder from New York" who allegedly relayed

a statement attributed to von Braun. However, Dr. Stalter is typically not mentioned as the source of the statement, which goes as follows:

“Wernher von Braun: ‘There are extraterrestrial forces that are stronger than we previously believed.’

‘We seek connection with them’

The German-American rocket scientist Wernher von Braun, the mastermind behind the launch of ‘Juno 2,’ declared after its deflection from its orbit to the Moon: There are extraterrestrial forces, the seat of which is still unknown to us, but which are much stronger than we have assumed so far. I am not allowed to say more about them. In a few months, however, we will be able to be clearer. We are at present in the process of coming into closer contact with these extraterrestrial forces.”

Dr . Stalter, New York

The original German text, found in an esoteric publication called “Neues Europa,” also extensively discusses supposed visits from “Venusians,” that is, beings from Venus. Here is the exact quotation of the article in the magazine reporting von Braun’s alleged statement [142]:

Wernher von Braun: “Es gibt außerirdische Kräfte, die stärker sind als wir bisher glaubten”

“Wir suchen Verbindung mit ihnen”

Der deutsch-amerikanische Raketenforscher Wernher v . Braun, der leitende Kopf bei dem Abschuß der “Juno 2”, erklärte nach dessen Ablenkung aus seiner Bahn zum Monde: „Es gibt außerirdische Kräfte, deren Sitz uns noch unbekannt ist, die aber weitauß stärker sind, als wir bisher annahmen. Mehr darf ich darüber nicht sagen. In wenigen Monaten aber können wir deutlicher werden. Wir sind zur Zeit dabei, mit diesen außerirdischen Kräften in nähere Verbindung zu kommen.”

Dr . Stalter, New York

Such messages may be dismissed as rumors, but it is difficult to overlook the recollections [423] of the late Robert Irving Sarbacher, as mentioned in Section 9.5. According to Sarbacher, it was highly likely that Wernher von Braun was actually consulted on matters relating to retrieved spacecraft, if indeed such craft had been retrieved.

3.4 Socorro policeman Zamora's encounter in 1964—a student prank?

According to Project Blue Book [36, 1964-04-8694587-Socorro-NewMexico], on April 24, 1964, a Socorro, New Mexico, policeman named Lonnie Zamora reported sighting an object about a mile south of the town at approximately 5:45 pm in an unpopulated area full of hills, gullies, and sagebrush. While chasing a speeding car north on US 85, Mr. Zamora heard a roar and saw flames in an area where a dynamite shack was known to be located. He abandoned the chase of the car and proceeded to where he believed an explosion had occurred. After traveling a little-used road and experiencing considerable difficulty trying to drive his car up a gravel-covered hill, he observed what he thought was an overturned car standing on end. He was approximately 800 feet away from the object, and his car was at the crest of a hill with the object ahead of him in a gully. During this first glance, he saw one or two figures in coveralls whom he assumed to be occupants of the object. He did not see them again.

After radioing to Police Headquarters at Socorro that he was proceeding to investigate what he believed to be an auto accident, he drove to a point approximately 150 feet from the gully where the object rested and stopped the car to proceed on foot. He said the object was white, egg or oval-shaped [[like a rugby ball]] and apparently supported on girder-like legs. He heard a roar and saw smoke and flame coming from the bottom of the object. Mr. Zamora believed that the object was about to explode, and he became frightened, turned, and ran to shield himself behind the police car, bruising his leg and losing his glasses on the way. He crouched down, shielding his eyes with his arm while the noise stopped and he glanced up. The object had risen to a point approximately 15–20 ft above the ground, and the smoke had ceased. At this point, he noted a design on the object, which he described as markings in red approximately 1 to 1.5 ft in height, shaped like a crescent with a vertical arrow and horizontal line underneath. The object remained stationary for several seconds and then flew off in a southerly direction, following the contour of the gully.

Sgt. Chavez of the New Mexico State Police arrived on the scene in response to Mr. Zamora's earlier radio call. He observed no object, but he reported that there were some slight depressions in the ground and apparently burned brushes in the area where Mr. Zamora had reported seeing the object. The brush was cold to the touch. Sgt Chavez reported the incident to local military authorities who conducted the initial investigation. The Air Force sent investigators from their Air Technical Intelligence Centre (ATIC, handling Project Blue Book requests) at Wright-Patterson AFB, Ohio, who found that no other witnesses to the object reported by Mr. Zamora could be located. There were no unidentified helicopters or aircraft in the area. Observers at radar installations had observed no unusual or unidentified blips. There was no unusual meteorological activity and no thunderstorms, and the weather was windy but clear.

The story takes a twist with claims that the Socorro incident was a hoax, potentially directed at Socorro Policeman Lonnie Zamora and committed by students at the New

Mexico Institute of Mining and Technology. In a letter to Linus Pauling dated June 19, 1968, the institute's president, Stirling A. Colgate, made this claim (although it has been contested by some [331]) [42].

There is also ambiguity regarding the symbolism on the craft. The body of the craft allegedly had a couple of lines drawn as a symbol. It is unclear whether Hynek or Captain Richard Holder asked Zamora and others not to reveal the true symbol so that potential hoaxers would reveal themselves. As a result, there are various alleged symbols, including an inverted "V" under an "umbrella" type half-circle with a horizontal baseline under the inverted "V." An alternative symbol is a line within the inverted "V" stretching from half the baseline to the top of the inverted "V." This information is contained in my version of the Project Blue Book files [36, 1964-04-8694587-Socorro-NewMexico]. However, another popular symbol is formed by three horizontal bars of equal length, stacked upon each other and overlaid by an inverted "V."

For a recent investigation of the case, see also Chapter 4 of Daniel Coumbe's "Anomaly" book [98].

3.5 A lavender farmer's encounter in Valensole, France, in 1965

The following event was later recounted by GEIPAN, the French government study and information group on unidentified aerospace phenomena [180].

On July 1, 1965, at 5:45 a.m., Maurice Masse, a farmer, was working in his lavender field near Valensole in the Provence-Alpes-Côte d'Azur department of Alpes de Haute Provence when he heard a whistle that caught his attention. He went to investigate and found a strange, dark machine on the ground that was shaped like a rugby ball. At first, he thought it was a Renault Dauphine. He watched as two individuals entered the machine, which quickly took off and disappeared toward Manosque. Approximately ten minutes later, he noticed traces on the ground where the machine had been, in the shape of a star with a cylindrical hole in the middle, on soaked ground. He returned to the location with his daughter in the evening at approximately 8:30 p.m. and noticed that the ground had hardened like cement. René Gouin, a neighboring farmer visiting the site, noticed that in a field close by, the machine had burned the blossoming lavender as it flew away: first, many plants were heavily damaged, and then fewer plants were burned as the machine flew higher up [160, time=23min].

Shortly afterwards, on July 4, 1965, a theory that it was a helicopter was put forth in an article in Le Monde. Military circles considered the machine to be a light army helicopter, most likely of the Alouette II or Alouette III type. There had been known maneuvers called "Provence 65" taking place in the region since June 29, which included the participation of this light aviation. Since Valensole is only 19 km away from Manosque, the eastern border of the maneuver zone, it is almost certain that an aircraft flew over Valensole, and a helicopter could very well have landed in Maurice Masse's field.

On August 18, 1965, one and a half months after the event, maybe because he previously was afraid that the police would consider him insane if he had told them the entire happening, the farmer approached the police and reported very strange additional information. He reported that, as he approached the craft and the two figures standing outside of it, he got about seven meters away from them. At that moment, one individual facing the farmer noticed him. This one must have given a signal to the other, and both stood up. The one with his back to the farmer turned around and made a gesture with his right hand. In it, the farmer saw an object. At that moment, he became paralyzed, completely immobile, and could not make a single movement [343]. He felt nothing. He was neither numb nor paralyzed. He simply could not move his head, arms, legs, or body. He described the strangers as being approximately 1.2 meters tall, not larger than children of 10 years of age, with a very big head in comparison to the rest of the body. After approximately 20 minutes, he allegedly could move again.

Some believe that the farmer experienced a “missing time” after this encounter. Others claim that he saw a UFO a second time, this time hovering above him as he prepared to water young lavender plants. He only told his wife of this event, and she remained silent until after his death, seeing his ontological shock [160].

3.6 “Foo fighter” sightings by the chief pilots of Lufthansa and Austrian Airlines

The following reports, translated from German, are accounts given by Werner Utter, chief pilot of Lufthansa, and Alexander Raab, chief pilot of Austrian Airlines (AUA). These reports were collected by Andreas Müller [332] and by Mufon [463]. Utter was one of the most experienced German pilots of his time. During WWII, he flew the first jet aircraft for the Luftwaffe, and after the war, he flew many heads of (West) Germany on official state visits. Later, Utter became a member of the Board of Directors for Lufthansa and was responsible for flight operations.

Utter: “[In the 1950s]] My first conscious experience was on a flight from Beirut to Baghdad, at 3000 meters altitude, and it was at that time a Super Constellation, one of the best three-blades per engine aircraft with four engines. And as we initially took off and had to make a right turn over the Mediterranean and fly over Lebanon, and as we were almost at the crest of Lebanon, I suddenly saw a very bright light on the left ahead of me. And I immediately remembered my experiences during the last war as a pilot and thought to myself, someone is throwing a flare. The light fascinated me. I looked at the light and it was coming toward me at such a speed that I initially turned on my headlights because I thought it could not see me. I told the copilot: watch out, something is coming toward us. And it all happened in seconds and suddenly it was there, a fireball, I would say, a fireball that was not dead but alive, pulsating, and it

was suddenly next to me between the left inner engine and the cockpit, which means you could not see exactly how far it extended. It flew around me and it was daylight inside the cockpit and I looked at the copilot, he saw it too and we did not say a word, we were so amazed by something like that and while we were staring into this fireball, it flew or shot, I would say, with an eerie speed at approximately 45 degrees in front of me, upward, getting smaller and disappearing and it was dark and that was it.

And the three of us in the front of the plane, we were so impressed that we could not talk to each other properly for a while. In Baghdad, we took some time to recover from the whole thing. We could not explain anything at all.

We did not know that at that time there were already known UFO sightings—I certainly was not aware of any of it. [463]"

Here is Utter's account of his second sighting that took place on November 21, 1978 over Labrador:

Utter: "[[On November 21, 1978]] this was over Labrador, at an altitude of approximately 12 000 meters on a flight from Frankfurt to New York. It seems we had a flying saucer in sight. Very bright, pulsating and emitting rays, sometimes red, sometimes white, sometimes violet, like a jellyfish or spider. I was just as fascinated by this light appearance, but there was not the warmth there as in the first appearance."

The sighting was preceded by a radio message from a TWA plane reporting a light, a possible UFO, that was supposed to cross the course of Utter's plane.

Utter's third encounter was on a cargo flight, approximately in 1978:

Utter: "You may laugh about it, but I have it on tape. I was returning from New York in the evening on a cargo flight, it was still daylight. Suddenly, a huge thing comes toward us. The flight engineer, who was standing behind me and talking to the copilot, quickly shouted—you can hear it on the tape—'Watch out', and then I said, 'What is that?' It was a cucumber or cigar, coming toward us at 35 000 feet (12 000 meters), and I immediately said, 'That is a UFO.' The air traffic controller below saw nothing on radar [[. . .]] I thought it was going into my one engine (left outboard engine). If I had seen it alone, [[. . .]] but the engineer also saw it and shouted the alarm."

Alexander Raab, who was chief pilot of Austrian Airlines (AUA) in the 1960s, also reported a UFO sighting. The incident occurred in the evening of March 18, 1972, during a flight with an AUA DC-9 from Vienna to Frankfurt, at approximately 6000 meters above the provincial capital of Linz, Upper Austria. Eight minutes before the sightings, the onboard compasses went crazy and deviated by several degrees [509].

Raab’s aircraft was overtaken by a cone-shaped flying object [332, p. 165]. According to his account, the “fiery body” was in the shape of a funnel, with a downward-pointing tip that emitted a dazzlingly bright light that turned reddish later [509]. Raab saw the UFO together with his copilot Otto Herold for approximately half an hour [332, p. 165].

At first, he made “no comparisons,” in particular, not with a UFO. Instead, he thought of a meteorite. However, the angle of entry was much too steep. The funnel itself had clearly visible contours [509].

“I could not put up any theory, because I think too realistically.” He explained his reservations with respect to the observed phenomenon. Additionally, he had “not thought of Martians” during the sighting.

Two minutes later, he said, the apparition suddenly changed direction and now overtook the AUA aircraft on the left, before it disappeared from the field of view of the two pilots on the horizon.

When asked by a journalist if the sighting could have been compared to satellites, Raab reported that he had already seen numerous satellites from the cockpit but that the UFO appearance was “completely different.”

“The thing was much bigger from my point of view. It was to the left of the aircraft. In my opinion, it had nothing to do with satellites or the remnant of a rocket stage. [[. . .]] By the way, my copilot and I were not the only observers. This object was also sighted at the same time by crew members of a Cessna as well as a Lufthansa aircraft [[Brouwer above Radstadt?]].”

Afterwards, Leopold Kletter, the head of the Austrian weather service, declared that the luminous phenomenon undoubtedly had natural and prosaic causes in the form of a large meteor that broke up in the upper atmosphere and caused many light phenomena, including those observed above Radstadt and in multiple locations in southwest Europe [509].

Recently, the experienced pilot and photographer Christaan van Heijst [137, time = 4225 s = 1 hr 10 min 27 s] stated that approximately “30 to 40 percent of my colleagues have potentially seen something that they cannot explain.” Van Heijst recalls four such sightings. In two instances, a very bright light descended vertically from above at great speed. One sighting occurred near Nürnberg, Germany, while during the other sighting, the object vanished into the Mediterranean near the Greek-Albanian border. He also witnessed a bright light in the sky “stuttering towards the east,” appearing and disappearing intermittently four times before moving out of sight with instant speed.

Van Heijst also observed a cylindrical-shaped object of presumably significant size, which remained stationary at a very high altitude over an unknown location, presumably south of Spain for about an hour. He witnessed this event with another experienced pilot, and both were struck by the object’s steady shape and position. After contacting flight control on the ground, Van Heijst was advised to contact military radar control as soon as possible. The military controller showed a great

deal of interest in his sighting and informed him that nothing of any known type, not even a balloon, had been over Spanish airspace.

3.7 Malmstrom incident in 1967

UFOs may have an affinity for nuclear sites, and Robert Hastings [206] has collected a large number of UFO sightings in connection with such facilities, especially nuclear weapons. One of the most prominent incidents reportedly occurred in 1967 in central Montana at Minuteman Intercontinental Ballistic Missile fields, and involved the 341st Space/Missile Wing (341 MW) of the Air Force Global Strike Command at Malmstrom Air Force Base.

According to the reports—partly official and private recollections—twenty such Minuteman Intercontinental Ballistic Missiles had allegedly been deactivated. The story has been retold by James Klotz, a UFO researcher and (at the time) 1st Lt. Robert Salas [270, 271].

3.7.1 Oscar Flight Missile Combat Crew

In the early hours of the morning of March 16, 1967, Salas was Deputy Missile Combat Crew Commander (DMCCC) of the Missile Combat Crew at the Launch Control Center (LCC or capsule) of “Oscar Flight,” which was below ground. Initially, one of the airmen serving above ground at the Oscar Flight facility spotted what appeared to be a star in the sky, zig-zagging across its expanse. Although he was hesitant to believe it, another light soon appeared, mirroring the previous maneuvers but closer and larger in size. Wanting another opinion, the airman called for the flight security controller to join him. Together, they watched in awe as the lights streaked above them, suddenly halting or changing direction with lightning accelerations.

At that point, the flight security controller quickly phoned Salas in the underground capsule to relay the unbelievable sighting [270]. At first, Salas gave little attention to this message. However, a few minutes after the first call, he received another call from the flight security controller. This time, there was urgency in the guard’s voice. He was clearly frightened and was shouting his words. “Sir, there’s one hovering outside the front gate! [...] A UFO! It’s just sitting there. [...] I can’t really describe it. It’s glowing red.”

Salas immediately went over to his commander, 1st Lt. Fred Meiwald, who was on a scheduled sleep period on a small bed behind a curtain. He woke him and began to brief him about the phone calls and what was going on at the topside of their installation (i.e., above their capsule at the surface).

In the middle of this conversation, they both heard the first alarm klaxon sound through the confined space of the capsule, and they immediately looked over at the panel of annunciator lights at the Commander’s console. A “No-Go” (inoperable)

light and two red security lights were lit, indicating problems at one of their missile sites. Meiwald jumped up to query the system to determine the cause of the problem. Before he could do so, another alarm went off at another site, then two more simultaneously. Within the next few seconds, they had lost eight to ten missiles to a “No-Go” condition.

Salas and Meiwald tried to find the cause of the malfunctions and bring the Minutemen missiles back to operational status. When they had completed their checklist procedure, they discovered that each of the missiles had gone off alert due to a Guidance and Control System fault. Power had not been lost to the sites, the missiles simply were not operational due to some inexplicable reason, each of their Guidance and Control systems had malfunctioned. After reporting to the Command Post, Fred turned to his colleague and stated that the same kind of missile shutdowns had happened at Echo Flight!

3.7.2 Echo Flight Missile Combat Crew

Maybe at the same time (there exist some uncertainties about the concurrence), on the morning of March 16, 1967, another crew, Captain Eric Carlson and 1st Lt. Walt Figel, were the Missile Combat Crew Commander (MCCC) and the Deputy Missile Combat Crew Commander (DMCCC) of the Missile Combat Crew at the Launch Control Center (LCC or capsule) of “Echo Flight” Missile Combat Crew that was also (just as LLC of “Oscar Flight”) located below ground in central Montana.

Maintenance crews and security teams were stationed at two of the Echo Flight Launch Facilities (LFs) after performing maintenance work during the previous day. They had camped out overnight to ensure that the missile sites were secure. In the early hours of the morning, multiple reports came in from the security patrols and maintenance crews stating that they had witnessed unidentified flying objects. One of the UFOs was spotted directly above one of the Echo Flight minuteman silos. The incident was so unsettling that at least one security officer was deeply impacted, and never returned to missile security duty again.

At approximately 8:30 a.m., Figel, the DMCCC, was providing Carlson, the MCCC, with an update on the flight status when an alarm horn abruptly blared out. It was discovered that one of the Minuteman missiles they oversaw had become inoperable and gone off alert. This occurred at one of the two sites where maintenance crews had set up camps. Feeling disconcerted, Figel believed that the maintenance staff had neglected to inform him, as per protocol, that maintenance work had been conducted on the missile and that it was now transitioning to an ‘off-alert’ status.

Consequently, Figel promptly reached out to the missile site. However, he was informed by the on-site security guard that no maintenance had been carried out that morning. Moreover, the guard claimed to have witnessed a UFO hovering over the site. Figel initially dismissed the guard’s claim as a result of being drunk.

Suddenly, multiple missiles began sounding alerts in quick succession. In a matter of seconds, the entire flight of ten minuteman ICBMs—one by one across the board—

became nonoperational, reporting a “No-Go” condition. Every missile was rendered inoperable, one after the other.

Upon completion of the checklist procedure at each missile site, it became clear that a fault in the Guidance and Control System had caused all the missiles to deactivate from alert status. The sites had not experienced any power outages, but inexplicably, the guidance and control systems in each missile had malfunctioned, rendering them nonoperational.

Subsequently, the “Echo Flight” Missile Combat Crew—Figel and Carlson—dispatched two Security Alert Teams (SATs, “strike teams”) to the sites where maintenance crews were present, without informing them that one of the on-site guards had reported a UFO. After arriving at the Launch Facilities, the SATs reported back to Figel that all maintenance and security personnel present at each site had witnessed UFOs hovering over the two locations [270, p. 12]. (It is unclear whether the two SATs saw these UFOs personally or whether they just relayed hearsay.)

Later that morning, the Echo Flight Combat Crew was replaced by Captain Don Crawford’s crew. Crawford noticed that both Carlson and Figel were still visibly affected by what had happened earlier. During his shift, Crawford witnessed the maintenance crews tirelessly working on the missiles all day and at night to restore them to their alert status. It was a daunting task, as almost twenty missiles had been lost, rendering our deterrent forces vulnerable. Those missiles had remained out of service for an entire day.

After their debriefing at Malstrom Air Force Base, no explanation was given to the soldiers who had experienced this alleged UFO encounter. Instead, as Klotz and Salas [270, p. 18] report, the official wing history covering the time period January through March 1967 states to the contrary:

“Rumors of Unidentified Flying Objects (UFO) around the area of Echo Flight during the time of the fault were disproven. A Mobile Strike Team (MST), which had checked all November [[Oscar or Echo]] Flight’s LFs on the morning of 16 March 1967, were questioned and stated that no unusual activity or sightings were observed.”

3.7.3 Postmortem analysis by Boeing Corporation

Boeing played a crucial role as a support contractor for the Minuteman Missile system, and at the request of the Air Force, was tasked with conducting an investigation into the incident. A message from the Strategic Air Command to Boeing Corporation, which built and maintained the Minuteman Intercontinental Ballistic Missiles, obtained by a FOIA request reads (in capital letters) [271]:

“All ten missiles in Echo Flight at Malmstrom lost strat alert within ten seconds of each other. This incident occurred at 0845[[?]] in March 1967. [[. . .]] The fact that no apparent reason for the loss of ten missiles can be readily identified is cause for grave concern to this headquarters.”

Robert Kaminski, an engineer in the Logistics Engineering Group at Boeing responsible for resolving field issues with the Minuteman system, was designated as the team leader to coordinate the contractor’s response when the Echo Flight incident took place. According to a letter from Kaminski to Klotz and Salas [270, p. 21], this investigation which was of “grave concern” to the Strategic Air Command was terminated by them in a most remarkable way:

“Meanwhile, I was contacted by our representative at OOAMA [[Ogden Air Material Command support facility]] (Don Peterson) and told by him that the incident was reported as being a UFO event—that a UFO was seen by some airmen over the LCF at the time E-Flight went down. Subsequently, we were notified a few days later that a stop work order was on the way from OOAMA to stop any further effort on this project. We stopped. We were also told that we were not to submit the final engineering report. This was most unusual since all of our work required review by the customer and the submittal of a final Engineering Report to OOAMA.”

In September 1966, retired Air Force Captain David Schindele, who was then a Minuteman intercontinental ballistic missile (ICBM) launch control officer and deputy commander of a launch crew at Minot Air Force Base, North Dakota, reported a strikingly similar event—the deactivation of ten Minuteman ICBMs [410, 411]. Once again, a large object approximately 80 to 100 feet wide was seen just outside the perimeter fence, displaying bright flashing lights and hovering close to the ground without any noise.

The following section describes an unrelated event that took place at Minot Air Force Base two years later.

3.8 Minot Air Force Base incident on October 24, 1968

An encounter of an alleged UFO with a B-52 strategic bomber of the US Air Force took place on a flight to, and over, Minot Air Force Base, North Dakota on October 24, 1968. Later, a Minuteman silo became involved as well.

The following summary is based on very detailed documentation [450] of this case by the Sign Oral History Project [420]. On May 5, 2000 Captain, ret. USAF, Bradford Runyon, Jr. was interviewed by Thomas Tulien and Jan Aldrich [392].

A corresponding investigation was reported in the Project Blue Book entry “24 Oct 68 24/0030, 24/0530Z Minot AFB, North Dakota” [36, 374].

3.8.1 Stimulated encounter with a UFO

Runyon recounts a time when he was a copilot on a flight in a B-52 strategic bomber that had been out on a mission for 10 hours. As he requested permission to land, the controller asked him to check on something. He was sent in a certain direction, but he was not sure what he was supposed to look for. Upon requesting more details the controller just said, “Well, you’ll know it if you find it.”

His navigator and radar navigator noticed an object coming toward them at a high speed of approximately 3000 miles per hour. They were ready for impact, but the object stopped dead off the right wing or off the tail, being in the right seat. The object was visible only as a haze. At that point, their radios went out. Then, it moved to the other side of the airplane and stayed a mile and a half just off the left tail. It was not identifiable because it did not have an Identification, Friend or Foe (IFF) code. The skin paint of the object—the radar indication caused by the reflected radar signal from the object—was huge, possibly six times as large as a tanker plane.

With their radios out, they decided to land at Minot Air Force Base without permission. They started to descend. Finally, only 10 miles from the runway, their radios returned. At that point, the object must have already separated from their plane, dropped away, and set down.

3.8.2 Observation of the landed UFO

As they proceeded to the base, a general officer came on the radio and instructed them to return and fly over the object, to observe it and take pictures if possible. The object had landed, and the radars on the ground and in the plane showed its location. They turned their plane and went back at approximately 150 and 200 mph, keeping a constant distance of approximately 1000 feet above ground, moving too quickly around the landed object to get the chance to observe it in full detail. Moreover, their airplane surrounded them, so they had limited views to the side and below.

As they flew around it, Runyon was able to make out that the object was egg-shaped. The object was aligned with the runway and consisted of three connected parts. Its first, orange glowing portion resembled molten metal or lava, but did not appear shiny or radiant. Rather, it had a dull appearance. Second, there was a shiny tubular section—it was like a smooth metallic-looking, round tunnel. Attached to it was a third and final part, a sort of crescent moon-shaped object that was wrapped around one end of the larger mass, and it was smooth, shiny, metallic-looking—like a big bumper. Viewed from above, the entire object was shiny, and it was slightly lit.

As they approached the object, their radios went off again, but after they moved some distance away, the radio came back again. They finally landed at Minot Air Force Base. All the airmen went in for the mission debriefing.

3.8.3 Silo slit opened

During a briefing the day after, a general officer told Runyon that, while they approach the base and were still in the air the other day, an alarm had gone off in one of the missile silos. Air Police were dispatched to investigate, but the first group of Air Policemen did not check in as expected.

Another group was sent to check on them, and they found the first group unconscious near their vehicle, with the paint on top of the vehicle burned off. When they regained consciousness, the first group reported that they had seen an object that appeared to be descending on top of them, causing them to flee.

The alarms were triggered because the 20-ton concrete lid which covered the top of the missile silo had been removed. Additionally, the chain link fence around the area had been crushed, and there were signs of radioactivity present. The inner alarm within the silo had also been activated.

One could imagine two conventional ways to remove the concrete lid: by using a large crane to lift it off and set it aside or by activating explosive charges that would blow it off in the event of a missile launch during war. However, the explosive charges had not been activated. The 20-ton concrete lid was discovered just off to the side, in close proximity to the now open missile silo.

3.8.4 Project Blue Book Entry

The entry of the Project Blue Book investigation is entitled “1968_-Minot_AFB_ND_Runyon-Brad-2000” [36] and carries the information “24 Oct 68 24/0030, 24/0530Z Minot AFB, North Dakota” (see also [374]). The Project Blue Book entry claims that “the following conclusions have been reached after a thorough study of the data submitted to the Foreign Technology Division”:

The ground visual sightings appear to be of the star Sirius and the B-52 which was flying in the area. The B-52 radar contact and the temporary loss of UHF transmission could be attributed to plasma similar to ball lightning. The air-visual from the B-52 could be the star Vega which was on the horizon at the time, or it could be a light on the ground, or possibly a plasma.

No further investigation by the Foreign Technology Division was contemplated. Case closed.

3.9 John Lennon's New York UFO in August 1974

John Lennon, the famous musician and member of the Beatles, had a life-long interest in UFOs, even before this sighting. On August 23, 1974 at 9 o'clock, according to their own unconfirmed story, Lennon and his muse May Pang saw a UFO from his New York apartment balcony. He described the object as round, black or gray in the middle with white blinking lights encircling the rim (bottom circumference)—like light bulbs, on-off-on-off-on-off alternatively—and a red light on top.

The unknown object flew close to his balcony on a summer night without making any noise. He assured interviewers that it was not a helicopter or a balloon due to its proximity to the rooftop and its maneuvers. According to his account, the episode lasted five to ten minutes.

Lennon called the police, who allegedly received similar reports that evening. The incident took place during Lennon's separation from Yoko Ono and a period of drug and alcohol abuse, although he stated he was sober at the time of the sighting.

Lennon recalled that the UFO flew down the East River, turned right toward the United Nations, then turned left and down the river.

May Pang, who was with him at the time, confirmed most of Lennon's story. She noted that, after hovering over a building, the UFO turned sideways (turned on its side) and flew down the river. Then, it shot up into the sky.

3.10 Tehran incident in 1976

On September 18, 1976, a strange object was spotted in the sky over Tehran, Iran. The object was seen by multiple witnesses and appeared to change color and shape.

3.10.1 Sighting by airport personnel

Hussain Perouzi, a night shift supervisor at the air traffic control tower at Mehrabad Airport, observed the object through binoculars and confirmed its unusual behavior [427]: The object moved northward, oscillating up and down, at an estimated distance of 5 miles and an altitude of 6000 feet. It vanished abruptly, only to reappear a mile away within a few seconds. Seen through binoculars, the object's right and left ends appeared blue in color, with a flashing red light in the middle. To confirm that his observation was accurate, he passed the binoculars to one of his trainees, who saw the same thing. Despite the object's stunning brightness, Perouzi was able to discern its shape, which resembled that of a starfish.

The tower radar was under repair, so Perouzi could not confirm the sighting by radar. However, concerned about the object's potential impact on incoming flights, Perouzi reported it to the Iranian Air Force.

3.10.2 First attempt to approach the object

Two Imperial Iranian Air Force F-4 Phantom II jet interceptors were dispatched for investigation. First, Captain Mohammad Reza Azizkhani flew an F-4 Phantom Fighter jet from Shahroki Air Force Base. The object was so large and brilliant that it could be seen from almost 70 miles away. Despite increasing his velocity and surpassing Mach 2 speeds, Azizkhani was unable to catch up with the incredibly fast object as it made its way swiftly to the city limits of Tehran. Azizkhani was then ordered to return.

However, the object suddenly reappeared directly above the city of Tehran, having traveled a great distance at implausible speeds. It appeared to have stopped mid-flight above Teheran.

Azizkhani headed toward the object again. When he approached within approximately 25 nautical miles, his navigational equipment on board began to malfunction, causing confusion and concern. The equipment returned to normal when he veered away from the object, but every time he got close, it would shut down again.

Azizkhani returned to base without any clues or explanations for what he had witnessed. He reported instrumentation malfunctions whenever he was within a certain distance from the object.

3.10.3 Attempt to shoot down an approaching uncategorized object

Squadron Commander, Parvis Jafari, with First Lieutenant Jalal Damirian serving as the weapons officer, was then scrambled to intercept the object and took off in another F-4 Phantom jet. Here is a short excerpt from a (maybe inaccurate in some details) Defense Intelligence Agency (DIA) report [112]:

C. The size of the radar return was comparable to that of a 707 tanker [[Boeing 707 Stratotanker]]. The visual size of the object was difficult to discern because of its intense brilliance. The light that it gave off was that of flashing strobe lights arranged in a rectangular pattern and alternating blue, green, red, and orange in color. The sequence of the lights was so fast that all the colors could be seen at once.

As Jafari's F-4 Phantom jet came closer, he could faintly discern a diamond-shaped object with lights on all points of the diamond. He then noticed that four other objects with different shapes separated from the main object at different times. Whenever the objects were close, his radar jammed, and radio communications were garbled. One of the objects approached his jet, and he tried to launch a heat seeker AIM-9 missile at it, but the missile panel went out. The experience was both interesting and terrifying.

Jafari was uncertain about his next move, as he had no way to counter if the object fired a missile at him. The object continued to approach him, and he became increasingly scared as his missile panel was down and communication with the tower was lost. Jafari believed that, if the object got any closer, he would have to eject from the plane, but even his ejection equipment was malfunctioning. To avoid a head-on collision, Jafari veered to the left, only to find the object had disappeared. Another detached object began circling his jet, and even when he tried to get away from it, it continued to follow him. Jafari decided to perform a quick negative G nose dive, an aviation maneuver in which the pilot pulls the nose of the aircraft down and accelerates toward the ground. During the dive, the pilot experiences negative g-forces, which push them out of the seat and toward the aircraft's ceiling. However, the object shot passed him and disappeared. With his instrumentation failing, Jafari finally received a signal to communicate with the tower and was ordered to return to base.

On his descent, Jafari saw that the main diamond-shaped object was still stationary. As he continued in his turn away from it, the second object that had approached him returned to the primary object for a perfect rejoin. This or another object broke off from the diamond-shaped one and made its way toward Jafari. However, to his relief, the object did not appear to be targeting him as it descended toward the ground. The object emitted a luminous light that was so bright that it made the sands visible from as far as fifteen miles away.

As he approached the landing site, Jafari was instructed to conduct a final flyover to gather any valuable observations of an impact site and to identify the object more closely. However, as he got closer, his radio malfunctioned, and his instruments went haywire. Jafari was only able to resume communication with the tower after he had distanced himself from the object. Despite his attempts to gather more information, he was ordered to return to base. The main diamond-shaped object in the sky had vanished into thin air while he was landing.

On the next day, Jafari and Damirian flew by helicopter to the area where they thought the light hit the ground, but they found nothing. Occupants of nearby houses only reported hearing a loud noise and a bright flash of light during the night.

3.11 Terry Lovelace encounter at Devil's Den in Arkansas in 1977

The following is a condensed version of Terry Lovelace's memories as recorded in a book [299] and in a podcast [241].

In 1977, Terry Lovelace, a medic and emergency medical technician, and his friend Toby, both in their twenties, were on active duty at Whiteman Air Force Base in Missouri. In the middle of the night, Toby suggested they go camping on an impromptu basis. They spontaneously decided to go to a plateau near Devil's Den in Arkansas. At the time, neither of them had prior experience or inclination toward camping.

After driving for approximately six hours, they accidentally found a plateau owned by the Bureau of Land Management and set up a camp there. As they sat around a campfire, they noticed that the forest had become completely still and silent. They then observed lights in the sky that appeared to be moving and rotating. Lovelace described the lights as three bright stars that rotated on an axis and moved straight up into the air, stopping at a certain point and then moving toward them. As the object got closer, they could see that it was a triangle shape with lights on the apex, but they did not hear any noise.

While observing the object, they felt a sense of calm and detachment, as if their emotions were muted. A light then came on from underneath the center of the craft, beaming down from approximately 3000 feet to the ground and hit their campfire for about a minute or less before clicking off. Instead of this broader light, thin laser-type lights popped on from the same center of the triangle. One of these lights danced around them and struck them and their belongings multiple times, including Lovelace's chest, but he did not feel any pain. After the light disappeared, they felt a sense of calm and drowsiness, and they went into their tent and immediately fell asleep.

When Lovelace woke up later, he saw flashing lights outside the tent and assumed they were from a park ranger. He also noticed that his combat boots were unlaced and unbuttoned, which he knew he hadn't done before going to sleep. Later, after taking off his boots, he noticed that his socks were turned out sideways. When he looked outside the tent, he saw that the triangular craft had descended to 30 feet above the floor of the meadow, and 12–15 small, spindly-armed creatures with large heads and long limbs, who he first assumed to be children but shortly afterwards identified as aliens, were roaming around the object in groups of twos and threes.

Eventually, a bright, milky-white column of light emerged from the center of the object. This light was approximately 30 feet in diameter—roughly the same width as the craft was high—off the ground. As the light appeared, the gray beings turned their attention to it, walked toward it, and entered it in groups of two or three. Lovelace suggests that the scene was similar to the “beamer” from the original Star Trek, where characters would “pixelate” and vanish. The beings disappeared along with the light, and after the last group entered the light, it turned off, and the lights on the triangle-shaped craft changed to solid white, whereupon it took off.

After the craft had disappeared, Lovelace and Toby, still in panic, rushed to their car, leaving their belongings behind. On their journey home, they experienced severe thirst. They decided not to tell anybody for fear of being considered insane and dismissed from the Air Force. They both felt an inexplicable but strong and strange sense of alienation and disconnection toward each other.

After this experience, both suffered from various health problems. They were ordered to avoid each other and not communicate. Eventually, Lovelace was hospitalized and visited by two police officers from the investigative branch of the Air Force's Security Police (OSI), who made him sign unknown forms.

Later, Lovelace was contacted by the Office of Scientific Intelligence (of the CIA). They took him to an interrogation facility and attempted to use hypnosis to uncover

what might have happened during the time he supposedly spent inside the triangular craft.

The following is a summary of Terry Lovelace's recollections of the missing time he allegedly spent in the triangle-shaped craft, as he recalled it through flashbacks [241, 299] and later hypnoses.

Lovelace believed he was brought inside the triangle-shaped craft. He was paralyzed and unable to move. He stood next to Toby and described the place as being enormous and confusing, as it appeared to be much larger on the inside than the craft he had seen hovering over the campsite. He suggested that the craft could have been in a different location or that the laws of physics were different for the beings controlling the craft. In his angle of sight and while being paralyzed, Lovelace encountered little gray beings. He speculates that these may have been robots running around the craft. He also saw what appeared to be big garage doors and a row of silver disc-shaped flying saucers.

Lovelace also described one other type of alien who was six feet tall, with pinkish flesh-colored skin and sparse hair, large black eyes with no sclera, pupil, or cornea, and wearing a knit garment with shoes that seemed to be integrated into their pant legs. Lovelace asserted that this alien had caused the most frightening experience for him, as he felt like "the guy was in his head" and knew everything about him, his life, his plans, and his secrets. The exchange with the alien took place as if the other had "just raw intellect in the eyes."

He felt inferior: this alien might have been as superior to humans, as he was to his dog.

Lovelace also recalled seeing a group of humans in unknown uniforms but with the same boots as Lovelace, but they took no notice of him and vanished from his view while he was paralyzed.

Lovelace also mentioned the accidental discovery of an implant after his legs had been X-rayed following an accident. He was later contacted by DeLonge and Elizondo, who suggested an examination. Lovelace mentioned that he might have had previous encounters with aliens and that there might be a covert military operation dealing with "alien abductees" like himself. He speculated that the military might have been aware of and involved in these types of encounters.

It should be noted that none of these claims and narrations can be confirmed. They are based on Lovelace's own speculation and interpretation of his experiences. Lovelace did not come forward with his account of the 1977 incident at Devil's Den until 2018, which was 40 years after the event occurred.

3.12 Abduction at a Minuteman Missile launch site in November 1977

The following is an account of events that took place at a Minuteman Missile launch facility controlled by the Ellsworth Air Force Base (AFB) in South Dakota. In November of 1977 USAF Sergeant Mario Woods served there as a member of the

44th Security Police Squadron. The account here is based on a podcast with Robert Fleischer [162]. Just like Minot AFB encountered in Section 3.8 and Malmstrom AFB encountered in Section 3.7, Ellsworth AFB was part of a system of Cold War bases in the northern part of the US, equipped with a strategic B-52 bomber wing and Minuteman Missiles tipped with nuclear warheads for both aircraft and missile deployment.

Already as a child, Mario Woods had a UFO sighting with his family. In 1961, his mother was driving him to De Queen Elementary School in Port Arthur, Texas. They lived close by and the school was a single building that housed kindergarten through 12th grade. Across the street, a road was blocked off and used as a playground. As they approached the drop-off point, they were in a line of cars, maybe fifth or eighth. Suddenly, his mother pointed out three silver white, disc-shaped flying saucers with lights on the bottom, pulsating around them, hovering in a triangular formation about 50 feet up in the air, directly above a nearby church. The saucers were 50 to 70 feet in diameter and had pulsating lights on the bottom. They stayed in the sky for a couple of minutes, during which time everyone in the playground and even people in the school were looking up at them. His sister was scared, but their mother didn't say anything. The saucers suddenly shot straight up and out of the atmosphere, getting smaller until they disappeared from sight. Woods would never forget that day, and he and his sister Carolyn talked about it often.

Around 2017, Woods and his sister had another encounter with two Tic-Tac shaped UFO's in Florida, over the Dade City Florida area, just north of Tampa, when they went out to buy lunch together. A lot of people saw these UFOs. One moment the UFOs were there, and then all of a sudden they were gone in a flash.

Woods' encounter at Ellsworth AFB in November 1977 started when he went outside his Launch Control Facility to smoke a cigarette. He saw two large lights far away, which may have been planets or stars, although at first he thought they were helicopters or B-52 bombers flying in tandem. They seemed to zero in on him but did not change position. Woods had the intuition to communicate with whatever was out there. So he flipped the facility lights using just one switch, which controlled 12 to 14 light cans or perimeter lights on the building and fence line. The lights were about two feet in diameter and were only moderately bright for the time, as light-emitting diodes (LEDs) were not as advanced as they are today. Woods used them as a signaling device, without following any particular sequence like SOS. He flipped them on and off three or four times before running back outside. When he walked outside again about 30 seconds later, the object flipped its lights off and on repeatedly. It almost looked as if the objects in the sky were reacting to him.

At that point Woods got excited and wanted to repeat this again. So he went back into his Launch Control Facility and told a colleague Michael Johnson who was watching TV to come and see this reaction. When they went outside, he first showed Michael the light in the sky. Then Woods ran inside and switched the facility lights on and off a couple of times. And sure enough the objects would flash back at him—or so he would interpret the blinking light which went off, went on, went off, went on, went off, and went on. Michael didn't seem very interested and went back inside. The narrator went back outside alone and saw that the light had moved closer

and further to the north. He was excited, thinking it might be an airplane flying over. He told Bill Holloman at the flight security control center, who was at the Flight Security Control Center, but they didn't find it unusual. So he flipped the lights at it again and ran back outside, now by himself. The object came back on, but it was not in the same direction; it was further north and had moved back at a 45-degree angle, indicating that it had gotten closer, but it was still far away. It had moved more to the north of him and stayed lit up for just a few moments before going out again. He waited, but it did not come back on, despite his flipping the light several times.

A while afterwards there was an alarm "set four" at one of the Minuteman Missile sights called "November Five." Woods and Johnson were ordered to investigate. Already from afar, as they approached, Woods happened to look over his right shoulder toward November Five, which was about seven to eight miles away. He saw a long-range glow that seemed to be pulsating up off the ground. He couldn't see the ground, just a glow in the atmosphere in that direction. He didn't know if it was really at November Five, he just knew it was in that direction.

When Woods and Johnson came around the little dog leg on Ormond Road, they saw a huge object—of the size of a super Walmart building—sitting there above November Five, exactly on top of the blast door. The object was not touching the ground, but remained about ten feet up in the air. It was the biggest thing he had ever seen in the air. The object was a round sphere and appeared to have electricity or flames emitting from the outer area, like an electrical coil fire of some type. It had no leading edges, wings, or any sign of thrust, and there was no noise at all. The object was gargantuan. They pulled up right in front of the site. Their vehicle was parked at a 45-degree angle about 20 yards from the cattle gate that kept cattle on the ranchers' properties.

