

The Extent of Our Knowledge

Organization of the Research in France

In 1977, the Centre National d'Etudes Spatiales was tasked with the mission of setting up a permanent structure for the study of unidentified aerospace phenomena (UAP): the Groupe d'Etudes de Phénomènes Aérospatiaux Non Identifiés (GEPAN). This establishment had within it the skills and resources appropriate to this mission, in particular, engineers and personnel with high-level technical knowledge who were in close touch with scientific circles. A scientific council chaired by Hubert Curien and composed of twelve members who were representative of the social and exact sciences guaranteed that this complex and delicate subject would be handled with all the necessary precision. This council had the job of guiding, organizing, and reviewing the work of GEPAN annually.

Three phases can be distinguished in the progression of the activity connected with the study of UFOs in France, which culminated in 1988 in the creation of the Service d'Expertise des Phénomènes de Rentré Atmosphérique (SEBRA), which succeeded GEPAN, still within CNES:

- a phase that consisted of setting up the organization and defining the procedures for the collection and processing of data, which is described in this chapter,
- a phase that consisted of defining the scientific method for studying cases,
- a phase that consisted of implementing the previously defined methods and procedures, the last two of which are discussed in the next chapter.

SEBRA plays a more limited role in the study of UFOs than does GEPAN, the scientific council of which has accomplished its mission

The Setting Up the Organization Phase

GEPAN's first job was to form a partnership among the different public, civilian, and military agencies with a view to organizing the collection and analysis of reliable data. The Gendarmerie Nationale, the civil and military aviation authorities, the National Weather Service, etc., were approached and brought together in this organization via agreements and protocols established with GEPAN.

The first goal set was the rapid acquisition and provision of data collected at the sites where a phenomenon was sighted. To do this, in accordance with the directives of the scientific council, GEPAN was tasked with the mission of forming teams of specialized investigators for the collection of psychological and physical data, such as, for example, taking samples of tracks in the ground. In parallel to this organization, various civilian and military research laboratories were asked to participate in expert's appraisals and analyses of the data collected in investigations, such as, for example, the processing of photographic documents and radar recordings.

Participation of the Gendarmerie Nationale

It was in February 1974 that the first instructions were given tasking the Gendarmerie Nationale with the job of collecting and centralizing spontaneous testimonies on UFOs. Previously, these testimonies had been collected on an occasional basis in the regional [gendarmerie] forces and rarely gave rise to the drafting of reports or to in-depth investigations (the Valensole case in [1965]). The administrative or technical authorities did not process or use these documents.

Beginning in May 1977, one of the six copies of the report drafted by the regional gendarmerie forces was forwarded to GEPAN, which from then on became the recipient of all information collected on UFOs.

Role and Action of the Gendarmerie Nationale

Each gendarmerie force possesses a manual, the "gendarmerie handbook," which contains all of the instructions on the procedures to be followed in the collection of data on unidentified aerospace phenomena. Depending on the degree of complexity of the case reported, the level of intervention may range from the simple transcript of a testimony to an actual investigation, which may be conducted jointly with the GEPAN/SEPPA departments at the locations of sightings and often results in an in-depth report.

Use of Data Collected by the Gendarmerie Nationale

Once the information has been collected locally by the gendarmerie, it is forwarded in the form of a report to the Gendarmerie Nationale headquarters in Paris, which issues a copy of it to GEPAN/SEPPA. The latter processes it at two different levels:

- at the first level, the report is analyzed, then entered into a database, and perhaps is processed statistically for the purpose of establishing classifications and typologies of phenomena,
- at the second level, which relates to more complex "UAP D" (category D unidentified aerospace phenomena) cases, the investigation in the field generates a set of research activities with respect to elements for further processing that results in the drafting of a detailed, in-depth investigation report; the report may be used for track interpretation studies.

Assessment and Results of the Cooperation with the Gendarmerie Nationale

Since 1974, over 3,000 gendarmerie reports representing an average of [three] spontaneous testimonies per document have been collected and forwarded to GEPAN/SEPPA. Added to this are some one hundred investigations and interventions in the field, conducted jointly with the local [gendarmerie] forces. All of these have permitted the characterization of a set of rare, natural and artificial phenomena that have occurred with varying frequency which would not have been able to be identified without this type of organization. Thanks to this collaboration, it has been possible to study UFO cases like the Trans-en-Provence and "Amaranth" cases (see Chapter 4) under excellent conditions, showing that there was a remnant of events the nature of which had yet to be identified. A volume of information describing the objectives sought by CNES in the study of UFOs was widely disseminated to all of the regional [gendarmerie] forces. Supplemental information and training, [end of line cut off] direction of officers and lower-level gendarmes, is regularly provided by the Gendarmerie Nationale schools to sensitize the [gendarmerie] force commanders to this subject.

The results of this collaboration could be more effective. Regular updating of the data collection procedures would be desirable, as well as shorter time delays before intervention for investigations between the time the local [gendarmerie] force learns of the case and the time when SEPRA intervenes. This reduction in the intervention time would considerably diminish the loss of information, particularly with respect to effects on the environment. It would also be important for the gendarmerie forces to be routinely informed of the results of work and investigations carried out by SEPRA. However, the resources currently available in terms of personnel and budget allocations do not permit a response with the efficacy desired.

6.3

Participation of the Air Force

Just after World War II, the first reports of French aeronautic UFO sightings were collected and archived by the Air Force Chief of Staff's Office of Planning and Studies (EMAA/BPE).

When GEPAN was created, a memorandum of understanding defined the respective roles of the two agencies for the processing of information relating to cases of military aeronautic sightings. In principle, all UFO sightings must be reported to the military air [traffic] control center in question, which forwards the information to the Air Operations Center (CCOA) in Taverny. The latter is responsible, in collaboration with the Air Force Chief of Staff's Space Office, for forwarding it to GEPAN/SEPRA. At the same time, all radar information is recorded in the radar control centers and kept for a minimum of one month and longer on request. This information is made available to investigators if needed.

A protocol established with the Army defines the conditions for the forwarding of information collected in flight by pilots of the Army Air Corps (ALAT).

6.4

Participation of the Civil Aviation Authority

The same type of organization and procedures is used by the civil aviation authority to collect and process the information relating to UFO sightings made by civilian pilots. A protocol signed between the Civil Aviation Directorate (DGAC) and CNES permits GEPAN/SEPRA to have access to UFO sighting reports drafted by national and foreign airlines crews. To this end, a sighting report form prepared jointly by DGAC and GEPAN/SEPRA is made available to crews at the air [traffic] control centers of the civil aviation authority and airlines. In addition, the radio conversations between the crew and the air [traffic] control [center] are routinely recorded and attached to the detailed sighting report.

There is also a regulation concerning flight incidents that could involve safety. In this case, the flight captain must follow the "Airmiss" procedure, which routinely triggers an investigation by the DGAC.

6.5

Additional Research Resources

Numerous civilian (public or private) and military bodies contribute to the expert appraisals performed in investigations and work by GEPAN/SEPRA. This involvement takes place at two levels, either in the collection of data in the field and the utilization of sighting reports or in the

analysis of data after the expert's appraisal and the theoretical and experimental research that are deemed necessary.

Cooperation agreements have been established, particularly with various bodies that can benefit in return from the results of investigations of interest to their own area of study, for example:

- lightning (EDF, CEA [French Atomic Energy Commission], the National Weather Service, ONERA, CEAT [Toulouse Aeronautic Test Center]),
- meteors (CNRS [National Center for Scientific Research], DGA [French General Delegation for Armaments]),
- line disturbances (EDF, France Télécom [French telecommunications company]),
- group sociology and, in particular, sects (CNRS, universities),
- photography, the study of films, the processing of satellite imagery (Fleximage).

The following three applications should be emphasized:

6.5.1 **Sample Analysis**

GEPAN/SEPRA is supported by various civilian and military laboratories, including those of the Etablissement Technique Central de l'Armement [Central Technical Armaments Institution] (ETCA), for analyzing soil and plant samples collected during the course of investigations.

6.5.2 **Use of Photographs**

Image processing work was performed at ETCA between 1981 and 1988. This work enabled the techniques and procedures, listed in GEPAN technical memorandum no. 18, for studying supposed UFO photographs to be defined. Diffraction filters were installed in the gendarmeries to permit the collection of information over the light spectrum emitted.

6.5.3 **Sky Surveillance System**

A system called "ORION" was studied and deployed by [the Ministry of] Defense for the purpose of monitoring, identifying, and predicting the passage of satellites, particularly over national territory. It should meet, at least partially, the need for the surveillance of UFO-type light phenomena. The system consists of:

- the current surveillance and tracking radar systems and listening antenna on the ship *Monge*,
- two radar and optical surveillance systems and one optical imaging system:
 - the "GRAVES" surveillance radar system, which will be capable of detecting objects from 1 m² [in size] at a distance of 1500 km,
 - the "SPOC" [Sky Observation Probe System] optical surveillance system, which uses CCD cameras to detect and determine the trajectory of orbiting satellites or magnitude 7 to 8 space debris (the installation of equipment at two sites is currently under way),
- finally, the development of the 4 m diameter "SOLSTICE" telescope, which may be provided with adaptive optics, for the observation of objects in geostationary orbit (36,000 km).

Method and Results of GEPAN/SEPRA

7.1

Method Developed by GEPAN

GEPAN developed an original method for studying rare, randomly occurring phenomena. Meteorites are among these phenomena. Scientists have long refused to consider sightings of stones that have fallen from the sky, which are generally reported by rural inhabitants. Fortunately, in 1803, the physicist Jean-Baptiste Biot conducted an in-depth investigation in the village of Laigle in Orne [Department] about three weeks after someone had reported stones that had fallen from the sky. Biot examined numerous stones and certain evidence (broken branches, perforated roofs, fires) and questioned many independent witnesses. He prepared a convincing report that gave scientific existence to meteorites.

The method developed by GEPAN was approved by its scientific council. It basically consists of identifying initially unknown phenomena and performing a joint analysis of four types of data concerning:

- witnesses: physiology, psychology, etc.,
- testimonies: accounts, reactions to questions, general behavior, etc.,
- the physical environment: weather, air traffic, photographs, radar data, traces left on the environment, etc.,
- the psychosociological environment: readings and beliefs of witnesses, possible influence of the media and various groups on these witnesses, etc.

Gendarmerie reports often contain sufficient data in order to be able to identify the phenomenon sighted. In many cases, the phenomenon turns out to be an airplane, a planet, a satellite, etc. In other cases, a fairly large supplemental investigation is conducted by GEPAN/SEPRA. An in-depth study can take up to two years. The analysis of traces left on the environment may result in specialized laboratories being called on for assistance (see the Trans-en-Provence and "Amaranth" cases in Chapter 4).