They panicked. Woods kept saying, "What is it? What is that man? What is that, Michael?" but Johnson did not answer. All of a sudden, before he could think another thought, it was as if the atmosphere and the brightness of the object increased intensely in the cab of the truck. It was as though the Sun had entered their vehicle, and then the air or the atmosphere, the best way to describe it, was as if it was all pulled out at one time, and they couldn't breathe. There was no air to breathe. It was as if he was being pulled up into the back of the seat. Woods only knew one thing to do, and he didn't even know where the thought came from. He reached up and rolled the window down, a hand crank window. He had mittens on his left hand, and he had his Maglite in his right hand. The only thing he could think of was to roll the window down. He pulled himself up on the edge of the window and sat on it, afraid to touch the ground, afraid to get away from their vehicle. He held onto the blue lights on top of the roof, and flashed his Maglite at the object, five, six, seven, eight times. As soon as he did that, he felt in his mind as if he was told that that was enough, and he slid back down on the seat. Things eased up so they could breathe again, and he told Johnson it would be okay. But Johnson never said anything. He just kept looking ahead, sitting there holding onto the steering wheel.

As Woods eyesight began to fade, an object appeared in front of their windshield. It was black, about twice the size of a beach ball, and had lines running from top to bottom with a slight curvature. The object was jumping around erratically, and

he saw it three or four times before it disappeared over the top of the vehicle. As he started to pass out, he saw three small beings wearing some type of uniform, standing next to a taller being behind them. They had large eyes and were around four feet tall. He couldn't be sure, but there may have been different types of beings. One of the beings held a straight stick with a glowing tip, which briefly caught his attention. The taller being had something protruding from its chest, which he feared. Just before he blacked out, he heard and felt a vibration repeating the words "do not fear."

When he woke up, he was in complete darkness, unable to see anything, but he realized that he was sitting in the seat of their vehicle. He asked Michael, who was sitting next to him, where they were, but there was no answer. As his eyesight started to return, he looked around and saw some really strange things. He wondered where they were and how they had got there. Without hesitation, he popped the door of their car and stepped out with the right foot, stepping into deep mud. At some point Woods notified the base, which had already been searching for them for five hours. They triangulated them and found their car in a place close to a dam a couple of miles away. Both men were debriefed, supposedly by an unknown "man in a black suit," Captain Jack Reed, and then a young officer by the name of Richard Doty [359] who was allegedly trained in the Strategic Air Command Communications Protocol.

3.13 Frederick Valentich disappearance in 1978

In 1978, Frederick Valentich, an inexperienced Australian pilot and UFO enthusiast, disappeared while flying a small plane, a Cessna 182L with call sign Delta Sierra Juliet, across the Bass Strait from Melbourne to Hobart, Tasmania, at dusk on October 21, 1978. He reported to the Melbourne Flight Service that he had encountered an object with a metallic shine and bright lights and that it was hovering above him. His last words were, "That strange aircraft is hovering on top of me again [...] and it's not an aircraft."

A search for Valentich and his aircraft was conducted but was unsuccessful. During the investigation, it was discovered that some people had seen strange luminous objects in the area on the night of Valentich's disappearance. Additionally, an amateur photographer allegedly took color photos of a disk surrounded by cloud-like vapor near the Strait around the time of Valentich's disappearance [196, 274, 403].

3.14 Rendlesham Forest incident in 1980

This incident involves the alleged visitation of alien craft near or at the twin bases of Royal Air Force (RAF) [[station]] Bentwaters/Woodbridge and Royal Air Force (RAF) [[station]] Bentwaters. RAF Bentwaters and RAF Woodbridge were two air bases leased by Britain's Royal Air Force to the US Air Force. Rendlesham Forest

was situated between them, and the bases were approximately 72 km apart. Rumors circulated that one of the biggest stockpiles of US-controlled nuclear weapons in Europe was stored at RAF Bentwaters. Allegedly, “nuclear weapons stored in the Weapons Storage Area at RAF Woodbridge were struck by light beams fired from an unidentified craft seen over the base in the period 25–30 December 1980” [297].

Unconfirmed accounts leaning toward flying saucers of some kind have been presented in several books [45, 215, 361] by Georgina Bruni, Nick Pope, John Burroughs, and James (Jim) W. Penniston, and Gary Heseltine. Pope had worked on the British Ministry of Defence’s “leaky” [67] UFO desk, and the other two authors were USAF security personnel at Bentwaters/Woodbridge, involved in the events in Rendlesham Forest. A Telegraph article [207] by Rupert Hawksley is just one in a long series of press reports on the incident.

Ian Ridpath [388] and David Clarke [65] drafted a vastly different story. While it was suggested that at least one RAF radar had tracked the UFOs, the Ministry of Defence file revealed that no unusual targets were seen on the UK radar picture during the Christmas period in 1980. Squadron Leader Derek Coumbe confirmed that there was nothing unusual on the radar picture, despite claims made to the contrary. The marks found on the trees in the area were made by foresters’ axes, and the decision to remove the trees was made before the sightings. The ground traces found by USAF airmen were deemed to be of no significance by British police officers. The levels of radiation detected were confirmed by at least three independent scientific experts and the makers of the equipment used to be nothing unusual or significant. The readings were simply background levels of radiation that would be expected in a pine forest [65]. Finally, the base commander and his deputy of RAF Bentwaters/Woodbridge disagreed on what they had seen [73].

Let me state up front that debunking stories abound on this topic. These include a burn-up in the atmosphere of an exceptionally bright meteor [65, 388] and the since dismantled Orfordness Lighthouse [389]. The UFO sightings may have been triggered by a Russian object that entered the Earth’s atmosphere after being in orbit for only a few hours: Cosmos 749, a satellite launched by the Soviets, re-entered the Earth’s atmosphere on Christmas Day and broke into several pieces, creating a stunning light display in the sky. Astronomers tracked the object’s course across southeast England and noted that the final fragment disappeared in the East Anglia area, where the Rendlesham sightings were reported. In addition, twelve satellites decayed during the week of the UFO scare, with six being large objects such as rocket bodies that would have been visible to ground observers. Furthermore, astronomers logged three fireball meteors during the Christmas holiday period, including one at 2:50 am on Boxing Day morning [65].

According to another narrative, the “Historic British UFO mystery was a ‘prank played on the US Air Force by [[the British Special Air Service]] SAS’ ” [383] in retaliation for the imprisonment and beating of British SAS soldiers by their US captors. The British SAS had regularly tested US security by probing the perimeters of RAF Woodbridge in Suffolk, where nuclear warheads were said to be stored. However, these US captors refused to believe who these SAS soldiers were and repeatedly referred to them as “unidentified aliens.”

Therefore, with these cautionary provisos, let me proceed with narratives involving strangeness of the UFO kind.

3.14.1 The Halt memo, Halt's signed notarized statement, and Conrad's statement

Two weeks after the incident, Lieutenant Colonel Charles I. Halt (of the USAF), the deputy base commander of RAF Woodbridge, wrote a memorandum [201, 387] to the Ministry of Defence detailing alleged encounters experienced in Rendlesham Forest. This memorandum, known as the “Halt memo,” was made publicly available in the United States in 1983 under the US Freedom of Information Act. The memo was titled “Unexplained Lights” and was dated “13 Jan 1981.” However, the two-week delay between the incident and the report may have caused errors in the dates and times given. The memo was not classified in any way:

1. Early in the morning of 27 Dec 80 (approximately 0300L) two USAF security police patrolmen saw unusual lights outside the back gate at RAF Woodbridge. Thinking an aircraft might have crashed or been forced down, they called for permission to go outside the gate to investigate. The on-duty flight chief responded and allowed three patrolmen to proceed on foot. The individuals reported seeing a strange glowing object in the forest. The object was described as being metallic in appearance and triangular in shape, approximately two to three meters across the base and approximately two meters high. It illuminated the entire forest with a white light. The object itself had a pulsing red light on top and a bank(s) of blue lights underneath. The object was hovering or on legs. As the patrolmen approached the object, it maneuvered through the trees and disappeared. At this time the animals on a nearby farm went into a frenzy. The object was briefly sighted approximately an hour later near the back gate.

2. The next day, three depressions 1.5 inches deep and 7 inches in diameter were found where the object had been sighted on the ground. The following night (29 Dec 80) the area was checked for radiation. Beta/gamma readings of 0.1 milliroentgens were recorded with peak readings in the three depressions and near the center of the triangle formed by the depressions. A nearby tree had moderate (0.05–0.07) readings on the side of the tree toward the depressions.

3. Later in the night a red sun-like light was seen through the trees. It moved about and pulsed. At one point it appeared to throw off glowing particles and then broke into five separate white objects and then disappeared. Immediately thereafter, three star-like objects were noticed in the sky, two objects to the north and one to the south, all of which were about 10 degrees off the horizon. The objects moved rapidly in sharp, angular movements and displayed red, green, and blue lights. The objects to the north appeared to be elliptical through an 8–12 power lens. They then turned to full circles. The objects to the north remained in the sky for an hour or more. The object to the south was visible

for two or three hours and beamed down a stream of light from time to time. Numerous individuals, including the undersigned, witnessed the activities in paragraphs 2 and 3.

(Signed)
Charles I. Halt, Lt Col, USAF
Deputy Base Commander

David Clarke investigated the background of the memo, specifically the reaction of Col Theodore J. Conrad, who served as the Bentwaters/Woodbridge base commander, while Halt was his deputy. Conrad denied many of the claims made by Halt in both the 1981 memo and a notarized statement from Halt in 2010. In a statement excerpted on a blog by David Clarke, Conrad judged Halt's memo as having generated "the frenzy of speculative reporting and the inevitable allegations of cover-up."

3.14.2 December 26, 1980

At 03:00, in the very early morning hours of December 26, 1980—confusingly reported as December 27, 1980 by Lieutenant Colonel Charles Halt in his memo to the UK Ministry of Defence—a security patrol stationed near the east gate of RAF Woodbridge, including Airman First Class John Burroughs, spotted strange lights in the forest, flashing red and blue, that appeared to be descending into the nearby Rendlesham Forest.

Burroughs and his supervisor, who also saw the lights, made a small excursion off base in their car. At first, they believed it to be a downed aircraft. Down a small track, white light became visible, in addition to red and blue lights. This white light was particularly odd and at one point appeared to be coming closer to them, down the small track. The color, configuration, and movement of the lights were like no aircraft or vehicle they were familiar with. They decided to go back to the gate and inform the on-duty flight chief, Staff Sergeant James W. Penniston. Soon after, Penniston and a few others arrived on the scene.

The control tower checked the radar and contacted other locations for information. They learned that a "boogie" (for unknown air contact) had been tracked 15 minutes earlier but had disappeared over the Woodbridge base.

Burroughs and Penniston proceeded on foot to the source of light. When they finally arrived, their radio equipment failed and they felt static electricity in the air around them. Suddenly, as they approached, there was a silent explosion of light. At one point, Penniston and Burroughs threw themselves to the ground. Penniston saw no immediate harm from the intense light. Therefore, he stood up, looked to his right and saw Burroughs engulfed in a huge beam of light that seemed to be coming from above, completely encompassing him.

The initial sphere of light that was in front of him had disappeared and transformed into the shape of some sort of craft. It had a roughly triangular shape and appeared to be hovering just above the ground or resting on tripod-like legs at each edge. The craft had a bank of blue lights on its side and a bright white light on top. No sound could be heard. Penniston noticed strange symbols on the side of the craft that resembled ancient Egyptian hieroglyphs. He took photographs and sketched the craft and symbols in his notebook. When Penniston touched the craft, he described the hull as hard and smooth, like smooth opaque black glass. However, the symbols felt rough, like running his fingers over sandpaper. As he touched the symbols, the white light on top of the craft flared up and became so intense that he was temporarily blinded. When he removed his hand, the light dimmed, and the sense of panic receded. After some time, the craft lifted off the ground and slowly rose above the trees surrounding the clearing. There was no noise during this time. The craft seemed to maneuver through the trees as it cleared them and then accelerated away in an instant [361, Chapter 1].

Shortly afterwards, at 04:00, local police were called to the scene but could only see lights from the Orfordness lighthouse several miles away on the coast.

When the servicemen returned to the area at daybreak, they identified three small impressions in a triangular pattern on the ground, along with burn marks and broken branches on nearby trees. The police were again called out at 10:30 to view the impressions, which they thought could have been made by an animal.

As stated by Penniston [361, Chapter 19]:

“[[. . .]] after what I had seen in the early morning hours on that night, I left that forest a different man than when I walked in. I was in awe of the technology and, yes, a knowing that it was not an aircraft that could have been manufactured in 1980 or even now. The replication of this craft in my assessment is far more advanced than any we could develop in the next few centuries at the very least.”

3.14.3 UFO scanning a weapons storage area in late December 1980

Sergeant Steve Longero of the USAF Security Police allegedly saw an object hovering over the treetops outside the perimeter of the Bentwaters (nuclear) Weapon Storage Area [161, 215], with different colored lights on it, disc-shaped, and with a greenish glow. He estimated that it was about 200 to 300 yards away, at an approximate altitude of perhaps 40 to 50 feet, and was located on the forest side of the nuclear Weapon Storage Area. He described the object as looking like an eye with something dripping off it, and he observed a searchlight-like beam coming from the object and shining onto the ground within the Weapon Storage Area. The beam was continually moving and shining across the entire area in a grid search pattern, scanning the entire

row of bunkers with nuclear weapons, casting left to right. The object then moved away over the forest out of view, and Longero began to hear a lot of radio chatter.

3.14.4 A reddish/orange object on late December 27, 1980

According to a recent reinvestigation of the Rendlesham Forest Incident by a formal criminal investigator Gary Heseltine [215], Lt. Bonnie Tamplin's traumatic incident during late December 1980 has long been established, but only fragments of the incident were previously known. According to the generally accepted story before Heseltine's reinvestigation, two USAF Security police officers, Airwoman Lori Buoen and Airman John Tremontozzi, saw a red ball of fire descend into the forest while at the East Gate. Lt Tamplin, who happened to be on mobile patrol in the area, agreed to investigate and soon after, Buoen and Tremontozzi heard Tamplin's distressed screaming voice over the radio, requesting help. Master Sergeant "Bobby" Ball was believed to have responded to her cries over the radio first and reached her first. Tamplin was so traumatized that she was relieved from duty and seemingly did not return to shift duty.

However, during the filming of Capel Green, former Airman First Class Michael Stacy Smith came forward with direct witness testimony to the events involving Lt Tamplin. Although he cannot tell the whole story as a direct witness, a trusted supervisor on shift had told him the rest of the story. According to Smith, Lt Tamplin had visited him on the night of the incident and told him she was going to Woodbridge. A few minutes later, he heard her voice over the radio, but it wasn't clear. He saw several vehicles leaving Central Security Control in a hurry and was told to go to Butley Gate.

A short time later, MSgt Ball returned in his vehicle with Lt Tamplin, who was crying, had dirty clothes, and was not wearing her beret. Smith learned from a supervisor after the shift that an orange/reddish ball had appeared in front of Tamplin's jeep as she was driving. Apparently, in trying to get away from the object, the jeep ran off the road and rolled onto its side. Lt. Tamplin was able to crawl out of it, but the reddish/orange object was still close to her location, so she had opened fire on it. After this incident, when her weapon was checked into the armory after the incident, a number of rounds were found to be missing. The missing rounds were replaced after the weapon was cleaned and returned to the armory. Heseltine mentioned that so far Tamplin had refused to come forward and tell her story [161].

3.14.5 December 28, 1980

In the early hours of 28 December 1980, Lieutenant Colonel Charles Halt, accompanied by several servicemen visited the site of the alleged Rendlesham Forest UFO sightings. They took radiation readings using a military survey meter and allegedly

detected a small increase in radiation levels. Halt recorded the events on a micro-cassette recorder and reported seeing a flashing light across the field to the east, as well as three star-like lights in the sky that seemed to hover for two to three hours and beam down a stream of light from time to time. The transcript of the Halt tape includes the following:

“It looks like an eye winking at you. Still moving from side to side and when you put the starscope on it, it sort of like has a hollow center, a dark centre, it’s [...] like a pupil of an eye looking at you, winking. And the flash is so bright to the starscope, that it almost burns your eye . . .”

“04.00 hours. One object still hovering over the Woodbridge base at about five to ten degrees off the horizon, still moving erratic and similar lights and beaming down as earlier.”

On the following night, on December 28, 1980, a group of military personnel, including Larry Warren, an 18-year-old soldier, Sgt Adrian Bustinza, and other soldiers, were sent out on patrol in Rendlesham Forest to investigate the reports of strange lights seen in the area on the previous two nights. Sometime after 11 pm, the men left their trucks and walked toward the field where the lights had been spotted. According to Warren and others, they had a close encounter with an unidentified flying object and other strange experiences. Warren claims to have witnessed “disaster preparedness officers” with Geiger counters moving in a semicircular pattern around a small object on the ground. He describes being taken to a field known as the “farmer’s field” with a group of other guards. In the field, they saw approximately 15 to 20 US Airforce security officers standing in a circle around a yellowish-green fog that was hugging the ground and glowing. Suddenly, a small light, the size of a beach ball, self-illuminated, and not quite red in color, appeared and stopped over the mist. There was then a bright explosion of light that left a shimmering, translucent craft on the ground where the mist had been. Warren claims that the incident was being filmed by two people from a distance using early video and cine film cameras. Warren says that he witnessed something akin to a bubble emerging from the craft and dividing into three bubbles, each containing the upper torso of a humanoid figure. The three entities floated beside the craft, and Warren claims that he saw Colonel Williams have a silent face-off with them. Eventually, Warren was told to leave and return to the staging area, where vehicles were parked and could go no further into the forest [161, 215].

The Condign Report [76] mentions the Rendlesham Forest incident in Volume 2, Working Paper 1, Annex F under the heading “Non-ionizing EM effects on humans” and “Potential mental effects on humans.” The report states [5]:

“Neurological rather than biological effects may be the clue to some human behaviour after exposure in the near field of UAP radiation. Particularly sensitive are the temporal lobe areas of the brain. Unlike other parts of the brain, the temporal cortex can be rendered electrically unstable.”

[[. . .]]

“The well-reported Rendlesham Forest/Bentwaters event is an example where it might be postulated that several observers were probably exposed to UAP radiation for longer than normal UAP sighting periods. There may be other cases which remain unreported. It is clear that the recipients of these effects are not aware that their behaviour/perception of what they are observing is being modified.”

Both Penniston and Burroughs reported suffering from post-traumatic stress disorder (PTSD) following the incident. On the basis of the aforementioned passage in the Condign Report, Burroughs later won compensation for illnesses he blamed on exposure to radiation from the event [365].

3.15 Soviet UFO missile crises in 1982

The Soviet UFO missile crisis was the opposite of what US Missile Combat Crews experienced in the Malmstrom incident in 1967 (see Section 3.7): instead of deactivating US intercontinental ballistic missiles, UFOs activated USSR intercontinental ballistic missiles without authorization from Moscow.

The incident allegedly took place on October 4, 1982, in Byelokoroviche, Ukraine. It affected the 50th missile division of the Strategic Missile Forces of the Carpathian Military District.

On October 4, 1982, at 18:30 Moscow time, several unknown aircraft appeared in the sky moving along trajectories that were impossible for any known Earth-sourced technology. According to military reports, strange lights were seen in the night sky. One or more UFOs were spotted hovering above the missile base in Usovo, Ukraine.

Alarming events occurred inside the underground bunker of military unit 52035, where the missile launch control panels were located. The signal lights on both control panels suddenly lit up, which meant that the missiles were ready to be launched. This could only normally have occurred after receiving appropriate authorization from Moscow, but Moscow did not send such a signal.

The situation was confirmed by a report signed by Major M. D. Kataman, assistant commander of military unit 52035 for communications. He did not see the UFOs flying above because he was, at the time, on shift in the underground bunker (capsule). However, “on October 4, 1982 at 21:37,” he writes, “I observed the spontaneous switching on of all signal lights on the panels.” Someone or something was apparently manipulating the series of precise control codes, four spaces, and control code combination, which regulate the computerized missile control launch panel [232]. Within fifteen terrifying seconds, the base lost control of its deadly weapons.

One of the eyewitnesses to the appearance of a UFO over the base was Lieutenant Colonel Vladimir Platunov. He described the object as “just like a flying saucer” without hatches or portholes, 300 meters in diameter, and with a “flawless geometric

shape." The saucer made a sharp right-angle turn and made no sound. The object was also seen by servicemen from a neighboring unit and many civilians from nearby villages. They all reported that the "flying saucer" was huge and had a "flawless geometric shape."

Subsequently, the Soviet Academy of Sciences determined that the UFO hovering near the missile site was, in reality, only a military flare.

The incident was later reported by ABC TV News Moscow correspondent David Ensor [232, 407] in its documentary "Soviet KGB Files on UFOs," which was broadcast on October 6, 1994. The story was retold in the TV show entitled "Military Secret: UFOs and the Ministry of Defense of the Russian Federation" [233, 453] and reviewed by Hastings [206, Chapter 23].

3.16 Brazil's night of UFOs on May 19, 1986

Listening to the reports of Brazil's "night of UFOs," I was reminded of the Washington Flyovers in 1952, described in Section 2.10. As in the former flap, these phenomena could have been "debunked" as natural atmospheric events such as inversion layers [322], bright stars or meteors, or optical illusions, but just as then, certain elements leave us feeling uneasy.

On the night of May 19, 1986, a series of unidentified flying objects were tracked by ground radar and reported by pilots over several states in southeastern Brazil.

An air force air traffic controller named Sergeant Sergio Mota da Silva reported seeing unusual lights in the sky while working in the control tower of an airport near São Paulo [437]. He stated that the lights did not move up or down, left or right. He asked other controllers if any planes were headed to his airfield, to which they replied in the negative. At one point, he said he dimmed the lights on the airport's runway, causing the objects to come closer to the control tower and then move away when he turned up the brightness.

At approximately 8 PM, approximately 2000 cadets and officers from an air force training school near the São Paulo airport reported seeing lights in the sky, similar to those that were previously reported by da Silva. An hour later, a plane piloted by the president of aircraft maker Embraer reported several objects in the sky as it was landing at the airport. These lights were also seen by two passenger planes.

Radar returns were picked up by airports in São Paulo [59] and were later tracked by the Integrated Air Defense & Air Traffic Control Center I (CINDACTA I) in Brasilia. The objects were described as spherical in shape and self-luminous white, green, or red in color. The radar controller and some pilots described the objects as performing unusual and erratic maneuvers.

The incident was considered significant because it was the first time that government authorities of any country published the existence of unidentified aerial phenomena in their airspace. CINDACTA I radars that covered the whole southeast area of the country, as well as the federal capital, captured as many as twenty-one unidentified radar plots, many of which demonstrated highly unusual flight profiles.

The unidentified objects were tracked by radar as they moved across the airspace, but no physical contact was made.

Brazil's night of UFOs received significant media attention and remains one of the best documented cases of a military encounter with unidentified flying objects. Despite the efforts made by the Brazilian government and the Brazilian Air Force, the objects remained unidentified. To date, there is no official explanation for these events.

Here are some personal anecdotal accounts in more detail. As the radar returns were considered unidentified, the Brazilian Air Force scrambled five fighter jets to investigate. Two Northrop F-5E aircraft went up, flown by the pilot of the alert jet Lieutenant Aviator Kleber Marinho and Captain Aviator Márcio Brisola Jordão from Santa Cruz Air Base in Rio de Janeiro state, and two Dassault F-103 Mirage and one Dassault Mirage 500 jet fighters, flown by Captain Aviator Rodolfo da Silva Souza, Captain Aviator Armindo Souza Viriato de Freitas, and Captain Aviator Júlio Cézar Rozenberg, respectively, from Anápolis Air Base in Goias state. The pilots were instructed to intercept the objects without taking an aggressive stance.

Pilots of the scrambled fighters reported visual and radar sightings of the objects. Kleber, who had activated the afterburner of his F-5E, recalls [59]:

“I began to descend, going directly toward the object, but being on the whole careful and considering the possibility of an optical illusion, due to the darkness. I could be seeing a light under water, a large ship with a spotlight or any other thing. For this reason I didn't want to rely only on my visual impressions so tried my radar, even without instruction to do so. And, really, at about 8 to 12 miles away, an object appeared on the screen, confirming the presence of something solid in front of me. This coincided with the direction of the light that I had sighted visually. In the radar systems that equipped the fighters of that time, the size of the plot is in general agreement with the size of the contact. The radar indicated an object of about one centimeter (screen image size), that means something in the span of a Jumbo (Boeing 747).

[...]

I arrived close to the object, positioning myself about six miles away from him; this was still far enough away to accomplish a necessary verification at night. The object stopped moving in my direction and began to climb. I didn't lose my initial radar contact and I started to climb with [[it]]. I continued following the contact up to about 30 thousand feet, when I lost the radar contact; I could still see it. But then the strong light became merged with the lights of the stars.”

All other aviators failed to intercept and returned to their bases. In his attempts to locate the “object,” Rozenberg recalled that he did not have anything on his radar and did not see anything, although ground control announced that the alleged object was a mile ahead. This night, according to the consensual recollections of the pilots, was exceptionally clear and bright.

Geraldo Souza Pinto, the pilot of a Boeing-707 cargo plane, was subsequently contacted by CINDACTA I (ground control?). They (ground control?) told him, “we have a UFO at that location [[at their 11 o’clock position]],” appearing on their radar. Pinto then recalls “It was at this position that I saw it. A very strong light shone, a white light.” Next, the crew lowered their cockpit lights to be able to search for the contact visually. Nivaldo Barbosa, the copilot, saw something outside the cockpit that left a luminous trace. Pinto recalls:

“[[. . .]] the controller informed us that the object had suddenly moved to our right at a very high rate of speed, reaching in a fraction of a second, an incredible speed, something above Mach 5. A human being could not tolerate an acceleration of this magnitude. He would die with such displacement.

[[. . .]]

We were some 30 miles from the object. The impression that we had was that the contact was (now) moving at a low speed, and that we were approaching [[it]]. The approach continued. The radar continued to inform us of the (separation) distances: fifteen miles, ten, five [[. . .]] But I looked, [[Barbosa]] looked and didn’t see anything else. Then the controller said: ‘Three miles, two, ah [[. . .]] the traffic is merging with the plot of your (own) airplane.’ We looked upward, down and we didn’t see anything! We were told by ground control that the object was passing behind our aircraft, but his transmission began to have a lot of interference and the radar lost him from view.”

A short unconfirmed message or comment from the USDAO (US Defense Attaché Office) in Rio de Janeiro to the Defense Intelligence Agency (DIA) was entitled [59] “BAF [Brazilian Air Force] has a Close Encounter of the First Kind.” It states: “Three visual sightings and positive radar contact from three different types of radar systems lead one to believe that something arrived over Brazil the night of 19 May. Pilots or ground personnel reports no EMI [[electromagnetic interference?]] effects due to the presence of UFO/UAP.”

3.17 UFOs over Gulf Breeze from November 11, 1987, to 1988

The Gulf Breeze UFO incidents might have been good examples of how the UFO community sometimes gets steered, nudged, and spun by occasional hoaxers and persons and institutions who subsequently rock the boat of attention [106, 168, 169].

On November 11, 1987, the first alleged UFO sighting in this persistent “UFO wave” was made by Ed Walters [487], a local contractor who, according to an article in the Pensacola News Journal, had at the time been “convicted in 1967 of forgery charges from Duval County, Fla, and two auto theft charges from Alachua County, Fla. He had served one and a half years in prison” [335]. Walters supplied the

paper *The Gulf Breeze Sentinel* with Polaroid photos that he claimed to show a UFO. He also claimed that he had been briefly immobilized by a blue beam and had taken photos of a UFO hovering above his Gulf Breeze home. He alleged that he had videotaped and taken 32 photographs of the UFO and had seen aliens that communicated with him telepathically in both English and Spanish. He claimed to have been lifted off the ground by a bright blue beam of light and that his wife had attempted to outrun the same beam.

Over time, Walters and his family reported 19 sightings or encounters and claimed that humming in his head signaled the arrival of UFOs. On one occasion, Walters said he felt a presence, saw the UFO, took a photo of it, and then lost consciousness for an hour.

In 1990, after the family had moved out of the house at 612 Silverthorne Road in Gulf Breeze in December 1988, a new resident found a UFO model made up of “four plastic foam plates and some drafting paper” in the attic [334]. The model found in Walters’ house closely resembled the UFOs in his photos. Walters denied knowing about the model but refused to take a lie detector test. Instead, he signed a statement denying any knowledge of the UFO model. The person who found the model also signed a statement claiming to not know who made it. Photographers were able to recreate photos of UFOs from Walters’ book using the model.

Already in June 1988, Robert Boyd, a critic, had been forced out of the Mutual UFO Network (MUFON) because of his conclusions that Walter’s photos were probably fakes. MUFON, as well as Bruce Maccabee [487] and other photo analysts, still supported Walters’ photos.

In early 1990, MUFON hosted its annual UFO symposium in Pensacola, attracting hundreds of attendees. The event garnered free publicity and brought in tourists, with UFO-focused tours being organized and merchants selling UFO-related merchandise. A local travel agent arranged 600 flights for the conference. The success of the symposium led to the first Gulf Breeze UFO Conference in October 1993, featuring alien abduction researcher John E. Mack, which was expected to attract 600 attendees. The second conference in October 1994 drew over 700 attendees, many of whom suspected they had been abducted by aliens. Additionally, for Walters, the Gulf Breeze UFO incident was profitable: according to an article in the *Pensacola News Journal* [335], he had been given an advance of \$200 000 for his book [487] and was offered \$450 000 by a TV station for the mini-series rights on his UFO encounters.

Later, the Pensacola Bay Bridge was a popular spot for UFO watchers in 1991, with many reporting seeing a “pearl necklace” of lights in the sky and a red glow over 74 times. People frequently gathered near the bridge at night with equipment to capture footage of the sightings. In 1996, the mayor of Gulf Breeze suggested that the lights in the sky were likely from nearby military airfields and airports. The MUFON UFO hotline was disconnected in 2000, and the president of the organization stated that there was not much going on in the area. The Center for Inquiry executive director agreed with colleague Phillip Klass’s statement that the sightings were a hoax and suggested that people let their imaginations get carried away. Just because something cannot be identified does not mean it is from another planet.

Chapter 4

UFO sagas and legends after 2003

Abstract The Nimitz encounter was an event that took place in November 2004 and involved a strange encounter between US Navy pilots and an unknown aerial object. The USS Princeton, part of the Nimitz Carrier Strike Group, had been tracking strange aircraft for two weeks prior to the incident and reported that the objects would appear at high altitudes, then rapidly descend toward the ocean and hover. Commander David Fravor and another pilot, Alex Dietrich, were directed to investigate the unknown contact and observed two objects. One was just below the surface of the water, and the second was an oval-shaped object hovering erratically above the water. Fravor reported that as he spiraled down to get closer to the object, it turned toward him and started to mirror his movements, but eventually disappeared in a sudden and rapid manner, only to reappear at the secret Combat Air Patrol (CAP) point. Despite the presence of eyewitnesses, there is no official documentation or radar data that covers the incident. However, photos associated with the event were authenticated by the Department of Defense in 2020.

4.1 Nimitz encounter on November 10–14, 2004

4.1.1 Context and sources

The following narrative is a mesh from several recollections of the event [58, 327, 366, 368]. No official document or radar data exist that covers them. It became famous because of the release of photos—authenticated by the DoD on April 27, 2020 [461]—associated with (parts of) it, as well as reports in legacy media [29, 90].

In December 2008, almost ten years before the December 2017 New York Times article, a participant in the events contacted Colm A. Kelleher. At the time, the participant was retired from the US Navy and was interviewed for a job at the Bigelow Aerospace Advanced Space Studies (BAASS) [281, p. 41]. BAASS was

hiring personnel, as it had won a contract for Advanced Aerospace Weapon System Applications Program (AAWSAP) [123].

AAWSAP was originally stimulated by George Knapp, a journalist specializing in “strange” encounters and UFOs, as well as by Robert Bigelow. Bigelow had bought the Sherman aka Skinwalker Ranch in Utah (now owned by Brandon Fugal, another property tycoon), allegedly known for some “strange phenomena” encountered there [415].

After reading a book about these alleged occurrences [257] and traveling to Skinwalker Ranch, James Lacatski, an employee of the Defense Intelligence Agency (DIA), had a minor “vision.”

As far as I can tell, Bigelow was the friend and campaign contributor of the late Nevada Senator Harry Reid, a former Majority Leader of the United States Senate. With the support of Reid and two other Senators, Lacatski developed a government contract to investigate UFOs, strange phenomena, and the Skinwalker Ranch, all under the guise of researching future aerospace technologies and threats. BAASS was founded as a contractor for this small project—AAWSAP—under the aegis of the Defense Intelligence Agency (DIA).

After listening to Kurth’s story, Kelleher passed it on to Jim Lacatski at the Defense Intelligence Agency (DIA). Lacatski, in turn, put Jonathan Axelrod on the case, and within months, Axelrod and his team had comprehensively interviewed and obtained detailed testimony from many witnesses: pilots, radar operators, and others from the Nimitz Aircraft Carrier Strike Group [281, p. 41]. Allegedly part of it has been released [455], but its origin and validity are unclear at this point.

4.1.2 USS Princeton observes groups of objects raining out of the sky toward the sea

The USS Princeton, part of a strike group, had been tracking strange groups of objects for several days—from November 4 to November 14 over a 10 day period, there were probably 100 different contacts in groups of five to ten, at seemingly random times [505]. Ballistic missile defense had observed objects beyond the upper atmosphere. These groups of five to ten emerged at an altitude of 80 000 feet. The group of objects would then rapidly descend toward the ocean and end at 35 000 to 20 000 feet close to Catalina Island, where they would hover, almost stationary, or move southbound towards Guadalupe Island, which is approximately 500 kilometres (300 miles) away. They kept a tight formation in the same relative positions to each other over the entire time, at a speed of approximately 100 knots or 200 km/hour. Afterwards, they would either shoot straight back upward [91] or drop down to the ocean at incredible speeds of approximately 24 000 miles/hour or 40 000 km/hour, before vanishing from the radar close to Guadalupe Island [505].

The operators first thought that their new AN/SPY-1B phased array radar system—at the time, the most sophisticated and powerful tactical radar on the planet—was malfunctioning. Therefore, the air control systems were taken down and recalibrated

in an effort to clarify what were assumed to be false radar returns. However, after this recalibration, the strange unexplainable tracks were even sharper and clearer.

At some point, when the objects appeared on radar, Gary Voorhis, a system technician aboard the USS Princeton, went up to the bridge to observe them through the ship’s “Big Eyes,” which were heavily magnified binoculars [316]. The objects were too far away to discern any specific details, but Voorhis could clearly see something whitish moving unpredictably in the distance. He recalls that, at night, the objects had a uniform phosphorescent glow [507]. They could be seen more easily in the dark than in the daylight.

An airborne (E-2 Hawkeye) radar system, after focusing their radar on the coordinates USS Princeton directed them toward, observed a faint signal of that target. However, the radar returns from the contact were not good enough to generate a target track.

At this point, the operators on the USS Princeton seemed determined to find out what was behind this phenomenon. They approached fighter pilots on their training missions to obtain a closer look.

4.1.3 Whitewater

On November 14, 2004, Lieutenant Colonel Douglas “Cheeks” Kurth had just finished a routine post-maintenance check flight—so he was already flying in the air—when he received a strange and intriguing communication from USS Princeton. Despite being in close proximity to San Diego’s homeport, Kurth was asked to investigate an unidentified airborne contact, which was an uncommon request given the location. What made the communication even more peculiar was the fact that Kurth was questioned about the ordnance he had on board. He had none.

As Kurth neared the designated location, USS Princeton cautioned him to maintain an altitude of at least 10 000 feet, as Commander David Fravor and Lieutenant Commander Alex Dietrich’s group of Super Hornets were on their way to the target [182]. Kurth’s radar picked up the two Super Hornets but no other contacts. At that point, USS Princeton instructed him to abandon the mission and head back to the ship. Since he was close, Kurth decided to stay for a while and watch what would happen [58].

It was a late morning on a gorgeous day in Southern California, with the sea almost as still as glass, presenting perfect flying conditions. As Cheeks flew over the area, he noticed a disturbance on the ocean surface, a circular section of turbulent water spanning 50–100 meters in diameter. He termed it “whitewater,” since it appeared as though something was lurking beneath the surface, such as a shoal or the aftermath of a sinking ship.

Kurth circled back to get a closer look but could not ascertain what was causing the frothing effect on the water. As he turned away, coinciding with the arrival of the Super Hornets at the location, the whitewater subsided, and the ocean surface

reverted to its serene state. The area of the previous commotion was now completely unrecognizable.

He never saw anything other than whitewater.

4.1.4 Encounter with an oval object

On the same day, November 14, 2004, Commander David Fravor and Lieutenant Commander Alex Dietrich were flying Super Hornets of the USS Nimitz Carrier Strike Group [174]. Just as Kurth before, Fravor was first asked if their jets were carrying any ordnance. He responded that all they had were two captive-carry training missiles.

Fravor and Dietrich were directed by the USS Princeton to investigate an unknown aerial contact or object at a particular location where one of these strangely moving objects, which had been observed by the USS Princeton for days, appeared on the radar screens. Upon arriving at the supposed location, which was the merge spot (or radar merge cell) on the AN/SPY-1B phased array radar where Fravor and Dietrich's Super Hornets could no longer be distinguished from the object, Fravor realized that there were two objects rather than one.

He saw a large cross-shaped object just below the surface of the water, about the size of a large passenger aircraft, causing a "whitewater" effect, which Kurth also observed. Then, the weapons systems officer in the rear seat, and shortly thereafter Fravor, spotted a second object hovering erratically in a zig-zag style just 50 feet above the water. Fravor estimated that the second, smaller object, which was whitish and oval-shaped without wings or a propulsion system, was approximately 40 feet long.

Four people in total, including the two pilots Fravor and Dietrich, as well as their respective weapons systems officers, observed a smaller object for approximately five minutes. Fravor reported that, as he spiraled down to get closer to the object, it suddenly seemed to recognize his plane. The object turned toward him and started to mirror his movements; as he went down, the object was coming up. Fravor's plane and the object circled around each other, but while the object was ascending, Fravor's plane was descending.

At some point, Fravor wanted to get closer to the object and join it. He dropped the nose of his plane aggressively, thereby cutting across the circle. Then, in Fravor's own words, the object reacted and "starts to accelerate, and within about less than a second as I start to pull nose onto it [...] it crosses right in front of me [...] it just goes 'poof' and it's gone." The object had disappeared, and not only from Fravor's view. Nobody could locate it any longer. Additionally, the object under the whitewater was also gone.

In Day's alternative recollection [505] of the engagement, Fravor told him that, as Fravor's plane approached the formation of five objects, the lead object of the formation did a barrel roll around him, and headed straight down to the water. Fravor followed and chased it down towards the ocean floor.

4.1.5 Object waiting at the Combat Air Patrol point

The Super Hornets then communicated with the USS Princeton. At that point, the operator at the USS Princeton told Fravor: “You are not going to believe this but that thing is back at your CAP point.” This computer-generated Combat Air Patrol (CAP) point was 60 miles away—not only was this location highly protected and encrypted, but the object needed at most 30–40 seconds to reach it, amounting to more than 3700 miles per hour, or 6000 km per hour. The radar did not track it—it just vanished and reappeared there.

However, by the time they arrived, the object had already disappeared.

4.1.6 Another wave of fighters recording a movie

Another wave of fighters, including Lieutenant Commander Chad Underwood [358], was dispatched for investigation. Underwood’s fighter was equipped with a targeting pod including an advanced FLIR (infrared) camera. Some (at least similar) object appeared on the onboard radar and started jamming the radar. Underwood switched to passive recording FLIR (infrared) and video camera mode. This is the video that was later authenticated by the DoD [461], which is often referred to as the “Tic Tac” video, although he himself did not see any unusual object.

4.1.7 Estimate of eye resolution

Let us estimate Fravor’s conceivable eye resolution from a distance of 20 000 feet [368, time = 646 s]. A US National Bureau of Standards publication reviewing visual acuity, states that [228, p. 10] “it is traditionally assumed that the finest detail that can just be made out by an eye with normal visual acuity, viewing black lines on a white background, with moderate levels of illumination, subtends a visual angle of 1 minute of arc.” This means that by approximating $\sin(x) \approx x$ for $x \ll 1$, the (size of the) smallest object discernible with human eyes at a distance d (in SI units) is approximately $d \times 2 \times \pi / (360 \times 60)$ m. That is, for 20 000 feet $\approx 20 000 \times 0.3048$ m ≈ 6096 m, the smallest object discernible for an average person is approximately $6096 \times 2 \times \pi / (360 \times 60)$ m ≈ 1.7 m or approximately 6 feet. Therefore, Fravor’s estimate of the size of the craft of 40 feet [368, time = 652 s] is reasonable, in particular, assuming that Fravor’s visual acuity may be better than average, and the illumination was very good.

The events described suggest the presence of advanced aircraft technology beyond the current capabilities of the US military and aerospace industry.

4.1.8 Analysis of the flir, gofast, and gimbal videos

In what follows are the critical analyses by Mick West and the group at Metabunk. These in turn have been met with criticisms from other UFO investigators on two grounds [500]:

- Firstly, in line with a strategy employed by the late Edward Teller (an experience I had the privilege of witnessing personally [154]), whenever one tried to “nail Teller down” with some argument, he would take evasive action by stating that he could not disclose certain information due to national security concerns, even though he was privy to classified information that supported his positions.
- Secondly, similar to the first reason, there is an insinuation that anyone criticizing the “strangeness” of these videos lacks knowledge of important contextual factors, such as additional sensor data, better and longer videos, and the opinions of highly competent experts who have already analyzed these videos and excluded prosaic explanations.

Flir video

As mentioned earlier, one of the three videos [339–341] that have been authenticated by the Department of Defense on April 27, 2020 [461]—the “FLIR” video—is related to the previous narrative. It was taken from a different airplane after Fravor’s encounter with a “tic-tac” shaped UAP.

A detailed analysis [498, 499, 501] by the “debunker” Mick West [503] attempted to demonstrate that the flir video actually shows an ordinary aircraft moving with constant velocity. The video is overlaid with a time code and relevant information from the display to show that all apparent movements are consistent with the object moving in a straight line to the left. The camera was tracking the object visually, and every time there occurred a physical lens change or a camera rotation, the lock was briefly lost, causing the object to appear as if it had suddenly changed speed. The analysis suggests that the object was a distant aircraft flying along normally.