Finally research was conducted in collaboration with the universities in order to perfect the investigation method. CNES, out of a concern for scientific precision, adopted the term "UAP" instead of the term UFO, which is more well known but more restrictive. GEPAN is the group that studies UAPs.

7.2

First Classification of UAPs (Unidentified Aerospace Phenomena)

After a study is conducted, each case is classified by GEPAN/SEPRA into one of the following four categories, depending on the extent to which it has been identified:

- Category A: completely identified phenomenon,
- Category B: phenomenon that can probably be identified but which cannot be identified with certainty due to a lack of evidence,
- Category C: phenomenon that cannot be identified due to a lack of data,
- Category D: phenomenon that cannot be identified despite the abundance and quality of the data.

Category D UAPs represent 4 to 5% of the cases and are called UAP Ds. They include sightings of phenomena, some of which were close to the ground a few meters from the witnesses. The strangest and most mysterious cases in this category are generally labeled CE3s (close encounters of the third kind) according to the classification proposed by Professor A. Hynek, an astronomer and consultant to the USAF, within the context of the Blue Book Project (cf. Chapter 9.1).

Typology of UAP Ds

The detailed statistical analysis of UAP Ds enables a precise determination of the distribution of their physical characteristics: speed, acceleration, silence, shape, effects on the environment. It is interesting to note that statistical studies in the USSR yielded distributions comparable to those determined by Claude Poher, the first head of GEPAN, from some 200 French cases, or 1,000 cases worldwide. It would be desirable to be able to develop UAP D statistical studies in France.

Investigations of Remarkable Cases

Around one hundred investigations have been conducted by GEPAN/SEPRA. Some of them have highlighted rare physical atmospheric phenomena associated, for example, with lightning; others have revealed unusual psychological behavior of witnesses caused, for example, by taking hallucinogenic drugs. Several very in-depth investigations based on analyses of evidence have demonstrated, in the end, the physical presence of a phenomenon the nature and origin of which remain unknown. Two cases related in Chapter 4 stand out in our minds, the Trans-en-Provence case of January 8, 1981, and the "Amaranth" case of October 21, 1982. The investigations lead us to believe that double-saucer-shaped objects were close to the ground for some time, then departed toward the sky leaving traces on the vegetation and, in the Trans-en-Provence case, on the ground itself. They are detailed in GEPAN technical memoranda no. 16 and no. 17 (see the reference list in Chapter 6).

Aeronautical Cases

Data on French Aeronautical Cases

- Twelve French aeronautical cases have been brought to the attention of GEPAN/SEPRA; only three or four of these can be considered to fall into category D.

- The first UAP D case identified dates back to 1951. It involved Vampire military aircraft in the Orange area. In two other very extraordinary sightings, which are presented in Chapter 1, military pilots reported *the presence of objects with aeronautical performances inconsistent with the maneuvers of classic aircraft* over the region of Tours in 1976 and of Luxeuil in 1977. However, not until January 28, 1994, was the crew of a regularly scheduled Air France commercial airplane able to collect the first case of a visual sighting correlated with a radar detection over 50 seconds long (see Chapter 1.3).

Aeronautical UAP D Cases Worldwide

The aeronautical UAP D cases known since 1942 were initially enumerated in a document entitled *Rencontres dans le ciel [Encounters in the Sky]*, by Dominique Weinstein, the French portion of which SEPRA contributed to. The list of sightings worldwide includes the description of 489 well-documented cases of aeronautical UAP D sightings the sources of which were duly verified. Most of the information on these aeronautical UAP Ds is drawn from official sources, government authorities, the Air Forces of different States, or agencies like SEPRA.

This list offers a classification according to criteria with respect to the quality of the sighting. It ranges from simple visual sightings, describing the specific performances or maneuvers of the phenomenon observed (speed, acceleration, maneuverability, silence, etc.), to more elaborate sightings, mentioning environmental disturbances caused by the aeronautical UAP Ds, such as radio interference or radar jamming, navigation instrument malfunctions, or even physical effects on the crew (heat, blinding, etc.).

Between 1947 and 1969, that is, during the time of the U.S. Air Force Blue Book Project on UFOs, 363 sightings were identified. 1952 is the year in which the greatest number of sightings were recorded: 68. A total of 63 countries are cited as having been the scene of at least one aeronautical sighting.

7.5.3

"Radar/Visual" Cases Worldwide

"Radar/visual" cases are those in which a visual sighting is associated with an onboard radar and/or ground radar detection. It is noted that:

- the first sightings in Japan and the USSR date back to 1948,
- 30 of the 68 countries cited in the list reported "radar/visual" cases,
- of the 489 cases in the report, 101 were "radar/visual" cases (21%),
- of the 363 cases in the Blue Book report, 76 were "radar/visual" cases (21%),
- in 1952, 16 out of 68 cases were "radar/visual" cases (23.52%).

In conclusion, we can clearly establish that from 1942 to 1995, at least 500 well-documented and recognized aeronautical UAP D sightings were identified throughout the world, nearly 20% of which were "radar/visual" cases. They furnish proof of a physical reality of phenomena that exhibited paradoxical maneuvers.

7.6

The Physical Reality of UAP Ds

7.6.1

An Initial Report as Early as September 1947 in the United States

We have seen that the work of GEPAN/SEPRA showed that there was an entire category of rare physical phenomena occurring at varying frequency that could not be classified as known natural or artificial phenomena. These phenomena, UAP Ds, which we have highlighted, both in the aeronautical sphere (military and civilian aeronautical cases) and close to the ground (cases of close encounters), support other cases of well-documented sightings that have been verified by official authorities throughout the world. It is interesting to note that as early as November [sic] 1947, right at the start of the very first wave of modern UFO sightings, in the United States, General Twining, head of the Air Material Command, drafted a report on "*flying disks*," the conclusions of which are very explicit:

1. The phenomenon reported is *something real*; it is not a matter of visions or imagination.
2. *Disk-shaped* objects the size of which is comparable to that of our aircraft do exist.
3. It is possible that some sightings correspond to natural phenomena.
4. The very high rate-of-climb observed, *the maneuverability, and the escape maneuvers* when the disks are detected lead one to assume that they are piloted or operated by remote control.
5. Most witnesses describe objects with a *metal surface that are circular or elliptical in shape, the upper portion of which is dome shaped, flying without making any noise* in a formation of three to nine objects...

7.6.2 GEPAN/SEPRA's Work

We do not have irrefutable tangible proof in the form of material, either whole or in fragments, that confirm the physical nature of UAP Ds and their artifactual character. Nevertheless, the collection and expert appraisal work carried out at GEPAN/SEPRA for over 20 years confirms the statements General Twining made in 1947.

7.6.3 French Aeronautical Cases

The study of French military aeronautical UAP D [sightings] (Orange in 1951, Tours in 1976, Luxeuil in 1977) support General Twining's conclusions, namely the fourth one. The testimonies of the pilots do in fact lead one to assume that the objects were "*either piloted or operated by remote control*": all of the pilots reported that it was "*the object*" that appeared to be moving toward them and not the other way around. Moreover, all of them considered the maneuvering abilities of the object to be far superior to those that they were familiar with.

7.6.4 Cases of Close-Up UAP D Sightings in France

For their part, the cases of close-up UAP D sightings in France are very much in keeping with Twining's conclusions 4 and 5. In Trans-en-Provence (Chapter 4), the expert appraisals made at the site support the local testimony and show that the object with a metallic appearance and circular shape landed, then took off silently within a very short space of time not very far from a wall 2.5 m in height. No modern aircraft is capable of these silent maneuvers, nor of this degree of precision when landing. It is hard not to imagine a piloted or remote-controlled flying machine, or else one having highly advanced cybernetics.

The other French cases of close encounters described in Chapter 4 also strongly suggest the existence of an intelligent [civilization] behind the UAP Ds. In the Valensole, "Amaranth" and Cussac cases, once the witness or witnesses are brought face to face with the UAP D, everything generally happens very quickly, and the object escapes without having shown the slightest aggressiveness toward the witnesses.

7.6.5 Foreign Cases - Conclusion

The study of certain foreign cases leads to conclusions similar to those drawn from the French cases. One may reread in this spirit the description of the aeronautical cases presented in Chapter 2. We could also relate foreign cases of close encounters, such as the Socorro (New Mexico) case, which is similar to the Trans-en-Provence case, but the critical overview of which would needlessly weigh down this report.

One strong conclusion emerges from this set of facts: some UAP Ds do seem to be completely unknown flying machines with exceptional performances that are guided by a natural or artificial intelligence.

UFOs: Hypotheses, Modeling Attempts

8.1

Partial Models

Credible sightings of aerial objects can be reinforced by plausible technical explanations of the phenomena reported. Among the most striking observations in relation to the current state of our knowledge, we cite:

- aerial movements carried out silently with very rapid accelerations and/or very high speeds.
- the shutting off of the engines of nearby land vehicles,
- the locomotor paralysis of witnesses.

Insofar as the sightings that are the most well documented, and the most credible owing to the obvious competence of the witnesses, come from aircraft pilots, it is their sightings of aerial movements, sightings which are, moreover, supported by radar plots, that should be explained first.

8.1.1

Travel

There are, from the standpoint of the concept, various principles of propulsion that do not require propellers or jet engines that could thus be silent. The most advanced uses magnetohydrodynamics, abbreviated MHD, but many others can also be considered. We will review these.

8.1.1.1

MHD Propulsion

The principle of MHD propulsion, which cannot be envisioned in a vacuum, consists of causing an electrical current to flow in the medium surrounding the rotor. At the same time, the rotor emits a magnetic field. According to Laplace's law, this field exerts a force on the current and thus on the medium in which it is flowing; this is the principle of most electric motors. The medium being displaced in this way in relation to the rotor, it is in fact the latter that undergoes, by reaction, a force that enables it to be propelled. You still have to cause the necessary field and current to appear:

- for the magnetic field, this is easily accomplished by installing windings (like those in electric motors), over which a suitable electrical current travels, in or under the walls of the rotor,
- for the electrical current, it all depends on the medium.

In sea water it is easy to cause a current to flow using electrodes positioned on the rotor housing. This is why MHD propulsion has been experimented with, so far successfully, in the United States and Japan on both surface and submarine ship models.