Mirroring movement

West also speculates that Fravor might have mistaken [499, 506] the “mirroring” movement of an object that in reality remained almost static in the center of the circle he was flying: Fravor thought that he was flying in a circle with some object mirroring him on the other side, but in reality this might have been an illusion caused by some object that was actually in the middle (rather than on the opposite end) of the circle. When Fravor decided to cut across the circle, he saw something coming towards him unexpectedly fast and zipping by, which was actually a loss of situational awareness from a misrepresentation of the airplane–object configuration.

Gofast video

West argues [497, 501] that the object in the “GOFAST” video [341] is not actually flying low and fast over the water as it appears, but rather is flying high and slow. He uses information from the video, such as the altitude of the jet, calibrated airspeed, and distance to the target, to calculate the height and speed of the object.

West suggests that the object is actually around 13 000 feet above the water and traveling at a speed of 20 to 40 knots, which is consistent with wind speed at that altitude. He also estimates that the object is about 6 to 7 feet in size, which is similar to the size of a weather balloon. This assumption would explain why it appears cold on the infrared camera.

Gimbal video

The Metabunk team including West argue [308, 499, 501, 502] that the object in the “GIMBAL” video [340] likely shows a glare [441] that hides the actual object, and that the shape of this glare only appears to be rotating because the camera mounted on a gimbal rotates, and in order to de-rotate the horizon, any glare—which does not rotate relative to the camera like the horizon does—appears to rotate. Therefore, the rotation of the UAP axes appears to be an illusion, created by the visual system of the aircraft.

In more detail, the rotation of the object is an artifact originating from the optical and post-processing system used. The camera, which is mounted on a two-axis gimbal system, can only rotate along two axes (roll and pitch), when actually three axes of rotation would be needed to “faithfully” track an object. In order to keep the horizon at constant (zero, horizontal) angle, a post-processing step called “de-ro,” short for “de-rotation,” is applied to the video: the de-ro device (or algorithm) takes the entire image and rotates it to obtain an unchanging horizon.

However, at the same time, the orientation of the glare from some thermal radiation (possibly from a jet plane) remains fixed relative to the camera (sensor) frame [502, time = 632 s]: as the “glare orientation is [[fixed]] relative to the camera [[sensor frame]]—rotate the camera and the background will rotate but the glare angle will remain unchanged [[relative to the camera sensor frame]].” The reason for this is that glare is an artifact of the camera’s optics. Therefore, under camera rotations, the glare remains invariant with respect to the frame due to the co-varying nature of the optics/(sensor) frame system.

Moreover, if the de-rotation is applied through post-processing to obtain a non-varying horizon orientation, and as the relative angle of the horizon and the camera glare/(sensor) frame system changes (due to camera rotation), the glare’s angle relative to the horizon changes. In summary, the alleged rotation of the object in the “GIMBAL” video is an illusory artifact of the camera/post-processing system used to track the object.

Videos authenticated by the government

Suppose that West's aforementioned analysis is correct, and that other videos released by the Pentagon, such as a pyramid-shaped object seen flying through the sky in night vision footage [79], are just bokeh [504]; or that the Aguadilla infrared footage of UFOs, taken from a Bombardier DHC-8 airplane operated by the U.S. Customs & Border Protection, probably shows a pair of hot air wedding lanterns [290]. This leaves us with little of value ever released by government players.

It appears not totally unreasonable to speculate that some of these supposed "leaks" could be a deliberate attempt to divert public attention and create frustration by releasing unremarkable sightings, while allowing UFO enthusiasts and even mainstream media to believe that they hold significant value. By doing so, these leaks could serve as a smokescreen to obscure potentially more critical information, or even to discredit the legitimacy of the entire UFO phenomenon.

4.2 The woo according to Chris Bledsoe's alleged abduction on January 8, 2007, and by "The Lady" in 2012

According to his own unconfirmed accounts, after losing everything in the 2007 financial crisis and suffering from a debilitating chronic disease, Chris Bledsoe, a deeply religious family man and successful business owner from North Carolina, was abducted by a UFO in 2007 and five years later witnessed an apparition of "The Lady" [35].

On January 8, 2007, Chris Bledsoe, his son, and three of his work friends went fishing on the Cape Fear River in North Carolina. This fishing expedition turned out to be an incredible and terrifying experience that changed their lives forever. They allegedly saw a fleet of UFOs with orange balls of light descending from the sky over the river. Some feared the world was ending. Chris Bledsoe's son claimed to have seen "little creatures come walking out of the woods" [518, time=699 s]. As he claimed to have seen a football-shaped spike-covered craft, Chris had the most unique experience of the group. Many hours had passed by that he could not account for when he finally returned to the group.

After he returned home, he allegedly followed his barking dogs and suddenly saw, very close (no more than three or four feet away), a creature staring at him, with the proportions of a child, red eyes, and a very shiny glowing surface, as though some small person had been dipped in glass and it had molded to the body [518].

Bledsoe's experience was investigated by the Mutual UFO Network (MUFON). When their investigators arrived, they found no physical evidence and therefore had to rely on anecdotal witness testimonies, and in particular, Chris Bledsoe's. Chris agreed to undergo a regression hypnosis to access his blocked (or false?) memories. During hypnosis, he started talking about being taken onboard a craft by beings who called themselves his Guardians.

Bledsoe underwent two psychological tests with Dr. Deborah Gioia [184], an associate professor at the University of Maryland, Baltimore: a SKID (now SCID) diagnostic interview, as well as the Minnesota Multiphasic Personality Inventory (MMPI). These tests did not reveal a psychotic personality, but rather a “proneness to unusual ideas and beliefs which probably made him more susceptible but certainly did not create any kind of mental illness” [518]. During the interview, he mentioned a time of stress: in 2001, he had lost two million dollars because he had 27 houses set on the market for a year and a half. This caused a lot of depression, but he never told his family about this loss.

He also agreed to a polygraph “lie detector” examination, which was performed by Robert J. Drdak [143, time=2099s], who had worked as a Special Agent of the Federal Bureau of Investigation (FBI). Based on the test results, Drdak concluded that Bledsoe “failed the test [[. . .]] his deceptive responses were focused around things that he actually saw that night” [518].

For the next five years, shadow people, orbs, and unexplained noises were reportedly commonplace for the Bledsoes. Despite this, Chris held onto the hope that the Guardians were watching over his family, and after reflecting on his hypnotic regression, he came to view extraterrestrial beings as angelic in nature. In 2012, he had another extraordinary experience when he reported being abducted once again, this time by a beautiful “Lady” who identified herself as the Mother Goddess.

Chris Bledsoe has been prominent in the American UFO scene and has met many individuals, among them John B. Alexander, Tom DeLonge, Luis Elizondo, Diana Walsh Pasulka, and Jim Semivan.

4.3 Hazard aircrew encounter of 2014

This is a quotation from a US Navy hazard report caused by several unidentified aerial vehicles operating in some operation area (W-72) without coordinating with the controlling agency. The report was released after a Freedom of Information Act (FOIA) request [431]. This passage describes a situation where a hazard aircrew (HAC) operating in exclusive-use airspace noticed two radar trackfiles that were not communicating with the controlling agency or other aircraft. The HAC identified these trackfiles as Hazard Unidentified Aerial Devices (HUADs) and used on-board sensors to verify that they were small, infrared-significant objects, rather than false radar track files. While tracking one of the HUADs, the HAC also observed two additional, non-radar-significant objects flying at a high speed at a distance of approximately five nautical miles away.

F. Event: Operating in exclusive-use W-72 Air 2A and 2B, the Hazard aircrew (HAC) noticed two radar trackfiles in 2A that were not communicating with the controlling agency or other aircraft. Radar indicated Hazard Unidentified Aerial Device (HUAD) 1 at 0.0 Mach and 15 thousand feet. HUAD2 indicated 12 thousand feet traveling at 0.0 Mach. HAC used multiple on-board sensors

to verify that HUAD1 and HUAD2 were small IR significant objects and not false radar track files. While tracking HUAD2 on radar and forward looking infrared (FLIR,) two additional, non-radar-significant objects, HUAD3 and HUAD4, were seen flying through the FLIR field-of-view at a high speed at a distance between the HAC and HUAD2, approximately 5 NM away.

G. Hazard Date, Local: April 23, 2014

4.4 Sentient “tic tac” shaped object highlight on May 6, 2021

The following slide entitled “(U)BLUF” is from a FOIA request [338] of a presentation of the National Reconnaissance Office (NRO) entitled “Recent Sentient Highlights.”

At 0038:17Z 6 May 2021. Sentient [[likely that the program or project is related to Sentient or its applications, like “NIMBUS”, “ORION”, or “SAGE”]] image processing detected a possible airborne object \approx 78 km southeast of [[likely that the location is near a coast or an ocean like “San Diego,” “Japan,” “Mediterranean Sea,” or “Indian Ocean”]] The object was small (< 10 m), and did not match the visual signature of typical aircraft detections.

- The object did, however, vaguely resemble similar detections of airborne objects by US Navy aircraft and surface vessels in the [[likely that the location is near a coast or an ocean like “San Diego,” “Japan,” “Mediterranean Sea,” or “Indian Ocean”]] Operating Areas (“Unidentified Aerial Phenomena”).
- There is a rough similarity to the previously reported “tic tac” shape.
- The object was likely not a sensor artifact or focal plane anomaly (although more in-depth imagery analysis is warranted).

There were no correlating tracks present in [[likely that these sources or systems are related to satellite imagery or communications like “SBIRS,” “NRO,” or “NSA”]] reporting, nor was there any correlating ELINT/SIGINT in [[likely that these sources or systems are related to satellite imagery or communications like “SBIRS,” “NRO,” or “NSA”]] reporting, despite time-coincident [[likely that this vessel is related to a foreign adversary or competitor that has capabilities or interests in space like “Shiyan,” “Yuan Wang,” or “Kosmos”]] access/collection.

- Sentient detections did, however, detect the presence of the prob [[likely that this vessel is related to a foreign adversary or competitor that has capabilities or interests in space like “Shiyan,” “Yuan Wang,” or “Kosmos”]] in the same imagery \approx 25 km to the west.

- In recent reporting the [[possible that the area is related to the Nimitz Carrier Strike Group encounters in 2004, which occurred off the coast of Southern California, like “SOCAL,” “W-291,” or “SCA”]] has been associated with command-and-control (C2) activities, as well as more traditional telemetry and space functions – the simultaneous presence of this high-interest vessel is notable, although possibly merely coincidental.

Confidence is relatively low in this detection, but the potential linkage to similar phenomenon off of [[possible that the area is related to the Nimitz Carrier Strike Group encounters in 2004, which occurred off the coast of Southern California, like “SOCAL,” “W-291,” or “SCA”]] may warrant further investigation.

4.5 Spheres with a cube inside

An interview [320] of Robert Fleischer with Christopher Karl Mellon contains a very nice summary of one type of strangeness encountered by the US Navy. Asked about the shapes of UFOs/UAPs, Mellon, a private equity investor, and former Deputy Assistant Secretary of Defense for Intelligence in the Clinton and George W. Bush administrations, responded that the military had recently been observing mysterious objects in the sky. These objects were described as spheres that were six feet wide and had a cube inside, with the points of the cube touching the inside of the sphere. These objects did not float like balloons or lighter-than-air objects, but instead were maneuverable, flew at hundreds of miles per hour, and flew against the wind without any exhaust [187]. The source of energy and force behind these objects remains unknown, and they did not have any air intake. They had a very low radar cross-section, making them difficult to detect, and they were well concealed. Pilots reported seeing these objects on radar, but were unable to see them with the naked eye unless they flew close to them. These objects appeared in military training areas and seemed to linger indefinitely, which is unusual, as drones usually have a limited loiter time due to their running out of electric battery power.

Chapter 5

Some visual photos of objects that have not (yet?) been identified

Abstract Here we present a selection of visual photographs depicting alleged UFO sightings, all of which are currently consistent with the hypothesis that they depict a craft not associated with any known human origin.

5.1 Trent phtotos near near McMinnville, Oregon on May 11, 1950

On May 11, 1950, at approximately 7:30 pm, while returning to her farmhouse after feeding her caged rabbits, Evelyn Trent spotted a slow-moving, metallic disk-shaped object approaching her from the northeast. She alerted her husband, Paul, who was inside the house, and he too observed the object. After watching it for a brief period, he returned to their home to retrieve a camera and managed to capture two photographs of the object before it rapidly departed to the west. Paul Trent's father also reported briefly glimpsing the object before it flew away [83, Case 46].



Fig. 5.1 First Trent photo of a UFO hovering near McMinnville [417, 449].

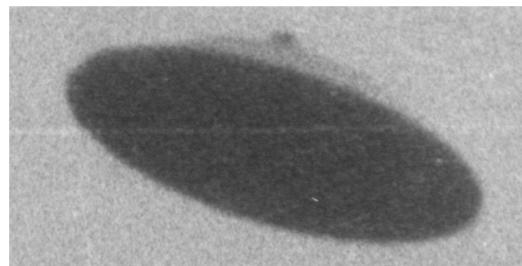


Fig. 5.2 Close-up of the UFO depicted in Fig. 5.1.



Fig. 5.3 Second Trent photo of a UFO hovering near McMinnville [417,449].



Fig. 5.4 Close-up of the UFO depicted in Fig. 5.3.

5.2 Saucer-shaped object moving above the sea towards Trindade Island on January 16, 1958

On January 16, 1958, at approximately 11:00 am, the crew of the Brazilian Navy training ship “Almirante Saldanha” witnessed a strange, silver, saucer-shaped object moving above the sea towards Trindade Island. The shiny object didn’t make any sound. It sometimes moved quickly, then slowly, up and slightly down. When it accelerated, it would leave a white phosphorescent trail that would disappear shortly. The crew, including retired Força Aérea Brasileira captain-aviator José Viegas and photographer Almiro Baraúna, an expert in trick photography, saw the object and took pictures. The electronic equipment of the ship stopped working during the sighting, and after the ship left the island, the equipment malfunctioned three more times. The Navy wanted to keep the pictures secret, but a reporter took copies and showed them to then-president Juscelino Kubitscheck, who released them to the public [203].

However, In 2009, two Brazilian skeptics interviewed a crew member of the Almirante Saldanha, who said that only 15 people saw the UFO and not the reported 48. The skeptics suggest the sighting may have been a case of mass hysteria. In 2010, a relative of photographer Almiro Baraúna revealed that he had confessed to faking the UFO photos using two plates stacked on top of each other and photographed in front of a refrigerator door with the right lighting.



Fig. 5.5 Photo of a UFO hovering above the sea towards Trindade Island, Brazil [203].



Fig. 5.6 Close-up of the UFO depicted in Fig. 5.5.

5.3 Instituto Geográfico Nacional de Costa Rica survey photo on September 4, 1971

On September 4, 1971, an automated camera aboard a plane captured an image of a UFO near the Arenal Volcano in Costa Rica. The camera was being used by the Instituto Geográfico Nacional de Costa Rica to study a hydroelectric project in the area. The occupants of the plane were not aware of the image at the time, and it wasn't until later when they were examining the negatives that they noticed the object hovering over Lago Cote. The object has never been debunked and is estimated to be between 120–220 feet in diameter [2].



Fig. 5.7 Cropped photo with the UFO inside, hovering over Lago Cote [2].

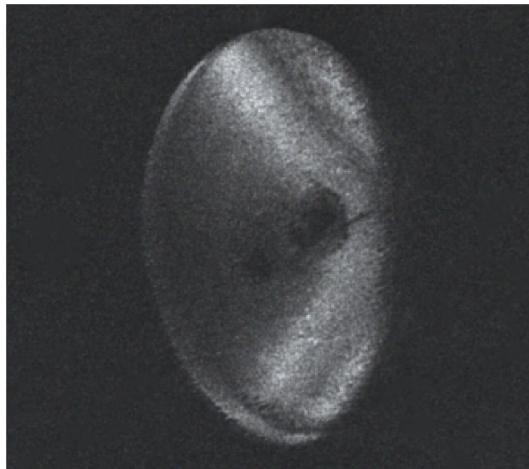


Fig. 5.8 Close-up of the UFO depicted in Fig. 5.7.

5.4 Calvine UFO photos on August 4, 1990

On the evening of Saturday, August 4, 1990, at approximately 9 pm, two unknown men, one allegedly called Kevin Russell [4], were located on a hillside near Calvine, a small hamlet situated approximately 35 miles north-west of Perth in Scotland, captured six color photographs of a sizable diamond-shaped craft during the failing summer daylight. The object remained stationary and silent near their location for around ten minutes before suddenly shooting off vertically at a relatively high speed [3,4,71].



Fig. 5.9 Cropped photo of a diamond-shaped UFO hovering over the Scottish Highlands near Calvine [3, 71]. To this date, the author of the photo, an alleged Kevin Russell [4], has not been identified.



Fig. 5.10 Close-up of the UFO depicted in Fig. 5.9.

5.5 Cigar-shaped object south of Spain on January 23, 2010

On the late afternoon of January 23, 2010, during a flight from Amsterdam to Malaga on a Boeing 737, an object caught the attention of the pilot, who asked the then copilot Christiaan van Heijst [137, 475] if he could see the object as well. It appeared as a rounded rectangular or cigar shape, similar to the rear side of a contrail, far ahead of them. However, they were flying rather high for a commercial aircraft, at 41 000 ft, and there was minimal to no traffic around. They were on a direct route from Pamplona (PPN) in the Madrid Flight Information Region (LECM) to Malaga (AGP), and they observed the object without changing direction. Estimating its distance was difficult, but they first guessed it could be 100 (nautical) miles ahead of them, or possibly much further. Considering the distance, the object was much higher than any commercial traffic, arousing their curiosity.

While flying over the north of Spain, they inquired with Madrid Air Traffic Control if there was any known traffic ahead and above their aircraft, but they reported no traffic and were puzzled by this inquiry. They informed Madrid Air Traffic Control of the object, and were directed to contact military air traffic control as soon as possible. The military were prompt, interested, and took serious note of what Christiaan van Heijst observed. They confirmed no other traffic in the area, including military activity, commercial traffic, or weather balloons. Van Heijst and the pilot observed the stationary object for at least an hour until they descended into the clouds over Malaga, specifically at position CRISA, far to the south of the Iberian Peninsula. Van Heijst mentioned that the cigar shape of the object was more distinguishable than in the photo [475], and that it remained motionless above the horizon.

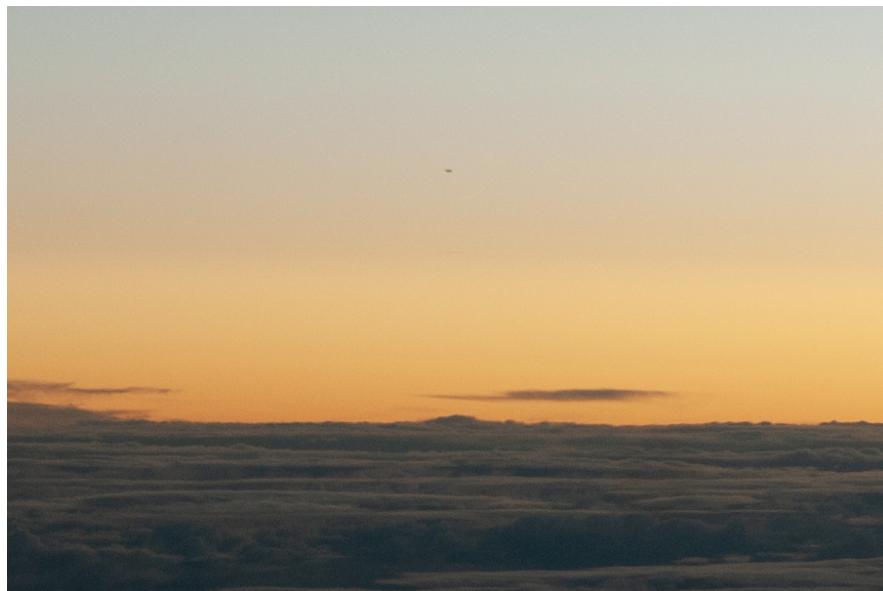


Fig. 5.11 Cigar-shaped object to the south of Spanish air space, recorded from a Boeing 737 on January 23, 2010. Courtesy of Christiaan van Heijst [475].

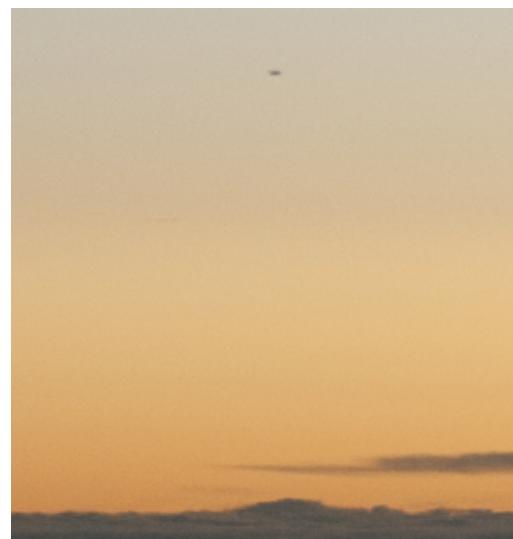


Fig. 5.12 Close-up of the object depicted in Fig. 5.11.

5.6 “Metallic orb” at an undisclosed “Middle East” location on December 7, 2022

Still photo of a Video [112] of a “metallic orb” recorded by a General Atomics MQ-9 Reaper drone at an undisclosed “Middle East” location on December 7, 2022. The video was presented by Sean Kirkpatrick [264] at the hearing on the mission, activities, oversight and budget of the All-Domain Anomaly Resolution Office (AARO) of the Subcommittee on Emerging Threats and Capabilities of the United States Congress Committee on Armed Services.



Fig. 5.13 “Metallic orb” recorded by a General Atomics MQ-9 Reaper drone at an undisclosed “Middle East” location on December 7, 2022 [115].

Fig. 5.14 Close-up of the object depicted in Fig. 5.13.



Part II

UFO compliance-and-management:

Handling strange matters

*“I work always with that concept in mind that—
just when I think I know what’s going on—
I might not know.”*

Annie Jacobsen in the Commonwealth Club of California,
on Inside the CIA’s Secret History [249, time = 39:17]

Chapter 6

UFO perception in the USA and elsewhere

Abstract It is conjectured that in 1948, after Project Sign in the USA, a secret program was initiated that focused on advanced topics such as anti-gravity and spaceship development. Meanwhile, Project Grudge and later Project Blue Book were publicly promoted as attempts to downplay the significance of these findings and mislead the public. The individuals involved, such as Ruppelt, Condon, and Hynek, are portrayed as unknowingly participating in a government-led drama to deny both the existence of these advanced technologies and the extraterrestrial origin of a tiny fraction of UFO sightings.

6.1 United States of America

My basic assumption, although unproven and speculative, is that the US government's executive branch, intelligence, and military entities follow a two-tier strategy concerning UFOs:

1. Denial to the public while occasionally conducting hearings, committees, and reports that appear to investigate the matter. This approach satisfies Congress, the press, and the general public. Project Blue Book, the Robertson Panel, the Condon Report, AAWSAP/AATIP, and the recent All-domain Anomaly Resolution Office (AARO) are examples of such "outside cover-up investigations." This strategy is comparable to adults playing Christmas for their children: the children blissfully remain unaware [300].
2. It cannot be outrightly excluded that there may be an ongoing exploitation and sequestration of crashed UFOs, though this remains to be corroborated by factual evidence. It is possible that a select few insiders, with ties to influential think tanks and military-industrial complexes, may have access to crashed UFOs and their occupants, if indeed there any. Battelle Memorial Institute, a private non-profit company that specializes in technology development, is one example of a think tank that some individuals suspect may have ties to this area. Another possible connection could be Lockheed Martin Corporation. Furthermore, there

are those who speculate that private contractors may be more integral to the government's activities in this field due to governmental transparency and oversight laws such as the Freedom of Information Act, as well as occasional presidential or congressional reviews.

Imagine this situation as an iceberg: it may appear small and insignificant on the surface, but it is deep and vast underneath. For laypersons, the scarcity of official information about UFOs can be frustrating. However, this lack of information is often accompanied by a large volume of claims, reports, and anecdotal evidence, making it difficult to determine what is credible. The sheer volume of UFO sightings of varying quality can make it challenging to wade through the data and separate credible reports from false or misidentified ones. "Clutter" and noise may inhibit the meaning and message due to their sheer volume.

The interface between the "surface" and the "deep state" parts seems almost impenetrable. There may have been individuals, driven by the knowledge they acquired during their function as "official and open" investigators, attempting to access what is going on inside. In particular, Josef Allen Hynek [234–238] "changed camps" and became increasingly weary of the debunking dramaturgy he had to follow. In more recent times, members of AATIP and Christopher Karl Mellon [319,321] have come forward, promoting disclosure of the deeper layers of UFO activities.

For the normal citizen who is considered not to be in the need to know, the signal-to-noise ratio in UFO sighting reports can be low, making it difficult to separate credible reports from false or misidentified ones—to separate the wheat from the chaff. This can make investigating UFO sightings frustrating, time-consuming, and resource-intensive.

As a result, many interested laypeople may turn to government agencies such as the military—because of the sensors deployed—or Congress—because of constitutional principles and oversight—in hopes of obtaining more information. Additionally, some people may use Freedom of Information Act (FOIA) requests to try to access information about UFOs.

In July 1952, following the Washington flyovers, Major General John Samford, the Air Force's director of intelligence, presented a mantra during what was arguably the largest press conference since the end of the Second World War [289]. This mantra would be repeatedly handed out as official canon, as documented in the archives [462]:

"Our basic difficulty in dealing with these is that there is no measurement of [[the flying saucers]] that makes it possible for us to put them in any pattern that would be profitable for a deliberate custom sort of analysis to take the next step."

"We have as a date come to only one firm conclusion with respect to this remaining percentage, and that is that it does not contain any pattern or purpose or of consistency that we can relate [[. . .]] to any conceivable threat to the United States."

“We can say that the recent sightings are in no way connected with any secret development by any department of the United States.”

The multi-authored book “UFOs and Government: A Historical Inquiry” [436] by Michael Swords, Robert Powell, Clas Svahn, Vicente-Juan Ballester Olmos, Bill Chalker, Barry Greenwood, Richard Thieme, Jan Aldrich, and Steve Purcell gives a detailed analysis of the people involved. The following is a sketch of what might have happened.

6.1.1 Project Sign, late 1947–1948

Project Saucer, later renamed Project Sign, was a covert US Air Force investigation into unidentified flying objects (UFOs) established by Air Force General Nathan Farragut Twining, head of the Air Technical Service Command, at the end of 1947 or early 1948. The initial name of the project was Project Saucer, and its goal was to collect, evaluate, and distribute within the government all information relating to UFO sightings on the premise that they might pose a national security concern. On April 27, 1949, a paper prepared by the Intelligence Division of the Air Material Command at Wright-Patterson Field, Ohio, was publicly released by the US Air Force. The paper stated that, while some UFOs appeared to represent actual aircraft, there were not enough data to determine their origin. Although almost all cases were explained by ordinary causes, the report recommended continuing the investigation of all sightings.

Retired Air Force Captain Edward J. Ruppelt, who later directed Project Blue Book, first mentioned Project Sign in his 1956 book [393]. Ruppelt [393, Chapter 3] claimed that Project Sign had produced an “Estimate of the Situation,” a document that was never published. According to Ruppelt, the document endorsed an interplanetary explanation for UFOs:

“The people at ATIC [[Air Technical Intelligence Center at Wright-Patterson Air Force Base, Ohio]] decided that the time had arrived to make an Estimate of the Situation. The situation was the UFO’s; the estimate was that they were interplanetary!

It was a rather thick document with a black cover and it was printed on legal sized paper. Stamped across the front were the words TOP SECRET.

It contained the Air Force’s analysis of many of the incidents I have told you about plus many similar ones. All of them had come from scientists, pilots, and other equally credible observers, and each one was an unknown.

The document pointed out that the reports hadn’t actually started with the Arnold Incident [[see Section 2.3]]. Belated reports from a weather observer in Richmond, Virginia, who observed a “silver disk” through his theodolite telescope; an F47 pilot and three pilots in his formation who saw a “silver flying

“wing,” and the English “ghost airplanes” that had been picked up on radar early in 1947 proved this point. Although reports on them were not received until after the Arnold sighting, these incidents all had taken place earlier.”

There were also several dramatic reports of pilot dogfights with UFOs that later turned out to be balloons. Therefore, the situation might have been ambivalent: on the one hand, once commissioned to investigate UFO cases, ATIC was vigorously investigating such sightings and, as one might have expected from such organizations, produced reports that favoured further studies. On the other hand, many of these alleged flying saucers turned out to have prosaic origins. Therefore, despite the aforementioned report, General Hoyt Sanford Vandenberg [457], the Chief of Staff of the Air Force, “wouldn’t buy interplanetary vehicles. The report lacked proof. A group from ATIC went to the Pentagon to bolster their position but had no luck, the Chief of Staff just couldn’t be convinced” [393, Chapter 3]. Project Sign was shut down on the grounds of an alleged lack of evidence.

In summary, Project Sign was established to investigate UFO sightings and determine whether they posed a national security threat. However, at least the official verdict was that the project’s findings were not convincing enough for the Air Force to continue the investigation. Indeed, most sightings could be attributed to misidentifications of natural phenomena or conventional aircraft such as balloons. As a result, conclusions were drawn that UFOs did not pose a threat to national security, and further investigation was unnecessary.

This decision of the US Air Force caused heated public debates. UFOs continued to be seen, even on radar. We may suppose that the press played a role in pushing the narrative and continuing investigations into these sightings. Flying saucers captured much attention, which increased paper circulation volume and revenues. Clearly, the US press would not let this good opportunity go to waste, even after the Air Force claimed that the underlying phenomena were mundane.

Authors who had past experience with fantastic stories were lured into the general flying saucer hype. Let me mention two examples: in 1947 and 1948, the British journalist Harold T. Wilkins was still publishing about “Mysteries of Ancient South America” [514] and “Mysteries and Monsters of the Deep” [515] (see also his 1929 Popular Mechanics piece “Secrets of Ancient Torture Chambers” [513]), but he then shifted his attention, switching to UFO mysteries and writing books entitled “Flying Saucers on the Attack” [516] or “Flying Saucers Uncensored” [517].

Donald Edward Keyhoe managed a coast-to-coast tour with Charles Lindbergh in 1927 and wrote his first book, “Flying With Lindbergh,” in 1928 [259]. During World War II, he served in the Naval Aviation Training Division and attained the rank of Major. Before this, he had written fantasy stories for pulp magazines and glossies in the 1920s and 1930s, such as “The Grim Passenger” [258], which involved supernatural forces, magic, and extrasensory perception. Allegedly, Keyhoe had friends and good contacts in the military and the Pentagon. Later in life, he became passionate about the flying saucer mystery. He suggested that “the saucers are not a joke” [260] and “The Flying Saucers Are Real” [260,261] and need to be investigated

further. Afterwards, Keyhoe claimed that there was a conspiratorial cover-up going on [263].

At that point ATIC, the Air Technical Intelligence Center at Wright-Patterson Air Force Base, Ohio, seemed to give in to the demands of Vandenberg, the Chief of Staff of the Air Force. In 1971, Australian physicist Oliver Harry Turner, who was working as a senior nuclear scientist for the Australian government at the time, compiled an intelligence analysis of the US's initial attempts to address the flying saucer or UFO phenomenon [451]:

“In June of 1947 the Air Technical Intelligence Centre (ATIC) near Dayton, Ohio, assumed a responsibility to investigate the initial reports of ‘flying saucers’. Within a month it was considered that the phenomena were real and probably of Soviet origin. By the end of the year, when ATIC was officially authorised to investigate under the project code name of SIGN and with a high priority, most of the investigators were focussing on an interplanetary rather than a Soviet origin. These opinions were crystallized into a [[untraceable or lost]] written estimate [[of the situation]] that was sent to the Pentagon in September 1948. When the interplanetary conclusions were rejected on the grounds of insufficient hard evidence, a reaction set in at ATIC against trying to unravel the UFO problem.”

Despite indications of an ongoing saucer craze fueled by the press and some public figures, UFO sightings from various military and public channels continued to stream in.

6.1.2 Project Grudge, 1948-1952

Project Sign officially ended in late 1948. It was succeeded by a new project known as Project Grudge, which was met with criticism, as it was believed to have a mandate to debunk UFO sightings rather than genuinely investigate them.

The head of Project Grudge, Edward Ruppelt, later referred to the period during which Project Grudge was active as the “dark ages” [393, Chapter 5] of early USAF UFO investigation:

“New people took over Project Grudge. ATIC’s top intelligence specialists who had been so eager to work on Project Sign were no longer working on Project Grudge. Some of them had drastically and hurriedly changed their minds about UFOs when they thought that the Pentagon was no longer sympathetic to the UFO cause. They were now directing their talents toward more socially acceptable projects. Other charter members of Project Sign had been “purged.” These were the people who had refused to change their original opinions about UFOs.

With the new name and the new personnel came the new objective: get rid of the UFOs. It was never specified this way in writing, but it didn't take much effort to see that this was the goal of Project Grudge. This unwritten objective was reflected in every memo, report, and directive.

Project Grudge concluded that all UFO sightings could be explained as natural phenomena or misinterpretations of known objects [247, Chapter 4]. However, the report also admitted that 23 percent of the reports could not be explained by any known means. Despite this finding, the project concluded that UFOs did not pose a threat to national security and that there was no need for further investigation. As a result, Project Grudge was discontinued. It was not until the creation of the Project Blue Book in 1952 that the government conducted an official investigation into UFOs.

6.1.3 Insert: Was there a breakaway agency parallel to Project Grudge attempting to gather design data on interplanetary spaceships?

Before continuing with this public history, I invite the reader to contemplate the possibility that Turner's intelligence analysis of 1971 had come to nuanced conclusions. It may even have hinted that, at that point in time, the USA had initiated a "breakaway utilization" of UFO material while publicly holding on to Project Grudge [451]:

"2. In February 1949, ATIC personnel of Project SIGN were replaced with new personnel to form Project GRUDGE. A definite attempt was made during 1949 to use Project GRUDGE to destroy any acceptance of UFO's. The motives for this are not clear: possibly Air Force embarrassment at being incapable of controlling the situation and/or a fear of national panic prompted USAF to try and remove the problem by denying its existence. Another possible motive may have been to provide a breathing space for another "investigative agency" to reach some conclusion; the [[this other investigative]] agency had been assisting ATIC through 1948 and, contrary to official USAF policy, was maintaining a high level of interest during 1949. This governmental agency was not the FBI, and had rocket, nuclear and intelligence experts; their purpose was to study UFO reports in an effort to gather design data on interplanetary spaceships."

The Australian report speculates that "in the light of later developments, this agency was almost certainly the CIA."

I prefer to leave the question of who exactly was the "investigative agency" that handled the "effort to gather design data on interplanetary spaceships" open until new evidence comes forward, if ever. According to Richard Dolan and Bryce Zabel,

there is a group referred to as “The Breakaway Group” [138]. This group includes what Donald Keyhoe identified as “super-secret groups” or the “Silence Group” in the 1950s [263, Foreword]. If certain leaked documents from the 1980s are credible, which is highly controversial, this group was also called “Majestic-12” or “MJ-12.”

Turner’s estimation of the situation is corroborated by another source, coming from Canada, the Smith memo [422], summarized in Section 9.5, which points to two US scientists: Robert Sarbacher and Eric Walker. In a letter dated November 29, 1983, Sarbacher confirmed the following names [405]: John von Neumann, Vannever Bush, and maybe Robert Oppenheimer. Sarbacher mentions that his “association with the Research and Development Board under Doctor Compton during the Eisenhower administration was rather limited,” so that, although he had been invited to participate in several discussions associated with the reported recoveries (UFO crash retrievals), he could not personally attend the meetings. Sarbacher was sure that they would have asked Wernher von Braun.

One could speculate that, as time passed, the gap between the official, openly accessible US flying saucer efforts such as Project Blue Book or the Condon Report on the one hand, and these breakaway hidden projects on the other hand, widened, with communication exchange becoming increasingly absent.

If one believes Corso’s narratives, as summarized in Section 9.6, material from crash retrievals was presented to third parties such as Batelle or Lockheed Martin and locked away, as mentioned in the contemporary security state lingo in Appendix A.3.2.5, as carve-out Unacknowledged Special Access Programs (USAPs), or Controlled Access Programs (CAPs) or DOD SAPs.

6.1.4 Project Blue Book, 1952–1969—a data volume trap—drowning in data

It is important to note that, based on my hypothesis, investigations of UFOs following Project Grudge were primarily for the purpose of diverting attention away from related strange phenomena, and comforting and educating the public. They were not conducted with the intention of fully understanding the UFO phenomenon, but rather to give the appearance that the military and intelligence community were taking the phenomenon seriously.

According to Ruppelt, by the end of 1951, several high-ranking, very influential USAF generals were so dissatisfied with the state of Air Force UFO investigations that they dismantled Project Grudge and replaced it with Project Blue Book in March 1952. One of these men was General Charles P. Cabell. Another pro-UFO change came when General William Garland [371, 456] joined Cabell’s staff: Garland was an “experiencer” himself, as he had witnessed a UFO, and thought the UFO question deserved serious scrutiny.

The Blue Book team was authorized to interview any and all military personnel who witnessed UFOs and was not required to follow the chain of command. Each

US Air Force Base had a Blue Book officer to collect UFO reports and forward them to Ruppelt.

The new name, Project Blue Book, was selected to refer to the blue booklets used for testing at some colleges and universities. Ruppelt was the first head of the project, an experienced airman with an aeronautics degree. He officially coined the term “Unidentified Flying Object,” to replace the term “flying saucer” the military had previously used.

Ruppelt streamlined the manner in which UFOs were reported to (and by) military officials, partly in hopes of alleviating the stigma and ridicule associated with UFO witnesses. Ruppelt also ordered the development of a standard questionnaire for UFO witnesses—Air Force Letter 200-5 (AFL 200-5, 29-APR-1952) [125], Air Force Regulation 200-2 (or AFR 200-2) version August 12, 1954 [452] (superseding versions August 26, 1953, including Change 200-2A, November 2, 1953), a technical information sheet [6, Appendix II] and Air Force Form 112—hoping to uncover data that could be subject to statistical analysis.

For this task, he commissioned the Battelle Memorial Institute to create the questionnaire and computerize the data. Using case reports and computerized data, Battelle then conducted a massive scientific and statistical study of all Air Force UFO cases, completed in 1954 and known as “Project Blue Book Special Report No. 14.” The Summary sections basically stated that concerns or efforts with regard to UFOs were a waste of resources [7, p. ix]:

“All available data were included in this study which was prepared by a panel of scientists both in and out of the Air Force. On the basis of this study it is believed that all the unidentified aerial objects could have been explained if more complete observational data had been available. Insofar as the reported aerial objects which still remain unexplained are concerned, there exists little information other than the impressions and interpretations of their observers. As these impressions and interpretations have been replaced by the use of improved methods of investigation and reporting, and by scientific analysis, the number of unexplained cases has decreased rapidly towards the vanishing point.

Therefore, on the basis of this evaluation of the information, it is considered to be highly improbable that reports of unidentified aerial objects examined in this study represent observations of technological developments outside of the range of present-day scientific knowledge. It is emphasized that there has been a complete lack of any valid evidence of physical matter in any case of a reported unidentified aerial object.”

The Data Section reveals some very personal frustration with the Blue Book data [7, p. 93]:

“The reaction, mentioned above, that after reading a few reports, the reader is convinced that ‘flying saucers’ are real and are some form of sinister con-

trivrance, is very misleading. As more and more of the reports are read, the feeling that ‘saucers’ are real fades, and is replaced by a feeling of skepticism regarding their existence. The reader eventually reaches a point of saturation, after which the reports contain no new information at all and are no longer of any interest. This feeling of surfeit was universal among the personnel who worked on this project, and continually necessitated a conscious effort on their part to remain objective.”

One can sense the genuine frustration of these analysts and programmers. However, they may not have recognized that they were using an inappropriate methodology for this particular kind of problem: in a regime where only a tiny fraction of the data indicates a new phenomenon, these researchers were overwhelmed by the amount of data they had generated and reported on. To quote Einstein in a different context [149, 226, 227, 485]: the main point “was buried by the erudition.” In my opinion, the lesson learned from the Batelle investigation initiated and paid for by the US Air Force was that it makes little sense to cope with this phenomenon through “big data.” There is too much clutter to reveal the signal; even advanced AI techniques may fail to separate the wheat from the chaff.

Ruppelt tried to avoid uncorroborated speculation and a resulting escalation of controversies related to the extraterrestrial hypothesis in his own group: he allegedly fired three personnel very early in the project because they were either “too pro” or “too con” on the extraterrestrial hypothesis.

The astronomer J. Allen Hynek was the scientific consultant for the project. In their attempt to find prosaic causes for, or even “explain away,” all sorts of UFO sightings, oftentimes justified but sometimes far-fetched, with occasional implausible causes, Hynek and Blue Book became increasingly at odds with the public. On March 25, 1966, this culminated in a press conference by Hynek, where he rather firmly stated that a rash of UFO sightings across Michigan in the mid-1960s, in particular, the incidents at the Mannor farm and Hillsdale College, were related to swamp gas as a result of rotting vegetation in lowland areas. The vegetation created gases that were trapped in winter. Then during spring, the gases were released. This so-called “swamp gas” phenomenon could produce light and even sound. “A dismal swamp is a most unlikely place for a visit from outer space,” Hynek said at the press conference. Moreover, Hynek assured the public that some strange photos taken at related events were “trails made as a result of a camera time exposure of the rising crescent moon [[. . .]] and the planet Venus”—so, effectively, nothing to see here [524].

However, with UFO sightings pouring in in ever-increasing numbers, as documented by the Blue Book protocols [36], and probably about five percent of these cases remaining hard to explain away by prosaic causes, Hynek started to get doubts—his inclinations toward the extraterrestrial or even stranger hypotheses can be deduced from the timeline of his publications [234–238].

Moreover, on the one hand, he was pressured by the public at large to come up with more plausible, if not spectacular, explanations. Politicians such as the later President of the United States and then Michigan Congressman, Gerald Rudolph Ford

Jr., called Hynek “flippant” and proposed that either the Science and Astronautics Committee or the Armed Services Committee of the House schedule UFO hearings and “invite testimony from both the executive branch of the government and some of the persons who claim to have seen UFO’s” [295].

On the other hand, the US Air Force and the CIA had very different problems, officially claiming that “continued emphasis on UFO reporting might threaten ‘the orderly functioning’ of the government by clogging the channels of communication with irrelevant reports and by inducing ‘hysterical mass behavior’ harmful to constituted authority” [195]. This was where the Robertson Panel came in.