In air, which is naturally insulating, it is more difficult to cause an electrical current to flow, but it is known how to make air conducting by using, for example, strong electrical fields generated here as well by suitable electrodes (air, when rendered conducting, can become more or less luminous, which has frequently been observed around unknown objects). As for the magnetic field, this can be created as for boats. However, propulsion is much more difficult to achieve in air, since it must not only propel the rotor but first of all compensate for its weight. The electrical and magnetic fields required are therefore much stronger than for a ship and, in practice, obtaining the very strong fields that are essential is scarcely conceivable without having recourse to superconducting windings. Still theoretical until a only few years ago, their use in an aerial vehicle

has been a credible prospect since 1991, with the discovery of superconductors capable of operating at near-ambient temperatures.

Propulsion in the atmosphere without propellers or jet engines is, therefore, completely possible in principle with MHD, and the calculations show that the power necessary is not, in certain cases, incompatible with our current aeronautical engines. The fact that no cooling system has been seen (or heard) on the objects that have been observed close up can be explained as long as the length of the craft's flights does not exceed a few dozen minutes. Furthermore, other motors that we already use – electric motors, due to energy stored on board or to inertia if they are not yet powerful enough – would not need immediate cooling, which duly proves that this problem is not insurmountable.

Numerous witnesses have been struck by the silence accompanying the maneuvers of the objects, which do not create a “bang” even at supersonic speeds (cf. Part 1, Chapters 1, 2, and 3). MHD propulsion could account for this silence: preliminary experiments in noise reduction by eliminating the wake and shock wave, albeit under very special conditions, are encouraging.

There has been extensive work on the different aspects of MHD propulsion of aircraft abroad: in the United States at Rensselaer Polytechnic Institute in Troy (NY), and according to the journal *New Scientist* (February 1996), in Great Britain and in Russia.

To sum up, based on the current state of our knowledge, an MHD aircraft model is conceivable in the short term, while the creation of a craft having the same movement capabilities as the aerial vehicles described by the witnesses seems quite likely to us within a few dozen years. For the time being, only the quasi absence of perceptible air flow and noise while hovering close to the ground pose problems.

8.1.1.2

Other Propulsion Methods

In a vacuum, the absence or scarcity of molecules or atoms prevents current flow in the medium as well as the projection of a mass of sufficient substance pulled from this medium. MHD propulsion is therefore not possible, and it is necessary to formulate other hypotheses. Jet propulsion by means of chemical reactions, comparable to our rocket engines – even though its performance is more advanced – should not be ruled out *a priori*. In fact, the space phase of the travel of unknown objects takes place very far from sight.

In addition, skins for stealth purposes render them invisible to telescopes and radars beyond a few kilometers or a few dozen kilometers. Consequently, at these distances, these objects could very well use classic propulsion systems without being detected. Mainly, then, problems with respect to power consumption and mass to be expelled are raised, but the method reviewed below in 8.1.1.3 would enable these problems to be partially solved.

More advanced technologically are propulsion systems that call for very high velocity exhaust – a considerable fraction of the speed of light – of particle beams. Due to the extremely high exhaust velocity, the mass expelled is low and expulsion can be continued for a very long time. Such particle beams that can be loaded on board satellites have been developed for space warfare in the former USSR (at the von Ardenne laboratory in Soukhumi, Georgia) and the United States, especially at the Argonne National Laboratory. At present, of course, these beams are much less powerful than what would be necessary here, but they are already of interest as low-power engines once out of the proximity of planets. The U.S. probe “Deep Space 1”, which should narrowly miss asteroid 1992 KD on July 29, 1999, was equipped with an engine of this type.

Other methods of space propulsion are being studied very actively: nuclear propulsion using fission ("NERVA," "ORION," and "DAEDALUS" projects) and, more recently, fusion, which would offer respective gains of one and over two orders of magnitude in comparison with the best engines at present. Beyond this, the use of power stored in the form of antimatter – which has become credible since CERN [European Council for Nuclear Research] created an antihydrogen atom and demonstrated the means for storing it – will offer gains even one hundred times greater.

This is why a growing number of research centers are doing work on this subject: the Jet Propulsion Laboratory, Lawrence Livermore Laboratory, the Air Force Astronautical Laboratory (Edwards Air Force Base), where antigravitation is also being studied, according to the June 10, 1996 issue of *Jane's Defence Weekly*. The latter topic is reportedly also being pursued in Great Britain and in the CIS [Commonwealth of Independent States].

8.1.1.3

Use of Planetary or Stellar Impulse

Closer to our current technologies, even though, strictly speaking, it does not have to do with propulsion, the Jet Propulsion Laboratory imagined, in 1961, that a spacecraft slingshotting off of the potential [gravity] wells of suitably selected planets could attain higher and higher speeds without expending any energy. This method is now routinely used for missions to the remote planets in our [solar] system. One can then envision that by using "reflections," not only off of planets but also off of stars, as Dyson proposed in 1963, considerable speeds could be attained (limited only by escape velocities) and interstellar distances could be crossed using relatively little energy at the price, of course, of the time necessary for the departure and arrival slingshots.

This method would lead to intersidereal voyage lengths probably figuring in thousands of years, thus with an order of magnitude greater than lengths anticipated for the envisioned antimatter propulsion.

8.1.1.4

Conclusion Regarding Travel

To sum up, for travel both in the atmosphere and in space, we can formulate reasonable hypotheses on flight without any apparent means of lift in the first case and on the crossing of great distances, up to an interstellar scale, in the second.

8.1.2

The Shutting Off of Land Vehicle Engines

To explain this phenomenon, which has been reported frequently abroad, it is necessary to visualize a remote action. [Since] no beams of light appear to be associated with these engine immobilizations, we can imagine radio-frequency radiation, such as microwaves, which we know can cause effects of this type and which can be easily formed into beams to act from a distance. Under these conditions, microwave emissions from unknown objects would be likely to create an electrical field around the craft strong enough for the ignition voltages, in being added to it, to cause ionization of the air around the high voltage circuit of the engine ([ignition] coil, distributor, spark plug wire), thus short-circuiting the firing pulses to the engine mass and shutting it off.

Since electronic ignition came into widespread use in the 70s, the action of microwaves, apart from the mechanism previously described, may be exerted directly, paralyzing the electronic circuit generating the high voltage. We can therefore envision the action of unknown objects on land vehicles, including nowadays those with diesel engines, which are made vulnerable due to their very

often electronic regulation circuit. Let us recall that the ability to generate microwave beams that can act from a distance is within the capabilities of our own technologies, as demonstrated by the intensive work being carried out in the United States and the former USSR to develop microwave weapons intended precisely to destroy or immobilize enemy electronic systems from a distance, and even to act on personnel. In France, high power microwave generators that can be used for this purpose are being studied.

This does not rule out the possibility of other types of radiation being used. Charged particle beams would be capable of analogous effects, passing through, if necessary, living matter, such as the bodies of some witnesses, without being felt by the latter or leaving any notable or lasting sequelae. This can be illustrated by the beams of accelerators used in proton therapy, which begin by passing through tissue without causing too much damage and becoming destructive only when their energy falls below a certain threshold as a result of their penetration.

This mode of action corresponds, moreover, to certain testimonies that report the observation of beams of light passing through physical obstacles; in fact, by ionizing the air, proton beams generally do become visible in the form of truncated beams of light the length of which is a function of their initial energy.

8.1.3

Locomotor Paralysis of Some Witnesses

This phenomenon is less common. It is remarkable in that the paralyzes reported only affect certain voluntary movements, but not respiration or posture (balance, in particular, is not compromised; the witnesses do not fall down) or eye movements. From the standpoint of concepts, it can be remarked that in human beings posture and respiration are controlled by the cerebellum, an organ that is independent of the cerebrum, which governs voluntary movements. The paralysis effects observed can reasonably be attributed to microwaves acting from a distance on certain parts of the human body (this is also one of the objectives of the work mentioned above on microwave weapons). We should note that these effects, among others, are being studied at the Air Force Weapons Laboratory at Kirtland AFB.

8.2

Modeling and Credibility

The fact that we can formulate a credible hypothesis on the propulsion of the objects sighted is obviously only a positive indication, but not proof of their existence, no more than that of their conformity to the model that we imagine.

In this regard, the history of the technique teaches humility, but it can also yield quasi certainties:

- humility in noting prognostic errors committed in the past. It suffices to recall the affirmations (or readiness to [affirm]...) of several very great scientists: "*You cannot breath in tunnels,*" "*science is almost finished,*" "*something heavier than air cannot fly,*" etc. It would therefore be presumptuous to claim to foresee, based on our knowledge and our current accomplishments, what might be technologies that are only slightly more advanced than our own – or our own technologies in one or two centuries. Let us consider that only 150 years ago, engines, electricity, the existence of the atom, and Hertzian waves were unknown! We can also reread Jules Verne: *Paris au XX^e siècle* [*Paris in the 20th Century*] or *Hier et demain* [*Yesterday and Tomorrow*]...

- certainties, since scientific and technical progress can only continue, supported by more scientists and engineers than there have ever been, spurred by competition among nations. This

competition, which is now "closed" in our world, will focus on all of the resources that once were free: potable water, the deep sea, the polar regions, air, space, radio frequencies, etc.

Although it is risky to predict the results of an increasingly accelerated scientific and technical development, it is, at least, almost certain that our own knowledge will have advanced greatly even within a few decades. There's no telling what progress will be made beyond that time! Under these circumstances, we can conclude with a high degree of certainty that movements of objects that at present are just beyond our capabilities will be technically possible within a few decades, or even a few centuries, even if the knowledge put into play is not what we are predicting.

To the extent that the preceding conclusion is acceptable, let us go further and comment that only a few million years will have elapsed (barring a catastrophe) between the appearance of man and the future stellar expeditions of our descendants (cf. Chapter 8.3.6 and Appendix 4). This interval between the appearance on earth of a conscious intelligence and the time when we will be able to perform the same feats as those performed by the objects we are dealing with here is infinitesimal (one to two thousand years) compared with the age of the earth or even with the 600 million years that separate us from the appearance of the first living organisms at the beginning of the Cambrian period.

But the development of other intelligent [beings] on other worlds cannot have taken place at exactly the same rate as on earth. If the age of these other worlds, like that of the earth, is on the order of 4 billion years, and if a conscious life [form] appeared, neither the rate of its development nor the epoch in which that world was created cannot have been exactly the same as ours.

Under these conditions, even a minuscule deviation of 0.1%, for example, in regard to these initial data would make it possible to place such a civilization between several million years ahead of ours and several million years behind ours.