6.1.5 Robertson Panel, 1952–53

Again, it is important to note that, based on my speculations, investigations of UFOs following Project Grudge were primarily for the purpose of educating—or, in more sinister terms, distracting—the public. They were not conducted with the intention of fully understanding the UFO phenomenon, but rather to give the appearance that the military and intelligence community were “dealing with it appropriately” and, if necessary, taking the phenomenon seriously.

The CIA had noted that the British were in a similar situation: in 1951, upon mounting public sightings and interest, the secret British Flying Saucer Working Party (FSWP) mentioned in Section 6.2.1 had created a report amounting to “nothing to see here” [164]. Marshall H. Chadwell, the CIA’s chief scientist and Assistant Director of CIA’s Office of Scientific Intelligence (OSI), was a guest of FSWP. Chadwell was responsible for the US government’s strategy of dismissing UFO reports as a means of eliminating the perceived danger that belief in UFOs presented during the Cold War. The CIA aimed to decrease the subject’s media attention through an “educational” program [68].

In December 1952, the Intelligence Advisory Committee discussed UFOs and decided to enlist the help of selected scientists. In January 1953, Chadwell and Howard P. Robertson, a physicist from the California Institute of Technology, assembled a panel of distinguished nonmilitary scientists to examine the issue of UFOs. The panel was led by Robertson and included other notable scientists, such as Samuel A. Goudsmit, a nuclear physicist from the Brookhaven National Laboratories, Luis Alvarez, a high-energy physicist, Thornton Page, the deputy director of the Johns Hopkins Operations Research Office and an expert in radar and electronics, and Lloyd Berkner, a director of the Brookhaven National Laboratories and a specialist in geophysics.

Neither the panel chair, Robertson, nor Alvarez were new to the study of UFOs, as they had been involved with the study of foo fighters and UFOs in World War II, as mentioned in the introduction of Chester’s book [56]. This is similar to David T. Griggs, a professor of geophysics at the University of California at Los Angeles, who was also mentioned in the Durant Report [145] of the Robertson Panel.

Thornton Page, a panel member, later revealed that before the main panel meetings, the panel members had an informal “mission” meeting with no outsiders present [354]:

“Robertson told us in the first private (no outsiders) session that our job was to reduce public concern, and show that UFO reports could be explained by conventional reasoning.”

The panel’s official task [195] was a careful review of the available evidence on UFOs and evaluation of the potential risks to US national security. The panel met from January 14 to 18, 1953, and examined Air Force data on UFO case histories. After studying the phenomena for 12 hours, the panel determined that reasonable explanations could be provided for most, if not all, sightings. The panel reached a unanimous conclusion that there was no evidence of a direct threat to national security from the UFO sightings, nor was there any evidence that the objects sighted were extraterrestrial in origin. However, they were concerned that continued emphasis on UFO reporting could disrupt the orderly functioning of the government by clogging communication channels with irrelevant reports and inducing “hysterical mass behavior” that could harm the authorities. The panel also worried that potential enemies might exploit the UFO phenomena and use them to disrupt US air defenses.

To address these issues, the panel recommended that the National Security Council (NSC) work to debunk UFO reports and implement a public education campaign to reassure the public that there was no evidence to support the existence of UFOs. They suggested utilizing mass media, advertising, business clubs, schools, and even the Disney corporation to disseminate this message. Given the political climate at the time, the panel also recommended monitoring private UFO groups such as the Civilian Flying Saucer Investigators in Los Angeles and the Aerial Phenomena Research Organization in Wisconsin for any so-called “subversive” activities.

The conclusions of the Robertson panel were similar to those of earlier Air Force project reports on UFOs, as well as the CIA’s own Office of Scientific Intelligence (OSI) Study Group, which found that UFO reports posed no direct threat to national security and that there was no evidence of extraterrestrial visits. Following the panel’s findings, CIA officials stated that no further consideration of the subject appeared necessary, but they continued to monitor sightings for potential national security concerns [145].

In the letter quoted earlier, Page also recalls [354]:

“As indicated in ‘UFOs, A Scientific Debate’ [400], Sagan and I later became convinced that E.U. Condon’s scientific ‘Study of Unidentified Flying Objects’ [84] (Bantam Books 1969 = ‘The Condon report’) was neither scientific nor rational, concluding, as it did, that 15 celebrated sightings were not worthy of further investigation.”

Interestingly, many of the prominent scientists on the Robertson Panel, who were tasked with investigating UFOs in 1953, had previously been involved in the examination of unconventional objects such as foo fighters during World War II [56, 382]. This included Robertson, the chairman of the panel, as well as Luis W. Alvarez from the University of California.

Notably, as mentioned earlier, the Durant Robertson Report also identified David T. Griggs, a geophysics professor at the University of California at Los Angeles, as the individual with the most knowledge about foo fighters. These scientists had been observing and analyzing this phenomenon for a considerable amount of time before the panel was formed. John Archibald Wheeler was also contacted by Durant “as a consultant in the CIA attack on the ‘flying saucers’ problem” but politely refused, stating “that he might not be able to actively assist even after March 1953” but “would be pleased at any time to discuss this matter briefly” [146].

The Durant Report of the Robertson Panel contains the following passage [145]:

The Panel concluded unanimously that there was no evidence of a direct threat to national security in the objects sighted. Instances of “Foo Fighters” were cited. These were unexplained phenomena sighted by aircraft pilots during World War II in both European and Far East theaters of operation wherein “balls of light” would fly near or with the aircraft and maneuver rapidly. They were believed to be electrostatic (similar to St. Elmo’s fire) or electromagnetic phenomena or possibly light reflections from ice crystals in the air, but their exact cause or nature was never defined. Both Robertson and Alvarez had been concerned in the investigation of these phenomena, but David T. Griggs (Professor of Geophysics at the University of California at Los Angeles) is believed to have been the most knowledgeable person on this subject. If the term “flying saucers” had been popular in 1943–1945, these objects would have been so labeled. It was interesting that in at least two cases reviewed that the object sighted was categorized by Robertson and Alvarez as probably “Foo Fighters,” to date unexplained but not dangerous; they were not happy thus to dismiss the sightings by calling them names. It was their feeling that these phenomena are not beyond the domain of present knowledge of physical sciences, however.

Therefore, what were—or are—these strange “foo fighters”?

Turner’s analysis of 1971 characterized the situation as follows [451]:

“3. Project GRUDGE failed to eliminate the UFO problem. UFO reports in 1949 actually exceeded the number in 1948, and several people [[Donald Edward Keyhoe and James Edward McDonald?]] who had gained access to earlier official reports were able to contradict the USAF. Journalists generally felt that GRUDGE reporting represented a cover to a more serious knowledge. Eventually, USAF intelligence decided that a fresh approach to the problem was necessary. Between September 1951 and the establishment of Project

BLUE BOOK in March 1952, UFO investigation regained adequate financial and administrative support to once again analyse the collected data. Project BLUE BOOK was able to process the data from 3200 reports into a form suitable for their consultants to be able to use IBM card-sorting machines.”

“4. The summer of 1952 saw a more than twenty-fold rise in the normal rate of reporting and included the two extensive July sightings involving Washington D.C. This marked increase in sightings had diverse effects. A component of USAF intelligence considered that UFO’s were interplanetary spaceships which were about to make closer contact. To prepare the public for this possibility, 41 previously classified reports were released for publication between August 1952 and February 1953. These reports contradicted the earlier official USAF policy of dismissing the reports as misidentifications, etc. On the other hand, the CIA regarded the summer UFO activity as a threat to national security mainly because the resulting crowded communications and defence forces involvement lessened the level of national alertness against possible enemy attack.”

“5. A scientific panel chaired by H.P. Robertson was convened by the Office of Scientific Intelligence of the CIA during mid-January 1953 for the purpose of recommending future action on the UFO problem. Briefings were made both by the CIA and USAF. ATIC personnel showed the then classified two movie films of UFO’s and the early results of statistical analysis of 3200 reports. Because of the vital issues involved, the panel felt restricted to recommending that the investigation be continued, but with increased personnel and equipment. The USAF responded promptly with an instruction to comply with these recommendations.”

“6. The CIA, however, in a report dated 16 February 1953 showed a preference to publicly abandon the investigation whilst intensifying the collection of data. By September 1953 the CIA position had been largely achieved with Project BLUE BOOK reduced from a staff of ten qualified personnel operating at a top secret level to a virtually inactive project involving one airman. The investigating component had been transferred to the 4602nd Air Intelligence Service Squadron [(AISS)] which was trained in rapid intelligence procurement and reported to Air Defence Command and USAF Intelligence Washington rather than BLUE BOOK. Direct access between the 4602nd AISS and all USAF units was authorized by AFR 200-2 [[452]] whereas previously this privilege had been given to BLUE BOOK. Although only the airman (first-class) remained in September 1943, BLUE BOOK was later built up to one officer, one sergeant, one secretary, and a part-time consultant Dr J. Allen Hynek, staying at about this level until it was closed down in December 1969. During this time BLUE BOOK served mainly as a means of supplying unclassified summaries of UFO identifications to the public, and did not form a vital link in collection or serious analysis.”

“7. Control of public awareness of the UFO situation was tightened by the issuing of JANAP 146 in 1953 [[JANAP 146C [444] in 1954]] which prohibited service personnel from discussing UPF’s by threatening defaulters with up to

10 years gaol and up to a \$ 10 000 fine. When service personnel resigned or retired, however, it was possible to reveal USAF attitudes or opinions even if actual data was still restricted. In this way many Intelligence Officers associated with the UFO problem, including Major D. Fournet, who was BLUE BOOK Project Officer at the Pentagon until late 1952, Captain E. Ruppelt, who headed Project GRUDGE and Project BLUE BOOK until September 1953, and Admiral Hillenkoetter, who directed CIA from its inception until October 1950, on retiring from these services, all publicly stated that the US Government knew UFO's were extraterrestrial but was withholding this fact from the public."

"8. When the National Investigation Committee on Aerial Phenomena (NICAP) was formed in 1956 to counter the publicly suppressed USAF investigation of UFO's, the first Chairman was Admiral D.S. Fahrney, who had directed the Navy's guided missile programme from its inception. Apart from Admiral Hillenkoetter, Major Keyhoe, and Major Fournet, other Directors have included Rear Admiral H.B. Knowles, General A. Wedemeyer and Col J.J. Bryan (who was a special assistant to the Secretary of the Air Force). To reduce the effect of these and similar defections from official policy after retirement, the revised JANAP 146E [[JANAP 146E [60] in 1977]], passed in 1960, made it an offence under the Espionage Act if data on UFO's were revealed."

"9. The change in style of USAF reporting before and after the Robertson panel meeting is clearly indicated in the Project BLUE BOOK Special Report No. 14 [[[372]]]. The body of the report prepared between March 1952 and early 1953, although biased in favour of a natural explanation for UFO's, nevertheless showed mathematically that the evidence favoured an explanation that was scientifically unknown. This section of the 316 page report was not released to the public other than as a copy to be consulted, assuming the reader knew of its existence. Public distribution was made, however, of a so-called "summary," which in fact did not summarise, nor scarcely allude to the 1947–52 data, but concentrated on 1953–55 reporting, which was clearly designed to reduce the residual unknowns to an insignificant number, no matter how senseless the identification became."

"10. Within the body of the difficult-to-obtain report there is an interesting diagram. The product of the estimated observer reliability and the report reliability became the sighting reliability. The percentage of reports that had to be registered as 'unknown' (i.e., incapable of being even approximately identified as a known object) increased as the sighting reliability improved. Conversely, the percentage listed as 'insufficient information' decreased with improving reliability."

Sighting reliability	Number of reports	Unknown (%)	Insufficient information (%)
Poor	435	16.6	21.4
Doubtful	794	13.0	14.0
Good	757	24.8	3.6
Excellent	213	33.3	4.2

“11. Throughout the years of the UFO phenomenon, there has been a persistent form of official pronouncements which state that the percentage of unknowns would be reduced if more data were available. The above table contradicts that statement. Reports of excellent reliability generally stem from astronomers, pilots, scientists, surveyors, meteorologists, radar operators, etc., complete with instrumented values and accurately detailed accounts. The introduction of good reliable reporting prevents the ready prosaic interpretation. In all probability the overall average percentage of unknowns (19.7%) would have been substantially increased if the data had been more reliable.”

“12. Project BLUE BOOK consultants statistically tested the unknown object population to determine the likelihood that it was similar to the population of identified objects and found that the probability was less than one in 10^{28} (i.e., using the American system, the odds were ten thousand trillion trillion to one against the unknowns being the same as the knowns). Since the consultants had arbitrarily called all green fireballs and short duration (i.e., less than five seconds) night-time sightings as known astronomical objects, there was an undue preponderance in that category. Hence, assuming that no astronomical objects were left in the unknowns, the statistical tests were repeated with astronomical identifications removed. The odds were reduced to ten trillion trillion to one. The analysts could not find a way to reduce those odds sufficiently further to warrant additional testing, and irrationally considered the results to be ‘inconclusive’.”

“13. While PROJECT BLUE BOOK endeavoured to reduce the official number of unknowns—in 1957 they claimed only 14 out of 1006 sightings remained unidentified—the covert programme expanded considerably. The government agency (almost certainly the CIA) that had been collecting data on UPO performance and propulsion methods during 1948–52 presumably influenced US governmental funding of certain advanced projects. One project was the Canadian Avro saucer. A drawing of this saucer released in October 1955, showed a typical flying disc as described in many UFO reports. The Secretary of the Air Force, D.A. Quarles, appeared moderately confident that such a vehicle would be successfully developed by the U.S.”

6.1.6 Futile attempts toward breakaway gravity research starting in 1955

Turner’s analysis of 1971 continues with what he calls “astounding” investments made by the US into anti-gravity research. During the early years of his career, in 1956, Turner came across the US anti-gravity project through a note that was posted on a board at Harwell, which was Britain’s inaugural Atomic Energy Research Establishment, according to some biographical notes by Dominic McNamara and Bill Chalker [318]: “The opinion of staff at Harwell was that this was odd, as we

didn't know what gravity itself was, let alone researching anti-gravity." This research faced an insurmountable explanation trap [451]:

"14. A more astounding decision on the part of the U.S. Government was to allocate considerable funds to investigate gravity and a means of controlling gravity. Despite the fact that science had not attained a level of competence to deal with either gravity or anti-gravity problems and the only theory that might be applicable was Einstein's Unified Field Theory which was still incomplete at the time of his death, the U.S. chose to support six universities and government agencies in an all-out drive to conquer the problem. It is significant that at this time the current theories on UFO propulsion were a mixture of gravity control and electro-magnetic propulsion."

"15. During 1955, because insufficient staff could be recruited for the project, recourse was made to an urgent appeal for theoretical physicists and mathematicians from AERE Harwell, U.K. The six Gravity Research Centres being established were at the Institute for Advanced Study (Princeton, N.J.), Princeton University, University of Indiana, Purdue University Research Foundation, University of North Carolina and the Massachusetts Institute of Technology through the (Roger Babson) Gravity Research Institute (New Boston N.H.). The latter institute is a non-profit organization founded in 1949 with George M. Rideout as President. It was believed that to make a gravity motor, a gravity differential was required which necessitated the discovery of an insulator, deflector or absorber of gravity. By 1955, 485 essays had been written on this subject and awards totalling \$ 10 600 made for original contributions."

"16. The scientists involved included Teller from the University of California, Oppenheimer and F.J. Dyson of the Institute of Advanced Studies, J.A. Wheeler and Richard Arnowitt of Princeton, Vaclay Hlavaty of University of Indiana (who had worked with Einstein in Prague) and Stanley Deser. The objective was to control gravity. During 1955 the following firms entered into gravity and/or electromagnetic programmes: Glenn L. Martin Aviation Co. (specifically Dr B. Heirn from Goettingen University and Dr P. Jordan from Hamburg University), Convair of San Diego, Bell Aircraft of Buffalo, Sikorsky Division, Lear Inc. of Santa Monica, Clarke Electronics of Palm Springs, California, and Sperry Gyroscope Division of Great Neck, Long Island, N.Y."

"17. Such an intensive onslaught on the gravity enigma was entirely irrational from the standpoint of conventional science, and can only be rationalized within the context of a firm belief that UFOs were real and that the intelligences behind them knew how to control gravity. The drive to harness this power before the USSR could do so would be a strong incentive for the U.S. Government to fully support an anti-gravity programme. By 1966, 46 separate projects of this nature were being financially supported, 33 of which were under the supervision of the U.S. Air Force. Although details of most of these projects have been kept classified it would appear that generally they have not been successful. Work on gravitational waves by J. Weber and his associates

under USAF Cambridge Research Laboratory jurisdiction has been reported fairly extensively since 1966.”

Perhaps Turner’s observations and suspicions were partly stimulated by the private initiative of two wealthy eccentric businessmen – Roger Babson and Agnew Bahnsen. They envisioned and privately financed research into the “shielding of gravity” or some form of anti-gravity [254]. Babson’s Gravity Research Foundation, founded in 1948, sponsored annual “Essays on Gravitation” competitions. The winners included researchers like Stephen Hawking, who later became well-known scientists. Bahnsen played an instrumental role in the founding years of the Institute of Field Physics, Inc. at the University of North Carolina, Chapel Hill, in 1955 [385], which hosted the 1957 Chapel Hill Conference on “The Role of Gravitation in Physics” [386].

6.1.7 Condon Committee, 1966–1968

Once more, it is important to keep in mind that, based on my hypothesis, investigations of UFOs following Project Grudge were primarily for the purpose of educating the public. They were not conducted with the intention of fully understanding the UFO phenomenon. Instead, they aimed to create the illusion that the military and intelligence community were taking the phenomenon seriously.

As the years passed, the small team working on Project Blue Book—consisting of only one officer, a sergeant, and a secretary [83, 84, 88, 89]—continued to collect an increasing amount of data on UFO sightings. By 1966, the US Air Force had gathered a vast amount of information from nearly 20 years of investigating over 10 000 cases. Despite all of this, public perception of UFOs had not greatly evolved, and controversies surrounding the topic persisted. It appears that the Air Force, faced with the daunting task of collecting and analyzing an ever increasing amount of data, sought to put an end to the futile, tedious, and time-consuming endeavor. They may have believed that conducting a final, definitive investigation or one that could legitimize ending Project Blue Book, would be the solution to resolve the issue.

Finding a reputable “lead” scientist, as well as an academic institution to conduct a study on UFOs, was difficult. The US Air Force (USAF) struggled with this search for “suitable and willing candidates” in the spring and summer of 1966. They needed a renowned academic for the job and approached well-known scientific institutions such as the Massachusetts Institute of Technology, but none of them were willing to undertake such an effort. Meanwhile, James E. McDonald, an atmospheric physicist from the University of Arizona, was actively campaigning to secure the contract. McDonald was well respected by his peers but faced a major drawback, as his not-so-hidden opinions went against the Air Force’s intentions: McDonald already strongly believed that some UFOs were of extraterrestrial origin [267].

In 1966, the University of Colorado agreed to undertake a study on UFOs with funding from the Air Force, led by physics professor Edward Uhler Condon. The

project was met with mixed reactions from the university faculty, but was ultimately accepted, possibly due to the Air Force's involvement. Condon, a well-known public figure and science functionary, had previously directed the National Bureau of Standards and held positions as president of the American Physical Society and the American Association for the Advancement of Science. On Condon's behalf, Robert J. Low, an assistant dean of the university's graduate program, served as coordinator, with David Saunders of the pro-extraterrestrial hypothesis, National Investigations Committee on Aerial Phenomena (NICAP) and astronomer Franklin E. Roach as coprincipal investigators. Saunders and NICAP would eventually leave the study team [406] (aka "Dr. Norman Levine and Dr. David Saunders had been summarily fired by Dr. Condon" [103, Chapter 11, p. 199]).

While it is speculative to assume that both Condon and Low were specifically chosen for the task and had a "hidden agenda" according to the Air Force's intentions, it is worth noting that Low and Condon appeared to have preconceived views on UFOs before the committee began its work. On August 9, 1966, Low wrote a memo in which he reassured two University of Colorado administrators that there was nothing to fear in terms of ridicule or negative repercussions from the scientific community, which could harm the University of Colorado's reputation [229, pp. 33,34]:

"The trick would be, I think, to describe the project so that, to the public, it would appear to be a totally objective study but, to the scientific community, would present the image of a group of nonbelievers trying their best to be objective but having an almost zero expectation of finding a saucer."

Low's memo to E. James Archer, Dean of the Graduate School, and Thurston E. Manning, Vice President and Dean of Faculties, regarding the Air Force proposed UFO study, presents a thorough analysis of the pros and cons and is highly recommended [229, pp. 33,34]. Additionally, highly recommended is "UFOs: An Insider's View of the Official Quest for Evidence" [103], a personal account by Roy Craig, Associate Professor and Coordinator of Physical Science at the University of Colorado's Division of Integrated Studies, describing his participation in the Condon study.

During his speech on January 25, 1967, at a Sigma Xi chapter in Corning, New York, Condon, who was known for his breezy and anecdotal style, reportedly expressed preconceived opinions. The Elmira Star-Gazette reported on these opinions, in which he made similar comments: "UFOs are not the business of the Air Force. [...] It is my inclination to recommend right now that the government get out of this business. My attitude right now is that there is nothing to it." Allegedly with a smile, he added: "But I'm not supposed to reach a conclusion for another year" [178,229].

The Committee faced additional controversies due to these statements and the loose correlation between case evaluations and conclusions (see later). The pro-extraterrestrial faction, represented by McDonald and Keyhoe, attempted to undermine the work of the Committee by claiming that the results were biased due to the attitudes of its main proponents.

Regardless, the outcome of the investigation was not surprising, as it was pre-determined by the US Air Force, who commissioned the report. The executive summary of the Condon Report [83–88], specifically Section 1 titled “Conclusions and Recommendations” and authored by Edward U. Condon, confirms this:

“[[. . .]] we think that all of the agencies of the federal government, and the private foundations as well, ought to be willing to consider UFO research proposals along with the others submitted to them on an open-minded, unprejudiced basis. While we do not think at present that anything worthwhile is likely to come of such research, each individual case ought to be carefully considered on its own merits.

This formulation carries with it the corollary that we do not think that at this time the federal government ought to set up a major new agency, as some have suggested, for the scientific study of UFOs. This conclusion may not be true for all time. If, by the progress of research based on new ideas in this field, it then appears worthwhile to create such an agency, the decision to do so may be taken at that time.”

[[. . .]]

“Our general conclusion is that nothing has come from the study of UFOs in the past 21 years that has added to scientific knowledge. Careful consideration of the record as it is available to us leads us to conclude that further extensive study of UFOs probably cannot be justified in the expectation that science will be advanced thereby.”

[[. . .]]

“The question remains as to what, if anything, the federal government should do about the UFO reports it receives from the general public. We are inclined to think that nothing should be done with them in the expectation that they are going to contribute to the advance of science.

This question is inseparable from the question of the national defense interest of these reports. The history of the past 21 years has repeatedly led Air Force officers to the conclusion that none of the things seen, or thought to have been seen, which pass by the name of UFO reports, constituted any hazard or threat to national security.”

[[. . .]]

“It is our impression that the defense function could be performed within the framework established for intelligence and surveillance operations without the continuance of a special unit such as Project Blue Book, but this is a question for defense specialists rather than research scientists.”

[[. . .]]

“The subject of UFOs has been widely misrepresented to the public by a small number of individuals who have given sensationalized presentations in writings and public lectures. So far as we can judge, not many people have been misled by such irresponsible behavior, but whatever effect there has been has been bad.”

The report concluded that public attention should be directed to the UFO “miseducation in our schools.” After the report’s publication, a scientific dispute broke out about its consistency, methodological adequacy, and validity. A review panel of the National Academy of Sciences expressed its satisfaction with the report and certified it to be “adequate to its purpose” and “in accordance with accepted standards of scientific investigation” [349].

Both sides argue that Condon’s involvement was not substantial enough to conduct a deep analysis of the investigated cases, and Low lacked the necessary experience to lead such a complex investigation effectively [267]. The connection between the first two sections, “Conclusions and Recommendations” and “Summary of the Study,” to the main body of the report appears spurious. Most case studies were conducted by junior staff, with little participation from senior staff and the director. Notably, the analysis of evidence indicates substantial differences between the findings of the project staff and the director. While both the director and staff were careful not to make definite statements, the staff tended to focus on difficult cases and unresolved issues, while the director stressed the difficulty of further research and the likelihood that no new scientific information could be obtained [432].

It has been argued from both sides of the debate about the extraterrestrial origins of UFOs that, despite all of the Condon Committee’s efforts to find prosaic explanations, those who prepared the Condon Report ended up with about a dozen, approximately 15%, of their cases in their “Unexplained” category [234, 267, 314, 353, 432]. This alleged deficiency of the conclusion and summary parts of the Condon Report was clearly expressed in an appraisal of the UFO problem by the American Institute of Aeronautics and Astronautics (AIAA) [433]. In 1967, the Technical Committee on Atmospheric Environment and the Technical Committee on Space and Atmospheric Physics of AIAA jointly formed a UFO Subcommittee, which published a discussion of the Condon Report. They stated that there existed a fraction of UFO reports, perhaps less than one percent (i.e., less than one out of a hundred), which might be called “hard cases.” Those hard cases have high credibility, as they are: “observations by multiple independent witnesses of known and reliable background or by multiple independent sensing systems (reported by multiple independent operators) or both; high abnormality or strangeness, when no known natural phenomena whatsoever seem to fit the observations.”

“Taking all evidence which has come to the Subcommittee’s attention into account, we find it difficult to ignore the small residue of well-documented but unexplainable cases which form the hard core of the UFO controversy.”

[...]

“In fact, the Subcommittee finds that the opposite conclusion could have been drawn from its content, namely, that a phenomenon with such a high ratio of unexplained cases (about 30% [[in the Condon Report]]) should arouse sufficient scientific curiosity to continue its study.”

“The issue seems to boil down to the question: Are we justified to extrapolate from 0.99 to 1.00, implying that if 99% of all observations can be explained,

the remaining 1% could also be explained; or do we face a severe problem of signal-to-noise ratio (order of magnitude 0.01)?”

These concerns of the AIAA align with my own impression of the Air Force’s Project Blue Book, which was overwhelmed by a large amount of data with a weak signal and significant noise, as reported by the Condon Report, which was staffed with only one officer, a sergeant, and a secretary. This made it difficult to extract meaningful information from the incoming stream of alleged UFO sightings. However, it remains unclear whether this was intentional or simply a way to save taxpayers’ money while communicating to UFO enthusiasts and the interested public that the “Air Force cared.” Regardless, the Condon report ultimately brought these official efforts to an end.

6.1.8 Turner’s view of the Condon Report and the end of Project Blue Book

Turner’s analysis of 1971 presents the following evaluation of the finalization of any official US efforts to cope with flying saucers [451]:

“18. During August of 1965 Project BLUE BOOK received 262 reports which was about six times the average number for a month and was twice any previous month since November 1957. On 28 September 1965 Maj. Gen. LeBailly, Director of Information, formally requested the Air Force Scientific Advisory Board to review Project BLUE BOOK. The review suggested that the limited Project BLUE BOJK staff and the official investigating officers did not possess the technical competence to properly identify the phenomena and that university teams should be appointed to investigate selected sightings. This conclusion was supported by the House Armed Services Committee which met on April 5th 1966 in the shadow of a public furore consequent to the USAF identifying the well-publicized Michigan sightings as being swamp gas. The Colorado University was selected for the task, and Dr. Edward U. Condon appointed to lead the project with an initial allocation of \$ 313 000 later raised to \$ 525 000.”

“19. The Colorado project became discredited when Dr Condon stated publicly on 25 January 1967 that ‘my attitude right now is that there is nothing to it, but I’m not supposed to reach a conclusion for another year’. The revealing of a memorandum outlining a method to trick the public, combined with a general dissatisfaction at Condon’s biased attitude, led to the dismissal and resignation of most of the staff after most of the investigations had been made but not completely written up. The final report of 965 pages lacked coherence. Condon’s conclusions were at variance with individual staff conclusions, although only Condon’s conclusions were publicised. As a result of the Condon

report, USAP closed down Project BLUE BOOK shortly before the American Association for the Advancement of Science held a special meeting to counteract the effect of the Condon report. The Chairman of the Special Committee, Dr Thornton Page, was one of the signatories to the Robertson report.”

“20. Dr J. Allen Hynek, scientific consultant to Project Blue Book 1948–69, began his association with a conviction that all sightings could be conventionally explained. Even though doubts grew in his mind, he found himself obliged to support official USAF public policy. Since 1966, however, he has become more outspoken against the USAF attitude and has assisted to convene both congressional hearings and scientific symposia on the subject. Although initially supporting the Condon Committee, he became disillusioned and critical of it with the passage of time. It is quite clear that Dr Hynek along with many other reputable scientists do not accept the USAF explanation of misidentification, hysteria, or hoax.”

6.1.9 Ad hoc initiatives after Project Blue Book

Since the cessation of Project Blue Book, initiatives by interested individuals such as John B. Alexander’s Advanced Theoretical Physics Working Group [10, 351], Laurence S. Rockefeller’s Initiative [30], and Steven M. Greer’s Disclosure Project [189] have erupted in an ad hoc and ad hominem manner time and again.

More recently, the Advanced Aerospace Weapon Systems Applications Program (AAWSAP) was started by Harry Reid (D-Nevada), then the Senate Majority Leader, at the initiative of a Nevada-based journalist, George Knapp, and Robert Bigelow, a Nevada businessman and governmental contractor. The program, which studied unexplained aerial phenomena (UAP), was supported by Senators Ted Stevens (R-Alaska) and Daniel Inouye (D-Hawaii) and began in 2007 with a budget of \$22 million for its five-year operation. In January 2008, Bigelow established Bigelow Aerospace Advanced Space Studies (BAASS), a company that undertook the AAWSAP contract for the DIA [281]. On June 24, 2009, Senator Reid attempted to create a “Restricted Special Access Program (SAP) with a Bigoted Access List for specific portions of the AATIP,” but this initiative failed [281].

As far as I can resolve the connections, the Advanced Aerospace Threat Identification Program (AATIP) was a colocated program associated with AAWSAP in the Defense Intelligence Agency (DIA), the intelligence agency and combat support agency of the United States Department of Defense (DOD). The connection between AAWSAP and AATIP is not entirely clear to me. Additionally, some personal affiliations are not entirely certain. I conjecture that James T. Lacatski was the first Defense Intelligence Agency program manager of AAWSAP. Luis Elizondo was involved in AATIP and had a leadership role, possibly as a successor of Lacatski, and “investigating UAPs as the head of AATIP” [381].

AAWSAP/AATIP was a rather ambitious, maybe “reconnaissance/pathfinder” project—started by outsiders (Bigelow) and insiders (Reid, Christopher Mellon)—to “get as far as possible to the bottom” of the Pentagon’s and defense contractors’ knowledge of UFOs and to make it public. They also studied a farm in Utah that allegedly exhibited strange performances [281]. AATIP produced DIA products listed after a FOIA request [114], including reports entitled “Advanced Space Propulsion Based on Vacuum (space time metric) Engineering, Dr. Hal Puthoff, EarthTech International,” “Invisibility Cloaking, Dr. Ulf Leonhardt, Univ. of St. Andrews,” “Traversable Wormholes, Stargates, and Negative Energy, Dr. Eric Davis, EarthTech International,” “Field Effects on Biological Tissues, Dr. Kit Green, Wayne State University,” and “Space-Communication Implications of Quantum Entanglement and Nonlocality, Dr. J. Cramer, Univ. of Washington.” These are available from the DOI FOIA reading room [113].

Another alleged attempt to initiate the public to the alleged secret machinations of aliens and the USA’s reaction to it comes from Tom DeLonge, who has created a group of advisors and scientists and published two book series on “secret machines” with Andrew James Hartley and Peter Levenda [116–119].

6.2 United Kingdom

The situation in the United Kingdom is not entirely different from that in the USA. Officially, the UK conducted two investigations into flying saucers: the Flying Saucer Working Party and the Condign Report. The following is a very incomplete description of the UK’s efforts to cope with the phenomenon. One important case that took place in Suffolk, England, the Rendlesham Forest incident in 1980, is mentioned in Section 3.14.

6.2.1 Flying Saucer Working Party, 1950–1951

A team dedicated to studying flying saucers was established in 1950 and worked closely with the CIA. The Ministry of Defence (MOD) denied the existence of this official study of UFOs until minutes of the meetings were discovered at the National Archives in 1999. However, the report produced by this committee, known as the “Holy Grail” to those who believe in a cover-up of UFO evidence, could not be found and was said to have “not survived the passage of time.” Despite this, the report is considered an important piece of the history of the Cold War.

The study of “Flying Saucers” was initiated in 1950 by Sir Henry Tizard, a trusted scientific advisor of Churchill, due to pressure from a pro-saucer newspaper campaign supported by Lord Louis Mountbatten and other high-ranking officials who believed the saucers to be advanced craft from outer space. The study, called the Flying Saucer Working Party, was led by members of the Technical Intelligence

branches of the Air Ministry, Admiralty, War Office, and Ministry of Defence (MoD) and held its first meeting in 1950. The RAF and Royal Navy were asked to submit sighting reports for investigation.

The Flying Saucer Working Party produced their final report entitled “MoD DSI/JTIC Report No 7 Unidentified Flying Objects” [164] and stamped SECRET in 1951. Although this document was lost, it has been recovered by UFO researcher David Clarke [68]. The report recommended debunking sightings and implementing a tight security clampdown to prevent puzzling cases from reaching the public.

When the Flying Saucer Working Party produced their final report in 1951 [164], the CIA’s chief scientist and Assistant Director of the CIA’s Office of Scientific Intelligence (OSI), Marshall H. Chadwell, was present [195]. This is also reflected by parallels between the UK Flying Saucer Working Party and the USA Robertson Panel mentioned in Section 6.1.5, which was established by the CIA in 1952–1983 with a similar goal of debunking UFO sightings and ensuring that UFOs posed no threat to national security and did not escalate into public hysteria.

6.2.2 Condign Report of 1996

The following paragraph is based on a podcast with and posts by David Clarke [67, 76], as well as on an article by Clarke and Anthony [75] on the Condign Report.

Just as in the UK Flying Saucer Working Party report of 1951 [164] relates to (correlates with) the US Durant Report of the Robertson Panel of 1953 [145], so does the UK Condign Report of 1996 [194] relate to (correlate with) the US Condon report of 1968 [83, 84, 88, 89]. (The name “Condign”—meaning “a severe and well deserved punishment”—was chosen with the help of a randomization algorithm to not signify anything; its similarity with “Condon” is purely accidental [76].)

One difference between the Condon and the Condign reports was that, whereas the Condign Report of 1996 was a classified study commissioned by the British government and directed toward its own military and intelligence community, the earlier unclassified and highly marketed Condon report was an effort to eliminate Project Blue Book and the public attention of UFOs as quickly and for as long as possible. Both formulated an official “surface” stance—a manufactured consent [211]—on the subject but directed toward different recipients.

Here is the official reason for the Condign report, as laid out by the Ministry of Defence (MoD) [194]:

“During a policy review in 1996 into the handling of Unidentified Aerial Phenomena sighting reports received by the Ministry of Defence, a study was undertaken to determine the potential value, if any, of such reports to Defence Intelligence. Consistent with Ministry of Defence policy, the available data was studied principally to ascertain whether there is any evidence of a threat

to the UK, and secondly, should the opportunity arise, to identify any potential military technologies of interest.”

Both the Condon and the Condign reports concluded that the majority of UFO sightings could be explained as misidentifications of natural phenomena or man-made objects, and that there was no evidence of a threat to national security.

Three executive branches were involved in the Condign investigation: the Royal Air Force (RAF) “Ground” section, which received data from radar stations and the Airborne Warning and Control System (AWACS); the DI55 partition of the Defence Intelligence Staff (DIS), now known as Defence Intelligence (DI), which focuses on gathering and analyzing military intelligence; and the MoD’s civilian Secretariat (Air Staff), abbreviated as Sec(AS), also known as MoD’s “UFO desk.” Allegedly, DI55 believed that civilians were “leaky”, that is, more likely to disclose classified information, leading to the decision to exclude Sec(AS) from the Condign investigation [67].

According to Davies, the officially undisclosed lead author of the Condign Report was Ron Haddow, a government scientist [76]. Haddow’s task was to assess any potential threats to the UK and the possibility of acquiring new technology, rather than investigating claims such as alien abductions [67].

An executive summary of the Condign Report was provided in a letter dated December 4, 2000 [64], in line with the “official UK/US position” mentioned earlier. The letter contains excerpts from the report’s summary:

“2. The main conclusion of the Study [[Condign Report]] is that the sighting reports provide nothing of value to the DIS in our assessment of threat weapon systems. Taken together with other evidence, we believe that many of the sightings can be explained as mis-reporting of man-made vehicles; natural but not unusual phenomena, and natural but relatively rare and not completely understood phenomena. It is for these reasons that we have taken the decision to do no further work on the subject and will no longer receive copies of sighting reports.”

The executive summary expressed interest in the Condign Report’s findings regarding (i) flight safety staff and (ii) possible novel phenomena associated with plasma formations, which may have potential applications to novel weapon technology.

As of the time of writing, the Ministry of Defense appears to have misplaced their copy of the Condign Report. Additionally, no destruction certificate signed by a senior Ministry of Defense official has been discovered [76]. As a former civil servant in Austria’s Ministry of Research, I can sympathize with MoD staff who may be struggling with this situation. [Civil servants in Austria have a saying: “etwas ist in Verstoß geraten,” meaning that “something has fallen into the pile” of forget-me(-not).]

6.2.3 Discrete enquiries for the Duke of Edinburgh

From 1953 to 1956, Air Marshal Sir Beresford Peter Torrington Horsley served as Equerry to Prince Philip, the “Royal Flying Saucer” [70], and, as such, was part of the British Royal Household. In an amazing chapter entitled “Visitors” [223, Chapter 10], he describes discreet investigations into flying saucers.

Horsley suggests four general categories of reported sightings: those from (i) objective observers with no self-interest, (ii) a growing body of people promoting sightings for mercenary reasons or self-advertisement, (iii) observers suffering from flying saucer psychosis or mental illness, and finally (iv) practical jokers. He describes a great number of sightings of the first category, some of which he reported to the Duke of Edinburgh.

One took place on November 3, 1953, when two Royal Air Force officers, Flying Officer T.S. Johnson and Flying Officer G. Smythe, reported seeing a circular, brightly illuminated object flying at over 1000 miles an hour in the London Metropolitan Sector. Despite the official explanation that it was likely to be a balloon, the officers believed it was not, due to the object’s high speed and unusual behavior. The officers were medically examined and found to be fit for operational flying, and there were no known high-speed experimental aircraft in the area at the time. On the same day, an object was tracked by radar behaving in a similar manner, moving from stationary to high speed over a considerable height band. As Horsley had not interviewed the operators, he discounted this report as merely corroborative evidence.

Another “Little Rissington” case is a rare incident where a visual and radar report of a UFO matched up. The incident occurred when an instructor and his pupil-instructor were flying a tandem-seater Meteor Mk VII high above Little Rissington, a central flying school responsible for training flying instructors. The front pilot observed a circular object dead ahead, filling about three inches of his windscreen, which he initially assumed to be an oxygen failure. The instructor took over control of the aircraft, turned it through forty-five degrees, and saw the object, confirming its description with the pupil-instructor. They reported the incident to Little Rissington Air Traffic Control who instructed them to approach closer. They turned again towards the object, and when the circular object filled half their windscreen, it suddenly turned on its side, emitting an iridescent light around its edges, and climbed away out of sight at great speed. The object’s size could not be estimated as they did not know its distance. Meanwhile, in Fighter Command, Southern Sector radar reported an unidentified aircraft travelling through the sector. The Meteor appeared on the radar tube and closed in on the unidentified blip, which then moved rapidly across the screen at an estimated speed of over 1000 miles an hour. However, the final distance between the two was never measured, so the size of the UFO was never estimated. A pair of standby fighters were scrambled from Tangmere but never made contact with it. The incident was unusual as both the visual and radar reports matched up, providing evidence for the existence of an unidentified flying object. Horsley never interviewed the persons involved, but his narrative stimulated an investigation by David Clarke [69, 74] also mentioned in Section 3.2.

Horsley recounts a meeting with someone who was said to be named “Janus” and who seemed to him knowledgeable about the history and agenda of extraterrestrial visitors. Janus believed that the Earth was a small part of the universe and that extraterrestrial traffic to Earth was minimal. These extraterrestrials had developed means of superluminal travel.

Despite the Earth allegedly being a galactic backwater inhabited only by semi-civilized and dangerous humans, explorers still wished to find out more about it, much like people on Earth who travel to uncomfortable and dangerous places. Therefore, interference with life on Earth was kept to a minimum. Some extraterrestrial vehicles were manned by beings with advanced mental powers who made contact with select individuals. These beings did not use weapons and were equipped with medical technology to operate on Earth. Horsley suspected that Janus might be part of a plot, but when he tried to contact him again, Janus and his contacts had disappeared.

6.3 Former USSR, Russia, and Ukraine

The situation in Russia regarding UFOs appears to be confusing, as reliable information is scarce. Two sources provide insight into the subject: Vallée’s “UFO Chronicles of the Soviet Union. A Cosmic Samizdat” [466], and a 1968 RAND study which suggests that “Even the Soviets, who previously refused even to discuss the subject now admit to having a study group with good qualifications” [273, p. 6].

There are also unconfirmed and highly uncertain online resources, such as “UFO Facts and Documents” by G.K. Kolchin, who is allegedly a retired colonel and deputy chairman of the Commission on Anomalous Phenomena of the Geographical Society of the USSR [275]. This resource is briefly outlined in a Reddit post [464]. Additionally, there exist review articles of unknown depth, reliability, and accuracy on UFO research in the former USSR [11, 360] and in Ukraine [33, 183].

6.3.1 UFOs over Soviet nuclear bases

The Soviet UFO missile crises is reviewed by Hastings [206, Chapter 23] (see also [232, 233, 407]) as retold in Section 3.15.

6.3.2 Bizarre statement by Russian prime minister Dmitry Medvedev

There is a bizarre anecdote involving the then Russian prime minister, Dmitry Medvedev, making some outlandish remarks while television cameras were still rolling. When a journalist inquired whether the President of Russia is provided with

classified information on aliens, upon receiving the briefcase required to initiate the country's nuclear arsenal, Medvedev responded [421]:

"I tell you the first and last time. Together with the briefcase with nuclear codes, the president of the country is given a special 'top secret' folder. This folder is entirely devoted to the strangers who visited our planet."

"The report is provided by the secret special service that handles the control over aliens in our country [...] More detailed information on this topic can be obtained from the documentary 'Men in Black' [...]"