Thus the probability of the extent of development of two civilizations in the universe, and the same solar system, being equal appears to be very low, and in all likelihood we have only two possibilities:

- our "neighbors" are several thousand or several million years behind us (or do not yet exist as a conscious species), and it will be we who discover them,
- our neighbors are ahead of us, but then the probability is that this advance figures in the thousands of years or more, rather than in years or even hundreds of years, and if we can judge from the rate of our own development, their level of development would certainly exceed our forecasting capabilities in every domain.

UFOs – Overall Hypotheses

For several dozens of years, the systematic collection and scientific study of unusual atmospheric phenomena have permitted a number of major advances. Of course, on analysis, a good proportion of the sightings have proven completely explicable: satellite reentries, sounding balloons, etc. This has furthermore enabled the precision of the observers, as well as the veracity and consistency of the testimonies, to be tested. Cases of hoaxes are, on the whole, very rare and quite easy to detect. The majority of the observers provide reliable reports, although it is necessary to take into account the problems of diverse assessments.

Most of the sightings of all types have also enabled the credible and well-documented sightings called UAP Ds (category D unidentified aerospace phenomena) for which no explanation has been found to be classified separately. However, these phenomena are often attested by means of

consistent testimonies all the way up to visual sightings coupled with radar sightings. Of course, if there had only been ten or so UAP D [sightings], this ambiguous file could just have been classified as "no action," but we are no longer at that point and are far beyond that. Thus we are forced to seek plausible explanations. All sorts of hypotheses have been constructed, and they may be classified as follows:

8.3.1 **Ascientific Hypotheses**

"We are being manipulated without realizing it" (by a very secret, very powerful, and very knowledgeable group of people; by strange, unknown, or even extraterrestrial beings; by spirits; by the devil; by our psychological fantasies; etc.). Obviously, we cannot say *a priori* whether these hypotheses are true or false [since] they cannot be proven; their main drawback is that they aren't much good to us.

Parapsychological phenomena and collective hallucinations should be classified in this category. The same is true of the idea that is sometimes expressed that the futuristic craft sighted are actually products of the future activity of humanity. Our descendants of the distant [future], who have found the way to go back in time, come to observe us...

It is obviously classic to try to reconstruct and observe the past via any of the traces that it leaves, and one could theoretically observe it directly (for example, by discovering a well-oriented mirror on a planet located a few light years away). It is, however, out of the question for such an observation to be able to influence a bygone time in any way, except by being detectable.

8.3.2 **Secret Weapons of a Superpower**

UAP Ds would then be piloted or remote-controlled craft of terrestrial origin. There is no lack of observers to believe that the object with fantastic performances that they saw maneuvering in the sky is the state of the art of military progress, which would explain the secrecy in which they are cloaked. Certainly studies such as those regarding the stealth aircraft or magnetohydrodynamics actually lead to impressive progress. But besides the fact that it would be extremely unwise to expose to the eyes of laymen and foreign experts in this way what there has been so much interest in concealing, it can be added today that throughout the decades during which these phenomena have occurred, the secret would have inevitably come out, especially if the political upheavals of recent years are taken into account.

8.3.3 **Disinformation Attempts**

Into this category fall special effects and montages, which are generally accompanied by a lot of media publicity. Some researchers believe that without necessarily lending themselves to the manufacture of ultramodern weapons, the performances of high-tech craft might serve to brainwash public opinion in the same way as other propaganda techniques. Of course, this point of view is a direct result of the cold war period. Any means were good at that time for destabilizing the other camp, including fear of an invasion by extraterrestrials or the instilling of doubt about leaders *"who hide anything manifestly serious from us."*

This type of hypothesis is even less satisfying than the preceding ones because it runs up against the objections to each of those.

Holographic Images

At the junction between disinformation attempts and extraterrestrial hypotheses lies the technique of holographic images, whether they be the work of a superpower or extraterrestrial crews. In actual fact, this technique is difficult to employ. It requires considerable preparation because air is very transparent and diffuses light only very poorly. Therefore it is necessary to have large equipment covering the optical field used or at least to project an appropriate screen on it, for example, a film of water.

The first method corresponds to theoretical holographic images, while the second is simpler and is frequently used for spectacular effects, but it obviously leaves traces behind... We can also envision using clouds or a curtain of rain, but this, of course, poses multiple hazards. Without necessarily being able to judge them at present, the method of holographic images and associated methods have only very limited use.

Unknown Natural Phenomena

This hypothesis cannot be ruled out completely and must therefore be cited. However, it is difficult to support in cases where the UFO sighted behaves in an apparently intelligent manner (approach, pursuit, evasion, and escape maneuvers, etc.).

Extraterrestrial Hypotheses

A large number of people today are convinced that UFOs are piloted by intelligent beings who have come from a very remote part of the universe and are tasked with watching us and even initiating contact with us. As appealing as they may be, these hypotheses run up against all sorts of huge difficulties. The hypothetical Martians only recently disappeared from the realm of possibility, and apart from earth, the solar system appears to be totally unable to have produced organized life and even more unable to have produced an advanced civilization. It is therefore necessary to look farther, to the stars, but the closest star is already one hundred million times further away than the moon.

The only contacts that we may try to establish from such distances at present are radio contacts. Astronomers have attempted contacts via message transmission and radio listening in the "SETI" and "MEGASETI" programs. Although some enthusiasts have suggested futuristic ideas to "bypass" the vast expanse, such as, for example, the use of "black holes," the crossing of interstellar distances by possible extraterrestrials has elicited much skepticism and the majority of astronomers reiterate that *"to date there has been no UFO case that is sufficiently well established to imply that it came from an extraterrestrial civilization."*

Two professional astronomers, Jean-Claude Ribes and Guy Monnet, have, however, proposed a scenario in our future in space that includes plausible interstellar voyages. In this scenario, which is summarized in Appendix 4, they envision the establishment of large communities in verdant *"islands in space,"* enormous artificial structures orbiting the earth, as described by the physicist O'Neill, and even inside large asteroids, where an abundance of different materials, including water and oxygen, as well as ready protection against meteorites and cosmic radiation, are found. Later on, when our descendants have mastered the production, storage and use of antimatter as energy, they will utilize it to propel some of their habitats to another solar system. They will settle in an asteroid belt, start families there, and then visit the planets of the receiving system aboard craft that are perceived by any possible natives the same way we perceive UFOs today.

This scenario, which in essence relies only on laws of physics that are currently well accepted,

gives the extraterrestrial hypothesis a certain degree of plausibility; it is possible to imagine that a civilization that came from somewhere else colonized the region of our asteroid belt and used it as a staging base to our planet. Current progress in the conquest of space and physics reinforces this idea.

We should point out that some people envisage another hypothesis, which is much debated: the UFOs do belong to a civilization located in the asteroid belt, but this civilization itself comes from our planet. Older than any known terrestrial civilizations and highly advanced, it supposedly disappeared from earth (nuclear war, radioactivity, pollution, etc.) but resettled in the solar system.

Both hypotheses have to their credit the fact that they place the UFO problem outside the realm of the paranormal and promote thought about the future of our planet.

CHAPTER 9

Organization of the Research Abroad

9.1 Organization of the Research in the United States

The subject of UFOs is presently very popular in the United States. This is evidenced by the number and success of fiction films such as *Independence Day*, *Men in Black*, and *Contact*, which deal with this topic. A survey conducted in June 1997 for *Time* magazine showed that nearly one American in four believes that an extraterrestrial craft crashed at Roswell (New Mexico) at the beginning of July 1947. A professor of psychiatry at Harvard, Dr. Mack, treats the problem of the temporary abduction, whether real or imagined, of his fellow countrymen by UFOs very seriously. In view of the public's expectations, what are the authorities doing?

They deny that the UFO phenomenon poses a *threat to national security*, or that it is evidence of an extraterrestrial origin. This position has been taken almost continuously by the Air Force, which was tasked with the study of UFOs from 1948 to 1969 within the framework of a project which bore the overall title Blue Book. It was confirmed in the summary and conclusions of the university commission in charge of evaluating the Blue Book [Project], the Condon Commission. The physicist Condon wrote in his conclusions that the study of UFOs had little chance of advancing science. All official studies thus came to a halt in the United States as of December 1969, and the Air Force referred those who were curious to private ufological associations.

Although it was endorsed by the Academy of Sciences, the Condon report was harshly criticized by numerous scientists, particularly at the powerful AIAA (American Institute of Aeronautics and Astronautics). The latter justly pointed out that the summary and conclusions of the report, which were drafted by Professor Condon himself, conflicted with a number of analyses within its body. The AIAA recommended moderate, but continuous scientific work on UFOs.

An amendment to the Freedom of Information Act (FOIA) passed in 1974 permitted declassified official documents on UFOs to be obtained as of 1976. One of these, in particular, attracted attention. It was a letter from Air Force Brigadier General Bolender from October 1969 stating that the imminent conclusion of the Blue Book Project would not put an end to military reports concerning UFOs that constituted a threat to national security. These were not part of the Blue Book system and would continue, as in the past, to be handled in accordance with the directive JANAP 146 and Air Force Manual 55-11.

“As regards authenticity, only negative conclusions are definitive”

By François Louange,
Chief Executive Officer of Fleximage



[Photo]

Among the investigations conducted on the subject of UFOs, photograph analysis represents one of the more delicate areas. In fact, in the public's eyes, photographs constitute indisputable proof par excellence of the existence of the phenomenon, which gives them a very special emotional factor. But photography is in reality a field where one still finds many errors and hoaxes, because many natural or technical effects can give rise to surprising documents: it is becoming easier and easier for a specialist who has computer equipment to produce a doctored negative that stands up well to investigations. This can sometimes even prove lucrative.

Moreover, experience shows that most of the negatives that stand up to analysis contain only extremely poor and unusable information, often limited to a saturated bright spot on a black background or vice versa, which makes this area of investigation relatively disappointing.

For about forty years, alleged photographs of UFOs, which are sometimes renowned in ufological circles, have occasionally been the subject of expert appraisals on the part of specialists interested in this topic. The physical and technical fields that come into play are quite varied, ranging from atmospheric propagation to photography or video and including digital image processing.

The analysis of a photographic document or video is broken down into two steps:

1 - Establishing or disproving authenticity, uncovering hoaxes, fake maneuvers or parasitic phenomena that could have affected the photographing equipment or the original data storage medium (film, video cassette). This concept of authenticity is furthermore completely relative, because only negative conclusions are definitive and in the best of cases a document can stand up to analyses at any given moment.

2 - With respect to a document deemed to be authentic, extracting the maximum amount of information permitting a known phenomenon to be identified or a phenomenon that is *a priori* inexplicable to be characterized (size, position, speed, albedo, energy emitted, etc.). This phenomenon will then be compared with other unexplained phenomena in order to draw possible parallels.