"I will not tell you how many of them are among us because it may cause panic."

Note that when referring to "Men in Black," Medvedev might have had the Russian documentary [454] in mind.

6.3.3 Handwaving and handraising UFO responses

The Soviet Union reportedly had the ability to "summon" UFOs to at least one of their military bases, as recounted in an interview with Major-General Vasily Alexeyev of the Russian Air Force, Space Communications Centre, Moscow, 1997 [216,217].

Observers in the Soviet Union utilized a technique to intentionally create the appearance of a UFO by increasing military activity, including the transportation of "special loads," which may have been nuclear devices. This orchestrated activity resulted in a corresponding appearance of a UFO, establishing a correlation between military actions and UFO sightings. As a result, it was concluded that whoever was responsible for the UFOs possessed advanced intelligence and sensitivity to such activities.

At certain testing sites, presumed to be nuclear bases, individuals were able to establish communication with the UFOs beyond simply summoning them. The UFOs typically appeared as spheres, although they occasionally manifested themselves in different forms. Communication occurred through physical signals or gestures. For example, pointing an arm in various directions caused the UFO sphere to flatten in the corresponding direction. Raising arms three times elicited a response from the UFO, causing it to flatten out in the vertical direction three times as well [216,217].

6.4 France

6.4.1 GEIPAN

GEIPAN—Groupe d’Etude et d’Information sur les Phenomènes Aerospatiaux Non-identifiés (Group for Study and Information on Unidentified Aerospace Phenomena)—is the official investigation unit of the French Space Agency (CNES) responsible for the study and investigation of unidentified flying objects (UFOs) and other aerial phenomena. Established in 1977 and based at the CNES headquarters in Paris, GEIPAN conducts research, collects and analyzes data, and provides information to the public on its findings. Additionally, the group maintains the official French government archive of UFO reports and related information.

According to its official front webpage [181], GEIPAN has collected 99 “hard cases” [in their terminology “D – unidentified (after investigation)’] out of a total of 2978 cases, which is just over 3 percent of all cases. This estimate appears to be consistent with the less than 1% estimate for “hard cases” based on the Condon Report and Project Blue Book of the UFO Subcommittee of the American Institute of Aeronautics and Astronautics (AIAA) in 1967 [433]. Everything else, 97%, appears to be clutter.

Institutions or initiatives such as GEIPAN are repeatedly faced with the challenge of a small signal-to-noise ratio. This makes it difficult and expensive to distinguish the “wheat from the chaff,” the signal from the noise and clutter of unnecessary, disorganized, or obstructive items. This creates a sense of chaos, disorientation, and frustration and makes it difficult to find what one is looking for or to focus on the task at hand.

6.4.2 COMETA

COMETA, an association comprised of experts in various fields, including physics, life sciences, human sciences, engineering, and senior military officers, published a comprehensive report on UFOs in July 1999 and submitted it to the President and Prime Minister [20, 80]. According to the report, the possibility of UFOs having an extraterrestrial origin could not be dismissed. One of the conclusions, or rather accusations, of the COMETA report was that the US government was engaged in a major cover-up and disinformation campaign, particularly with respect to the Roswell incident.

6.5 Australia

For information on the Australian situation regarding UFO sightings and ongoing discussions, see Keith Basterfield [27, 28], Bill Chalker [54, 436], and Ross Coulthart [97].

In 1971, Oliver Harry Turner,, an Australian nuclear physicist, made a spectacular attempt to comprehend the UFO phenomenon [28, 53, 436], including US efforts to study flying saucers, which were later called UFOs [451]. I have fully quoted much of the summary part in earlier sections.

After reading Menzel's "debunking" book on UFOs [322], Turner became interested in the subject and investigated local UFO sightings in Melbourne suburbs. He was later recruited by the Royal Australian Air Force (RAAF) to investigate these sightings and analyze RAAF files on the subject. Turner found physical evidence in one of his investigations and prepared a report on the Dandenong sightings for the RAAF.

After that episode, Turner traveled to the UK to work at Harwell, a British nuclear research establishment. In 1956, a job posting at Harwell sought scientists to work on anti-gravity research in the United States. He and other scientists at Harwell took notice, as anti-gravity appeared to be outlandish [318]. Why should the USA be interested in this exotic subject?

Upon his return to Australia, Turner was stationed at Maralinga, a nuclear test site in South Australia. Again, he covered an investigation into a UFO sighting on an ad hoc basis, as one official report states [23, p. 74]: "Mr. Oliver Harry Turner, Health Physics Officer, who possesses an inquiring mind, made an independent investigation and extensive calculations. He is of the opinion that the light was not the result of a natural phenomenon but caused by an unidentified flying object, either a cone from a satellite or a 'flying saucer.' "

As he progressed through the defense department, he became a scientific analyst working in the Directorate of Scientific and Technical Intelligence (DSTI) of the Joint Intelligence Bureau (JIB) of the Australian Government's Department of Defense. It has been estimated that during his tenure, Turner devoted most of his time to researching UFOs [53].

In the 1970s, Turner pushed for a UFO investigation team. He presented an analysis stating that the UFO reports were real phenomena with flight characteristics so advanced that only an extraterrestrial origin could be envisaged [451]. After consulting with the USA, the Australians eventually turned these initiatives down.

The 1971 document by Turner, like many others before the FOIA period, was never intended for public release. However, thanks to the efforts of Keith Basterfield and Bill Chalker, along with a group of investigators, the Turner files were located, digitized, and published between 2003 and 2008. We owe them the rediscovery of these files.

As far as I am aware, Turner himself never reported a UFO sighting. Two Australians, Keith Basterfield [28] and Paul Dean [110], provide a wealth of material through their blogs, including information on Australian cases. Ross Coulthart is an internationally renowned investigative television journalist and author who recently concentrated on UFOs and related subjects [97].

6.6 Canada

I may be totally ignorant of Canadian efforts regarding flying saucers/UFOs/UAPs, but my basic assumption is that the Canadian government was mostly hesitant, if not unwilling, to deal with such issues. They relied on the USA to handle it.

The Smith–Sarbacher–Walker connection, discussed in Section 9.5, was extemporaneous, ad hoc, and anecdotal rather than systematic, and it was dependent on a single person, Wilbert Brockhouse Smith, who became increasingly involved personally. In my opinion, he discredited his own initial efforts to investigate UFOs.

In more recent times, the closest thing Canada had to an official “UFO desk” [352] was civilian researcher Chris Rutkowski [395]. His surveys were based on UFO reports obtained through interviews with witnesses by the Royal Canadian Mounted Police in the 1980s and 1990s [396]. However, he can no longer access sources from the Department of National Defence and Transport Canada.

6.7 China, India and many other states

I have no knowledge about attempts to investigate sightings and alleged crashes that have occurred in various other regions of the planet. My supposition is that there are efforts to investigate such incidents, but to what extent, I cannot say. For certain countries, there are overviews available [436].

6.8 Germany

Just as a reference point, I mention Illobrand von Ludwiger’s “Best UFO Cases–Europe” [484] and Andreas Müller’s “Deutschlands UFO-Akten” [332], as well as the cases of two chief pilots of both Lufthansa and Austrian airlines mentioned in Section 3.6. Robert Fleischer is a very active journalist and producer of ExomagazinTV with numerous interesting contributions [320].

Chapter 7

Some flight characteristics

Abstract This chapter provides an overview of the perceived flight characteristics of Unidentified Flying Objects (UFOs) or Unidentified Aerial Phenomena (UAPs) based on reports from various sources. These characteristics include the ability to rapidly change direction and speed, a total lack of noise or humming sounds, strange shapes and structures, and different types of motion, such as wobble and zig-zag. The authors highlight that these flight characteristics are not consistent with any known conventional aircraft or natural phenomenon, which adds to the mystery of what these objects could be. The wide range of shapes and structures reported is also a major puzzle in understanding the nature of these objects.

7.1 Explanation trap through conceptual and theoretical overreach

As we explore possible explanations for the flight characteristics of UFOs, it is important to keep in mind a significant issue that could affect our understanding. It is likely that we will not be able to fully comprehend some aspects of their movement due to the limitations and inadequacies of our current understanding and methods of analysis. Thereby, we may suffer from an explanation overreach.

Forcing an explanation in such a situation of explanation overreach may lead to the “explanation trap,” where inaccurate models and beliefs persist and are not acknowledged, despite the lack of understanding. This topic is discussed further in Appendix B.

7.2 Rapid change of direction and speed

One of the most striking characteristics of UFO/UAP sightings is their ability to rapidly change direction and speed. This is often described as sudden accelerations, sudden stops, or sudden changes in direction.

A recent proposal for amendment to the appropriations for fiscal year 2024 for military activities of the Department of Defense prominently highlights this apparent absence of inertia [413]:

- Unidentified anomalous phenomena are differentiated from both attributed and temporarily non-attributed objects by one or more of the following observables:
- (i) Instantaneous acceleration absent apparent inertia.
 - (ii) Hypersonic velocity absent a thermal signature and sonic shockwave.
 - (iii) Transmedium (such as space-to-ground and air-to-undersea) travel.
 - (iv) Positive lift contrary to known aerodynamic principles.
 - (v) Multispectral signature control.
 - (vi) Physical or invasive biological effects to close observers and the environment.

Kevin H. Knuth, Robert M. Powell, and Peter Reali estimated minimum accelerations of the objects during the observed maneuvers, ranging from 100 g to thousands of g's, with no visible air disturbance, no sonic booms, and no evidence of heat production [272, 366]. An earlier investigation by Paul Richard Hill came to similar conclusions [218, pp. 48,49]. More recent estimates by Daniel Coumbe appear to confirm these calculations [98].

This flight behavior is not consistent with any known conventional aircraft or natural phenomenon, which adds to the mystery of what these objects could be. For instance, friction of a “fast mover” with the surrounding air is expected to generate a bright optical fireball and a sonic boom [293, 294].

One should add that these calculations depend on certain assumptions, such as the solidity and “nuts-and-bolts” character of these craft-type phenomena. For example, a holographic projection or laser created plasma UFOs [202, 328] may not be limited to inertial motion: such “objects” have little or no mass/inertia.

Another factor to consider is the (mostly unknown) distance from the observer.

7.3 Total lack of noise or humming sounds

A common feature of UFO/UAP sightings is their apparent lack of noise. While some objects are reported to produce a low humming sound, the majority are said to be completely silent, even when moving at high speed. This lack of noise is a

significant deviation from the usual behavior of conventional aircraft, which generate a significant amount of noise due to their engines and air movements.

The lack of noise associated with UFO/UAP sightings suggests that these objects may not be powered by conventional means, or that they have advanced technology that eliminates noise.

7.4 No sonic booms

According to some (alleged government) reports [104, 355], there is evidence of UFOs breaking the sound barrier without a sonic boom. (This might also be achievable with current means and special designs [159].)

7.5 Shapes

In addition to their peculiar flight behavior, UFO/UAPs are frequently reported to possess particular shapes and structures. Some are characterized as circular or spherical objects, triangular, oval/elliptical/egg/avocado-shaped, cylindrical/cigar-shaped, and saucer-shaped, while others exhibit irregular shapes or geometric patterns [218, p. 12].

The 1968 RAND report [273, p. 24] quotes a collection of 575 NICAP cases [199], with the following percentages: disc-shaped 26%, round/ball-shaped 17%, oval/elliptical-shaped 13%, cylindrical-shaped 8.3%, triangular-shaped 2%, and other (just radar, light sources, or not categorized) 33.7%. It is interesting to compare these ratios from the 1960s with later findings. The follow-up report by Hall [200, p. 446] categorized the shapes of 225 UFO sightings as follows: disc-shaped 44%, oval/elliptical-shaped 13%, round/ball-shaped 12%, hemisphere-shaped 6%, cigar/cylindrical-shaped 5%, cone/spindle-shaped 5%, light sources 4%, delta/triangular-shaped 4%, and others 7%.

Some are reported to emit beams of light or be luminous, while others are reported to be completely dark. The broad range of reported shapes and structures poses a significant puzzle in comprehending the nature of these objects. It is challenging to attribute these reports to a single source or explanation.

7.6 Motion types

7.6.1 Wobble

Oscillation is a common type of motion, and NICAP [273, p. 26] classifies it into three categories: “wobble on axis” (also known as fluttering, flipping, or tipping),

pendulum motion during slow ascent, hovering, and descent (also known as “falling leaf motion”), and sometimes a side-to-side oscillation that is observed as the UFO moves horizontally. These movements are typically observed in disc-shaped UFOs, although comparable behaviors have been seen in other shapes.

7.6.2 Zig-zag

Another motion category can be characterized by violent and unpredictable movements [273, p. 26]. This motion appears to lack inertia and has no clear explanation according to current physical theory. Witnesses describe these movements using terms such as “bobbing,” “erratic,” “jerky,” “zig-zag,” and “shot away,” and they involve high angular accelerations and velocities.

7.7 Underwater unidentified submerged objects

There have been reports [135, 404] of unidentified submerged objects (USOs) with remarkable characteristics. USOs allegedly emerge from or dive into lakes and the sea, producing sonar signatures and nocturnal underwater lights. For an older bibliography, see Chapters 26 and 27 of George M. Eberhart’s review [147].

A dramatic example of an unconfirmed episode [38] is retold in Section 2.6. It is similar to many maritime reports, such as in a conversation mentioned by Charles Fort [166, Chapter 21].

The phenomenon of geometrical, phosphorescent displays on the surface of tropical seas, such as moving parallel bands of light or luminous pinwheels, is often explained as the result of bioluminescent discharges from microorganisms. The mystery lies in what causes creatures to emit so much light in such specific patterns. These displays have been associated with USOs in some UFO literature [147, Chapter 27]. For another unconfirmed anecdote, see also the alleged downed UFO/USO after a high altitude nuclear explosion presented in Section 9.4. A better understanding of nocturnal light USOs may come from studying marine luminescence.

Let me mention a dramatic unconfirmed USO episode retold by Ivan T. Sanderson [404, Chapter 1] in his book “Invisible Residents.” It allegedly took place during Operation Deep Freeze in the late 1950s. Dr. Rubens J. Villela, a Brazilian scientist working with the U.S. Navy’s Operation Deep Freeze in Antarctica witnessed a massive object suddenly emerge from the sea, shoot up through more than ten meters of ice, and soar into the sky like a silvery bullet. The incident occurred in Admiralty Bay, facing the South Atlantic Ocean. Enormous blocks of ice were thrown high into the air, cascading down around the hole created in the thick ice sheet. The water was rolling, and steam was coming from both the hole and the descending ice.

7.8 Evasive not aggressive

Often but not always UFOs tend to be evasive when approached. They seek to make distance by adopting very high speeds.

Chapter 8

Abductions and experiences

Abstract There have been numerous reported cases of alien encounters and abductions throughout history. Many individuals claim to have been taken aboard an extraterrestrial spacecraft and subjected to various experiments, procedures, or observations. These experiences have been described by many as life-changing events, causing a dramatic shift in their attitude toward the existence of UFOs and existence in general. However, there is a lack of concrete evidence to support these claims. Some scientists have offered alternative explanations for these experiences, such as sleep paralysis and the possibility of false memories generated through hypnosis.

8.1 Caveat

This chapter presents accounts of alleged abductions that have the potential to be authentic. However, it should be noted that these accounts are speculative and may be purely fictional. They are highly controversial and have not undergone independent verification.

It is crucial to approach such claims with skepticism and to bear in mind that the credibility of the sources and the evidence presented should always be critically evaluated [12, 13]. Additionally, it is worth noting that false or exaggerated claims are not uncommon, particularly in the context of controversial or sensational topics such as UFO sightings and alleged alien contacts.

8.2 Deception operations against experiencers and UFO reporters

Before discussing experiencers, I would like to mention that there have been speculations regarding some government agencies running deception operations against them and groups of UFO reporters and “researchers” trying to manage the situation

and categorize what they have seen or been told. For instance, the CIA has feared that UFO reports might congest communication channels, thus diminishing alertness and response to attacks. However, increased public attention to flying saucers from outer space may also have positive side-effects. This category of flying saucers could be an esoteric classification of highly advanced, top-secret technologies and weapons developed by the respective states.

8.2.1 UFOs serving as camouflage for secret military technology and spy planes

As already stated, the UFO experiencer and the wider community of UFO reporters and researchers who are trying to understand and categorize the phenomenon is confronted with possible attempts at deception or “education” operations targeting them. For instance, the CIA has been known to be concerned about “hysterical mass behavior” [247, Chapter 4] and the potential for UFO reports to congest communication channels, potentially lowering the ability to respond to attacks [195].

However, heightened public interest in flying saucers from outer space may also have advantages, such as the possibility that the category of flying saucers serves as an esoteric camouflage or disguise for highly advanced and classified technologies and weapons developed by the respective countries.

For instance, reports of UFO sightings by commercial airline pilots and air traffic controllers began to increase after U-2 planes started flying from Area 51. The U-2s, which were silver at the time, created a reflection that led citizens to believe they were UFOs due to their high altitude and unique wing shape. The planes flew at an altitude of 70 000 feet, much higher than the commercial airplanes of the mid-1950s, and their long, shiny wings made them look like a flying cross. Therefore, even if the CIA knew that U-2 sightings accounted for a large portion of UFO sightings at the time, it did not disclose this fact [247, Chapter 4].

8.2.2 The controversial story of Paul Bennewitz

Paul Frederic Bennewitz, Jr. was an American physicist and electronics engineer known for his work in analyzing extraterrestrial signals and his strange story of possible government cover-up and deception. Born on October 17, 1925, Bennewitz grew up in a family of scientists and engineers. He became interested in electronics at a young age and went on to study physics and electrical engineering at the University of Notre Dame.

During the 1970s, Bennewitz was a member of Arizona’s branch of the Aerial Phenomena Research Organization (APRO). In that late decade, he became intrigued by reports of strange lights and alleged unidentified flying objects (UFOs) near the Kirtland Air Force Base in Albuquerque, New Mexico. He began monitoring the

signals he believed were coming from these objects and claimed to have decoded messages that he believed were from extraterrestrial beings.

Bennewitz shared his findings with others, including Air Force officials and researchers in the UFO community. At this point, the military became concerned about the security implications of Bennewitz's work regarding secret yet prosaic activities at Kirtland Air Force Base.

Some authors [302, 359] have speculated that Bennewitz was the victim of a deception operation attempted by the Air Force. He was allegedly contacted by an agent who invited him to the base and shared "secret UFO information of the government" with him. The original goal of this operation might have been to recategorize secret military research, technology, and equipment as UFOs galore. (One name dropped in this connection is Richard Doty, but as I can neither confirm nor disprove this claim, I leave it at that.)

In the 1980s, Bennewitz became increasingly isolated and paranoid, and his health began to deteriorate. He was eventually diagnosed with schizophrenia and was admitted to a mental hospital, where he died in 2003. The story of Paul Bennewitz remains controversial to this day.

8.3 Abduction saga I: Barney and Betty Hill abduction

This is a summary of the Barney and Betty Hill abduction, as reviewed by Don Crosbie Donderi [140]. Barney and Betty, an interracial couple, were driving home from Vermont to Portsmouth through northern New Hampshire on US Route 3 on the night of September 19. They stopped at a restaurant in Colebrook, New Hampshire and left just after 10:00 p.m. A storm was moving up the east coast, giving them an incentive to get home soon. While they were driving, they noticed a light in the sky above Jupiter that seemed to be moving and bigger than the planet. They slowed the car to get a better look and thought it might be a satellite. As they drove south, the light was sometimes visible as the road turned and trees or mountains obstructed their view, so they found it hard to tell whether it was actually moving. They stopped the car, saw that it was moving, and got out to look through binoculars. They saw a disc with a row of brightly lit rectangular windows, sixty to eighty feet in diameter and approximately twenty feet tall. The disc hovered over the road in front of their car, then moved silently to the left and came to rest over the tree line just past the edge of a field. Barney got out of the car and walked closer to the disc with his binoculars, but saw black-clad figures inside. One figure stared at him, and he felt he was about to be captured. Betty screamed for him to come back to the car, and they drove away. As they fled, the disc followed them, and they heard buzzing tones coming from the car trunk. They had unclear memories of seeing a manned roadblock and a fiery globe on the ground. They continued on their journey and reached home just after 5:00 am, later than their predicted arrival time.

Approximately ten nights after the UFO sighting, Betty began experiencing nightmares that lasted for five consecutive nights. Barney did not have similar nightmares

and did not think they were anything serious. Betty wrote down her nightmares to alleviate her anxiety. Two years after the sighting, Barney had a traumatic flashback of the event, and several people suggested hypnosis to remove the amnesia that Barney and Betty had experienced. They were referred to a psychiatrist, Dr. Benjamin Simon, who used hypnosis to help soldiers with post-traumatic stress disorder. Under hypnosis, Barney and Betty recalled being taken into a UFO and examined by the occupants. Barney remembered a rectal, groin, and genital/urological probe, and the occupants were surprised to find that Barney had removable teeth and Betty did not.

Betty recalled an alien being whom she referred to as the “leader.” Despite not communicating in English, Betty was able to understand the leader as if he were speaking the language. The leader performed a medical examination on Betty, which included the insertion of a large needle into her navel, causing her pain. However, the leader could wave his hand over her face and make the pain go away.

After the examination, Betty was left alone with the leader, and they had a conversation. She expressed her desire to take a souvenir with her. The leader offered to let her take something. She saw a book-like object lying on a cabinet and asked if she could take it, even though she could not read it. The leader agreed to give her the book, and she then asked him where they were from. The leader inquired if she knew much about the universe, and after she shared her limited knowledge, he opened a star map. Described as being three feet wide, oblong-shaped, and almost self-luminous, like a holographic projection, it displayed bright circles of different sizes connected by solid lines between larger circles and some dotted lines. The leader explained that the circles represented stars or planets, the lines represented trade routes, and the dotted lines represented expeditions. He asked her if she knew where she was on the map, and she said no. The leader then stated, “If you do not know where you are, there would not be any point in me telling you where I come from,” and closed the map.

As Betty was getting ready to leave after her encounter with the leader, a commotion broke out among the crew. A shorter, round-faced individual in a position of authority objected to Betty being allowed to keep the book, and she was forced to give it back. The leader also informed her that they had decided to prevent Barney and Betty from remembering their abduction. They explained that even if Betty remembered anything, Barney would not, and if he did, his memories would contradict hers and they would be left confused. Betty returned to the car where Barney was already sitting behind the wheel, and Delsey the dachshund had been left during the abduction.

Barney and Betty’s mechanical wristwatches stopped during this incident.

8.4 Abduction saga II: Travis Walton incident

The following story might have been invented for the sake of money.

Travis Walton was a 22-year-old man working on a logging contract in Arizona. On November 5, 1975, he was working with a timber stand improvement crew in the

Apache-Sitgreaves National Forest near Snowflake, Arizona. In the evening, while leaving the forest in a truck, they noticed a craft descending from the trees. All seven witnesses, including Walton, saw a saucer-shaped object hovering over the ground approximately 110 feet away, emitting a high-pitched buzz. Walton, seated in the front passenger seat, left the truck and approached the craft. Despite his friends' warnings to come back, he stood in front of the object. Suddenly, a bright blue light beam shot out, hit him in the chest, and knocked him back 10 to 15 feet onto the ground. His friends, fearing for their lives, drove away in panic.

After several minutes of distancing themselves from the dangerous craft that had shaken Walton to the ground, Walton's friends regained their composure and decided to return to the site. However, when they arrived, Walton was nowhere to be found. His disappearance triggered a massive search effort that involved many people, police, tracking dogs, helicopters, and horseback riders. Despite the extensive search, no trace of Walton was found for five days.

For five days, the authorities could not exclude that Walton had been murdered by his coworkers. He eventually turned up unshaven and dehydrated and made a phone call from a payphone. This sparked media attention and a circus-like atmosphere, with UFO researchers descending upon the area.

Walton claimed that during his abduction, he woke up in a hospital-like room with three short, bald creatures. Later he changed location by leaving a small craft into some sort of mothership or hangar. A "man" in blue uniform with a helmet brought him into a room with other human-like beings without helmets who tried to push him over to a table where they put a mask over his face. No verbal or telepathic communication took place. The next thing Walton knew, he was on the ground on Earth with the craft taking off above him [132, 488–490].

Walton wrote a book about his experiences [488] and made several appearances on talk shows [369].

Skeptics view the Travis Walton abduction case as a hoax perpetuated by a credulous media circus. Walton allegedly exploited his publicity to make money. Klass, a UFO skeptic, pointed to alleged discrepancies in Walton's and his coworkers' accounts. Klass also reported that the polygraph tests were poorly administered and that Walton used countermeasures during the test. Clancy speculated that Walton may have been influenced by the NBC television movie called "The UFO Incident." The movie aired two weeks before Walton's claimed abduction and dramatized the claims of Barney and Betty Hill. After the airing of the movie, there was a rise in alien abduction claims. Clancy concluded that Walton's narration made him an instant celebrity.

8.5 Different types of experiences and abductions

8.5.1 Individuals having sightings versus experiencers versus abductees

Estimating the percentage of individuals who have encountered a “hard case” UFO/UAP sighting—one that cannot be easily dismissed as being due to ordinary phenomena or causes—is a complex task. On the one hand, numerous sightings go unreported due to various factors such as:

- neglect or disinterest,
- fear of ridicule.

On the other hand, a significant portion of these reports may be mere fabrications, created by individuals who:

- seek to exploit public interest for personal gain,
- have a strong desire to feel extraordinary and find meaning in their otherwise mundane lives.

Consequently, distinguishing between credible sightings and hoaxes or misidentifications proves to be challenging.

Furthermore, it is still unclear what percentage of individuals, also known as experiencers, have had a profound encounter, which is typically accompanied by an “ontological shock,” as discussed in Section 8.6. Such an encounter goes beyond a simple sighting that may have little impact on the individual.

A third category of deep experiencers consists of the so-called abductees, individuals who claim to have been abducted by extraterrestrials. The number of people identifying as abductees remains uncertain. Although differentiating between alleged abductees and alleged experiencers may appear challenging, Jacobs [46] posits that an individual is typically either one or the other, with few cases falling in-between. A 1992 estimate [139,220] suggests that approximately 2% of Americans may have experienced the UFO Abduction Syndrome. Don Crosbie Donderi asserts that he can use a questionnaire to determine with a high degree of accuracy whether a person has actually been abducted [140].

Allow me to clarify that I have not had any such experiences myself, and I do not intend to engage in debates regarding the factuality of these experiences or abductions [399]. My stance is that many individuals who claim to have had an experience and cannot be easily dismissed as profiteers or hoaxers likely have a genuine experience that should be treated seriously in an epistemic manner, though not necessarily in an ontic sense. In other words, this discussion focuses on experiences rather than facts. While factuality is important, it remains uncertain and highly questionable.

8.5.2 Time and situation of abductions

I believe that, just as in cases of UFO sightings, it is of great importance to separate the wheat from the chaff, to sort out actual abductions or close encounters with aliens

(if they exist) from more prosaic experiences such as nocturnal sleep paralysis or false memories.

However, while it is rather likely that a high percentage of claimed nocturnal encounters with aliens might result from symptoms of sleep paralysis interpreted as alien abductions, some of them might actually be caused by aliens. Daytime experiences—with people experiencing “missing time” and being transferred to different locations than their pickup positions—might be an entirely different sort.

In any case, my impression is that there is a divide between people who are “experiencers” of some sort—some of whom claim to have occasionally or regularly seen some “glowing orbs,” others who claim to have stumbled upon some craft, sometimes even with inhabitants, and others who claim to have been forced into an alien craft—and “other folk” (like myself) who have had no such experiences.

My observation is that experiencers feel very strongly about the existence of an alien presence, even if the experience took place a long time ago or is sporadic. It is as if they need no further proof, and skepticism by non-experiencers appears totally inappropriate to them. It is almost as if they were trying to explain color to the color blind.

Whatever these “experiences” or “abductions” may be, my feeling is that they have not been taken seriously in the medical community. Schizophrenic or psychotic mental conditions may cause some of these. Likewise, post-traumatic stress disorder can result, similar to what occurs in situations of war or terrorism. I am not suggesting that all cases can be explained by mental conditions, or that they are alien-induced; although one should not a priori rule out such causes.

Many individuals affected by such incidents require assistance but are not adequately supported by psychologists, psychiatrists, or society. They deserve empathy and a greater understanding from us, and this process may eventually also help “us”—the majority—to understand ourselves better.

8.6 Ontological shock

Ontological shock refers to an experience that challenges one’s understanding of reality, causing disruption. This can be a profound and unsettling experience that requires individuals to re-evaluate their long-held beliefs and assumptions.

John E. Mack, a Harvard psychiatrist, worked with patients who claimed to have experienced ontological shock related to UFO encounters. Specifically, these individuals believed that their experiences of being abducted by aliens were genuine and that their perception of reality had been forever altered. Initially, many of these patients approached Mack with what they called “vivid dreams,” which Mack referred to as denial. Mack used hypnosis to help his patients overcome this denial and accept their experiences as genuine [305, 376].

8.7 Sleep paralysis may account for a large number of “abductions”

Nocturnal UFO abduction experiences are frequently described as people being taken against their will by extraterrestrial beings and subjected to various physical and psychological examinations. These experiences are typically reported by individuals who claim to have been abducted by aliens and often involve vivid hallucinations and a sensation of being paralyzed or unable to move.

Therefore, it has been suggested that “alien abductions” have a mundane explanation, such as sleep paralysis [61, 219]. During sleep, the body becomes paralyzed as a protective measure to prevent injury. However, it is possible to fall asleep or wake up while still in a paralyzed state, leaving the person incapable of movement. During an episode of sleeping paralysis, an individual may also experience vivid hallucinations and an intense sense of fear or anxiety.

When this happens, people may experience hallucinations that seem real but are actually a product of their imagination. Sleep paralysis is a common experience, affecting approximately 25% of people worldwide, and approximately 5% of people experience a very dramatic form thereof—that is, they also have hallucinations involving their sense of sight, sound, touch, and even abduction experiences. Some of them become obsessed with seeking an explanation for it, which can lead them to adopt unscientific explanations [426].

Furthermore, a study found that adults who reported memories of childhood sexual abuse, whether repressed, recovered, or continuous, were more likely to experience sleep paralysis than a control group without such experiences [317]. Sleep paralysis may be linked to irregular sleep patterns, stress, and even certain medications [416]. It has also been suggested that “many of the frequently reported particulars of the abduction experience bear more than a passing resemblance to medical-surgical procedures and propose[[d]] that experience with these may also be contributory” [165].

However, it may be more than that. This group of “pseudo-abductees” might find depth and meaning in their lives through “alien communion.” In her book, “Abducted” [61], Susan A. Clancy suggests that those who claim to have been abducted by extraterrestrials are not mentally ill but rather intelligent individuals who have formed false memories due to a combination of nightmares, exposure to alien-related media, and a desire for something greater than science can provide. It gives their lives meaning [173], a glowing light of orientation and proof of the experiencer’s exceptionalism in an otherwise dreary life. For these individuals, the experience of abduction can be transformative and meaningful. Clancy’s book delves into the intricacies of memory and the nature of belief.

8.8 The sexual connotation: arousal and rape

There is a sexual component to abduction that Mack acknowledged in “Abduction” [305]. Mack writes, “the reported intrusive sexual and reproductive procedures that are a central aspect of the abduction phenomenon can profoundly affect the intimate life and general well-being of abductees.”

In his book “Communion: A True Story” [429]—whose title page shows an archetypical “gray alien”—Whitley Strieber observes almost romantic feelings toward aliens as follows: “To me this is a woman, perhaps because her movements are so graceful, perhaps because she has created states of sexual arousal in me, or maybe it is simply the memory of her hand touching the side of my chest one time, so lightly and yet with such firmness.” He also mentions that “in recent years, many of the taken have reported having sexual experiences with the visitors.”

Strieber also mentions a notable case of a sexual encounter with an extraterrestrial that occurred in Brazil in 1957, where a farmer drove his tractor at night in one of his fields. The tractor suddenly died, and he allegedly saw an object that had landed in front of him. He was stripped, washed, taken inside the object and left on a table. Later, he saw a woman, resembling a human—her hair being blond and parted in the center, with an extremely wide face, blue and slanted eyes, thin, nearly invisible lips—entered the room and had sexual intercourse with him. She pointed to her belly and then to the sky and left him.

In one of Strieber’s podcasts with Mack, the latter discusses the connection between sex and alien abductions at some length [430, time=26m30s] and Mack’s quotation of Strieber’s testimony in Mack’s book “Passport to the Cosmos” [306]:

“The sexual part of [[Strieber’s]] relationship [with the beings] has been very complex and very rich and very difficult at times because I’m a married man. I’ve taken marriage vows, which I believe in. To an extent this aspect of it has been thrust on me, and it’s not something I’ve been able to control. If it had been under my control, I would have felt very guilty.” There is a specific alien female with whom [[Strieber]] feels mated. It’s like having a second wife with whom I have a secret relationship [[. . .]] There was never a seduction, [[. . .]] I would wake up in a state of sexual excitement, in mid-intercourse [[. . .]] The physical dynamic is different in the sense that the sensation of intercourse moves through your whole body, and you become totally devoted to it for longer than I do in normal intercourse [[. . .]] as if a level of sexuality I’m normally not involved with is engaged. It’s very, very powerful.”

Nocturnal abductions may not always be enchanting but can be traumatizing. According to David M. Jacobs, a UFO researcher, aliens may be abducting humans and performing invasive medical procedures to learn about the human body, particularly the reproductive system. Jacobs believes that aliens are collecting human sperm and eggs for their own breeding program, which could result in the creation of human-alien hybrid beings.

In a 1994 article in the Los Angeles Times [230], a story is recounted that is similar to approximately 60 stories in Jacob's book "Secret Life: Firsthand Documented Accounts of UFO Abductions" [244]. The story involves Bill, a 42-year-old married medical professional with two children and a devout Christian belief. Bill underwent regressive hypnosis with a hypnotherapist, which led him to believe that he had been abducted by aliens and taken to a spaceship for examination. During the examination, an instrument painfully probed his rectum, and another collected semen from him. Bill described the experience as feeling like he was being raped. Despite not profiting from these claims, the experience has caused strain on his marriage, and he is unable to discuss the topic with his wife.

8.9 Possible psychotic or schizophrenic origins

Psychosis and schizophrenia are medical conditions that can lead to changes in a person's thoughts, emotions, and behavior. Psychosis refers to a state in which a person loses touch with reality and may exhibit symptoms such as hallucinations (seeing or hearing things that are not there) or delusions (fixed, false beliefs). Schizophrenia is a mental disorder that frequently includes psychosis as a symptom and may also involve disorganized thinking, communication difficulties, and alterations in mood and motivation.

The exact causes of psychosis and schizophrenia are not yet entirely understood, but research suggests that a combination of genetic, environmental, and brain chemistry factors may be involved. While some individuals experiencing psychosis may report hallucinations or delusions involving extraterrestrial abductions or other unusual events, it is important to note that not all such experiences are necessarily caused by psychosis. Other factors, such as sleep deprivation, stress, use of certain drugs, false memories [62], or physical conditions such as sleep paralysis, can also contribute to similar experiences. It is also important to bear in mind that many individuals who report such experiences do not have any underlying mental health conditions [219].

Therefore, it is possible that some of these recollections may indeed be caused by actual extraterrestrial abductions or other strange events, making it challenging to distinguish and cope with [12, 13]. As for myself, I would be uncertain how to categorize such experiences if I were to encounter them.

8.10 Alien subversion?

David M. Jacobs [46, 244–246], a researcher who has conducted many regression sessions with individuals claiming alien abduction, identified patterns in their accounts that formed a classic abduction scenario. He concluded that these experiences were not merely occupations but rather invasions in which the aliens were creating

human-alien hybrids. Jacobs believes that these beings have been coexisting with humans for a considerable time and that hybridization is not a recent occurrence.

Jacobs has also pointed out that the memories of abductees, if not false, may be the only way of "looking into alien craft from the inside."

8.11 Fort's "we're property" hypothesis

There are some darker theories that suggest aliens see us as their property and Earth as their farm. According to these theories, we are nothing more than mere possessions to them, despite our belief in our own independence and free will. Essentially, these theories posit that we are under their control.

Charles Fort, in Chapter 12 of "The Book of the Damned" [166, 167], was one of the first authors to suggest this hypothesis in a secular context. While religions often point this out, Fort proposed this theory back in 1919:

"... that near approach by another world to this world would be catastrophic: that navigable worlds would avoid proximity; that others that have survived have organized into protective remotenesses, or orbits which approximate to regularity, although by no means to the degree of popular supposition."

...

"Would we, if we could, educate and sophisticate pigs, geese, cattle?"

"Would it be wise to establish diplomatic relations with the hen that now functions, satisfied with mere sense of achievement by way of compensation?"

"I think we're property.

I should say we belong to something:

That once upon a time, this earth was No-man's Land, that other worlds explored and colonized here, and fought among themselves for possession, but that now it's owned by something:

That something owns this earth—all others warned off."

...

"Nothing in our own times—perhaps—because I am thinking of certain notes I have—has ever appeared upon this earth, from somewhere else, so openly as Columbus landed upon San Salvador, or as Hudson sailed up his river. But as to surreptitious visits to this earth, in recent times, or as to emissaries, perhaps, from other worlds, or voyagers who have shown every indication of intent to evade and avoid, we shall have data as convincing as our data of oil or coal-burning aerial super-constructions."

...

"Pigs, geese, and cattle.

First find out that they are owned.

Then find out the whyness of it.

I suspect that, after all, we're useful—that among contesting claimants, adjustment has occurred, or that something now has a legal right to us, by

force, or by having paid out analogues of beads for us to former, more primitive, owners of us—all others warned off—that all this has been known, perhaps for ages, to certain ones upon this earth, a cult or order, members of which function like bellwethers to the rest of us, or as superior slaves or overseers, directing us in accordance with instructions received—from Somewhere else—in our mysterious usefulness.

But I accept that, in the past, before proprietorship was established, inhabitants of a host of other worlds have—dropped here, hopped here, wafted, sailed, flown, motored—walked here, for all I know—been pulled here, been pushed; have come singly, have come in enormous numbers; have visited occasionally, have visited periodically for hunting, trading, replenishing harems, mining: have been unable to stay here, have established colonies here, have been lost here; far-advanced peoples, or things, and primitive peoples or whatever they were: white ones, black ones, yellow ones . . .”

Fort’s hypothesis can undoubtedly be considered as wild speculation with seemingly no substantial empirical evidence. I suppose many critical readers might blame me for even bringing it up. However, it may still be worthwhile to include this material for the sake of historical completeness. Additionally, discussing this hypothesis can shed light on the innate human tendency to fantasize and invent stories and devise explanations, regardless of how far-fetched they may appear.

On the other hand, some individuals may argue that Fort’s ideas have not been conclusively disproven, and that their personal experiences lend support to at least some of his speculations. However, we need to recall Carl Sagan’s critical stance on any appeal to ignorance—the claim that “whatever has not been proved false must be true” [399], and that “extraordinary claims require extraordinary evidence” [163, 285, 394].

In Fort’s line of speculation, and similar to Brinsley Le Poer Trench’s “The Sky People” [286], William Bramley’s [44] “Gods of Eden” is a critical look back at human history that starts in ancient times and moves forward, examining ancient texts and relating them (in an almost literary way at times) to the UFO phenomenon in prehistory. He quotes the Bible, interpreting the descriptions of “God” as literal accounts of thundering, smoke, and aerial phenomena that resemble a modern rocketship. Bramley argues that a custodial race—the Others—of advanced beings formed the basis of ancient religions such as the Hebrews, Sumerians, Mayans, and Aztecs.

He claims that these same rulers manipulated and controlled secret societies, religions, and wars to maintain their power and foster violence. Bramley also connects the custodians to modern events such as the Crusades, the Inquisition, the financial system, and revolutions, showing their role in creating a system of economics, politics, and social control based on war and a “strategia della tensione” as Italians call it, a strategy of tension—thereby maintaining control over humanity. According to Bramley, there are no significant events in human history that occur by mere

chance, but rather they are the result of the hidden influence and manipulation of the custodials, the Others.

8.12 Demonology

The reception of the UFO phenomenon could not possibly become any more bizarre: Nick Redfern reports [210, 380] about the mysterious and frightening realm of the alleged “Collins Elite”, a covert group within the US government. This group holds the belief that extraterrestrial life as we know it is actually comprised of deceitful demons and fallen angels, serving as minions of Satan and harvesting humanity’s souls, ultimately leading to the end of the world and the Day of Judgement.

The Collins Elite believes that the extraterrestrial life that we are aware of is actually comprised of demonic entities. The group came to believe that the wave of UFO sightings was the result of these entities coming into our world through portals opened by occult practices.

Their research focuses on the relationship between these entities, UFO sightings, alien abductions, and other paranormal issues such as out-of-body experiences and life after death.

The Collins Elite believes that the ultimate goal of the demons masquerading as aliens is to control humanity through a new world order and enslave humanity by harvesting our souls. The group is allegedly divided on what to do about this situation. Some members have attempted to establish a Christian theocracy to combat the demonic forces. The group fears that publicizing their findings would result in mass panic and hysteria, leading to biblical end times.

Complaints have been made that the Collins Elite in the Pentagon has effectively and successfully blocked research into the UFO phenomenon, for the reasons just explained.

8.13 Alien implants and DNA analysis?

Roger Leir allegedly extracted alien implants from people who claimed to have been abducted and found “objects” in their body [287]. This raises the possibility that the implants are used for monitoring people [132] but thus far, all of these “objects” seem to have mundane origins.

One example of an investigation [292] into an alleged “implant” found that the individual who had it removed was likely struck by a piece of a tool while they were preoccupied with other events. This resulted in a cut that was thought to have healed, but over time, the body developed a reddish lump of scar tissue to isolate the object.

In my opinion, the claims of “alien implants” are either false or a deliberate deception.

The “Hair of the Alien” is a book on the DNA analysis of alleged alien origin [52].

8.14 Connections to psychoanalysis and similarities to Freud's seduction hypothesis

8.14.1 Freud's abandonment of hypnosis

Hypnotherapists have published books on alleged abductions [284, 307, 424] that are directed toward those who feel uneasy and have alleged memories or flashbacks of abduction episodes. It is interesting to compare these and Mack's earlier attempts [305, 306] using hypnosis with Freud's own experiences and methodological transformations. Freud started using hypnosis in his early work as a therapist, but eventually abandoned it in favor of his new method of psychoanalysis, which involved the use of free association and interpretation of unconscious thoughts and feelings. He found that hypnosis was not as effective as he had hoped and that it often led to false memories and confabulations. Additionally, he believed that the talking cure of psychoanalysis was a more direct and efficient way of accessing the unconscious mind.