It is important to emphasize that the photographic as well as the video documents available come only from fortuitous witnesses; there are very few opportunities for significant data to be exploited by reason of simple statistical considerations: the chances of being witness to a rare phenomenon, the likelihood of having [camera] equipment in hand ready to use, the probability of being able to make the proper adjustments and calmly take professional quality photographs, etc.

In any case, it seems reasonable to limit in-depth investigations to cases in which the following two conditions are met:

- 1 - The original document (negative, slide, video cassette, etc.) is available.
2. - There is at least one other independent source of information (visual testimony or another sensing device).

Trick of the eye: lens-shaped clouds

[Photo]

Central bulge, broad and narrow disk, this is the definition of lenticular galaxies. It is also the definition of a type of cloud, cirrocumulus lenticularis, which forms above 7000 m altitude and up to the limits of the troposphere. Their very specific shape is due to factors such as pressure, temperature, turbulence, and very strong winds. But this shape is definitely open to every interpretation for those who wish to see it as a flying saucer...

When military craft play UFOs

[Photo]

[Photo]

Left:
Photographed in 1989 offshore from Los Angeles, this unpiloted surveillance unit is a Canadair CL-227 Sea Sentinel military drone.

Right:
This Sikorsky "Cypher" surveillance drone is used by the U.S. Army in urban conflict situations.

JANAP (Joint Army, Navy, Air Force Publication) 146 applies to military personnel but also to some civilians (flight captains of commercial aircraft, merchant marine captains) in the United States and Canada. It stipulates that an urgent report should be filed with certain authorities, which must in turn file a report, namely with the Air Operations Command (now NORAD [North American Air Defense]) in Colorado Springs, when objects requiring very urgent defensive action and/or an investigation by the armed forces of the United States or Canada are sighted.

Among these objects, UFOs (*Unidentified Flying Objects*) are listed along with missiles and hostile or unidentified submarines, etc. Disclosure of the contents of these reports is subject to the penalties of the laws cracking down on espionage. JANAP 146 entered into effect in recent years and perhaps is still in force. This regulation may explain the frequent reticence of American military personnel, aviators in particular, to bring up the subject of UFOs.

The members of American ufological associations number several thousand. These associations are used to fill the gap left by the public authorities in the field of "UFO" studies. The FOIA brought them a resurgence of activity, showing them that contrary to their statements, the Air Force and various special departments, namely the CIA, are very much interested in the subject of UFOs and have been for some time. It permitted them to learn of certain spectacular cases, such as the overflights of missile bases in 1975, or the 1976 Tehran incident related in Chapter 2. DIA deemed this a "radar/visual" case: *"A classic case that meets all the conditions required for a legitimate study of the UFO phenomenon."*

In recent years, the three main ufological associations have been brought together by a leading U.S. personality, Marie Galbraith, to conduct a joint study. She is the wife of Evan Griffith Galbraith, who was U.S. ambassador to France from 1981 to 1985. Thus she is well-acquainted with our country and our language, since she lived on Avenue Gabriel. Supported both morally and financially by Laurance Rockefeller, brother of the famous David Rockefeller, she traveled the world to meet the principal scientists interested in UFOs and to collect the best cases.

She then oversaw the drafting of a clear and documented book entitled *Unidentified Flying Objects, Briefing Document, the best available evidence*, which was endorsed in 1995 by the chairmen of the three associations CUFOs [Center for UFO Research], FUFOR [Fund for UFO Research], and MUFON [Mutual UFO Network]. She had this work sent to more than a thousand prominent figures throughout the world and, namely, to a large number of U.S. congressmen. Her goal is to get the U.S. government and possibly other governments to end the secrecy surrounding UFOs. For the editors of the book, this secrecy is essentially military in origin: the nation that is first to reproduce the exceptional characteristics of UFOs will dominate the world. The secrecy was justified during the cold war, but it is no longer justified now given the scientific and technical breakthroughs useful to humanity that one can expect [to obtain] from the study of UFOs.

On the whole, Marie Galbraith's book is descriptive. It does not interpret the phenomena sighted (physical modeling or hypotheses regarding the origin of the objects). Such was also the spirit of the international scientific colloquium organized in September 1997 by Laurance Rockefeller at Pocantico, near West Point, on the property of the Rockefeller Bros. Fund. Moderated by astrophysicist Peter Sturrock, this colloquium focused on physical evidence concerning UFOs.

Specialists on radar, the biological effects of microwaves, photography, etc., who often were not very familiar with the UFO problem, formed a scientific council there that judged the papers presented by the UFO researchers. French participation was quite noteworthy; it consisted of the head of SEPRA and two members of the scientific council. A summary document expressed the desire that many countries have a UFO research organization comparable to that of France.

Colonel Corso's theory:

In July 1997, for the fiftieth anniversary of the Roswell incident, an astonishing book entitled *The Day After Roswell* was published. It was written by Colonel Corso, who from 1953 to 1957 was the military member of the National Security Council Staff and thus was in constant contact with President Eisenhower. The forward of this book was written by Strom Thurmond, the current chairman of the Senate Armed Services Committee, who, already a member of this committee, appointed Corso as congressional attaché when he left the Army in 1963. The author states that the object found at Roswell was indeed an extraterrestrial vessel. He reportedly saw for himself, in July 1947, the cadaver of one of the occupants preserved in a glass coffin. From 1961-1962, as chief of foreign technology in the Army R & D Department, he apparently was tasked with discretely allowing U.S. industry to benefit from the extremely high-tech objects found in the wreckage (according to him: printed circuits, a laser, light intensifier, etc.).

Colonel Corso affirms that high-ranking military officers and some U.S. congressmen know about the existence of extraterrestrial craft in our skies. They have concealed it from the public to avoid panics, but full disclosures are going to be able to be made, because the United States, which has been striving to do this for 50 years, reportedly now has the means to counter a possible UFO attack. Some of these claims are surprising at the very least, but the entire contents of the book cannot be easily dismissed when one considers the remarkable career of its author and Senator Thurmond's tribute to him. It is true that the latter requested that his forward not appear in reprints of the book, a request that was granted. The author allegedly had not told him that the book was about UFOs... But it is difficult to believe that the forward writer, the third in line in the U.S. Government to succeed the President, and the publisher, Simon & Schuster, were not acting with full knowledge of the facts at the time of the first printing. As soon as the book came out, the U.S. Air Force published a second report on Roswell again denying the plausibility of the hypothesis of the crash of an extraterrestrial craft. The first report, which was published in 1994, was presented as the first official study on UFOs since the end of the Blue Book [Project] in 1969 (see "Roswell and Disinformation" in Appendix [5]). This reaction is not incompatible with Colonel Corso's theories; it may be intended to reassure those whom Corso's revelations might worry.

9.2

Organization of the Research in the United Kingdom

Great Britain has been the scene of several remarkable cases. We presented the Lakenheath "radar/visual" case (1956) in Chapter 2. The RAF and the Ministry in charge of it therefore became interested in UFOs very early on, but we do not possess much information on their work. Since its creation in 1964, the British Ministry of Defence (MOD) has had a UFO study unit, whose [designator] abbreviation Sec(AS)2a stands for Department 2a of the Secretariat (Air Staff) division. Its activity was recently described by Nick Pope, who was its head from 1991 to 1994, in a warning book, *Open Skies, Closed Minds*.

This department receives telephone calls or letters from witnesses, but more generally reports prepared from the depositions of these witnesses taken at police stations, airports or RAF bases. It conducts classic investigations if it deems them useful. They then question radar stations or weather stations, the RAF space object surveillance base at Flyingdales, other RAF bases, the Greenwich Observatory, etc. Its unique mission is to determine whether the reports are of interest for defense purposes ("area of defence significance").

Nick Pope, who is currently a MOD career employee, has broken new ground in comparison with his predecessors. He has given interviews to the press and participated in television programs. He has cooperated with the ufological associations, giving their address and phone number

to witnesses who have written to him. In his letters of response he admitted that a small proportion of UFO sightings defied explanation and that the MOD was keeping its mind open regarding these. His predecessors wrote: "*If we had sufficient data, all of the cases could undoubtedly be explained.*" In his book, Nick Pope evokes various hypotheses to explain certain unidentified cases that were the subject of credible and detailed reports. He strongly favors the extraterrestrial hypothesis and expresses the desire that his ministry take seriously the potential threat that UFOs represent in his eyes.

Is there a department that is further developed than his (where he is alone) in the Ministry of Defence that would conduct secret studies on the UFO phenomenon? His statements on the subject are contradictory (pp. 129 and 181). Ralph Noyes, who was one of Nick Pope's predecessors from 1969 to 1972 and ended his career at MOD in 1977 as Undersecretary of State for Defence, considers the existence of such a department likely. Lord Hill-Norton, Admiral of the Fleet, who was Chief of Defence Staff from 1971 to 1973, shares this opinion. This information is found in a book the forward to which was written by Lord Hill-Norton himself (*Above Top Secret*, by Timothy Good). Admiral Hill-Norton was among some thirty lords active in a House of Lords intergroup studying UFOs in the 1980s. If this secret study department does exist, it can be presumed that it works in collaboration with the United States (*Above Top Secret*, pp. 48-49).

Organization of the Research in Russia

The Academy of Sciences of the USSR has conducted studies on UFOs since 1979 at least. During that time, Vladimir Migouline, a member of this academy, expressed his opinion in *La Recherche* regarding the sightings made in the Soviet Union of luminous phenomena and unusual objects: "*The vast majority of these sightings correspond to real phenomena just about the same as those sighted in other countries. But there is no indisputable proof that some of them involve technological manifestations of a highly developed civilization. It is also necessary to try to connect them with atmospheric phenomena,*" he said.

This is the goal that his assistant Platov aimed for in a work published in 1992, *UFOs and Modern Science*. At that time, Migouline and Platov, heads of the expert's group on abnormal phenomena in the Academy of Sciences, proposed a scientific and technical cooperation program to SEPRA, but the CNES management did not follow-up on the offer. It should be noted that in the Siberian section of the Academy of Sciences, the studies, which are less well known in the West, do not rule out the extraterrestrial hypotheses, and even favor it.

During "Glasnost," information was disseminated on the studies being conducted by both the KGB and by the military. In 1991, the KGB declassified 124 pages of documents from *Cases of Sightings of Abnormal Events over USSR Territory, 1982-1990*, which covered a total of 17 regions. One of these cases, which we detailed in Chapter 3, concerns the extraordinary aerial maneuvers of three bright disks over an Army missile base near Astrakhan in 1989. The objects, which were sighted by seven military members, went from hovering to high speed and back again all without making any noise. When it was approached by a Soviet fighter jet, one object escaped so quickly that it seemed to leave the fighter jet standing still in its tracks.

In 1994, Colonel Boris Sokolov sold *ABC News* a collection of investigations conducted by military personnel from 1978 to 1988. Earlier, in 1990, the newspaper *Rabochaya Tribuna* had published an article by Aviation General Maltsev, who commanded the territorial air defense, concerning a well-documented visual/radar case with multiple witnesses (Pereslav-Zaleski, the night of March 21, 1990) in which a silent discoid object went from hovering to a speed two or three times faster than that of a modern fighter jet. We described this case in Chapter 2.

UFOs and Defense

To date, a UFO has not been the certain cause of any accident or *a fortiori* any hostile act, at least officially; no UFO threat has materialized in France, although intimidation maneuvers have been confirmed (Chapters 1.1, 2.1, and 2.3). However, numerous manifestations observed by reliable witnesses could be the work of craft of extraterrestrial origin. In fact, if it were a question of terrestrial craft, these could only be American and, despite all precautions taken to maintain secrecy, this would be known. The first prototype stealth aircraft flew at the end of 1977; the existence of stealth aircraft became known about ten years later, in 1988. But credible, confirmed UFO sightings began in 1944. Certainly, this subject still sometimes elicits amused skepticism, if not a certain mistrust with regard to those who mention it seriously, but in the absence of explanations for the phenomena sighted, the hypothesis of an extraterrestrial origin can no longer be ruled out. In this third part, we set out to study, from a strategic, scientific, political, religious, and media standpoint, the consequences of this hypothesis based on present scientific knowledge.

Strategic Planning

The definition of a strategy toward an "adversary" requires that one know the adversary, understand his intentions, and ascertain his modes of action. In the case in question, we can only advance hypotheses formulated on the basis of the facts observed and their interpretation, while trying to answer three questions: Who are they? What are their intentions? Are they seeking to make contact or have they already done so?

What Extraterrestrials? Who Are They and What Are They Like?

A relative consistency emerges from the numerous descriptions of the phenomena: saucer, luminous sphere or cylinder, hovering followed by accelerations at lightning speed, the absence of noise, easily supersonic speed with no sonic boom, associated electromagnetic effects that interfere with the operation of nearby radio or electrical apparatus. Obviously, these extraterrestrials are highly endowed intellectually and are technologically advanced over us to have been able to achieve what we do not yet know how to do. But the rest remains a mystery! Morphology, physical make-up, type of life, manner of communication and form of society, sense of values, concept of time, motivations, etc. If they are observing us, it is necessary to note an apparent contradiction between the interest that they show in us and their furtiveness. Rather than observe us, it seems that they want to show themselves to us and to gradually acclimate us to the idea of their existence.

What Intentions and What Strategy Can We Deduce from Their Behavior?

Extrapolation based on a rational analysis of the objectives that the extraterrestrial civilization or civilizations could be pursuing should permit us to get an idea of the strategies that they are implementing and should consequently lead us, in response, to deduce the broad lines of what our own strategies might be. UFOs have manifested themselves to a small extent throughout the world in recent decades, with surprising peaks between 1952 and 1954, without our being able to deduce a well-defined course of action. What are they seeking?

After the observation phase and the phase of demonstrating that they exist, it would seem logical to us for them to be seeking to leave their mark and impose their will on the States of the earth, but at present, nothing allows us to deduce from their manifestations the existence of a driving desire serving purposes that we are presently unable to discern. It is plausible that preferred contacts can be attributed to the United States. But nothing contradicts the possible establishment of other contacts with some European countries or even with Russia, China, or Japan, [or] others perhaps... However, it seems difficult to imagine that they could be able to position themselves on earth with the complicity of certain States. Moreover, the hypotheses of contacts do not enable us to deduce the existence of some *status quo* with these visitors. In fact, the sporadic manifestations of UFOs and even the occurrence of repeated waves [of sightings] have continued since 1947. One would have every right to think that these visitors – fortified by their superiority – are showing their intention to continue to make themselves known in the most diverse locations on the planet and to continue to carry out their plans, the aims and means of which still escape us. It could be that, before 1947 and after, they have had fears for the future of earth, a future threatened by risks of nuclear war. Their influences have been able to be accompanied by appropriate demonstrations:

- overflights of nuclear missile bases, an example of which is given in Chapter 3,
- intimidation maneuvers against aircraft as in Luxeuil and Tehran (Chapters 1.1 and 2.3),
- witnesses paralyzed, engines shutting off, lights going out (San Carlos de Bariloche, Chapter 2.5).

The advances that have been made in the conquest of space and in the development of nuclear technology could be troubling them. Wouldn't it be logical to think that these extraterrestrial civilizations have established stations, even colonies, in the asteroid belt, and why not relay stations on the moon? Our forays and projects studied in the United States for modifying the orbits of asteroids using H bombs in order to bring them closer to the earth's orbit for mining purposes could be disturbing them. For the moment, they do not appear to be meddling in our affairs, but it is

advisable to ask ourselves what they are actually seeking. Do they want to invade earth? To preserve it from nuclear self-destruction? To learn about and preserve the patrimony that our civilizations have created over the span of centuries? In view of these uncertainties concerning their intentions, we can't tell what the future holds and, in particular, we cannot consider that they will continue not to intervene. Some of their undertakings in regard to us might, therefore, not be innocent in the long term. Perhaps they don't have any need for our sensibilities or the politics of States?

10.3 **Repercussions of UFO Manifestations on the Official and Unofficial Conduct of States**

The repercussions have been varied in scope. Based on what can be learned of the reactions of States, it is permissible under our hypothesis to classify them as:

- a) States that have no knowledge of extraterrestrial phenomena or are believed to be unconcerned,
- b) States that know of extraterrestrial phenomena but have no means to investigate them,
- c) States that know of extraterrestrial phenomena and have the means to investigate them,
- d) States that have entered into contact with one or more extraterrestrial civilizations and that have established relations and/or entered into political, scientific, and technical collaboration.

10.4 **Have Contacts Possibly Been Made with One or More States?**

Individuals claim to have been contacted for the purpose of studies or with a view to establishing relations between one intelligent life form and another. Can we imagine direct and continuous contacts at the highest level of one or more States, particularly the United States? It is true that the position of that country has been among the strangest since the wave [of sightings] in June 1947, followed by the Roswell affair in July 1947 (cf. Appendix 5). If the Americans were able on that occasion or on other occasions to collect at least debris or entire wreckages of extraterrestrial vessels in fairly good condition, and even cadavers of humanoids, a certain type of contact might well have been established.

First statements and reactions are often considered to be more probative than subsequent affirmations. Thus immediately following what would later become the Roswell affair, General Twining was tasked with preparing a secret report on "*flying disks*," the existence of which was not revealed until 22 years later in the Condon report. It emerges from this that these objects truly do exist. But since then the United States has followed a policy of increasing secrecy (classification above "*top secret*" of certain UFO files, according to General Barry Goldwater) and constant disinformation. The strange conclusions of the Condon report are just one case in point. Why would, and how could, such an important secret be kept all the way up to the present, despite everything? The simplest response would be that the United States wants to maintain at any cost military technological superiority over rival countries and, perhaps, a preferential contact.

This policy of secrecy and disinformation could have been dictated by an understandable concern for not creating panic reactions or irrational crazes among the public, or the concern at the time for protecting the country against actions by the USSR, or else, in a more prosaic and political fashion, not appearing in the eyes of voters to be incapable of providing convincing explanations regarding these phenomena. No doubt it would not do to undermine the prestige of the armed forces, which was incapable of interdicting these violations of air space, and invite attacks against the military budgets on the part of political opponents. Anything is conceivable, even the fear of seeing various government agencies accused of having lied at one time or another.

Whatever the case, it is symptomatic and illustrative to note that since 1953, the United States has equipped itself with an impressive repressive arsenal, which is still in force, it seems. In particular, they enacted two military regulations, AFR (Air Force Regulation) 200-2 and JANAP (Joint Army Navy Air Force Publication) 146, the first prohibiting the public disclosure of information relating to sightings of unidentified objects and the second making the unauthorized disclosure of a UFO sighting by the witness an infraction punishable by 10 years in prison and a \$10,000 fine. The JANAP regulation applies to military personnel, but also to commercial airline pilots and captains in the merchant marine.

10.5

What Measures Should We Take From Now On?

Whether or not UFOs are extraterrestrial in origin, the UFO phenomenon is already with us and, at any rate, requires critical vigilance on our part. In particular, the phenomenon involves risks of destabilizing manipulations from a media, psychological, cultural, and religious standpoint: panic fear, world wars, psychoses created by sects or lobbies, etc. These appreciable risks of cosmic fear, as well as the discovery and no doubt conquest of the cosmos that is to come, henceforth justify, on the part of the political, scientific, and intellectual elite, a certain degree of cosmic vigilance calculated to prevent any shocking surprise, erroneous interpretation, and malicious or unhealthy manipulation.

Without a doubt, measures should be contemplated on the national and international levels. Whatever the givens are with respect to American political problems, and in the face of a posture of ongoing secrecy, how can we conceive of harmonious political and military relations among allies, and particularly within NATO, which normally must be founded on basic trust, if access to information of incalculable importance – particularly technological information – is not shared?

10.5.1

National Structures

If France wants to affirm its presence in this domain, it seems urgent to expand SEPRA, which must:

- increase its human and material resources so as to be able to collect information relating to all UFO manifestations, both in Europe and throughout the world,
- expand its investigation and analysis capabilities,
- boost its representation and foreign relations status.

It would likewise be advisable to create a unit at the highest State level to collaborate with SEPRA that would be tasked with:

- formulating all prospective hypotheses,
- promoting scientific and technical research and, as such, would have a small minimum budget,
- proposing elements of military strategy,
- participating in the establishment of sectorial cooperation agreements with interested European and foreign countries. It should be noted that many countries already have small bodies for the collection of UFO sightings within their armed forces or intelligence services.

European Structures

It would be desirable then for the European States and the European Union Commission to conduct every type of research and to initiate diplomatic demarches with the United States, exerting useful pressure, to clarify this crucial issue, which must fall within the scope of political and strategic alliances. Would it perhaps be opportune for France to propose to the Commission that it create within it – so as to no longer be blind, dumb, and paralyzed – a special expanded coordinating body provided with the necessary human and material resources?

What Situations Should We Prepare For?