For these very reasons, I suggest that one should be very cautious when interpreting statements obtained by hypnosis.

8.14.2 Memories of childhood abductions

In 1896, Sigmund Freud presented his revolutionary “seduction theory” in his article “The Etiology of Hysteria,” arguing that acts of sexual abuse and violence inflicted on children are the direct cause of adult mental illness. These ideas were not well received, since they might have implied that many of his clients and patients in “reality” had been sexually abused by their fathers or male relatives—in particular, many colleagues and prominent members of the Viennese society.

Nine years later, Freud completely reversed his position: he blamed his patients for having deceived him on that issue, insisting that these sexual memories were actually fantasies that never happened. He subsequently launched a “fantasy” theory to explain the development of hysterical symptoms without the need for any actual abuses [39, 152, 310].

In his book “The Assault on Truth: Freud’s Suppression of the Seduction Theory,” Jeffrey Masson criticizes Sigmund Freud’s rejection of seduction theory, which posited that many of his patients’ psychological problems were rooted in childhood sexual abuse. According to Masson, Freud initially believed that his patients’ accounts of sexual abuse were true, but later discarded this theory under pressure from colleagues and his own unconscious conflicts. Masson argues that Freud’s rejection of seduction theory marked a turning point in his work and had far-reaching implications for the development of psychoanalysis. The book remains a controversial and widely debated aspect of Freudian scholarship.

The intriguing similarity between Masson's claims and the disregard of supposed alien abductions is that both raise the question of what actually occurred. Did the patients actually experience abductions, or did they succumb to false memories and hysterical delusions?

8.14.3 Some personal observations

I am convinced that we need to be aware that not all experiencers are hoaxers or profiteers, and that what some experiencers share is at least authentic, mind-boggling, and subjectively true. However, this kind of openness and suspended attention should not, under any circumstances, lead researchers to unquestioningly accept the factuality of these narratives and memories.

Likewise, experiencers need to be aware that their memories and experiences may not be entirely factual. These mental contents can be interpreted in various ways:

- they might be (partly) imagined and fantasized,
- some profound trauma may have been translated or transferred by the mind to an alien context,
- or they might not be imagined at all, but have actually occurred to that person in some form.

In any case, it is crucial to strive for a rigorous and empirical approach when investigating anomalous experiences. One effective way to do this is to augment, falsify, or corroborate such experiences with physical sensors, such as infrared, radar, or visual sensors. By doing so, we can attempt to establish a correlation between these objective measurements and the subjective experiences reported by individuals.

However, simply not believing, laughing at, or distrusting genuine subjective experiences by experiencers is, in my opinion, an inadequate response. Many experiencers seem to be very much afraid—almost ashamed—to talk about their experiences. This hesitancy might also be due in part to the attempt to self-repress such experiences, as a way to cope with the ontological shock that comes with them. Indeed, if they told these stories out loud to the world, this would document their own (maybe involuntary) difference, or even strangeness, which might be a challenge both to them and also to their peers and the religious or secular societies they live in.

Therefore, I would suggest creating friendly spaces and environments so that nobody is afraid to recount their extraordinary, sometimes very strange, and highly personal stories. Additionally, maintaining a critical scientific attitude that offers clinical psychological help and interdisciplinary research into these matters seems essential.

Chapter 9

Crash retrievals and UFO materials

Abstract In this speculative and possibly fictional chapter, the authenticity of two crash retrieval accounts is uncertain: Corso's alleged experiences with the Roswell incident and beyond and the alleged notes taken by Eric Davis from a meeting with Admiral Wilson. These accounts, akin to Rosetta stones, are used to understand the relationship between the “canonical normalcy” of the world and secret black ops programs related to alien technology. If genuine, they imply that the US industrial-military complex has tried to comprehend and replicate technology from recovered alien craft to gain supremacy over competitors on Earth, as well as to deal with the possibility of alien domination. This interpretation would, if correct, create a modified version of history after the Trinity test. One implication is that extraterrestrial crash materials and attempts to recreate alien vehicles are likely to be found in carve-out unacknowledged special access programs with precarious Congressional oversight.

9.1 Caveat

This chapter presents two potentially authentic but highly speculative and unconfirmed accounts of events related to crash recoveries: the Roswell incident and a meeting with Admiral Wilson. These accounts offer insight into secret programs aimed at recovering, understanding, and replicating alien technology, as well as the US military and industrial complex’s attempts to cope with the potential superiority of aliens and the technological advancements that may have been gained from recovered crafts. If true, these accounts suggest a revisionist history in which the US has sought to adapt to the presence of extraterrestrial beings.

It is important to note, however, that these accounts, particularly Corso’s story and the Wilson Memo, are speculative and may be purely fictional. They are highly controversial and have not been independently verified. Therefore, it is crucial to approach such claims with skepticism and evaluate the credibility of the sources and evidence presented. Additionally, it is not uncommon for individuals to make false or

exaggerated claims, particularly in the context of controversial or sensational topics such as UFO sightings and alleged recoveries of alien technology.

9.2 Missing artifacts from ancient aliens

Although it is not possible to say exactly how certain objects from ancient times—such as the pyramids in Egypt—were built, there are plausible scenarios that make it seem at least possible that these objects could have been constructed with the technology and tools available at the time of construction [15, 16].

The same can be said about specific objects or groups of objects, such as granite masonry with almost perfect joints and obelisks, such as the Serapeum of Saqqara. Nothing points to extraterrestrial help; their origins appear prosaic [14–18].

There may be artifacts, such as grave goods, that surpass the materials of the Bronze Age. For instance, an iron dagger was found in the tomb or mummy of Tutankhamun, but it was later determined that it was probably made from meteorite iron that was processed [311, 494, 495]. Additionally, there was recently a discovery near the Red Sea that included records dating back to the time of the construction of the “Cheops Pyramid” under Khufu [438–440], which revealed diligent bookkeeping of stones and ships involved.

Therefore, despite esoteric myths and grandiose claims to the contrary, there are no reliable indications of any “nonprosaic, exotic, out-of-time” agents in human history. Of course, one could never exclude that the “Nazca Lines” are signs directed toward “real” compared to “projected” aliens; they may well be. However, at the moment, from published records, there is not a single artifact or fact that would indicate the presence of “ancient aliens” from any material objects and that could not have been created by a lot of people and “a lot of sweat.”

9.3 Why do UFOs crash? How common are crashes?

The obvious question of “why do UFOs crash?” has not been definitively answered. This is even more pressing given that, if the extraterrestrial hypothesis is correct, these crafts might have to master physical environments of a much harsher type than the situation on our planet.

Some, such as William Bramley and Richard Dolan, point out that, in comparison to their overall activity, only a tiny fraction of UFOs crash. This might be analogous to plane crashes: most of the time, planes do not crash, but occasionally they do.

Bramley [44, pp. 18–19] estimates the chances of finding crashed ancient alien craft based on statistics from the Federal Aviation Administration. He assumes that if aliens had the same safety record as commercial jet aircraft, then there would be approximately one serious accident per one million flights. With the assumption that 2000 alien flights occur every year, which is approximately 5–6 per day,

Bramley calculates that there would be only one crash or significant debris every $1000000/2000 = 500$ years, that is, every five centuries. Of course, assuming more flights per day, such as 500 per day, would result in approximately one crash every $1000000/(500 \times 365) \approx 5\text{--}6$ years. Bramley concludes that, even if extraterrestrial crafts have been flying in our skies for a long time, finding wreckage or debris is unlikely, and the best evidence we might have of their existence is eyewitness testimony.

Another option is that UFOs cannot deal with very specific situations, such as some types of radar pulses or with electromagnetic (or other, hypothetical) pulses released during nuclear tests. A third option is “gifting;” just as US troops gifted items or food, or left behind things too difficult to remove, to indigenous populations in Melanesia during WWII, UFOs might come down on purpose, maybe to foster our technology.

I find the first theory plausible, but my confidence is weak. Of course, if there is no crash retrieval going on, then the entire issue disappears into thin air.

9.4 Can UFOs be downed by electromagnetic pulses?

“Operation Dominic” was a series of 31 nuclear test explosions conducted in the Pacific in 1962. Within this larger series of tests, “Operation Fishbowl” consisted of five high-altitude tests, and “Starfish Prime” was one of them.

On July 9, 1962, the United States detonated the Starfish Prime nuclear bomb in outer space as part of Operation Fishbowl. The explosion, with a yield of approximately 1.4 megatons, occurred at an altitude of 250 miles (400 km) over a point 19 miles (31 km) southwest of Johnston Atoll, approximately 700 nautical miles (1400 km) west of Hawaii. The test aimed to study the effects of nuclear explosions in space on the Earth’s magnetic field and determine whether such explosions could be used as weapons against the Soviet Union. The explosion generated strong electromagnetic pulses that caused auroras to be seen across the sky and resulted in electronics failing in the Hawaiian Islands. Additionally, the explosion created an artificial radiation belt that persisted for several years.

According to some unconfirmed reports and eyewitness accounts, the incident also resulted in a UFO fallout [351, Chapter BDM - EMP, pp. 64f]. In Elizondo’s words, the UFO came down like a brick [239, time = 38 min 44 sec].

9.4.1 Personal account of a sailor

Dolan quotes an unconfirmed eye witness called David, who gave another recollection of maybe a similar event [134, time = 22:08 min:sec]:

"Lo and behold, what appeared in the sky—what I saw—was a huge cigar shaped object coming toward us at ten degrees and approximately 15–20 degrees off the horizon. It looked like it was two football fields in length. It appeared to have some kind of blue glow at the stern [[its back side, Dolan: at its rear]] as it was moving past us at a moderate rate. My judgment is that it had to be traveling at at least 400 miles per hour. When it reached directly in front of us, it picked up speed. It just went from there to gone."

David Noble Whitecrow also recalls that during such tests, UFO sightings, both underwater and above sea level, were quite common, but they usually vanished shortly before the tests. David appeared in another series of interviews [345, 346] with his full name and gave a similar, more detailed account [346, time = 1:09:55 hour:min:sec]:

"the order came from the bitch box—that's that overhead ships command speaker—the order came for all hands on the starboard side to look 90 degrees shift eyes forward 90 degrees off the starboard side and observe in silence, tracking visually what you observe in every detail [...] dead silence, the surrounding side of the ship and the sea vanished, the huge object approaching the Finch off the starboard bow was not of this world [...] I went into brain freeze—I can only recall [...] the moment in time as I watch this immense unidentified object move downrange in the opposite direction of the Finch [[USS Finch, DER 328, a radar picket escort vessel David was on]] and it was like the fuselage—two football fields in length without props, jet engines, or wings—slowly moving down. It was so immense I thought at the time why doesn't it fall, why doesn't it go into the ocean? [...] I first caught the sight of the object. It did not resemble any logical airborne aircraft that I could recognize, I've been taught to recognize, as a lookout. I had been trained to recognize as a watchstander surface ships [...] military or commercial aircraft in sky watch experience. Silence was broken by a whisper. I could hear someone comment 'what the f-u-[] is that?' The opposite charge of the group—he broke ranks and ordered us to report to the ship's galley, for further instruction—before the strange objects slipped downrange toward the horizon I caught a short slight glimpse of the UFO as it slipped out of sight downrange vanishing at the point of the horizon."

"We were ordered to the ship's galley by twos and we sat at the ship's galley tables by twos in order to sit and remain until ordered to the ship's personnel office, which was down below the [?] deck."

"I was still trying to make some sense of what I witnessed on deck moments before. No one had a good answer before ordered to remain silent until our names were called to report to the personnel office."

"The debriefing [...] in it was my turn to describe what I have seen and witnessed the strange object, and I don't think a stenographer could keep up

because the agitation and the gargle and the confusion and our thoughts and words just didn't make sense—we had nothing to relate it to—and so I just came out and said: ‘the strange object approached at a very slow speed [...] I mean for its size and shape. For a short time I watched [[it]]—and maybe a minute to a minute and a half. I wondered how could this huge cigar shape stay up so high [...] above the sea. That was my first thought. I could tell it was whitish in color without markings. It was a cylinder with a smooth round front nose, like a gigantic cigar tube—you know the aluminum cigar tubes [...] Only long—about one and a half to two football fields in length—and I'm just using that as a gauge because I used to watch football. It was long, okay, and it was like 10 to 15 degrees above the horizon, above [...] the sea surface.’ ”

David recounted a story about a military diver who had been tasked with searching for and exploring a sunken UFO. The diver was carried down to the ocean floor and quickly realized that there was a gigantic translucent object behind him. He made a slow 180-degree turn and faced the object, following instructions to get close to it and touch or kick it. He tentatively put his hand out to touch it and discovered that the object was not solid but was instead organic, resembling a gigantic jellyfish or sponge with a honeycomb-like surface. As soon as his hand penetrated the surface, he got the subjective impression that the object was going to “suck him in.” Although the object did not actually pull him in, he grew increasingly nervous and began to panic. He could see “alien” figures moving inside and shining through the illuminated object. When he finally surfaced, he vomited into his diving suit.

Because of his condition, the diver was flown to a military hospital in Hawaii. He later heard rumors from sailors who had remained on his ship that the US, along with other nations such as Russia, the UK, and France, had attempted to salvage the huge object he had encountered underwater. This cigar-shaped object was most likely the same one that David had seen drifting by the Finch just days before. At one point during the night, the object began to glow brightly inside the water, much like a neon tube. It then moved carefully so as not to damage the surrounding ships above and quickly disappeared beneath the water’s surface [346].

Years later, David and the diver accidentally met at a bar in Guantanamo Bay, commonly referred to as “Gitmo.” The diver told David that he had been working on a book about his encounter with the cigar-shaped craft. Unfortunately, he never realized his plan because he was electrocuted in the bathroom just a week before his retirement. Prior to this bizarre incident, the diver’s personal yeoman, a sort of secretary, was killed in another skateboarding accident. This nerd-like person had been typing up a transcript based on the loose leaf papers, binders, and sketches that the diver had made [346].

9.4.2 UFO coming down like a brick

Here are excerpts from a transcribed [350, pp. 69,70] conversation between James Iandoli and Luis Elizondo [239, time = 38:19 min:sec]:

Iandoli: "Just one crash retrieval case I don't hear talked about much: Starfish Prime. . . They were doing a nuclear test to explode a nuclear warhead in space. And allegedly something crashed in the ocean. And it was retrieved." Elizondo: "... There may be some significance to EMPs [[electromagnetic pulses]]. . . This is at this point pure speculation, based on some potential observations made in the past. There may be some truth that an electromagnetic pulse of energy can interfere with whatever this technology is and its propulsion. And if it interferes with it, then you now . . . have a very interesting scenario where whatever is keeping these things up in the sky . . . it no longer does that. . . And so now all of a sudden, if you will, the bubble pops. And so all of a sudden comes crashing down this object that has no wings, no tail, no ailerons, no obvious signs of propulsion. And now it really does become a brick. And that brick falls. Now all of a sudden, gravity has a say and Mother Nature takes over. And that's probably all I'll say about that right now."

The search for the downed UFO was also reflected in "Sekret Machines Book 2: A Fire Within" by Tom DeLonge and Andrew James Hartley [117]. In this fiction, a second UFO appeared that vaporized the wreckage that had fallen with precise stabs of energy.

9.5 Smith memo

Wilbert Brockhouse Smith, a Canadian government official and electrical engineer, developed an interest in unidentified flying objects (UFOs) in the late 1940s after reading newspaper reports about them. These reports followed the 1947 Roswell UFO incident and the attention being given to the US military's projects Sign and Grudge, which were related to UFO sightings [208].

In 1950, Smith traveled to the US and met with Dr. Robert Irving Sarbacher, an American physicist, a student of Einstein, and a defense consultant, at a radio broadcasting conference in Washington DC. According to Smith's notes, Sarbacher told him that UFOs were real, that the subject was the most highly classified in the US government, even more so than the hydrogen bomb, and that the technology used in UFOs was so advanced that the US government had not been able to replicate it. Sarbacher also claimed that UFOs did not originate from Earth. The reason for Smith's meeting with Sarbacher and the specifics of their conversation are not clear. However, it is believed that this meeting had a significant impact on Smith's views on UFOs.

The following document [423], written by Smith on 15 September 1950, is about his interview with Sarbacher. It can be found in the archives at the University of Ottawa as part of the Arthur Bray fonds. This document is believed to be a recollection of the interview, written by Smith after their meeting, rather than an official document. The document is not part of the national archives collection. Arthur Bray, an independent researcher of UFOs who became interested in Smith's story after the engineer's death, self-published two books about UFOs and mentioned Smith and his work in them. He obtained Smith's personal papers, which included copies of official documents from the Department of Transportation or their drafts, from Smith's widow and later donated his collection of materials on Smith to the University of Ottawa:

Smith: "I am doing some work on the collapse of the earth's magnetic field as a source of energy, and I think our work may have a bearing on the flying saucers.
Sarbacher: "What do you want to know[?]?"
Smith: "I have read [[Frank]] Scully's book [[“Behind the Flying Saucers”]] on the saucers and would like to know how much of it is true."
Sarbacher: "The facts reported in the book are substantially correct."
Smith: "Then the saucers do exist?"
Sarbacher: "Yes, they exist."
Smith: "Do they operate as Scully suggests, on magnetic principles?"
Sarbacher: "We have not been able to duplicate their performance."
Smith: "Do they come from some other planet?"
Sarbacher: "All we know is, we didn't make them, and it's pretty certain they didn't originate on the earth."
Smith: "I understand the whole subject of saucers is classified."
Sarbacher: "Yes, it is classified two points higher even than the H-bomb. In fact it is the most highly classified subject in the U.S. government at the present time."
Smith: "May I ask the reason for the classification?"
Sarbacher: "You may ask, but I can't tell you."
Smith: "Is there any way in which I can get more information, particularly as it might fit in with our own work?"
Sarbacher: "I suppose you could be cleared through your own Defense Department and I am pretty sure arrangements could be made to exchange information. If you have anything to contribute we should be glad to talk it over, but I can't give you any more at the present time."

However, the context surrounding Wilbur Smith's meeting with Sarbacher is unclear, as this handwritten note [423] is prefaced with the following line: "Notes on interview through Lt/C. Bremner with Dr. Robert Sarbacher." This suggests that Smith may not have spoken personally with Sarbacher, but rather passed on questions to the scientist through Bremner, who was a defense attaché at the Canadian embassy

in Washington D.C. It remains unclear whether Smith actually met with Sarbacher in person or communicated with him through intermediaries such as Bremner.

On November 21, 1950, Smith sent a memorandum [422] on the letterhead of the Canadian Department of Transportation to the Controller of Telecommunications. The memo discussed Smith's thoughts on flying saucers and mentioned that he had had a meeting with a well-known American scientist. Smith had arranged this meeting through "discreet enquiries" made by the Canadian embassy staff in Washington. During the meeting, Smith reported that he had received the following information:

- a. "The matter is the most highly classified subject in the United States Government, rating higher even than the H-bomb."
- b. Flying saucers exist.
- c. Their modus operandi is unknown but concentrated effort is being made by a small group headed by Doctor Vannevar Bush.
- d. The entire matter is considered by the United States authorities to be of tremendous significance."

[[In this memorandum Smith also states:]] "I was further informed that the United States authorities are investigating along quite a number of lines which might possibly be related to the saucers, such as mental phenomena, and I gather that they are not doing too well since they indicated that, if Canada is doing anything at all in geo-magnetics, they would welcome a discussion with suitably accredited Canadians."

This is remarkable, as such information was not mentioned in the aforementioned note quoting Sarbacher. It remains unclear on what basis Smith made those remarks.

Several individuals attempted to locate Robert Sarbacher, who was living in Florida at the time [131]. UFO investigator William Steinman was successful in reaching Sarbacher and had several phone conversations with him. As a result, Sarbacher wrote a two-page, single-spaced typed letter detailing his meeting with Smith. In this letter, dated November 29, 1983, Sarbacher confirmed the following [405]:

- 1. "Relating to my own experience regarding recovered flying saucers, I had no association with any of the people involved in the recovery and have no knowledge regarding the dates of the recoveries. If I had I would send it to you."
- 2. Regarding verification that persons you list were involved, I can say only this: John von Neuman was definitely involved. Dr. Vannevar Bush was definitely involved, and I think Dr. Robert Oppenheimer also.
My association with the Research and Development Board under Doctor Compton during the Eisenhower administration was rather limited so that, although I had been invited to participate in several discussions associated

with the reported recoveries, I could not personally attend the meetings. I am sure that they would have asked Dr. von Braun, and the others that you listed were probably asked and may or may not have attended. This is all I know for sure.

3. I did receive some official reports when I was in my office at the Pentagon but all of these were left there as at the time we were never supposed to take them out of the office."

[[On the second page of his letter Sarbacher writes:]] "I recall the interview with Dr. Brenner of the Canadian Embassy. I think the answers I gave him were the ones you listed. Naturally, I was more familiar with the subject matter under discussion, at that time. Actually, I would have been able to give more specific answers had I attended the meetings concerning the subject. You must understand that I took this assignment as a private contribution. We were called "dollar-a-year men". My first responsibility was the maintenance of my own business activity so that my participation was limited.

About the only thing I remember at this time is that certain materials reported to have come from flying saucer crashes were extremely light and very tough. I am sure our laboratories analyzed them very carefully.

There were reports that instruments or people operating these machines were also of very light weight, sufficient to withstand the tremendous deceleration and acceleration associated with their machinery. I remember in talking with some of the people at the office that I got the impression these "aliens" were constructed like certain insects we have observed on earth, wherein because of the low mass the inertial forces involved in operation of these instruments would be quite low.

I still do not know why the high order of classification has been given and why the denial of the existence of these devices."

Sarbacher led researchers to another individual, Eric Walker [133]. Walker was a significant figure who served as the president of Penn State University and headed one of the most influential military think tanks in the country, the Institute for Defense Analyses. He was also a friend of President Dwight Eisenhower and was still alive at the time of the investigation. According to Steinman, Walker confirmed the existence of crash retrievals and recoveries of bodies and attended meetings on the subject. He also verified the existence of an organization similar to MJ-12. However, he warned Steinman to stop his investigation and leave the matter alone, stating that it was an area that could not be pursued.

Smith claimed to be in regular contact with an alien called "Affa", receiving alien artifacts from the US government and having mastered anti-gravity.

9.6 Corso's memories

What follows are speculations and fantasies. This brief review concerns unconfirmed memories of Philip James Corso, a former US Army officer who served in various positions within the military, including as a member of President Dwight D. Eisenhower's National Security Council. Corso is known for his claims about his involvement in the alleged recovery of extraterrestrial technology. In 1997, Corso copublished a book called "The Day after Roswell" [94], in which he claimed that he had played a key role in the distribution of some of that technology into various military and civilian applications. This would be similar to the exploitation of recovered foreign technology, as Corso became Chief of the Pentagon's Foreign Technology desk in 1961 and was a Special Assistant to Lt General Arthur Trudeau, who headed Army Research and Development.

It is unclear to me what Corso's original statements in the book "The Day After Roswell" were as he coauthored the book with Birnes. Birnes' status is mentioned as "with" on the book cover. There exists another, apocryphal account [93]. However, the authenticity of this second account remains unclear.

9.7 Stalin's craft

At this point, I would also like to mention another highly speculative account of the Roswell incident mentioned in Annie Jacobsen's book "Area 51: An Uncensored History of America's Top Secret Military Base" [247]. Jacobsen's story is about five EG&G engineers who, as told by one of them, claimed that the federal government did not officially acknowledge the existence of Area 51 due to a program related to the Roswell crash remains, which predated the establishment of the CIA facility, constructed in 1955.

According to this narrative, the name "Area 51" is not arbitrary but rather refers to the transfer of the Roswell crash remains from Wright-Patterson Air Force Base to a secret location in the Nevada desert in 1951. The crashed craft had been sent by Stalin with Russian writing imprinted on its interior. It had been the main focus of the project at Wright-Patterson Air Force Base. The secret behind the craft's ability to hover and fly had remained a mystery. As a result, Vannevar Bush instructed the team to reverse engineer the craft, taking it apart and reassembling it in an effort to discover its flight capabilities. Allegedly, that problem was solved.

9.8 Wilson notes

The following assumptions remain officially unconfirmed and speculative. Indeed, the authenticity of this narrative has allegedly been denied by Admiral Thomas Ray Wilson. Wilson himself called the notes "fiction" and stated, "I wouldn't know Eric

Davis if he walked in right now” [101, 102]. If, however, the subject is authentic, this has profound consequences, the weight of which cannot be overestimated.

9.8.1 Context

The Wilson UFO Leak refers to a set of 13 pages, known as the Wilson notes [108], which were written by Dr. Eric Davis in 2002 about an alleged meeting with Admiral Thomas Ray Wilson. However, Wilson has categorically denied that such a meeting ever took place [97, Chapters 9, 21, Ref. 9.23] and has also claimed to have no recollection of the other individuals mentioned in the notes [101, 102].

Wilson is a retired vice admiral in the US Navy who served as the director of the Defense Intelligence Agency (DIA) from 1999 until 2002. The DIA is a federal agency responsible for collecting, analyzing, and disseminating military intelligence to support military planning and operations, as well as providing intelligence support to the President, the National Security Council, and other government agencies. Prior to serving as the DIA director, Wilson was the director of intelligence for the joint chiefs of staff and deputy director of intelligence for the joint chiefs. This position, known as J-2, is responsible for managing the collection, analysis, and dissemination of intelligence information, providing guidance and direction to the Joint Staff (JS) on intelligence matters, and serving as the principal intelligence advisor to the Chairman of the Joint Chiefs of Staff (CJCS) and the JS. Wilson retired from the Navy in 2002.

One would assume that J-2 would be privy to “all state secrets” and have access to even the Critical Nuclear Weapons Design Information (CNWDI) to be “on top of the information chain.” However, the Wilson notes reveal Wilson’s frustrating attempts to access certain carve-out/waived special access programs executed by private contractors and dealing with extraterrestrial matters.

The documents were discovered among the personal effects of the late Dr. Edgar Mitchell, a prominent astronaut and MIT-trained aeronautics engineer who was the “sixth man to walk on the moon.” The significance of the documents lies in their confirmation of the existence of US projects related to the study of extraterrestrial technology and beings.

The notes describe an alleged meeting that Wilson previously had with UFO researchers Dr. Stephen Greer, Edgar Mitchell, and others in April 1997 (according to Dr. Edgar Mitchell, it took place on April 9, 1997 [108, p. 1]). In this first meeting—presumably arranged by Dr. Edgar Mitchell—they had discussed UFOs, UFO crash retrievals, and the existence of black budget programs to study the acquired technology. The notes further describe Wilson’s subsequent attempts to locate such program(s) and his subsequent meeting with the “gatekeepers” of at least one program run by a private contractor—probably Lockheed Martin Corporation—that was attempting to reverse engineer an alien spacecraft. Davis and Wilson also discuss UFO and alien-related topics, including the existence of organizations tasked with studying extraterrestrial technology and bodies retrieved from crashed UFOs. The notes also mention the Roswell UFO incident and Area 51.

The Admiral Wilson memo was officially recorded during Congressional hearings in May 2022 [108], giving credibility to previously suspected fake information about UFO/UAP. This information had previously been circulated in various online groups and websites, but is now part of the public record.

There has been some debate over the authenticity of the notes. Many researchers believe that they are genuine. For instance, Christopher Mellon corroborated authenticity by stating that “Dr. Davis, [[is the]] author of the famous Wilson–Davis memo” [321]. He is a former Deputy Assistant Secretary of Defense for Intelligence in the United States government. Mellon served in this position from 1997 to 2002, during which time he oversaw the Department of Defense’s intelligence programs and activities related to national security. After leaving the government, Mellon worked in the private sector as a security and intelligence consultant and has been involved in efforts to investigate and disclose information about unidentified flying objects.

It might not be totally unreasonable to speculate—but far from certain—that, carefully drafted, leaked, and exposed by a certain fraction of persons with some knowledge of the subject matter, the Wilson memo was purposefully intended as a sort of “screwdriver” to open up the can of (reconstructed) crafts and crash retrievals.

9.8.2 Excerpts from the Wilson notes

By now, the reader should be familiar with the categories of the US Department of Defense, specifically carve-out, waived, and unacknowledged special access programs (USAPs). The following excerpts from the Wilson memo are a slightly annotated (annotations marked by double brackets “[. . .]”) walk-through of these notes. Its essential and smoothed thread exposes the most critical issues raised.

On page 6, Eric W. Davis (EWD) asks Thomas R. Wilson (TW): “Okay then, what happened in April–June ’97?”

TW (Wilson) responds: “. . . I made calls, knocked on a few doors, talked to people—went on for 45 days (thereabouts) on and off”

On page 7, TW (Wilson) continues:

- “Suggestion came from Ward (Gen. M. Ward) to go through the records group files (like an index system [[a list of all SAPs]]) in OUSDAT (Office of the Under Secretary of Defense for Acquisition and Technology).
- Ran into Bill Perry [[William James Perry was the US Secretary of Defense from February 3, 1994, to January 23, 1997]] in May ’97—talked about this quietly—he suggested the same thing.
- They told me of a special projects record group not belonging to the usual SAP—a special subset of the unacknowledged/carve-out/waived programs—not belonging to the usual SAP divisions as organized in ’94

by Perry himself—set apart from rest but buried/covered by conventional SAPs.”

...

TW (Wilson): “So found the unusual record group—read the index abstracts [[of those carve-out/waived USAPs]].” ...

On page 8, EWD (Davis) asks: “Change subject: so what SAP compartment did you find yourself in?”

TW (Wilson): “Core secret—won’t say”

EWD (Davis): “Code name?”

TW (Wilson): “Again won’t say—core secret”

EWD (Davis): “Who was the project contractor or USG agency that runs the program?”

TW (Wilson): “An aerospace technology contractor—one of the top ones in US”

EWD (Davis): “Who?”

TW (Wilson): “Core secret—can’t tell”

EWD (Davis): “Defense contractor?”

TW (Wilson): “Yes, the best one of them.”

EWD (Davis): “Intelligence too?”

TW (Wilson): “In their corporate portfolio”

EWD (Davis): “Give a hint?”

TW (Wilson): “Sorry, no.”

Let us suppose for a moment that this “best defense contractor” is Lockheed Martin. This is a mere speculation [136].

EWD (Davis): “What happened when you found contractor?”

TW (Wilson): “I made several calls (end of May ’97), first to Paul [[maybe Paul Garrett Kaminski [101, 136]?]], Mike [[maybe Michael Costanik? Both Kaminski and Costanik may have been members of the previous leadership team of the senior review group [136]]], & Perry [[maybe William James Perry?]] to confirm I had right contractor and program manager to talk to.”

EWD (Davis): “They confirm?”

TW (Wilson): “Yes.”

Page 9 continues with EWD (Davis) asking Wilson: “Then?”

TW (Wilson): “(End of May ’97) Made three calls to the program manager—one of them a conference call with security director and corporate attorney. [[There was]] confusion on their part as to why I was looking for them and what I wanted from them or wanted to know about. Very testy tone from all of them.”

EWD (Davis): “What do you mean? ”

TW (Wilson): “They were agitated about my calling—surprised by call.”

EWD (Davis): “What [[did]] you asked them?”

TW (Wilson): “Yes.”

EWD (Davis): “What was that—what words?”

TW (Wilson): "I told I read their program record in the OUSDAT [[Office of the Under Secretary of Defense for Acquisition and Technology]] special program records group and wanted to know about their crashed UFO program, what their role in that was, what they had, etc. Also asked if they heard of MJ-12 or some such organization code relating to crashed/recovered UFO craft."

EWD (Davis): "Reaction on phone to that?"

TW (Wilson): "Yes! Asked who I talked to before I called them so I told them and they weren't happy with that answer."

EWD (Davis): "You mean about Perry, Paul, etc.?"

TW (Wilson): "Oh, no! I didn't tell them [[that]] I talked to those guys!"

...

On page 10, EWD (Davis) ask Wilson: "What then?"

TW (Wilson): "I told threesome I wanted formal briefing, tour, etc.—was exploiting my regulatory authority as Deputy Director DIA/Assistant Joint Chief of Staff J-2—Told them my not being briefed was oversight they needed to correct—I demanded!"

TW (Wilson): "They needed to discuss this (his demand) so hung up. Got called 2 days later and they said they don't want to talk on phone and arranged for face-to-face meeting at their facility."

EWD (Davis): "Did you go?"

TW (Wilson): "Yes, ten days later (mid-June or so). Flew out there. Met in their conference room in their secure vault. Three of them showed up"

EWD (Davis): "3 guys with whom you had telecon?"

TW (Wilson): "Yes, same 3."

- Security director (NSA-retired, a CI expert).
- Program director.
- Corporate attorney.
- Called themselves "the watch committee," or gate keepers.

On page 11, TW (Wilson) mentions: "[[...]] they weren't going to let me in the door"

EWD (Davis): "Why?"

TW (Wilson): "They said my tickets were all confirmed and valid, but I was not on the bigot list.

- My tickets alone were not enough.
- I didn't meet the special criteria so need to know authorization was not being granted.
- Went back 'n forth with them over these points (primarily with security director & attorney).

Page 12 continues with TW (Wilson): "Argued more—they wouldn't accept my arguments that they fell under my statutory oversight and regulatory authority as Deputy Director DIA—under purview for my right to have need to know (oversight, audit, justification issues, etc., etc.)

- Regulatory and statutory authority as Deputy Director DIA not relevant or pertinent to nature of their program!
- Then they pulled out their bigot list to convince me otherwise—several pages long-dated 1990, updated 1993.”

...

TW (Wilson):

- “Program Manager said they were:
 - o Not any weapons program
 - o Not any intelligence program
 - o Not any special ops or logistics program
 - o Doesn’t fit these categories
- I asked what they were then
- Loud groan from Program Manager
- Security Director and attorney say it’s okay to say it.”

EWD (Davis): “Say what?”

TW (Wilson): “They were a reverse engineering program—

- Something recovered years ago in the past
- Technological hardware was recovered
- So I thought they meant recovered Soviet/Chinese, etc., hardware and reverse engineer it—like a missile or intell platform or aircraft—actually came to meeting expecting to find a sensitive foreign collection and reverse engineering operation—thought “UFOs” used as a cover for that
- So I said that and they said they weren’t that either
 - page 13
- They had (program manager talking) a craft—an intact craft they believed could fly (space? air? water? dimensions?)
- Was it from overseas or not?
- Said NO! Could not be—not possible!!
- Why, I asked: where did it come from?
- Program manager said they didn’t know where it was from [they had some ideas on this]—it was technology that *was not of this Earth—not made by man—not by human hands*
- Said were trying to understand and exploit technology; their program was going on for years and years with very slow progress
- Agonizingly slow with little or no success—painful lack of collaboration to get help from outside community of experts and facilities to assist effort—must remain isolated and use own facilities and cleared personnel—tough environment to work—about 400–800 (bigot list count) workers varying in number with funding or personnel changes
- Miller questions asked:
 - o Roswell—craft/bodies/autopsies
 - o Holloman AFB Landing
 - o MJ-12 and leaked docs

- Zamora & Bentwaters, etc.
- They were mum—declined to discuss these
- TW [[Wilson]] threatened to go to SAPOC [[Special Access Program Oversight Committee]] to complain, gain access to their program
- They said go ahead and do what you must
- I was angry because they defied my authority to be read-in with good logical reason—wouldn't budge
- Their tone was very testy/terse throughout conversation.”

EWD (Davis): “What was outcome?”

TW (Wilson): “Meeting broke up and I returned to Washington”

....

EWD (Davis): “Did you complain to SAPOC [[Special Access Program Oversight Committee]]?” TW (Wilson): “Yes—called the subgroup members (Senior Review Group members) to a meeting at Pentagon

- Told them what happened at meeting
page 14
- They responded that they would sustain the contractor on their access denial
- So I ended up arguing with them a while
- Broke up in 20 minutes and they would meet me in 2–3 days
- Got the call 2 days later (near end of June) and met again with Senior Review Group members”

EWD (Davis): “When?”

TW (Wilson): “Before last week of June ('97)”

- They told me (TW [[Wilson]]) that they were sustaining the contractor, that I was to immediately drop the matter and let it go—forget about it as I did not have purview over their project, it didn't fall within my oversight, etc.
- I became very angry—started yelling when should have kept my mouth shut.”

EWD (Davis): “Miller and Greer said you nearly got busted.”

TW (Wilson): “Close to that!”

....

Why such a big deal over this considering the position of trust I have in the Pentagon—I do have relevant regulatory/statutory authority over their program—that's my position!!!”

EWD (Davis): “Is it because funding comes from you or through you? Or Director DIA?”

TW (Wilson): “Core secret—can't answer”

EWD (Davis): “Back to bigot list—can you describe type of people?”

TW (Wilson): “Corporate types—scientists and technicians, engineers, scientists, managers, etc.”

Page 15 closes by stating that Wilson “[w]ill retire to Midwest and close office in 2003.”

I am not sure of how to read and interpret these lines, but assuming this conversation had actually taken place, it appears more fascinating than a central scene in a science fiction movie: a high-ranking officer being told by his elected masters and an industry contractor to “forget about it” as he “did not have purview over their project.” How must it feel to be told to suppress that the US possesses, analyzes, and reproduces technology that is “not of this Earth—not made by man—not by human hands?” How should we cope with such a possibility?

9.9 A former intelligence officer turned whistleblower

David Charles Grusch, a former high-level UFO/UAP analysis official, has claimed that elements of the United States military, intelligence, and industrial base are withholding core secrets regarding UFO/UAPs from the public [153, 256, 418]. According to Grusch, this includes retrieved intact and partially intact craft of non-human origin as well as the remains of their deceased pilots. Allegedly, other nations have similar programs, and there has been a secret cold war regarding access and exploitation of these non-human artifacts for over eighty years. One of the early purported crashed craft is “Mussolini’s UFO” crashed or landed near Magenta in Lombardy in Italy on April 11th, 1933, which, after a hint from the Vatican, was allegedly transferred to the US after World War II.

On May 25, 2022, Grusch, then a G-15 employee at the National Geospatial-Intelligence Agency (NGA) serving as that Agency’s Senior Technical Advisor for Unidentified Aerial Phenomena (UAP) analysis, successfully [81] filed a “Disclosure of Urgent Concern(s), Complaint of Reprisal” [82] to the Intelligence Community Inspector General (ICIG) through the law firm Compass Rose Legal Group, by its senior partner Irvin Charles McCullough, III, Esq., a former ICIG himself. The complaint states: “He has direct knowledge that certain IC [(Intelligence Community)] elements have purposely and intentionally withheld and/or concealed UAP-related classified information from the US Congress. He has direct knowledge that this classified information has been withheld and/or concealed by the involved IC elements to purposely and intentionally thwart legitimate Congressional oversight of the UAP Program.”

The complaint to ICIG also mentioned a previous confidential complaint by Grusch in July 2021, which provided UAP-related classified information to the Department of Defense Inspector General (DoD IG). It stated that this earlier complaint had been disclosed to individuals and/or entities outside the DoD IG, and Grusch has faced retaliation and reprisals related to it.

Therefore, “consistent with 50 U.S.C. §3033(k)(5)(D)(ii)(I), Mr. Grusch now wishes to directly communicate the classified specifics of his UAP-related Urgent Concern(s) to the US Senate Select Committee on Intelligence (SSCI) and the US House Permanent Select Committee on Intelligence (HPSCI). Accordingly, we

hereby request that your office facilitates Mr. Grusch's direct communication with the SSCI and HPSCI."

In July 2022, the Intelligence Community Inspector General (ICIG) found his complaint "credible and urgent," and according to Grusch, a summary was distributed to the Director of National Intelligence, Avril Haines, as well as to both SSCI and HPSCI [256]. Therefore, it can be assumed that Director of National Intelligence, Avril Haines, and at least some members of both the US Senate Select Committee on Intelligence and the US House Permanent Select Committee on Intelligence have been briefed by Grusch and have knowledge of his UAP-related Urgent Concern(s).

So far, Grusch has not been allowed to share heretofore-related classified information with the public. His account [193] has been backed by other individuals and officials [256,418]. However, it can be assumed that his public account is consistent with the earlier discussed Wilson memo.

9.10 Where would alien stuff most likely reside?

What follows are speculations and fantasies.

Suppose for a moment that the USA was in possession of "alien stuff" and artifacts. Then, ask yourself: how would they be categorized and dealt with? Where would this material be located?

Suppose for a moment that the USA attempted to "process" alien artifacts in a similar manner to Nazi and other Earth-bound (e.g., Soviet) technology. It would not be unreasonable to speculate that early on, the US Air Force would have handled most of these efforts, coordinated by what was then the Air Materiel Command at Wright-Patterson Field, Ohio. From there, the material might have been distributed to various sites in industry and government.

Currently, such material and information, if administered by the DOD, by the Intelligence Community or by the DOE 312 would be buried away in carve-out USAPs, UCAPs or DOE SAPs. That means that they might be passed on to private corporations such as Lockheed Martin or Battelle. If they were in the possession of the DOE, they might also end up in private hands. However, they might have also been locked away in national laboratories such as Los Alamos National Lab (LANL) or Lawrence Livermore National Laboratory (LLNL), or Sandia National Laboratories, a long time ago.

If one believes in Philip Corso's original manuscript [93], he reportedly gave alien artifacts and technology similar to what companies were already working on to these companies for them to analyze for a time. He did not disclose where the technology came from or any other information about it. He asked the companies to pretend that they had developed any ideas or innovations based on the technology themselves and to offer the US military first access to any resulting technology.

Corso claimed that he was told that in some materials that he allegedly recovered and distributed to US corporations and research institutions, the atoms and molecules

were ordered in one direction—like in spider silk—which was unlike anything they had ever seen before [94].

While some technologies that were on the verge of discovery have made some advances, central alien technologies such as anti-gravity or propulsion could not be reverse-engineered, as discussed in Appendix B. This can be attributed to an explanation trap caused by conceptual and theoretical overreach. Without an “alien Prometheus” to explain the semantics and associated scientific principles necessary for comprehending more advanced aspects of alien technology, such technology might have been far too advanced for human science to understand. Human scientists, in their expert pose, may act like shamans explaining an airplane to an indigenous tribe.

Nat Kobitz, the former Navy Director of Science and Technology, told Ross Coulthart [97] that at Wright-Patterson Air Force Base, he saw a piece made out of a titanium alloy not known to the Air Force. Kobitz did not know what the piece was or where it came from. It was approximately three by four feet in size and showed no attachment except for something that appeared to be welded to it. However, this something was actually integral with the material, like a bulkhead to the skin, as if it were cast. According to Kobitz’s expert opinion, there was no known industrial process that could replicate the bond he saw on that curious fragment.