What strategies could we map out in the following situations:

- appearance of UFO and extraterrestrial desire to establish an official and peaceful contact,
- chance or intentional discovery of a microbase or base at some location in France or in Europe: position to adopt toward a friendly or hostile power,
- invasion (hardly likely given the fact that an invasion could have been carried out before the discovery of the atom) and targeted or massive attacks on strategic or nonstrategic locations,
- deliberate manipulation or disinformation with a view to destabilizing other States.

In the case of the first situation cited, we are not precluded from suggesting that the States that are equipped with sophisticated research and analysis tools will perhaps have more chances than others of being chosen as preferred negotiators, but at what risks and advantages?

Aeronautical Implications

Why Aeronautical Implications?

It is not intellectually possible to remain indifferent in light of an unexplained aeronautical phenomenon which numerous civilian and military pilots have come face to face with. Of the several hundred confirmed aeronautical cases, there are primarily five types of implications:

- simple sighting of a phenomenon by the crew, passengers, or ground personnel,
- detection of a track on a radar screen, which occurs in one out of five aeronautical cases, sometimes culminating in the recording of a track, as was the case on January 28, 1994, at the Cinq-Mars-la-Pile Control and Detection Center (CDC) (cf. Chapter 1),
- interferences with ground (San Carlos de Bariloche) or onboard (Tehran) electrical or electronic equipment,
- shadowing of aircraft (San Carlos de Bariloche, RB-47, etc.),
- apparently aggressive conduct (Mirage IV, student pilot at Tours, the Tehran incident, etc.).

The number of testimonies and the quality of the witnesses keep [the issue of] the phenomenon from being dodged, and aeronautic personnel, and more especially defense personnel, must be sensitized and prepared to deal with the situation. In fact, how can one try to ignore a phenomenon that is manifested by the regular crossing of our air space by moving objects the behavior of which suggests that they are piloted by an intelligent [being]? Can one claim, because this appears to exceed our technical knowledge, that it does not fall within our purview? If we do nothing, the very

principle of defense and air intelligence would be called into question.

The first sightings made by aviators date back to the beginning of the 40s. Since then, the number of unexplained sightings (after an expert's appraisal: UAP Ds) reported by pilots or [air traffic] controllers has risen to over 500. It should be reiterated that in France this figure is three or four since 1951. It is the responsibility of the Air Force to take into account these phenomena, which, until proven otherwise, occur primarily in air space.

11.2

Who is Involved?

11.2.1

Flight Crew

The flight crew is naturally involved, particularly the pilots, because whether they are civilian or military, they are in a more advantageous position for making sightings and would be the first affected in the event of an incident (risk of collision, in particular). This is especially true for a combat pilot, because he is trained to constantly monitor the sky and he now has more and more advanced weapons systems capable of detecting faster and faster and smaller and smaller targets at greater and greater distances. The pilot/weapons system pair is now more than ever an excellent sighting instrument and would be our first means of intervention if, by chance, this were to prove necessary. The concerns of a commercial airline pilot are different because, in addition to the fact that he does not have the same equipment, his priority is obviously the safety of his passengers. Although he remains a primary partner in the quest for information, he would be totally powerless in the face of an aggressive stance by a UFO.

11.2.2

[Air Traffic] Controllers

The [air traffic] controller is, of course, involved, but depending on whether he is civilian or military, the control equipment at his disposal offer him different options. In both cases, since he is in radio contact with the pilot, it is he who is the first to receive the sighting report from the crew. He must be prepared to note and supplement the sightings transmitted with the clear-headedness that the distance of his position gives him. In regard to radar detection, only the military controller has adequate equipment to detect a flying object that does not follow general air traffic rules. In fact, military air defense radars permit a visual display of the primary detection, as well as a synthetic display used by civilian [air traffic] controllers, to appear on the military controller's radar scope (see Appendix 1). In addition, they are the only ones who are able to obtain an image of craft moving at the supposed speeds of UFOs. Finally, the means to record and reconstruct radar situations on site at the Control and Detection Centers (CDC) enable supplemental investigations to be conducted, if necessary.

11.2.3

Meteorologists

Unusual phenomena are often explained by meteorological phenomena. Questions can easily be explained if the specialized departments are informed of the importance of their observations. All military and civilian personnel specializing in meteorology must therefore be able to meet this expectation.

11.2.4 **CNES Engineers**

CNES engineers are the French space specialists. They cannot remain indifferent to UFO phenomena. Knowledge of our universe, observation of the sky, and surveillance of anything that is deployed into the sky naturally makes them just the right people to head up the study of extraterrestrial phenomena. We have described their work above.

11.2.5 **Engineers in the Aeronautics Sector**

Engineers in the aeronautic sector are naturally involved. Their work is presented in the next chapter on scientific and technical implications.

11.3 **How Do We Involve Aeronautics [Personnel]?**

In order for aeronautics personnel, along with their resources, to be involved, we need to know how to interest them and, in order to do this, how to inform them of the phenomenon, to specify what is expected of them, and to define what their reflex responses should be and what course of action they should take.

11.3.1 **Informing Personnel**

Informing amounts, first and foremost, to getting someone to accept the possibility of the presence of extraterrestrial craft in our sky. It is necessary to overcome the fear of ridicule and to admit that, failing certainty, there are strong presumptions based on a list of examples selected from among the testimonies from the aeronautics world. Moreover, it is necessary to reach all generations. Informational conferences can be easily scheduled at aeronautics schools for the young generations (Ecole de l'Air, Ecole Nationale de l'Aviation Civile [National Civil Aviation School] (ENAC, Sup'Aéro, etc.), and for the not-so-young, in continuing education courses and, obviously, at the Collège Interarmées de Défense [Interarmy Defense College] (CID) and IHEDN. SEPRA is already holding conferences at ENAC within the framework of civilian [air traffic] controller training. This practice just needs to be extended to all flight crew training schools, regardless of the specialty being taught. For the generations already on the job, these conferences can easily be offered at the Control and Detection Centers and flight units for military personnel, and, at least for civilian [air traffic] controllers, at the Regional Air Navigation Centers (CNRA). As for commercial flight crews, the airline companies – Air France, in particular – have set up a systematic information sheet for crews that is periodically updated.

This information must furthermore be updated on a regular basis in the knowledge that the intended objective is to permit a future witness, whether he plays an active role or is merely an observer, to be fully aware of what course of action to take in the face of the phenomenon sighted. If we want personnel to get involved, it is necessary that they know how to react in real time and what to communicate and to whom, how to take the measures corresponding to the present situation, etc. For this reason, it is advisable to define with them what their reflex responses should be and what course of action they should take.

11.3.2 **Reflex Responses**

In fact, it is necessary to instill in personnel who are brought face to face with the phenomenon what their reflex responses should be, in the knowledge that they may merely be simple observers or, in some cases, have to take concrete measures (for example, at San Carlos de Bariloche, the

surprise of the landing strip lights going out in the middle of the UFO incident). It is quite certain that it would be better to be prepared in order to be fully aware of what course of action to take in the face of such an unforeseen and poorly understood event. These reflex responses differ in type depending on whether it is a matter of sighting, recording a testimony, transmitting information collected, or reacting in real time in order to take *ad hoc* measures in response to the phenomenon.

11.3.3 **Course of Action to Take**

The course of action to take seems to us to be summarized as follows: observe, note the maximum amount of details, take photographs if possible, make a report, allowing the visitors the initiative of possibly making contact, and avoid premature publicity in the media.

11.3.3.1 **Objective Observation**

In the face of an unknown situation, one must be on guard against any instinctive self-defense reaction that could be easily interpreted as a provocation. One must just observe and avoid any initiative aimed at seeking contact.

11.3.3.2 **Reporting**

Once a phenomenon has been sighted, it is advisable to report it in order to alert the other crews, on the one hand, which is what is currently done, and the authorities, on the other hand, through the air [traffic] control chain of command in civilian cases and the air defense chain of command in military cases.

11.3.3.3 **Remaining Discrete Vis-à-Vis the Public**

As a witness to a phenomenon of this type, one must know how to adopt a certain level of discretion vis-à-vis the press. It is essential to allow scientists [time] to make use of the information before letting the media trigger the curiosity of the general public, which could result in the disappearance of important evidence.

CHAPTER 12

Scientific and Technical Implications

The significance of the UFO phenomenon to defense in the broad sense leads to different proposals.

12.1 **Stepping Up the Collection and Analysis of Data**

It is, of course, advisable to continue and, if possible, expand geographically the collection, initial analysis, and classification of data and testimonies performed successively by GEPAN and then by SEPRA, which was described in Chapters 5 and 6.

12.2 **Establishing a Watch and Initiate Work Upstream**

From the studies presented in Chapter 8, it can be concluded that at least a passive, and

preferably an active, techno-watch is required in the fields of leading-edge propulsion such as, for example, magnetohydrodynamics. It is truly essential to know what the other nations are doing in this area. In other high-tech fields, the study of the various testimonies could be combined with appropriate scientific experiments to enable significant progress. A typical example is that of particle beams or microwaves, together with their effects: tools, weapons, etc. All of these subjects are, on the whole, more advanced than the technical problems presently under study by DGA or the public research institutions. Therefore they will not be dealt with unless a decision is made at the highest State level.

12.3

Encouraging Thought in Order to Place the Phenomena in a Global Context

The work mentioned above will enable progress in the partial models of the phenomena sighted, along with considerable spill-over for defense and industry. But the global interpretation of well-documented but inexplicable phenomena will require other research. The principal areas of research relate to the extraterrestrial hypothesis; we will list, for reference, the current research on the detection of extrasolar planets, which will take a new direction when the VLT (Very Large Telescope) of the ESO (European Southern Observatory) in Chile enables them to be observed directly. Each discovery of a planet, which is presently made indirectly via the disturbances that the planet causes in its star, has met with a favorable response in the media.

Less spectacular, albeit fascinating to a cultured public, is the research on the origin of life that is being conducted internationally at a very satisfying rate. It forms the basis of exobiology, the science of extraterrestrial life (see Appendix 3). Studies on evolution and its mechanisms are currently handicapped by school disputes. They are important to our subject: How might life evolve elsewhere? Underdeveloped but still important are the studies on the genesis and future of civilizations. The latter are normally extended by long-term, forward-looking scenarios for our planet and, of course, for others.

Interstellar travel, as visualized in Appendix 4 – entitled “Colonization of Space” – must be the object of at least passive monitoring. This subject is currently being dealt with in the United States, where numerous NASA or Pentagon study contracts concern propulsion using antimatter in solar or interstellar space. It was also in the United States where the astronomer Papagiannis won a NASA study contract a few years ago to detect possible space cities in the asteroid belt located between the planets Mars and Jupiter. In carrying out the study, he examined the photos taken in 1983 by the *IRAS* [Infrared Astronomical Satellite] satellite and looked for possible abnormal infrared emissions coming from objects in this belt. It would seem that NASA did not renew Papagiannis’ contract, which apparently did not yield any results.