A book by Tom Carey and Don Schmitt [48] suggests that materials from the Roswell crash were first transferred to Wright-Patterson Air Force Base, which was then called Air Force Technical Base. Later, the Battelle Memorial Institute was contracted for the reproduction of a shape-recovery alloy.

Following the alleged 1947 Roswell UFO crash, secret studies on previously unknown material were conducted to examine the debris reported by witnesses. This material is known as “memory metal” or Nitinol, which is a shape-recovery alloy that can instantly return to its original state after being deformed. The studies were conducted by the Battelle Memorial Institute in Ohio under the direction of a metallurgist who also worked on the US Air Force’s official UFO study, Project Bluebook. The article suggests that the discoveries from these studies were then utilized for further technology development by other government agencies and military contracts to universities and industry. It is also suggested that the Wright-Patterson Air Force Base was the location where the Roswell UFO debris was flown after the crash, and the Battelle Memorial Institute was contracted by Wright-Patterson to perform the studies.

9.11 Could we hack ourselves into their database?

An further option to the aforementioned “alien Prometheus” explaining their technology to us personally may be to locate their “computer,” that is, the information storage and handling facility, in a recovered craft. Most likely, this will be guarded and provided by an advanced form of artificial intelligence.

If we were able to access and penetrate it, we might be able to recover its information content—a sort of *encyclopedia galactica*—which would also include their means of propulsion and energy source. But this maybe hopeless: their technology might be so advanced that our own computers would seem like mere abacuses in comparison. Attempting to hack into their systems would be like trying to operate our own computers with an abacus—an endeavor that would highlight the vast technological gulf between our civilizations.

To identify potential storage facilities in a recovered flying saucer, we must first determine its hardware. Given that any such storage is likely to be highly advanced, we can assume that its material layer is also highly complex. This means that the information density stored per unit of material is high, and any memory device would appear irregular and randomly aligned at an atomic level, similar to white noise.

However, this paradoxical feature of highly organized, dense coding also means that the ciphertext appears random in the very precise sense of algorithmic information theory [47]. Informally speaking, it would be algorithmically incompressible, making it difficult to identify using conventional methods.

Therefore, a key criterion to identify storage on a recovered craft would be its disorganized and “amorphous” appearance. By looking for areas of the craft that appear structurally irregular and chaotic, we may be able to locate potential storage devices. Additionally, we could use advanced scanning techniques to analyze the material at an atomic level and identify any areas of high information density. Overall, a multi-faceted approach that combines structural analysis of the material with algorithmic pattern analysis would be necessary to successfully identify and carry out cryptanalysis of storage facilities in a recovered flying saucer.

One argument against the conventional search for extraterrestrial intelligence (SETI) is that any signals emitted by a civilization that are identifiable through conventional analysis might only be detectable for a relatively short period, perhaps just one or two centuries. This is due to the fact that as technology progresses and broadcasts become digitized, the emitted signals tend to approach white noise, making them much more difficult to analyze and decipher. Therefore, traditional SETI approaches that rely solely on detecting narrowband radio signals may not be effective in detecting advanced civilizations that have moved beyond using this type of technology.

9.12 Human “implants” as alien material?

Roger Leir allegedly performed numerous extractions of implants from individuals who claimed to have had abduction experiences and believed these objects to be of extraterrestrial origin [287]. Typically, these implants were smaller than a grain of rice [132]. It would be intriguing to examine these “implants” as potential “alien” materials and subject them to detailed analysis. However, all objects investigated thus far have been found to have mundane origins [292].

9.13 Speculations of a possible involvement of Einstein

9.13.1 Memories of “Einstein’s pet”

I hesitated for some time to include this very speculative addendum to an already very speculative chapter. There have been claims that Einstein was invited to a secret trip to a base—presumably Wright-Patterson Field, Ohio—where the remains of the Roswell crash were being investigated. Allegedly, he took a young female student with him (no affirmative account by Einstein is available): Shirley Wright [521], who later earned two PhDs in physical chemistry and physical science, and still much later recalled her trip with Einstein. In her own description, she called herself “Einstein’s pet,” among a group of students meeting and working with Einstein in the summer of 1947 [43].

Wright gave an unconfirmed oral statement that partially survived due to the flow of information from three UFO research enthusiasts and authors: Sheila Franklin, Leonard Stringfield, and Anthony Bragalia. According to Shirley Wright’s alleged testimony, she saw a badly damaged vehicle—one is reminded of the alleged “tear-drop shaped escape pod” mentioned by Carey and Schmitt [48]. She also recalls having seen five, and in another location nine aliens, at least one of them still alive. Wright was not permitted to enter the disk-shaped vehicle, as in her personal recollection she was only a “goldfish . . . a nobody,” supposed to assist Einstein. The communication with the alien was telepathic. “They wanted to know how long we lived. . . . They were very quick to let us know we did not know anything . . . Why would they come to Earth? . . . One ship he claim crashed in Siberia . . . definitely not from our galaxy . . . I wondered whether somebody playing a terrible untruth to us . . .”

9.13.2 Einstein’s letter of ignorance

In the midst of the 1952 UFO craze (or flap, depending on your preferences), Einstein refused to discuss flying saucers: in a letter dated July 23 [150], 1952, Einstein wrote that “those people have seen something. What it is I do not know, and I am not curious to know.” This is an amazing statement, given the potential impact on his own magnum opus, general relativity.

One might speculate that, at the time, Einstein had already phased out thoughts on general relativity. In 1949, Einstein might also have gotten weary over Kurt Gödel’s 1949 solution to the field equations of general relativity [185], which described a spacetime with some unusual properties. This Gödel universe permitted closed timelike curves, hence, a kind of time travel, and thereby might be seen as not admitting a forward lapse of time by successive moments of time. In the same year, Gödel published “A Remark about the Relationship between Relativity Theory and Idealistic Philosophy” [186] in which he used certain properties of this solution

to argue for a kind of temporal idealism, whereby “it seems that one obtains an unequivocal proof for the view of those philosophers who, like Parmenides, Kant, and the modern idealists, deny the objectivity of change and consider change as an illusion or an appearance due to our special mode of perception.”

Therefore, late in his life, Einstein might have been fully aware of the explanation trap encountered with regard to flying saucers. Indeed, in addition to Manhattan Project celebrities such as von Neumann and Oppenheimer, one might think that Einstein would have been the first to be addressed and called in case of crashed UFOs (maybe in spite of the FBI’s concerns that he might have been a double agent, anarchist, and pacifist).

Part III

**UFO apprehension-and-challenge: Some
speculations**

“Niemand ist mehr Sklave, als der sich für frei hält, ohne es zu sein.”
(No one is more a slave than he who thinks he is free without being so.)
in “Die Wahlverwandtschaften”
by Johann Wolfgang von Goethe [482]

Chapter 10

Are UFOs cargo?

Abstract Cargo cults developed in traditional societies in the Pacific region in response to the introduction of Western technology and material goods. These cults involve the belief that spirits or deities will bring valuable cargo, such as manufactured goods, food, and resources, to believers. The cargo is often incomprehensible to these societies and is considered “magic.” By analogy, it is possible to assume that our society is in a similar situation to these cargo cults relative to alien technology and capacities. This situation is characterized by conceptual, theoretical, and technological overreach, and the affected culture cannot properly comprehend either the context of their situation or the phenomena encountered. As a result, these phenomena may be absorbed into cults and religions.

One ontic way of interpreting UFOs is in terms of the divine. This may have happened with Nossa Senhora de Fátima (Our Lady of Fátima) in 1917 or with Chris Bledsoe’s apparition of The Lady.

A secular way of connecting the UFO phenomenon to religion and God(s) is an epistemic one in terms of cargo cult. Thus, such experiences are transformed into esoteric images. There is a long line of authors arguing along these sober, epistemic lines, including Charles Fort [166], Brinsley Le Poer Trench [286], Carl Sagan [397, Section 5, pp. 495,496], William Bramley [44], Erich von Däniken [480, 481], Tom DeLonge and Peter Levenda [118, 119], and, to some extent, although they seem to remain undecided, Jeffrey J. Kripal [278, 279] and Diana Walsh Pasulka [357].

10.1 Cargo cults

Erich von Däniken has described [480, 481] and, like others [50], visualized [477] the reaction of the local tribes when the US established a base camp in Hollandia, New Guinea, in 1945. The area was bustling with nonstop plane landings and departures, bringing supplies for the Pacific war theatre. The local Papuan bush dwellers observed these activities, which must have appeared “strange” to them. American soldiers distributed small gifts, such as chocolate, gum, old shoes, and

empty bottles, which the natives referred to as “cargo.” The natives eventually ventured to the edge of the runway to watch the large silver planes take off and wished they could fly directly to their tribe. This led to the creation of a “ghost airport” on the island of Wewak with imitated runways and wooden and straw airplanes. The behavior of cult members often included imitating the routines and fashion of American soldiers. This involved conducting parade drills with wooden or salvaged rifles and wearing wooden headphones while sitting in simulated “control towers,” mock “radio stations,” and “isolators” made of rolled-up leaves, and wooden and iron wristwatches. Imitated steel helmets made from turtle shells also appeared. The natives would signal landings by waving flags on the runway and lighting signal fires and torches, to illuminate runways and lighthouses. Additionally, they constructed life-sized airplane replicas made of straw and cleared military-style landing strips in the jungle in the hopes of attracting more aircraft.

Cargo cults [291, 520] are a type of religious movement that has emerged in some traditional societies in the Pacific region. These cults often develop in response to the introduction of Western technology and material goods, and they typically involve the belief that spirits or deities will bring valuable cargo (such as manufactured goods, food, and other resources) to believers.

Relative to the technological status of those societies, this kind of cargo is incomprehensible and “magic” [63]. Sometimes the intended original purpose might be comprehensible, but even in those cases, individuals or groups in those societies cannot comprehend the physical, chemical, and biological principles on which this cargo is based, nor can they, by mere imitation, reconstruct or reproduce such devices.

Imagine, for example, a truck or jeep delivered to a Melanesian tribe. Even if some members of these societies were trained to drive these vehicles, they would not understand why they move, and they would be unable to build one—they would, for instance, lack the metallurgy to build a motor.

10.2 Contemporary cargo cults reflecting alien technologies

It is not entirely implausible to assume that, by analogy, our societies are in a situation similar to that of cargo cults concerning alien technology and capabilities. This situation is characterized by a conceptual, theoretical, and technological overreach described in Section B. The affected culture suffers from an explanation trap, as it is unable to understand the phenomenon as it presents itself.

Charles Fort in “The Book of the Damned” [166], Brinsley Le Poer Trench in “The Sky People” [286], and William Bramley in “The Gods of Eden” [44] discuss ancient civilizations absorbing extraterrestrial visitations in terms of religions and cults. Erich von Däniken quotes the two Soviet scientists, Alexander Petrowitsch Kasanzew and Vyacheslav Saizew, for the conjecture that some (if not a large portion) of our myths and religions are the result of cargo cults based on the observation of extraterrestrial alien visitations [477].

Recently, Peter Levenda and Tom DeLonge suggested very similar hypotheses in a series of books devoted to cargo cults and “the phenomenon” [118,119]. Allegedly, they have been guided by approximately ten [240] “advisers” who are high-ranking military and industrial leaders “in the know.”

Levenda and DeLonge postulate that some aspects of many religions that developed over the ages were reflections of what people saw “in the heavens” and how they coped with these phenomena. This process continues. Both religions and sciences are part of a larger, ongoing cargo cult in which society is dedicated to achieving two goals: travel to the stars and immortality. Levenda and DeLonge also point out that, in July 1952, in the press conference after the Washington DC flyovers, the US Air Force attempted to frame those events in religious terms [119, Footnote 100].

Chapter 11

Are we an unaware participant in some galactic hypercivilization?

Abstract Fermi’s well-known inquiry, “Where is everybody?,” can be explored in the context of the distribution of civilizations within a galactic framework. Some people speculate that, even though it is not officially recognized or proven by science, “they” (i.e., extraterrestrial life) may already be present on Earth. The Zoo Hypothesis suggests that these “Others” may choose to avoid interaction with us and instead monitor our activities from a distance. It is possible that we are not aware that Earth is part of a greater hypercivilization within the galaxy.

11.1 The overall context

I encourage the reader to step out of the contemporary timeframe and consider this universe in a more holistic context as a container for evolving consciousness, and life in very general terms. In that perspective it is almost certain that some form of sentient life form has developed long before us, and will develop long after our current civilization has faltered [344, 412, Chapter 1]. The apparent lapse of time acts like a maelstrom, swallowing up worlds. All civilizations, alien and earthbound, seem to be subject to these very same conditions.

11.2 Galactic expansion

A significant aspect of the ongoing discussion surrounding the existence and prevalence of extraterrestrial life relates to interstellar travel and colonization. Already in 1963 Carl Sagan considered direct contact among galactic civilizations by relativistic interstellar spaceflight, that is, limited and relative to our contemporary means of space travel [397]. In 1975, Michael Hart proposed [204, 205] a “Bostrom-type” argument, according to which interstellar travel would be possible for a technologically advanced civilization, and that migration could spread through the galaxy in a matter

of a few million years. Given that this time frame is short in comparison to the age of the galaxy, he argued that the lack of settlers or evidence of their engineering projects in the Solar System indicates the absence of extraterrestrial life [252]. Therefore, and for the current name possibly misrepresenting Fermi’s position toward the existence of extraterrestrials, it has been suggested to call it the Hart–Tipler argument [188]. A more nuanced analysis by Newman and Sagan [342] came to a different conclusion. For a recent study, I refer to a paper by Beatriz Gato-Rivera [179].

11.3 Where are they?

11.3.1 Origin

In a letter dated October 17, 1984, and published (as a preprint) by Eric M. Jones of Los Alamos National Laboratory [252], Emil Konopinski recalled the context of Fermi’s famous question, “Where are they?”—or rather “But where is everybody?” It seems quite probable that the incident in which Fermi raised his question occurred in Los Alamos—at what from January 1, 1947, had been called Los Alamos Scientific Laboratory (LASL)—in the summer of 1950.

Emil Konopinski had a fairly clear recollection of how the discussion of extraterrestrials began while Enrico Fermi, Edward Teller, Herbert F. York, and he were walking to lunch at Fuller Lodge in Los Alamos. When he joined the party, they were discussing evidence for flying saucers. This immediately brought to his mind a cartoon he had recently seen in the New Yorker, explaining why public trash cans were disappearing from the streets of New York City. The cartoon showed what was evidently a flying saucer sitting in the background and streaming toward it, “aliens” (endowed with antennas) carrying the trash cans to the flying saucer.

More amusing was Fermi’s comment that it was a very reasonable theory since it accounted for two separate phenomena: first, the reports of flying saucers and second, the disappearance of the trash cans.

There ensued a discussion as to whether the saucers could somehow exceed the speed of light. It was after they were at the luncheon table that Fermi surprised them with the question: “But where is everybody?” It was his way of putting it that drew laughs from them.

He then turned to Teller, who recalls Fermi asking, “Edward, what is your opinion on the likelihood of obtaining clear evidence of a material object moving faster than light within the next ten years?” Teller’s response (from his memory) was “ 10^{-6} .” Fermi responded, “This estimate is far too low. The probability is more like ten percent.” According to York, Fermi then proceeded to perform a series of calculations on the likelihood of the existence of planets similar to Earth, the probability of life existing on an Earth-like planet, the probability of humans arising given the presence of life, and the expected emergence and duration of advanced technology. Based on these estimates, he concluded that extraterrestrial beings should have already visited Earth numerous times in the distant past. As Fermi and Teller continued to discuss

these chances further, the probability changed rapidly, as Teller and Fermi bounced arguments off each other.

From my own lunch experience with Teller and Dirac in Erice, Sicily, in August 1992, I can imagine that this recollection might well be authentic [128]. In mid-1950, according to Turner [451], Teller might already have been exposed to materials or investigations related to UFOs, but his rather secretive attitude would not have revealed much to Fermi and the other luncheon participants.

11.3.2 They may already be watching us or among us

As has already been mentioned those Others might already be “walking among us,” but prefer not to be recognized as aliens. This has already been put forward in the context of abductions. However, given the circumstances, this standpoint cannot be deemed scientific, at least not in the immediate sense: as Karl Popper [364] stated, it should be considered “blablabla” since it does not satisfy the demarcation criterion for science, namely, falsifiability [362, 363].

11.3.3 Rough estimate for the probability of seeing a UFO

Here is an attempt at a very crude estimate of how probable it might be to observe a flying saucer “live” in action. Earlier in Section 2.3, we already quoted a US National Bureau of Standards publication that reviews visual acuity. It states that “it is traditionally assumed that the finest detail that can just be made out by an eye with normal visual acuity, viewing black lines on a white background, with moderate levels of illumination, subtends a visual angle of 1 minute of arc” [228, p. 10]. From this, we conclude that the smallest object discernible with human eyes at a distance d (in SI units meters) is approximately $d \times 2 \times \pi / (360 \times 60)$ meters.

Suppose now, in a sort of rough back-of-the-envelope calculation, that the average UFO is the size of a ball with a diameter of 30 meters. That is, the maximal distance D from which we can see this UFO is given by

$$30 \text{ m} = \frac{D \times 2 \times \pi}{360 \times 60} \text{ m},$$

which can be rearranged to give

$$D = \frac{30 \times 360 \times 60}{2 \times \pi} \approx \frac{30 \times 360 \times 60}{2 \times 3} \approx 30 \times 360 \times 10 = 100\,000 \text{ m},$$

or 100 km.

Assuming that the UFO is above the horizon and standing on the ground in a flat surrounding region, we could “cover” an area of approximately $\pi \times 100^2 \text{ km}^2 \approx 30\,000 = 3 \times 10^4 \text{ km}^2$.

On the other hand, the Earth's average radius is approximately 6400 km, and consequently, the Earth's surface is approximately $4 \times \pi \times 6400^2 \approx 4 \times 3.14 \times 6400^2 \approx 5 \times 10^8 \text{ km}^2$.

Therefore, assuming that the density of UFOs on Earth is equidistributed and not extremely high—let us say, one craft in the atmosphere, then your chances of staring up and seeing a flying saucer are approximately 1 in 10 000, or 10^{-4} , which is one percent of one percent.

Of course, the chances may increase if the density of saucers increases, if more people look up, if the saucer size is larger, or if binoculars are used.

However, it is important to keep in mind that correctly categorizing an object or entity as a “flying saucer” is challenging when it is up in the air. From a great distance, and without sophisticated sensors, almost anything can appear like a flying saucer to an untrained, hopeful, and expectant observer. I suspect that labeling an object as a “flying saucer” or “UFO from outer space” reflects a Rorschach test—a projective psychological test that reveals more about the observer’s perspective or desires than the object itself.

11.4 Nonfraternization

From historic examples of European expansion and colonization, it may be inferred that the centers of empires eventually suffer from a kind of “imperial backflow:” the former colonies tend to affect those centers in unfavorable ways relative to the autonomy of the centers. In particular, there tends to be a kind of “osmosis” that is characterized by an influx of individuals from colonies gravitating to richer and technologically more advanced civilization hubs.

To prevent this from happening, a policy of strict nonfraternization could be imposed [384]. This refers to a policy that prohibits or strictly limits social interactions between individuals or groups who are in a position of power, autonomy, or authority, and those who are not.

This can include limiting or prohibiting social interactions, relationships of any informal kind, or any other type of personal connection that could create a potential connection. The goal of strict nonfraternization is to maintain an impartial environment and to avoid any actions that could create potential drawbacks and a loss of autonomy for the group in power and undermine their integrity or effectiveness.

As noted by Fort [166], Bramley [44], and others, and as discussed in Section 8.11, we may have little to offer advanced extraterrestrial civilizations visiting us, and we should consider the reasons why they might choose to contact us. If we put ourselves in their position, it becomes apparent that the asymmetry between their advanced technology and our own would make any potential gains from contact relatively marginal compared to the potential risks and losses.

This consideration is likely to dominate future principles of compliance with less technologically advanced civilizations, particularly as we approach a saturation point in space exploration and colonization. There are vast material resources that could

be extracted from non-inhabited rocks or planets without causing harm to sentient life forms. However, exploring and engaging with sentient life forms on distant exoplanets may not be an attractive prospect, especially if it involves dealing with primitive or unpredictable tribes. We may choose nonfraternization simply because of the possible inconveniences of making ourselves known to them. And because they have no need to know us.

Nevertheless, as already mentioned in the preface, we might hope for some “alien Prometheus” who, similar to the allegorical figure in Greek mythology, disobeys nonfraternization and gifts some of their scientific and technological achievements to humans. But then, why should they? And might the consequences—in terms of “us” competing in space and resources against “them”—not be discouraging, let alone their legal penalties, which may be associated with such an intercultural knowledge breach?

11.5 Zoo hypothesis

The zoo hypothesis [24] is a concept in the field of astrobiology that proposes that extraterrestrial civilizations may be observing humanity, but they refrain from making contact to preserve humanity’s natural development. The hypothesis suggests that advanced civilizations may be aware of our existence, but they choose to keep their distance to avoid interference with our natural development, much like a zoo would observe animals without interfering with their natural behavior, or an anthropologist would study some indigenous tribe. This idea implies that the extraterrestrial civilization is aware of us but avoiding interference because it considers us a “primitive” species in terms of technological and scientific advancement. The hypothesis suggests that extraterrestrial civilizations may be observing humanity in the same way that humans observe animals in a zoo, without interfering with their natural development.

Chapter 12

Possible consequences of disclosure or contact

Abstract The idea of disclosing information about extraterrestrial life may need to be reevaluated, as their motivations may not align with ours and they may have advanced technology that could lead to our subjugation. This can be compared to the historical conversation known as the Melian Dialog, which explores power and justice in international relations. The Brookings Report of 1961 also raises concerns about the impact of such a discovery on primitive societies and the potential dangers posed to extraterrestrial visitors. Governments may even view their territories as off-limits to extraterrestrial visitors for safety reasons.

12.1 Loss of autonomy

The potential loss of autonomy for individuals, organizations, and states in relation to UFO knowledge could have significant implications for the way governments handle and respond to this information. In particular, if the existence of UFOs or extraterrestrial life is confirmed, it could challenge long-held beliefs and structures within society, particularly those relating to religion [492], science, and politics.

For individuals, the possibility of extraterrestrial life may lead to a crisis of identity and purpose, as it would challenge our understanding of humanity's place in the universe. This could also cause individuals to question the legitimacy of their governments and other established institutions, leading to a loss of trust and confidence in these entities.

For organizations and states, the potential implications of UFO knowledge could be even more profound. The discovery of extraterrestrial life could have significant economic and geopolitical consequences, including the possibility of new technologies and resources, as well as potential threats to national security. This could lead to a race among nations to acquire and control this knowledge, potentially leading to international conflict and even war.

In response to these potential challenges, governments may be inclined to suppress information relating to UFOs and extraterrestrial life [493]. This could take many

forms, including censorship, disinformation campaigns, and even outright denial of the existence of UFOs. By suppressing this information, governments may be able to maintain their power and control over their citizens but at the cost of scientific progress, societal openness, and individual freedom.

Overall, the potential loss of autonomy related to UFO knowledge highlights the complex and far-reaching implications of any potential discoveries relating to extraterrestrial life. While such discoveries could be transformative and exciting, they could also challenge our deepest beliefs and structures and require careful consideration and management to ensure that the benefits are realized, while minimizing the potential negative consequences.

12.2 Imbalance of Power

Suppose extraterrestrial visits were a reality. Initially, our response would be to exclaim, “We want to know!” However, upon further reflection, we may rethink our eagerness for the Others to make themselves known and break their nonfraternization and silence.

This is because, despite optimistic attitudes [312] toward “disclosure” and fervent denials of potential “badness,” the motivations of these visitors may not be favorable for humankind, and may not align with our own goals. On the contrary, such “disclosure” or contact might be devastating.

Any such disclosure would mean that we would become aware that we have lost at least some autonomy and control. Undoubtedly, we would find ourselves at a disadvantage in terms of science and technology, and ultimately, we would be subjugated by the Others’ superior abilities. After all, they possess the capability to reach us, but we do not possess the means to travel to them. In short, we are dealing with an asymmetric situation that is to our disadvantage.

Based on our limited understanding, their technological prowess in operating their vessels appears to be superior and intimidating. In the event of a conflict, we would not be able to stand up to them. This creates a significant imbalance of power, leaving us vulnerable to their mercy.

12.3 The Melian Dialog

At this point, I believe that a little ancient history is pertinent. The Melian Dialog is a conversation between the representatives of Athens and the city-state of Melos, recorded by the historian Thucydides in his book *The Peloponnesian War* [447]. It took place during the Peloponnesian War between the Peloponnesian League led by Sparta and the Delian League led by Athens. At the time, the Melians had ancestral ties to Sparta. In the summer of 416 BC, Athens launched an invasion against Melos, insisting that the city surrender and become a tributary state, paying tribute to Athens.

Failing to comply would result in their destruction. Despite the dire consequences, the Melians refused to comply because they wished to remain neutral.

In this most remarkable dialog laid out by Thucydides, Athens tries to convince Melos to surrender and become a tributary state to Athens, while Melos offers neutrality in the conflict between Sparta and Athens and thereby resists the demands of Athens. Throughout the conversation, Athens asserts its military superiority and argues that “might makes right,” while Melos appeals to universal principles of justice and fair treatment. In my view, the core argument presented by Athens is based on the unequal distribution of power between themselves and the Melians, from which they claim the following privileges [447]:

“... you know as well as we do that right [[i.e., fairness]], as the world goes, is only in question between equals in power, while the strong do what they can and the weak suffer what they must.”

The dialog is a classic example of the principles of power and justice in international relations. The outcome of the dialog demonstrates the brutal realities of power politics in ancient Greece. Melos’ subsequent refusal to comply resulted in a siege by Athenian forces. Following the defeat of Melos, the Athenians ordered the execution of all adult male citizens. The women and children were sold into slavery. Athenian colonists then relocated to the island to establish a new settlement.

I believe that all past empires or colonization attempts have built upon these principles: fairness can only be expected among equals, and those in power take what they demand and need. Even institutions and organizations that ostensibly convey very different tactics and protocols effectively act that way. Therefore, as humans are inferior in such an exchange with the Others, we need to be aware of our possible fate.

12.4 The Brookings Report of 1961

In a section entitled “The implications of a discovery of extraterrestrial life” in a report prepared for NASA by the Brookings Institution the following issues are raised [324, p. 215 and Footnote 37, p. 226]:

“Anthropological files contain many examples of societies, sure of their place in the universe, which have disintegrated when they had to associate with previously unfamiliar societies espousing different ideas and different life ways; others that survived such an experience usually did so by paying the price of changes in values and attitudes and behavior.”

...

“Fruitful understanding might be gained from a comparative study of factors affecting the responses of primitive societies to exposure to technologically advanced societies. Some thrived, some endured, and some died.”

We might speculate that this has already happened to us.

12.5 We may pose dangers to visitors

It is possible that the concept of a cargo cult could work in reverse. Governments on Earth might effectively view their territories as “no-fly zones” for extraterrestrial visitors (without proper prior identification and credentials), and attack them with the intention of destroying them.

By analogy, the Sentinelese living on the small North Sentinel Island in the Andaman Sea, thought to be the last tribe on Earth still living in a pre-Neolithic way, fiercely resist attempts by outsiders to approach their island and frequently attack intruders [1]. Access to their territory is strictly limited by the government of India.

Illegal fishing operations, run by poachers, are prevalent in the waters surrounding the island. These poachers target turtles, lobsters, and sea cucumbers.

In 2006, the Sentinelese tribespeople took the lives of two Indian fishermen after their boat strayed onto the shore. An attempt to retrieve the bodies by an Indian Coast Guard helicopter was met with a barrage of arrows from the tribe, causing the helicopter to retreat.

In 2018, an American preacher who ventured to the remote Indian island—considered by the tribe to be “theirs”—and got killed, apparently shot and killed by arrows, although it has not been officially confirmed. According to his family, the man was a missionary and held nothing but love for the Sentinelese tribe.

12.6 Possible scenarios

There are several possible scenarios that could result from disclosure, ranging from benign to catastrophic. Unfortunately, due to the scientific and technological imbalance between “us” and “them,” it will not be within our control to initiate or oversee such a situation.

Richard Dolan and Bryce Zabel conducted a thorough examination of lifelike scenarios in their work [138]. Steven J. Dick’s collection of articles deals with “the impact of discovering life beyond Earth” [126]. In particular, Dick’s contribution in Chapter 3 contains some encouraging analogies, such as the great voyages of the fifteenth-century Ming China treasure fleets 50 years before Columbus. Dick notes that “there are other models of culture contact than the destructive ones usually cited,

including Jesuit models of culture contact that were not disastrous.” Let us hope for the best!

Part IV
Executive Summary

*"The SCEPTICK doth neither affirm,
neither deny any Position;
but doubteth of it,
and opposeth his Reasons
against that which is affirmed, or denied,
to justifie his not consenting."*

Sir Walter Raleigh, shortly before his execution [377]

Chapter 13

Executive summaries

Abstract As I do not know what actually happened, I will present three scenarios:

- (i) One in which no alien intrusion occurred but waves of mass hysteria created mistaken UFO sightings, with governments everywhere trying to calm their populations, dealing with an avalanche of reports, and a press that sells sensational cases.
- (ii) Another scenario involves alien visitations and even crashes of alien craft, but those aliens prefer not to be disclosed. Governments try to maintain the illusion of autonomy while attempting to take advantage of any salvaged or gifted alien craft.
- (iii) The last scenario involves the Others dictating strict nonfraternization while pursuing their interests, particularly breeding and reproduction, by abducting a sizable number of humans.

13.1 The “Great Nothingburger” scenario

In this scenario, UFO sightings lack any ontological basis. They are simply delusions and projections of the mind.

As Steven J. Dick pointed out [126, Chapter 3], throughout history, there have been instances where people thought they had found evidence of life beyond Earth, including the 1835 Moon Hoax/Satire, the Mars canal controversy (1894–1909), the Orson Wells War of the Worlds broadcast in 1938, the discovery of pulsars in 1967, the Viking landing on Mars in 1976, and the 1996 claim of Martian nanofossils.

The following episode from 1835 is an excerpt of a recollection by Dick, as quoted earlier. That year, the New York Sun published a series of six illustrated articles claiming that Sir John Herschel had made great astronomical discoveries while observing the moon at the Cape of Good Hope. The articles were later revealed to be a hoax written by Richard Adams Locke, a 34-year-old reporter who had just joined the Sun.

According to the articles, Herschel had observed large, winged creatures on the moon that were approximately four feet tall, with faces “of a yellowish flesh color” and appearing to be in conversation: “these creatures were evidently engaged in

conversation: their gesticulation, more particularly the varied action of their hands and arms, appeared impassioned and emphatic. We hence inferred that they were rational beings.”

Despite the fact that the journal the articles claimed to be from had ceased to exist three years prior, the hoax was widely read and generated significant interest at the time.

The author, Richard Adams Locke, was soon revealed to be a reporter for the Sun, and the articles were exposed as a hoax. However, it was not until 150 years later that historian Michael Crowe argued that Locke was actually writing satire aimed at advocates of inhabited worlds such as the Scottish astronomer Thomas Dick, who had calculated the number of inhabitants on each planet in the Solar System to be over 21 trillion. The Moon Hoax, according to Crowe, was a way for Locke to ridicule such absurd conclusions.

The public and scientific reaction to the Moon Hoax articles was significant. The story captured the attention of a large audience and had a major impact on the newspaper’s success. At the time, the New York Sun had a circulation of approximately 8000, but during the Moon episode, it reached 19 000 and continued to remain high. The story was so popular that the Sun sold 60 000 copies of the series in brochure form and released lithographs of the supposed lunar creatures. The story gained international attention, with French, Italian, Spanish, and German editions of the brochure appearing and numerous other newspapers reporting on it. The Moon Hoax may not have been true, but it had great popular appeal and was highly profitable for the Sun, much as sensational tabloid journalism continues to be today.

From a debunking point of view, Arnold’s sighting in 1947 can be perceived as a series of misperceptions, as pointed out by Hynek’s Project Blue Book report [373]. The length of the objects was one of the misperceptions. It was probably “pelicans flying in V-formation” [303]. The incidents in Roswell were initially misinterpreted as alien spacecraft due to the sighting of a downed Project Mogul balloon [491]. People everywhere gazed at the sky and imagined extraterrestrial spaceships in the form of flying saucers. Even the Air Force’s Project Sign was being increasingly consumed by the flying saucer craze, and the Washington Flyovers, caused by atmospheric inversions [322], generated massive attention at the heart of the US empire.

At that time, the UFO craze in the USA became so intense that the CIA [195] feared it could undermine established authority and disrupt the “orderly functioning” of the government. They were concerned that UFO reports might clog communication channels with irrelevant information and cause “hysterical mass behavior.” Potential adversaries—the Soviets—might take advantage of the UFO phenomenon and use it to confuse US air defenses during an attack.

Several high-ranking experts—individuals like Menzel and Hynek, researchers at Battelle Memorial Institute, renowned scientists in selected committees such as the Robertson Panel and the Condon Committee—were asked to dampen the saucer frenzy, and convince the public that there was no national security threat posed by flying saucers. They were also asked to suggest, if not recommend, that any official investigations into the increasing number of alleged sightings reported to

the Air Force should be terminated. With very few exceptions, due to a lack of data, all previously investigated cases had turned out to have prosaic and mundane explanations. These saucer investigations would never yield anything valuable.

In particular, two groups of experts, the Robertson Panel and the Condon Committee, were tasked with calming the hysteria and convincing the public that there was no threat to national security posed by UFOs. The Condon report from the latter group also recommended that although a tiny fraction of “hard cases” remained unexplained and “strange,” the opportunity costs of ongoing reporting were unjustified. Therefore, as intended and planned, the recommendation was made for the US Air Force to cease any official investigations into the constantly growing number of reports.

Despite occasional efforts from external sources, such as the Rockefeller Initiative [30] or the Disclosure Project by Greer, the US Air Force [189] has been able to maintain a peaceful state of non-involvement until the present day.

A congressional initiative, initiated by a UFO enthusiast and real estate tycoon with strong connections to a powerful senator, led to the creation of a small private contract and an associated section in the Pentagon. Despite not gaining Special Access Program status, this project aggressively attempted to uncover what its protagonists believed to be secret government programs related to UFOs, like a screwdriver trying to open a corked bottle. To stay with this allegory, the bottle they were trying to open, which they believed to contain UFOs, was empty.

Congress became suspicious that there might be more to the UFO (now called UAP) issue and created legislation for people to come forward with historic and current carve-out unacknowledged secret information. They also established a permanent “All-domain Anomaly Resolution Office (AARO),” a kind of follow-up to Project Blue Book, to thoroughly investigate the contents of the (empty) UFO bottle and report directly to the Under Secretary of Defense for Intelligence and Security [460].

In addition, the national security apparatus, including the CIA, this Mighty Wurlitzer [32, 100, 296, 512], has been using the chimeric UFO phenomenon as a camouflage [425] to their own advantage: to disguise all kinds of secret operations, nuts-and-bolts craft, and distractions from inconvenient exposures [213, 214].

13.2 The hidden breakaway scenario

This scenario basically follows Oliver Harry Turner’s recollections [451].

Arnold may have been the first popular witness to the UFO flap following the creation and deployment of the atom bomb. Roswell was one occasion of a downed craft, among others [472]. The USA attempted to “process” alien artifacts similarly to Nazi and other Earth-bound (e.g., Soviet) technology [405, 423]. The matter became highly secretive, and only a small group of scientists, such as von Neumann, Eric Walker, and Vannevar Bush, were involved, along with military and government officials.

However, any “Paperclip”-style [248] processing of these downed crafts was inapplicable because of alien nonfraternization. Nobody could explain the technology like former Nazi party member SS Sturmbannführer von Braun did.

Eisenhower’s Military-Industrial Complex (MIC) oversaw these efforts, which were coordinated by the Air Material Command at Wright-Patterson Field, Ohio, and executed and processed by various DOE/DOD/industry partners (including Battelle and Lockheed).

The MIC achieved success with some “proximity technology,” which may have been “on the verge of discovery” regardless [93, 94]. However, the MIC failed to develop advanced technology, particularly in propulsion. It is thought that the science and technology of propulsion was based on ideas that were at least two scientific breakthroughs ahead of the resources available on Earth. The US made efforts to develop “anti-gravity,” but these proved fruitless.

This situation has persisted until today. As a result, the US may have obtained advanced crafts (although this is purely speculative), but is unable to replicate them on a larger scale. Perhaps the propulsion systems salvaged from some advanced crashed craft were used to construct new, self-made craft.

However, as sensors accessible to the general public and various interest groups have improved, the timeframe for maintaining confidentiality and for “kicking the saucer can further down the nondisclosure alley” seems to be getting shorter.

A congressional initiative, started by a UFO enthusiast and real estate tycoon with strong connections to a powerful senator, led to the creation of a small private contract and an associated section in the Pentagon. Despite not achieving Special Access Program status, this project aggressively attempted to uncover what its proponents believed to be secret government programs relating to UFOs, like a screwdriver trying to open a corked bottle. They sent out one of their own, who wrote a secret memorandum of a conversation with a high-ranking military officer who suffered a bureaucratic defeat while attempting to determine what was inside that UFO bottle. Those in-the-know let the officer taste one bottle but refused access to more, in particular, the collection in their wine cellar.

In this scenario, the legacy media in 2017 got it all wrong; they mistook an anarchic grassroots movement—AAWSAP/AATIP—for the real thing, staring at the top of the iceberg, but not at its huge extent deep down in the water.

13.3 Total control of Earth by “Others” leading to loss of human autonomy

This scenario involves the sizable abduction of a large number of humans, as described by David M. Jacobs [244–246], Don Crosbie Donderi [139, 140, 220], John E. Mack [305, 306, 376], and Budd Hopkins [222].

The Others have prevented world governments and the United Nations from revealing their presence. One particular effort, near the end of the Cold War era, was thwarted by the Others when they abducted the Secretary General of the United

Nations after a coordination session for disclosure. This was meant to send a clear message that such a revelation was not possible [221].

Extraterrestrial beings, including Reptiloids, Insectoids, and Humanoids, continue to carry out their activities on Earth, considering us their possessions [166]. Unfortunately, nothing can be done about this, as the situation is hermetic.

13.4 The theological wild card: UFOs areemonic

According to an alleged secret group that is often referred to as the Collins Elite [210, 380], aliens are actually demons and fallen angels working for Satan. These followers reinterpret UFO-related phenomena in a theological context [279, 356] and believe that there is a satanic agenda behind alien abductions. It presents a darker and more ominous perspective on the UFO phenomenon and consequently rejects related experiences [357, p. 219].

Let me end this brief spectrum of UFO perception with a quote from Aurelius Augustinus, 354–430, who, in his “Confessiones” (Book XI, chapter 25), wrote: “*Ei mihi, qui nescio saltem quid nesciam!*” (English translation: “Alas for me, that I do not at least know the extent of my own ignorance!”)

13.5 Uniform recommendation of government UFO panels: continue qualified research

All government panels I am aware of recommended the initiation or continuation of some (though modest size) academic efforts of research into unidentified phenomena of the UFO sort. Let me quote from three of them.

The Durant Report [145], subsuming the recommendations of the 1952–53 Robertson Panel, emphasized that, regarding UFO’s (aka “Flying Saucers”), there was “no indication that these phenomena constitute a direct physical threat to national security,” but stated:

“Dr. Robertson at least was of the opinion that [[. . .]] there would still be a role for a [[. . .]] section to cope with the residuum of items of possible scientific intelligence value. This section should concentrate on energetically following up [[. . .]] those cases which seemed to indicate the evidence of unconventional enemy artifacts.”

In “Section I: Conclusions and Recommendations” of the Condon Report [83, 84, 88, 89] of 1968, Edward U. Condon writes:

“Scientists are no respecters of authority. Our conclusion that study of UFO reports is not likely to advance science will not be uncritically accepted by them. Nor should it be, nor do we wish it to be. For scientists, it is our hope that the detailed analytical presentation of what we were able to do, and of what we were unable to do, will assist them in deciding whether or not they agree with our conclusions. Our hope is that the details of this report will help other scientists in seeing what the problems are and the difficulties of coping with them.

If they agree with our conclusions, they will turn their valuable attention and talents elsewhere. If they disagree it will be because our report has helped them reach a clear picture of wherein existing studies are faulty or incomplete and thereby will have stimulated ideas for more accurate studies. If they do get such ideas and can formulate them clearly, we have no doubt that support will be forthcoming to carry on with such clearly defined, specific studies. We think that such ideas for work should be supported.”

In the “Subsidiary Recommendations” section of the “Executive Summary” of the UK Condign Report [194] of 1996, Ron Haddow, its alleged author [76], writes:

“The relevance of plasma and magnetic fields to UAP were an unexpected feature of the study. It is recommended that further investigation should be into the applicability of various characteristics of plasmas in novel military applications.”

This summary also notes that:

“Attempts by other nations to intercept the unexplained objects, which can clearly change position faster than an aircraft, have reportedly already caused fatalities [...]”

“The conditions for the initial formation and sustaining of what are apparently buoyant charged masses, which can form, separate, merge, hover, climb, dive and accelerate are not completely understood. Nevertheless, the underlying physics may have some military application in the future in the form of active visual, radar and IR decoys and passive electromagnetic spectrum energy absorbers.”

With regard to civil aviation, the following recommendations hold:

- “It should be stressed that, despite the recent increase in UAP events, the probability of encountering a UAP remains very low.

- No attempt should be made to out-manoeuvre a UAP during interception.
- At higher altitudes, although UAP appear to be benign to civil air-traffic, pilots should be advised not to manoeuvre, other than to place the object astern, if possible.”

Appendix A

US categories of secrecy

A.1 Congressional power and oversight

Constitutional rights and executive secrecy and necessities may appear to be at odds. For instance, the Constitution of the United States delineates war powers between Congress and the President. Congress is authorized to declare war and allocate funds for the military, while the President serves as the commander in chief of the armed forces. This separation of powers reflects the framers' aim to balance the influence of the executive and legislative branches and to guarantee that decisions concerning war and peace are made with the advice and consent of both government branches. In particular:

1. Article I, Section 8 of the Constitution gives Congress the sole power “to declare war, grant letters of marque and reprisal, and make rules concerning captures on land and water.” This means that Congress has the authority to decide whether the United States should go to war and to authorize the use of military force.
2. Article II, Section 2 of the Constitution, on the other hand, grants the president the power to be the commander in chief of the armed forces. This means that the president has the authority to direct the military and to make decisions about the use of military force, subject to the limitations and constraints imposed by Congress and the Constitution.

Therefore, the US Constitution attempts to establish a system of checks and balances between Congress and the President and between the legislative and executive branches of government, with each branch having its own powers and responsibilities in matters related to war and national defense.

However, the division of power between Congress and the Presidency, as well as executive branches such as the military and private entities, has fluid boundaries. For example, what happens if Congress is not willing to declare war, but the President and associated agencies are? The latter may have many pathways to get what they want. One such pathway would be to turn the declaration of war “upside down” by stimulating or almost forcing an opponent to declare war themselves. These methods could involve sanctions and other aggressive measures that are not classified as “war”

and therefore do not need to be approved by Congress. A controversial example of this is the Hull note, which provoked the Empire of Japan to attack, ultimately leading to the US's entry into WWII.

Another pathway is to distribute (mis)information, as has happened with the alleged “throwing the babies out of the incubator testimony” [8] of the daughter of the Kuwaiti ambassador to the US (at the time undisclosed and disguised as “Nurse Nayirah”), allegedly prepped by the PR agency Hill & Knowlton before Congress that contributed to launching the First Iraq War [129], or claims of the existence of “Saddam’s weapons of mass destruction,” presented before the UN General Assembly that contributed to launching the Second Iraq War, or the Gulf of Tonkin incident that led to the US engaging more directly in the Vietnam War. Once direct confrontations have commenced, in the fog of war [330], anybody doubting its beginning is called out as a traitor.

An anecdote suggests Gödel’s reservations regarding the lack of consistency of the US Constitution and its democratic robustness [329]; perhaps, in particular, his thoughts on the effects of executive orders. (However, this is just speculation.)

These historic events call into question the democratic oversight Congress is supposed to yield. This is particularly pressing in regard to highly sensitive information and undertakings of the executive branch of government. Therefore, it is of the utmost importance to understand the structure, categories, and hierarchy of compartmented secrecy within the three branches of the US executive: the Department of Energy, the Department of Defense, and, last but not least, the US intelligence community.

A.2 Mandatory lies—from need-to-know to need-to-lie

As will be detailed later, US regulations mandate that individuals with knowledge of extremely confidential topics must deceive those who are not authorized to access such information [136, 435, 474]. This rule applies regardless of rank, meaning that even lower-ranking personnel must deceive those of higher rank if they lack the necessary clearance.

In certain cases, it is also necessary to deceive the public, members of Congress (with some exceptions), and the press. The president is exempt from this rule; however, if confidential information is disclosed, they must face the consequences.

This requirement to deceive is often justified as a means of preserving plausible deniability. By deceiving those who are not authorized to access certain programs or events, individuals can deny knowledge of their existence if necessary.

Only a select group of individuals have knowledge of how many Special Access Programs (SAPs) are unacknowledged or waived. This group includes the “Gang of Eight” of Congress—the leaders of each of the two parties from both the Senate and House of Representatives, and the chairs and ranking minority members of both the Senate Committee and House Committee for intelligence as set forth by 50 U.S.C. §3093(c)(2)—as well as the members of the Special Access Program Oversight Committee (SAPOC), and the Secretary of Defense.

A.3 US Department of Defense categories of secrecy

Security clearances are like a Faustian trade with the devil (even if it is “your kind of devil”): you gain access to information and capabilities, but you are bound by the confidentiality agreements you had to sign.

Ask yourself: how would you react if you were offered access to a “sports model” extraterrestrial craft in exchange for keeping your lips sealed? If I were under pressure, I might choose to accept the offer, which would mean compromising my freedom of expression. (Perhaps I should clarify that nobody has approached me with any such offer, and it is possible that I might be excluded from it simply because of my Austrian citizenship—or even more simply, because no “sports model” extraterrestrial craft actually exists.)

A.3.1 Ordinary secrecy classifications: “Confidential,” “Secret,” and “Top Secret”

Ordinary secrecy classifications are used for the protection of information that is sensitive or classified. There are three main levels of classification: “Confidential,” “Secret,” and “Top Secret.”

1. “Confidential” is the lowest level of classification, and it is used for information that could potentially damage national security or cause other harm if it were to be released to the public. This could include information about military operations, diplomatic negotiations, or scientific research.
2. “Secret” is a higher level of classification, and it is used for information that could cause serious damage to national security or cause other harm if it were to be released. This could include information about military plans, intelligence operations, or diplomatic relations.
3. “Top Secret” is the highest level of classification, and it is used for information that could cause extremely grave damage to national security or cause other harm if it were to be released. This could include information about military capabilities, intelligence sources, or diplomatic negotiations.

In general, the higher the level of classification, the more sensitive the information is considered to be, and the more measures are taken to protect it.

A.3.2 Beyond ordinary secrecy classifications: special access programs

When normal protective measures, including those used for top secret programs, are not considered sufficient [474], a Special Access Program (SAP) [99, 122] can be created that has even stricter (and more expensive) rules, and uses more stringent safeguards for program security.

Many private contractors, such as Lockheed Martin (Corporation, LMT), The Boeing Company (BA), Raytheon Company (RTN), United Technologies Corporation (UTX), and Battelle (Memorial Institute), execute several of these programs. The level of oversight for SAPs varies. “Blackest of black” projects with the highest secrecy, called carve-out USAPs, have very little or no effective oversight by anyone, including the US Department of Defense.

In the past, there have been complaints about excessively strict restrictions. Is it possible that SAPs cause deployment delays? The Joint Security Commission, which was convened by then-deputy Secretary of Defense Bill Perry in 1993 and reported in 1994, stated that [445, p. 18-19]:

“even when military elements are briefed, they are put under such tight constraints that they are unable to use the compartmented access information in any practical way. This prohibits field elements from being able to incorporate these capabilities into war planning and other crisis activities. . . A senior military officer on the Joint Staff expressed concern that current classification and security procedures constrict the flow of operational information to the warfighter at the tactical level. He felt that we still treat certain capabilities as pearls too precious to wear—we acknowledge their value, but because of their value, we lock them up and don’t use them for fear of losing them.”

A.3.2.1 Acknowledged special access program

An acknowledged Special Access Program (SAP) is one that has been officially recognized and acknowledged by the government. This means that the existence of the program has been officially acknowledged and is known to a limited number of individuals who have a need to know. However, the details of an acknowledged SAP, such as its subject matter and nature, may still be highly classified and not disclosed to the general public.

The legal basis for SAPs is derived from the Department of Defense Directive 5205.07 [122], defining an “acknowledged SAP [[as a]] SAP whose existence is acknowledged but its specific details (technologies, materials, techniques, etc.) are classified as specified in the applicable security classification guide.”

For example, if an acknowledged SAP has a code word, such as “Blue Tomato”, it can be acknowledged that a program with this code word exists, but the details of what the program involves cannot be disclosed [136].

To further protect against the disclosure of information, the Department of Defense uses a multilevel nomenclature system for its SAPs. Each SAP has an unclassified nickname, which is composed of two unclassified words, such as “Have Blue” or “Rivet Joint”. These nicknames may be used on badges and in secure rooms to control access to information and physical facilities, even in programs that have a standard designation.

The nickname may consist of words such as “Have”, “Senior”, and “Constant”, which are often used as the first word in Air Force programs, “Tractor” in Army programs, and “Chalk” in Navy programs [435].

A.3.2.2 Unacknowledged special access program

An unacknowledged special access program (USAP) is one that has not been officially recognized or acknowledged by the government. This means that the existence of the program is not officially known or publicly disclosed. An unacknowledged SAP may also be referred to as a “black” program, as it is not formally acknowledged or accounted for in the government’s budget.

The legal basis for USAPs is derived from the Department of Defense Directive 5205.07 [122], defining an “unacknowledged SAP [[as a]] SAP having protective controls ensuring the existence of the program is not acknowledged, affirmed, or made known to any person not authorized for such information.” Directive 5205.07 establishes the policy and procedures for the governance, management, and oversight of DoD SAPs. The directive also establishes the Special Access Program Oversight Committee (SAPOC), which advises and assists the Secretary of Defense and the Deputy Secretary of Defense with USAPs.

According to Directive 5205.07, USAPs must be authorized by one of the following officials: the Secretary of Defense, the Deputy Secretary of Defense, the Secretaries of the Military Departments, the Chairman of the Joint Chiefs of Staff, or the Combatant Commanders.

The level of secrecy and security surrounding an unacknowledged SAP is likely to be even higher than that of an acknowledged SAP. Access to an unacknowledged SAP may be strictly limited to a small number of individuals with a need to know and may require additional security clearances and background checks. As a consequence, for unacknowledged SAPs, both the nature of the program (as in acknowledged SAPs) and its various system components, such as its code name, must not be disclosed. In particular, the phrase “no comment” or similar is not sufficient. Persons in the know have to make up a total lie about an unacknowledged SAP, denying its existence, and they must not just say nothing—such as a “no comment” comment—or merely remain silent [136].

This is mandatory even if asked by a supervisor who is not on the bigot list—a list of individuals who have been granted the necessary security clearance and are authorized to be informed about specific operations or sensitive information. The intentional dissemination of false information, or disinformation, is supported by two mechanisms within unacknowledged SAPs. If someone in the know is questioned about an unauthorized use of a program name or specific question of a USAP, they must deny any knowledge of a USAP. The person questioning them may not be aware of this requirement to deny knowledge and may therefore believe the denial and spread it further [435].

Therefore, individuals may genuinely believe that there are no secret programs in their area of responsibility due to a lack of access to the information. As a result,

when faced with a lack of confirmation and no way to distinguish between intentional and unintentional disinformation, many media outlets have stopped attempting to investigate classified programs [435].

A.3.2.3 Title 10 versus Title 50 of the United States Code

Title 50 is the section of the United States Code that covers war and national defense, including intelligence activities and covert action. According to some sources, most USAPs are conducted under Title 50 authority, as they involve sensitive intelligence operations that require a high degree of secrecy and plausible deniability.

However, some USAPs may also involve military operations or support under Title 10, which is the section of the United States Code that covers armed forces. Thus informally, Title 10 pertains to the Department of Defense and military operations, whereas Title 50 pertains to intelligence agencies like the CIA, intelligence activities, and covert action [486].

It is plausible to suppose that the majority of UFO-related USAPs, if indeed they exist, would fall under the Title 50 category. As highlighted by AARO's Sean Kirkpatrick [264, time = 2410 s], the current operations of this agency are conducted under Title 10. However, incorporating Title 50 authority could significantly expand its scope of legitimate inquiry.

A.3.2.4 Waived (unacknowledged) SAP

Escalating secrecy levels further, waived SAPs are granted a special status that exempts them from most reporting requirements, in accordance with statutory authority granted by the Secretary of Defense [136]. As a result, waived SAPs are not disclosed to the general public or most members of Congress. The only individuals who are required to be informed of waived SAPs are the chairpersons and ranking committee members of the Senate Appropriations Committee, Senate Armed Services Committee, House Appropriations Committee, and House Armed Services Committee. These notifications are typically made orally rather than in writing.

The legal basis for waived SAPs is derived from the Department of Defense Directive 5205.07 [122], defining a “waived SAP [[as an unacknowledged]] SAP for which the Secretary of Defense has waived applicable reporting in accordance with Reference (c) [[Section 119 of title 10, United States Code [92, 225]]] following a determination of adverse effect to national security. An unacknowledged SAP that has more restrictive reporting and access controls.”

It is important to note that waived SAPs are still subject to oversight by Congress. The chairpersons and ranking committee members of the relevant committees have the authority to request information about these programs as needed [136]. However, it has been suggested that many of these individuals do not request to be briefed on these programs and may not even be aware of their existence. This is often because

they have numerous other responsibilities and may not see the relevance of being informed about these programs.

Additionally, it is possible for these programs to evade congressional oversight by providing irrelevant, distracting, or incomplete information and entries into the list of SAPs maintained by the Under Secretary of Defense for Acquisition and Sustainment. Despite this, waived SAPs are still subjected to inspections by the Department of Defense on an annual basis [136].

A.3.2.5 Carve-out (unacknowledged) SAP

SAPs that have been carved out of Defense Security Service (DSS) cognizance [459] are called carve-out SAPs. As a result, the responsibility for inspection is shifted from the DOD to the contractor, thereby transferring the duty of inspection and compliance to the mostly private contractor.

The legal basis for carve-out SAPs is derived from the Department of Defense Directive 5205.07 [122], defining a “carve-out [[as a]] provision approved by the Secretary or Deputy Secretary of Defense that relieves DSS of its National Industrial Security Program obligation to perform industrial security oversight functions for a DoD SAP.”

A.4 US intelligence categories of secrecy

The intelligence community operates under the direction of the Director of National Intelligence (DNI), who oversees and coordinates the activities of 17 US intelligence agencies, including the CIA, NSA, and DIA. Much of the information produced by the intelligence community is classified as Sensitive Compartmented Information (SCI). SCI is used to protect highly sensitive intelligence information related to sources, methods, and activities. Access to SCI is strictly limited to individuals who have undergone special security clearance procedures and have a specific need to know. This type of information is marked with a special caveat, such as NOFORN, indicating its high level of sensitivity.

SCI is handled within a strict security system called a Sensitive Compartmented Information Facility (SCIF), which is a specially designed and constructed secure area equipped with specialized security systems. The information contained within these facilities is marked with specific caveats to indicate its level of sensitivity. There are various types of SCI, each designed to protect specific types of sensitive intelligence information:

1. Code Word SCI: This type of SCI is used to protect information that is considered to be among the most sensitive within the intelligence community. It is typically marked with a code word, such as GAMMA, to indicate the high level of sensitivity and security surrounding the information.

2. Special Intelligence (SI) SCI: This type of SCI is used to protect information that relates to sensitive intelligence sources, methods, and activities. It is typically marked with the caveat SI (for Special Intelligence).
3. TALENT KEYHOLE (TK) SCI: This type of SCI is used to protect information that relates to satellite intelligence. It is typically marked with the caveat TK (for Talent Keyhole).
4. HUMINT Control System (HCS) SCI: This type of SCI is used to protect information that relates to human intelligence sources and methods. It is typically marked with the caveat HCS (for Human Intelligence Collection Systems).
5. FGI SCI: This type of SCI is used to protect information that has been provided to the United States by a foreign government or international organization and is considered to be particularly sensitive. It is typically marked with the caveat FGI (for Foreign Government Information).

Just as the Department of Defense (DOD) has its Special Access Program (SAP), the United States intelligence community has a corresponding system known as Controlled Access Program (CAP) [348, 414]. CAPs operate as compartmentalized control systems within specific levels of classification, which involve compartments and sub-compartments.

These levels of classification include TOP SECRET, SECRET, and CONFIDENTIAL, signifying the relative sensitivity of intelligence activities, sources, and methods described within a document, as well as the potential damage to United States national security that could result from unauthorized disclosure.

Within the intelligence community (IC), CAPs are most commonly found as compartments or sub-compartments within the TOP SECRET level of classified intelligence.

Similarly to DOD's USAPs, as outlined in the Intelligence Community Directive 906 [348], Unacknowledged Controlled Access Programs (UCAPs) are those CAPs with protective controls that ensure the existence of the program is not acknowledged, affirmed, or made known to any person not authorized for such information. They are different from acknowledged CAPs, which are CAPs whose existence is known or can be made known to individuals who do not have a need to know.

A.5 Department of Energy categories of secrecy

The Department of Energy (DOE) employs a classification and declassification system to safeguard sensitive information concerning its missions and operations. The DOE classification system consists of three categories:

1. Confidential: This is the lowest level of classification and is used to protect information that, if disclosed, could cause damage to the national security of the United States. This category is used for information that requires protection for a period of at least ten years.

2. Secret: This is the intermediate level of classification and is used to protect information that, if disclosed, could cause serious damage to the national security of the United States. This category is used for information that requires protection for a period of at least twenty years.
3. Top Secret: This is the highest level of classification and is used to protect information that, if disclosed, could cause exceptionally grave damage to the national security of the United States. This category is used for information that requires protection for a period of at least thirty years.

In addition to these three categories, the DOE classification system also includes several special designations, such as “Formerly Restricted Data” and “Transclassified Foreign Nuclear Information,” that serve to safeguard information related to nuclear weapons. These designations play a critical role in preserving national security and preventing the spread of nuclear weapons:

1. Restricted Data (RD).
2. Formerly Restricted Data.
3. Critical Nuclear Weapons Design Information (CNWDI).

Nonetheless, there have been concerns raised about the potential misuse of these designations, which could lead to the withholding of information that should be accessible to the public.

According to the Department of Energy (DOE) website [124], the DOE Special Access Program (SAP) is a program established for a specific class of classified information that imposes safeguarding and access requirements exceeding those normally required for information at the same classification level. The DOE SAP is administered by the Executive Secretary of the Special Access Program Oversight Committee (SAPOC), which conducts its activities in accordance with the requirements of DOE Order 471.5. This directive is classified as “Official Use Only (OUO)” and can only be accessed by people who have a legitimate need to know. The DOE SAP is established under Executive Order 13526 or the Atomic Energy Act of 1954, as amended.

A.6 Miscellaneous nomenclature

A.6.1 Core secret

A core secret is defined as any item, progress, strategy, or piece of information, the compromise of which would result in unrecoverable failure [435]. If someone is asked about an unacknowledged SAP and they are not supposed to know about it, they are required to deny any knowledge of it. Such information is considered a core secret. Note that if the person being questioned responds with “no comment,” such a statement could be taken as confirmation that the program or information does exist. Therefore, a “no comment” response is not good enough. The correct answer

is falsity: “No, it does not exist.” If the questioner is unaware that the person being questioned is not supposed to have knowledge of the program or information, he or she may believe the denial and spread disinformation that the program or information does not exist, effectively allowing plausible deniability or an excuse to legally lie.

A.6.2 Limited hangout

A limited hangout occurs when an organization or individual releases a limited amount of information to deflect attention from more sensitive or essential information that is being withheld. The term is often used in the context of large institutions or governments releasing partial or selective information in response to criticism or public pressure.

Speculation [136] suggests that a high-ranking military official may have been subjected to a limited hangout in his unconfirmed attempt to learn about crash retrievals by a private group. It is possible that he was provided with partial or selective information to distract from more sensitive or crucial information that was being withheld. The military official may have been informed that the group had little or no success, had been working for an extended period with minimal progress, faced difficulty obtaining assistance from outside experts, and had to overcome a challenging work environment. The aim may have been to implant this information in his mind and convince him that the group had never succeeded, possibly to reverse-engineer the technology. If the military official had been informed that the group had indeed developed the technology successfully, it would have been a game-changer.

Somewhat related to limited hangouts is lying by omission. It is a type of deception in which someone intentionally leaves out important information or fails to disclose it, with the intent to mislead or deceive others. This can be done through words, actions, or both. It is often considered a form of lying because the person withholding the information is not being truthful about the complete picture and is therefore being dishonest.

A.6.3 Bigot list

A “BIGOT” list, also known as a bigot list, is a term utilized by the military and intelligence community to refer to a roster of personnel with clearance to access sensitive information or operations. The term “BIGOT” is an acronym used to identify individuals who have the required security clearance and need-to-know. This is to ensure they are informed about a particular operation or piece of sensitive information. The commanding officer or security officer responsible for the operation or information usually maintains the bigot list. It is used to keep track of who has been granted access to the sensitive material. The contents of a bigot list are generally classified, and access to the list is strictly controlled.

A.6.4 Gatekeepers: program manager, security director, corporate lawyer

In the day-to-day operations of Special Access Programs (SAPs), there are several key roles that are responsible for various aspects of the program. These include the Government Program Manager (GPM), who is responsible for all aspects of the SAP; the Contractor Program Manager (CPM), who is responsible for managing the program within the contractor facility; the Program Security Officer (PSO), who is responsible for all aspects of security; the Government SAP Security Officer (GSSO), who is responsible for security management and training for SAP-accessed individuals at government program facilities; and the Contractor Program Security Officer (CPSO), who is responsible for security management and training for SAP-accessed individuals at contractor facilities. All of these roles have specific duties and responsibilities related to maintaining the security and integrity of the SAP.

A.6.5 Stovepiping

Stovepiping is a term that refers to the way information is shared or disseminated within an organization. It often refers to a system in which information is passed vertically through a series of hierarchical levels rather than being shared horizontally among different units or departments. This can lead to a lack of communication and coordination within the organization, as well as a lack of integration and synthesis of information. Stovepiping can also lead to the siloing of information, where different units or departments have their own separate sources of information and do not share them with each other. This can result in a lack of situational awareness and a lack of understanding of the bigger picture.

A.6.6 Compartmentalization

Compartmentalization refers to the separation of different parts or functions within an organization or system. It can involve the separation of responsibilities, information, or resources to prevent the spread of problems or errors or to protect sensitive information or resources.

Compartmentalization is often used in the context of cybersecurity, where it is used to protect against the spread of malware or other malicious software. It can also be used in the management of organizations, where it can be used to clearly define roles and responsibilities or to separate different business functions to improve efficiency and control.

Compartmentalization can be an effective way to manage complex systems or organizations, but it can also have downsides, such as making it more difficult to share information or resources across different compartments. It is important to carefully

consider the benefits and trade-offs of compartmentalization when designing or implementing systems or organizations.

A.6.7 Sensitive compartmented information facility (SCIF)

A Sensitive Compartmented Information Facility (SCIF) is a secure area within a building that is used to store, process, and discuss sensitive compartmented information (SCI). SCI is a type of classified information that is protected by special security measures and controls and can only be accessed by individuals who have been specifically authorized to do so. SCIFs are designed to prevent unauthorized access to SCI and to protect it from espionage, sabotage, and other threats. They typically have physical security measures such as locked doors, security cameras, and access controls, as well as technical measures such as secure communications systems and secure computer networks. SCIFs may be used by government agencies, military units, or contractors who handle SCI on a regular basis.

White noise is a type of random noise that is often used in SCIFs to mask the sounds of conversations and other activities taking place within the SCIF. White noise is a continuous, broadband noise signal that contains a wide range of frequencies. It is designed to mask sounds by overwhelming them with constant, unobtrusive background noise. The use of white noise in SCIFs is intended to prevent people outside the SCIF from overhearing conversations or other sensitive information that may be discussed inside the facility. It is also used to prevent electronic eavesdropping, as white noise can interfere with the operation of listening devices. White noise is typically generated by a noise generator or by playing a recording of white noise through speakers in the SCIF.

Appendix B

Explanation trap through conceptual and theoretical overreach

B.1 The concept of the progression of science according to Kuhn and Lakatos

Thomas Samuel Kuhn argued [280] that science does not have uniform development but instead goes through “normal” and “revolutionary” phases. Normal science is focused on “puzzle-solving” with familiar methods and problems, leading to the accumulation of puzzle solutions. Revolutionary science, on the other hand, involves a revision of current beliefs, hard-core assumptions, and practices, leading to a “Kuhn loss” where previous achievements may no longer be valid [34].

Imre Lakatos proposed modifying Kuhn’s sociopsychological tools with logico-methodological tools. In Lakatos’ view, a research program, not isolated theories, is the unit of appraisal. Each theory within a program shares the same beliefs and hard-core assumptions and is surrounded by auxiliary hypotheses. If a theory is refuted, criticism is first directed at the auxiliary hypotheses and not the hard core, whose proponents tend to protect and immunize it. Modifications are guided by the hard core’s implicit heuristic principles [333].

Lakatos [282,283] would call a research program “progressive” if the associated new theory resolves empirical anomalies, is independently testable (falsifiable), and progresses empirically if new predictions are confirmed: it expands the empirical realm to previously unknown physical phenomena and technology.

One could consider Lakatos’ observations as an extension and modification of Kuhn’s view, with an emphasis on the importance of using logico-methodological terms, particularly regarding the auxiliary hypotheses “protecting the hard core.” Additionally, Lakatos emphasized that the hegemony of beliefs, hard-core assumptions, and practices is not as complete as Kuhn believed: there were always competing programs or paradigms.

B.2 Succession of semantically incoherent scientific research programs

Both Kuhn and Lakatos (as well as to some degree Paul Feyerabend [156–158]) might agree that:

1. For prolonged periods, there exist beliefs, hard-core assumptions, and practices that constitute a dominant scientific programme.
2. Regarding any such dominant scientific program:
 - a. it consists of core semantic concepts that translate into theoretical, syntactic formalizations;
 - b. it will eventually be overturned by another scientific program;
 - c. paradigms are incommensurable [347]: the semantic concepts of competing or successive scientific programs are un(cor)related (whereas their theoretical, syntactic formalizations might, in some approximations, coincide).

Therefore, we are effectively dealing with a temporal succession of scientific research programs with entirely distinct and mutually inconsistent concepts. No “semantic convergence” can be recognized. Moreover, it may be that this succession is not unique, and different researchers or groups of investigators or civilizations may have pursued various strands of concepts and research programs.

B.3 Conceptual and theoretical overreach

I am ready to formulate my main hypothesis, which I call “conceptual and theoretical overreach.”

An agent or individual who is pursuing a particular research program may not be capable of comprehending or reconstructing phenomena and technology associated with a research program that is more than one step ahead. Therefore, the attempt to understand advanced technology from a civilization that is more than one scientific revolution ahead is bound to fail.

Indeed, it might not be totally unreasonable to assume that consulting contemporary so-called “experts”—such as theoretical physicists or rocket scientists—might have an adverse effect on some preliminary, tentative, and incomplete understanding of the phenomena. These “experts” are biased and “ego-invested” toward their respective field of expertise, leading them to emphasize their current thinking. In terms of Reich’s Segmental Armouring Theory, the respective and respected experts sometimes carry and apply their current expertise like a vendor’s tray, surrounding it by something like an impenetrable armor of alleged wisdom.

In most cases involving very advanced technology or the evaluation of what might be a progressive research program, the thinking and belief system of “contemporary experts” will be inappropriate, if not outright distracting and wrong—a waste of opportunity costs. To illustrate, imagine asking a shaman medicine man of Borneo to explain a World War II (WWII) airplane flying over his head.

B.4 Explanation trap

The understanding of the motion and propulsion of UFOs may remain elusive due to the limitations of our current means and concepts. Imposing an explanation without proper understanding can lead to the entrenchment of erroneous models and ideas, despite a general lack of comprehension. This circumstance will be called, for a lack of better terms, an “explanation trap.”

On the scale of individuals, the “mind projection fallacy” is a related concept introduced by physicist and Bayesian statistician Edwin Thompson Jaynes [250]. It refers to the tendency of individuals to project their own subjective mental processes onto the “outside objective” world (or, more nominalistically, one’s own conceptions or labels referring to one’s own concepts and categories of the external world) and to assume that others have similar mental processes.

Jaynes argued that this fallacy can lead to misunderstandings and incorrect conclusions about the nature of reality and the actions of others. For example, individuals may assume that other people see the world in the same way that they do, or that objects have inherent properties when in reality, these are just interpretations that are dependent on their individual perception and experiences.

Jaynes believed that this fallacy is a result of individuals not realizing that their own mental processes are subjective, and therefore, their perceptions of the world are also subjective. This fallacy can also contribute to the illusion of determinism, where individuals believe that events and outcomes are determined by some objective, external factor, when in reality, the outcomes are dependent on the subject’s interpretation and understanding.

To avoid the explanation trap and the mind projection fallacy, it is suggested to adopt an analytical approach called “evenly suspended attention,” inspired by Freud [175, 176]. This approach involves observing the phenomenon without pre-conceived ideas or biases and allowing the observations to settle in, even without immediate explanations or category formations.

This also includes, in particular, recognition and estimation of one’s ignorance: it is important to recognize and acknowledge when we do not know something.

B.5 Examples

Let me present some examples or illustrations of the overreach principle.

In the second edition of his book “Profiles of the Future: An Inquiry into the Limits of the Possible,” Arthur C. Clarke formulated Clarke’s third law [63]: “Any sufficiently advanced technology is indistinguishable from magic.” This can be seen as an early recognition of conceptual overreach: some technology may be so advanced that certain recipients, if left on their own without outside explanations, will be hopelessly overwhelmed.

B.5.1 Stone-age tribe fleetingly encountering an airplane

For instance, imagine a Melanesian indigenous tribe fleetingly encountering an airplane during WWII. Tribe members would very likely seek guidance first from their elders, authorities, or a shaman, who would all be completely unable to grasp what was happening. If those elders, authorities, or shaman were to deny the existence of phenomena such as airplanes, this could easily trigger the formation of a “cargo cult” as a reaction.

B.5.2 Isaac Newton trying to comprehend the Global Positioning System

For a historic example, Lakatos mentions conceptual changes in the theory of gravitation [283]:

1. Ptolemy’s idea of epicycles was geometric.
2. Newton’s concept of gravitational force was mechanical.
3. Einstein’s idea of curved space-time was geometric.

Although all “advanced” theories contain each other’s formalizations and predictions at a certain resolution and with finite approximations, there is no semantic consistency. The future of gravity theories is uncertain [242, 243]. Currently, the study of gravitation (relativity theory) and quantization, particularly quantum field theory, are treated as separate subjects. However, once these two areas are combined, the resulting “unified” theory may bear little resemblance to either starting point.

B.5.3 Operation Overcast/Paperclip

Operation Overcast/Paperclip was a US effort to acquire advanced technology and knowledge from defeated Nazi Germany after WWII. The operation was successful in integrating technological advances that were within the reach of contemporary means and concepts. The Soviet equivalent, Operation Osoaviakhim, aimed to achieve the same goal by recruiting and evacuating German specialists to the Soviet Union. The

British and Australian effort was named Operation Matchbox. Additionally, there were similar efforts, such as the Alsos Mission and the Russian Alsos, that focused mainly on acquiring German nuclear technology.

B.5.4 Science overreach framed as cargo cult

As discussed in Section 10.2, which deals with possible contemporary cargo cults, we, as a civilization, might suffer from an incomprehensible phenomenon in a similar way that indigenous people reflected upon our technology after WWII.

B.6 Absorption of alien technology

Here is a conjecture: when faced with alien craft and debris, the US military-industrial complex attempted to absorb alien technology in a similar way to the absorption of German technology from the Nazi era.

As noted in Section 6.1.1, ATIC, the Air Technical Intelligence Centre at Wright-Patterson Air Force Base, Ohio, was responsible for handling Project Blue Book investigations [393, Chapter 3]. On July 1, 1961, the ATIC became the Foreign Technology Division (FTD). It has been rebranded several times and is currently called the National Air and Space Intelligence Center (NASIC). I am sure it will soon change its name again.

As speculated in Sections 6.1.3 and 9.10, such efforts may have been delegated to what is now referred to as carve-out USAPs mentioned in Section A.3.2.5. This may have resulted in some progress [94] if the respective technologies were not “too advanced,” but failed in central areas such as propulsion and “anti-gravity” or inertia modification.

B.7 Anti-gravity might not be a feasible hypothesis

I will spare the reader canonical arguments that anti-gravity goes against our current understanding of physics and gravity. The laws of physics, as described by Einstein’s theory of general relativity, state that gravity is a property of mass and energy that attracts other masses and energies. There is currently no experimental evidence that contradicts this theory and no widely accepted alternative theory that includes the existence of anti-gravity. Additionally, the concept of anti-gravity raises many theoretical problems and lacks a solid theoretical framework: it might require some sort of “negative or inverse curvature,” maybe also associated with “negative mass or energy (density).” Until there is experimental evidence or a well-developed theoretical framework for anti-gravity, it remains an unsupported and implausible hypothesis.

Likewise, I do not want to discuss in detail special solutions of Einstein's field equations allowing faster-than-light motion, often referred to as the Alcubierre drive [9, 155, 288]. Other solutions of Einstein's field equations require "exotic matter" resulting in wormholes (Einstein–Rosen bridges), which are hypothetical structures connecting disparate points in spacetime [326].

I would like to emphasize that anti-gravity may not solve the reported UFO flight characteristic of sudden changes in direction. It would simply introduce a counteracting gravitational force that could, for instance, counteract the pull toward the center of the Earth, but it would not address the sudden changes in direction. This would enable a craft to hover steadily over some point or slowly cruise at a constant altitude. However, it would not explain sudden, discontinuous changes in motion such as directional changes or changes in velocity: even if we had "anti-gravity propulsion," any such propulsion would still adhere to Newton's second law of motion, which states that the acceleration of an object is directly proportional to the net force applied to it and inversely proportional to its mass. In simple terms, this law states that the more force applied to an object, the greater its acceleration will be. Moreover, the greater an object's mass is, the less its acceleration will be for a given force. Conversely, the smaller an object's mass is, the greater its acceleration will be for a given force.

Thus, even with access to anti-gravity propulsion, producing discontinuous changes in motion would require either applying an excessive amount of force in the desired direction of motion or reducing the craft's mass or inertia in that direction. This holds true relative to the validity of Newton's second law of motion. (These statements are relative to the validity of Newton's second law of motion.)

Therefore, I suggest focusing on changing inertia, or mass, instead of concentrating on anti-gravity. To accomplish this, we must strive to comprehend mass, or at the very least, have a grasp of what we currently do not understand about inertia and mass.

B.8 Can inertia be changed?

B.8.1 Varieties of inertial mass: bare masses and field energy

With the caveats in mind that I may suffer some overreach, I would like to suggest that we should direct our attention to inertial motion, or to inertia in general.

Inertia is a property of an object by which it continues in its state of rest or uniform motion in a straight line, unless acted upon by an external force. Any object would not know how to move without inertia. Operationally, it is a measure of an object's resistance to a change in its velocity when a force is applied. In the following, the terms "inertia" and "mass" or "inertial mass" will be used interchangeably, understanding that mass is a (linear) measure of inertia. This holds true unless a distinction between "gravitational mass" and "inertial mass" is necessary and we

need to re-assess the equivalence principle of relativity theory, one of the starting points of our current theory of gravitation.

The concept of inertia was first described by Isaac Newton in his laws of motion: Newton's second law states that the acceleration a of an object is proportional to the force F applied to it and inversely proportional to its inertial mass m , that is, $a = F/m$. Hence, an object without inertial mass would "not know how to" experience acceleration, as dividing by zero is undefined. An object with very little inertial mass would experience very large acceleration, as a very small denominator (and a given numerator) results in a very large number.

Furthermore, in Newton's law of gravity, the gravitational mass of an object determines the strength of its gravitational force. It is not possible to create an object that has a gravitational force without gravitational mass. Therefore, eliminating mass would result in the elimination of gravity as well [510].

Therefore, manipulation or modulation of inertia, which is a measure of an object's resistance to any change in its velocity and direction, will immediately impact the object's flight characteristics. If, for instance, it is possible to change the inertial mass of some object to almost zero, then a very tiny force will bring about huge changes in the object's motion: it will be able to "zigzag" without much effort, as its inertial mass will be almost zero.

An immediate counterargument to such a possibility is built into relativity theory's assumption of the equivalence between inertial and gravitational mass: inertial masses are "non-negotiable." If they were, then the equivalence principle would not hold, and one could not postulate a single metric "for everybody."

At the end of the 19th century, physicists such as Henri Poincaré, Max Abraham, Fritz Hasenöhrl, and Albert Einstein realized that the electromagnetic field must be included in the calculation of inertial mass—indeed, that it is a form thereof [41]. They assumed linear proportionality between mass and electromagnetic field energy, resulting in the equation $m = kE/c^2$, where c is the speed of light in a vacuum. Einstein was the first to calculate the correct proportionality factor, which was $k = 1$ [148, 151].

Currently, the conversion of field energy into mass is regularly demonstrated in particle accelerators. In high-energy electron–positron collisions, many particles often emerge from the event, and the total mass of these particles can be thousands of times greater than the mass of the original electron and positron. This shows that mass can be created from energy in a physical process [510].

Therefore, there is a component of mass whose origin is in the field energy, and another component that is not. We shall call this latter component the "bare mass." Therefore, a hypothetical bare mass is a term used in quantum field theory (QFT) for the mass a particle would have if it were not influenced by interactions with other particles or fields.

In reality, particles always interact with other particles and fields—otherwise they would permanently remain hidden or cloaked relative to objects made from interacting matter. Those interactions can cause the masses to shift from their bare mass value. This shift in mass is known as a "dressed mass," and it is the mass that

we observe in experiments. The dressed mass of a particle can be larger or smaller than its bare mass, depending on the strength and type of interactions it experiences.

In QFT, the bare masses of particles are used as input parameters in theories and models, and the dressed masses are calculated from the bare masses and the interactions between particles. The concept of bare masses is important for understanding the behavior of particles in QFT and for making predictions about particle interactions and properties.

B.8.2 Dressed mass from the field energy of the strong and electromagnetic interactions

So how does mass from fields come about in our present semantic conception (aka narrative)? In answering this question, we will closely follow Frank Wilczek's accounts [510, 511]. We shall see that, according to the contemporary hard-core assumptions, there are two origins of mass: one from fields that are conceptualized by particles such as photons and gluons, and one from the "Higgs mechanism."

The mass of ordinary matter comes from atoms, which are primarily composed of nuclei made of protons and neutrons. The electrons contribute little mass to atoms. It is now well established that protons and neutrons are made of quarks and gluons, meaning that the majority of matter's mass can be traced back to quarks and gluons.

Electrons occupy the shells of atoms and are charged particles that interact with the charged particles in the nucleus via electromagnetism. The quantum theory of electromagnetism, called quantum electrodynamics (QED), describes these interactions between charged particles by the exchange of virtual photons.

As stated earlier, most of the mass of matter comes from the heavy particles in the nucleus, the protons and neutrons, rather than from the electromagnetic field. These particles are made of quarks, and the stability of the entire nucleon, made of neutral neutrons and positive protons, is maintained by a force much stronger than electrostatic repulsion, with a range on the order of the diameter of the nucleus. The quantum theory of this force is called quantum chromodynamics (QCD).

At its core, QCD is similar to QED but on a larger scale, both in the number of field quanta exchanges and in the strength of the interaction. Therefore, we refer to QCD as a formalization of the "strong interaction." In QED, there is only one type of charge, electric charge, while QCD has three types of charge referred to as "colors." Instead of one photon in QED, QCD has eight color gluons that respond to different color charges or convert one into another.

According to QCD, the confinement force between quarks is attractive and increases as the distance between them increases. This confinement force becomes extremely strong as the quarks are separated by large distances, and is responsible for confining quarks within hadrons (such as protons and neutrons).

In other words, as quarks are separated by a large distance, the attractive confinement force between them becomes very strong (relative to possible electromagnetic repulsion between same polarities), preventing them from moving away from each

other. This confinement gives hadrons their stability and structure, and is a key aspect of QCD and our understanding of the strong nuclear force.

QCD results in an attractive force that is much stronger than QED at “sufficiently large distances” (on the tiny scale of the nucleus) [191], and therefore accounts for most of the field-related mass of matter. Quantum field theoretic calculations of hadron masses, including the masses of protons and neutrons, using both QCD and QED should settle “most” of the nucleon masses, and tell us the origin of “most” inertial mass. (They cannot settle the electron, muon, quark, or neutrino masses though, or indeed explain why the photon is massless.)

Our computations construct massive particles using building blocks, viz., quarks and gluons, even though these particles themselves are massless. How can that be? Quantum mechanics dictates that when a bare color charge is placed in empty space, it will generate a cloud of virtual color gluons. These color gluon fields themselves carry color charge and produce additional soft radiation. This creates a self-sustaining enhancement, resulting in the growth of a large color cloud around the small color charge. (I will not go into detail about the way asymptotic freedom and QED limit these “avalanche-like” processes.)

In any case, starting from the hypothetical zero “bare masses” of all particles involved—in particular, the electron and its anti-particle, the positron, and quarks—suggests that all masses come from the electro- and chromodynamic fields encoded by photon and gluon exchanges. This is the first source of energy and thus inertial mass.

We may summarise these concepts of an “emergent” inertial mass by fields as follows [511]. Classical mechanics views mass as an intrinsic and fundamental property of matter. However, in modern physics, there is no equivalent fundamental concept, and mass is seen as an emergent property that arises from elementary “charged” constituents.

The main contributors to the mass of standard matter are colored gluons and quarks, but also electrons and photons, which have a much smaller impact. All other factors—including the bare masses covered next—are considered insignificant.

For completeness, it is worth mentioning that there is also a contribution to the dressed mass from the weak interaction—responsible, for instance, for the beta decay of neutrons into protons, electrons, and electron antineutrinos—in the standard model [96] of quantum field theory (conceptualized by an exchange of W and Z bosons). However, this contribution is very small.

B.8.3 Dressed mass by the Higgs mechanism

Our understanding of the origin of mass is by no means complete, or—at least to me—satisfactory. We have achieved some tentative understanding of the origin of “most” of the mass of ordinary matter, but not all of it. The masses of the W and Z particles, the leptons (electron, muon, tau), and the quarks, in particular, remain

deeply mysterious even in our most advanced speculations about unification and string theory.

In my opinion, the Brout–Englert–Higgs (BEH) mechanism is an ad hoc assumption—a deus ex machina of sorts—that has been suggested to resolve those issues to some degree. Through BEH, a particle can acquire a mass that is not associated with electroweak and strong field energy.

The Higgs field is supposed to be all-pervasive, permeating all of space. As particles interact with the Higgs field, this interaction causes mass or inertia. It is somewhat analogous to a ball in molasses: the ball acquires inertia or mass—resistance to any change in its motion—as the molasses slows it down. In that way, an additional interaction (per massive particle) can “explain” inertia not residing in the electroweak and strong interactions (and their respective fields).

Particles that interact more with the Higgs field have a greater mass, while particles such as photons that do not interact with it have no mass. The Higgs field is represented by a particle known as the Higgs boson, which was discovered in 2012 by the ATLAS [21] and CMS [78] experiments using CERN’s Large Hadron Collider (LHC) [22, 442, 443]. Despite those additional interactions—one per particle acquiring mass by interacting with it—the Higgs boson has been modeled as “characterless,” with zero spin, no electric charge, and no strong force interaction.

B.8.4 Changes in inertia by radiative corrections and charged particles between conducting plates

It has been suggested that the Casimir effect has an influence on physical parameters such as the velocity of light or mass (i.e., inertia). This is because parallel plates impose boundary constraints on the cloud of virtual photons, resulting in a discretization of field modes perpendicular to the plates. These, in turn, affect the radiative corrections. Calculations have shown that this effect leads to a decrease in observed masses and anomalous magnetic moments [277, 434], as well as an increase in the velocity of light in a vacuum [26, 57, 325, 408, 409].

B.8.5 Other suggestions involving zero point fluctuations of quantized fields

There are several suggestions for modifying the quantum mechanical vacuum state—in particular, its refractive index through varying permittivity or permeability—through radiative corrections or gravity from zero-point fluctuations [40, 107, 127, 197, 375, 390, 391, 401].

B.8.6 Mach's principle as an alternative explanation for inertia

For the sake of completeness, I mention the hypothesis that the inertial forces experienced by a body in nonuniform motion are determined by the quantity and distribution of matter in the universe that interacts with that body. This is often referred to as "Mach's principle" [25].

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