12.4

Special Studies

Some studies do not come under the “hard” sciences and technologies: for interstellar voyages, the stability of the societies involved requires study. What, in particular, is their minimum size? The different attempts at disinformation made by certain foreign governments should be analyzed discretely, but in depth. The concern of these governments over appropriating for themselves alone any possible futuristic technologies relating to military aircraft and weapons might help explain these attempts (see Appendices 5 and 7). It would be advisable to already be anticipating the measures to be taken and the decisions to be made should events such as indubitable physical or radio contacts with an outside civilization take place.

Political and Religious Implications

An assessment of the impact that the formal confirmation of the existence of UFOs and extraterrestrial civilizations would have on the political and religious situation of the countries on earth could be a bit of a challenge. However, the task is less arduous when we try to put ourselves in the shoes of extraterrestrials who supposedly have chosen earth as a field of observation and/or intervention. We will use this method. It is appropriate, of course, to postulate that the technical and human difficulties have been resolved, permitting us to exceed the limits of our solar system, and even our galaxy:

- Either in secular voyages aboard a "ship-world," in which thousands of volunteers who have embarked would see their generations replaced. It is necessary to keep in mind that these craft will not be able to one day return to earth, at least that is what we are assuming, which would confer – *de facto* – a political autonomy and freedom of decision to the onboard government independent of orders and programs established prior to departing earth (cf. Appendix 4: "Colonization of Space").

- Or, in [voyages of] several months or years – based on totally revolutionary scientific concepts and techniques that can only be imagined – using aircraft or probes piloted by classic crews or by bionic androids, which would follow the instructions received from a parent station or from earth.

During the course of these explorations, we might discover one or more celestial bodies populated with beings that have evolved more or less similarly to us, "humans," humanoid, or even stranger creatures. They may have created civilizations that are comparable to or more advanced than our present civilization, or they may be endowed with only rudimentary aptitudes for civilization, unless they still remain only at the elementary survival stage.

(Nota Bene: in this chapter, the numbers in parentheses refer to the references, pp. 87 to 89)

13.1

Phase One: Observation From a Distance

It seems reasonable to think that our earthling explorers have received a mission to peacefully observe these worlds and/or conquer, purely and simply, these new territories in order to establish a line of descendants there (cf. 13.4 below). The state of advancement of the local populations will likely dictate the manner of obtaining, as well as the nature and duration, of these observations, and the initial observations will, of course, be for analyzing:

- the living organisms, the manners in which they think and live, their languages, their religions and beliefs, their arts, sciences and weapons techniques, their political institutions, their social organizations, and their histories in general,

- the environments in which these populations live, [and] animals, plants, minerals, etc.

This first phase, which does not include any physical or material contact, would be that of scientific, *in vivo* laboratory observation: electronic surveillance, remote sensing, recording, decrypting of languages, analyses, evaluations, etc. It is important to emphasize that this period could last one year, ten years, a century, [or] a thousand years, and why not? In fact, what better scientific experiment – *lato sensu* – than that of having more or less civilized, stagnant or evolving populations, either at peace or at war, organized in a hundred different manners, no doubt having languages that are foreign to one another, considering each one with respect to the way it organizes its terrestrial and celestial cities. In a word, we would be in the situation of observing ourselves!

Phase Two: *In situ* Sampling and Furtive Appearances

The interpretation of the data collected can only be complete when a second phase has been implemented, during which sampling and analyses of mineral, plant, and animal elements, and perhaps even elements from evolved beings, are performed. Consequently, the question is raised as to the types of contacts that would be appropriate to establish and the political, psychological, and religious implications for the local populations that might result from these contacts: furtive and covert contacts, visible and overt contacts, continuous or intermittent contacts. If the furtive and covert mode of operation is selected, it nevertheless could not – at least based on the present state of our technology – go completely unnoticed by the indigenous populations. It is permissible to consider that the psychological and religious impacts may vary according to the different types of political organizations and the levels of moral and scientific development encountered on the same world.

Impacts on Preindustrial-Age Civilizations

Individuals or masses from preindustrial-age civilizations might note the passage and/or landing of our ships or our remote-controlled craft. They might collectively view them equally as natural, divine, extraordinary, supernatural, aberrant, or diabolical phenomena (frescoes in the Yugoslavian monastery at Detchani, spheres in Nuremberg and Basel in 1561 and 1566 – cf. Appendix 6). Furthermore, the collective memories of these peoples and their imagination in general could be more or less sharply marked by such manifestations if they are accompanied, in particular, by the sighting of our astronauts, whether dressed in their coveralls or their space suits or not, or robots, androids, or any artifacts that we may deem appropriate to disembark or represent. Such appearances, if the local authorities note and publicly certify their reality, would undoubtedly have a creative impact capable of modifying the indigenous political and religious conceptions for some time.

Impacts on Local Religions

Since terrestrial and celestial orders are closely interlinked in people's minds, the appearances of spaceships or remote-controlled craft, and, moreover, the appearances of astronauts or bionic robots, would be capable of creating a lasting impression in minds, reorienting religions, inspiring news, or originating founding myths. The flying machines that Ezekiel described at length (1), the air war of the Ramayana, the Epic of Gilgamesh (2), the Elohim of Genesis (3), and the Watchmen of the Sky, mixing with the daughters of men and begetting giants, whom Enoch also speaks of (4), and more generally, the Immortals, the Sons or the Kings of the Sky of the Orient and China (5), Japan, the "Land of Gods" (6), the Viracochas of South America, the Incas, or the great gods of Ancient Egypt, the Gods, the Titans, the Giants, the Children of the Gods, and the Heros of western and oriental Antiquity (7), etc., come to mind.

Both supernatural and extraordinary phenomena were part of the natural order of things in the past. Would religions founded on the existence of a God or a creative order be shattered by such apparitions? Nothing is less certain. Once the shock, terror, and curiosity have passed, a new appreciation of the cosmic order could replace the old religious conceptions, without necessarily destroying the divine principle itself. To say the least, these religious conceptions could be reoriented or even sublimated. God does not travel around in a spaceship. Besides, the great religions of earth do not condemn the idea of the existence of other inhabited worlds in the universe. Must we recall that certain collective memories experience aberrations, despite the

tangible proof subsequently furnished to the catechumen (the cult of the cargo plane in New Hebrides) (8)? Bonaparte's military and scientific expedition to Egypt left no trace in the local annals, which recorded only an interruption of the pilgrimage to Mecca (9). Closer to home, many people did not believe that men had walked on the moon, believing it to be a publicity stunt or disinformation. It would be appropriate, however, to qualify this impact, insofar as all ancient civilizations conceived of pantheons, the gods of which were associated with terrifying manifestations of the sea, wind, volcanoes, earthquakes, or lightening. It is therefore difficult to say whether they were the avatars of extraterrestrial influences or, more simply, the product of the invention of mythologies explaining the world.

13.2.1.2

Political Impacts

With respect to the political impacts, these should be much more ephemeral, at least in appearance. In fact, once the moments of astonishment have passed, the political organization of States does not seem to have to be affected in a lasting manner, since contingencies quickly regain the upper hand. However, that monarch or chief of state could proclaim himself the exclusive and privileged interpreter of these extraordinary manifestations. Would he not be tempted to consecrate himself a god-king or a king-god in the eyes of his subjects?

Once again without being able to distinguish what is the product of the natural and spontaneous search for the legitimacy of power from what could actually only be the result of inveigling by the privileged, we are forced to note that history abounds in god-kings or king-gods (pharaohs; Assyrian kings; Hellenic epiphanic kings; Roman, Chinese, or Japanese emperors; sons of the Sun of Central or South America, etc.).

13.2.2

Impacts on Industrial-Age Civilizations

Industrial-age civilizations are more skeptical than they formerly were and have more difficulty envisioning what is not a product of the immediately explainable or the simply measurable. However, it is certain that the furnishing of irrefutable proof of the existence of extraterrestrials would leave a profound mark on populations such as ours today. This issue is at the heart of our report.

13.3

Phase Three: Influences on Local Civilizations

The third phase would be that of the influences that we would consider appropriate to exert on the environment and the civilizations encountered with a view to causing them to evolve in our fashion. It goes without saying that the advantages and risks would have to be studied carefully.

13.3.1

Influences on Preindustrial-Age Civilizations

We might consider it necessary, in certain cases, to influence the environment in a specific manner and the evolution of local civilizations in a subtle way. It might seem necessary to us, upon completion of our observations and our analyses, to modify, bit by bit, the natural environment and the ecosystem by, for example, seeding or introducing select plants and organisms that are lacking.

Likewise, the course of indigenous civilizations could be gradually modified by influencing, either from a distance or directly, the qualities or defects of select individuals, accentuating their

intellectual and moral tendencies and their scientific knowledge, or by causing genetic mutations by different processes that are yet to be invented. In this case, it would be a matter of playing the role that these populations would have willingly reserved for gods, who, by providing sacred texts, would reorient, for example, their sense of morals, their religiosity, and perhaps their laws and their political institutions. The use of elements likely to terrify and impress could be appropriate in some cases. And, with all due reverence, nothing would prevent one from thinking of different episodes in the Old Testament, the conditions under which the laws of Manu were instituted (10) or even the Koran given. The influences relate back to a certain number of enigmas in history, including, perhaps, the concomitant appearance of the great civilizations of the Indus, Mesopotamia, and Egypt (cities, architecture, writing, calendar, astronomy, etc.). They also call to mind the extraordinary map of the Antarctic, which was drawn almost free of ice by the Frenchman Oronce Finé in 1583, nearly three centuries prior to the discovery of this continent in 1820 (11).

13.3.2

Influences on Industrial-Age Civilizations

The nature of these influences will vary according to the type of civilization, its technological development, and its psychological acclimatization or lack thereof to the existence of extraterrestrial civilizations. It would be advisable beforehand to accustom the mind of these populations to the idea of the probable existence of extraterrestrial civilizations (science-fiction novels, films, cartoon strips, video games, advertisements, a favorable psychological climate, [and] why not suitable sects?, etc.).

New and essential technological knowledge could be provided via different avenues or by means of chance or provoked accidents with one of our spacecraft. The contemporary Roswell case thus comes to mind. In order for the craft to be retained in full (or disposed of), it would still have been necessary for the U.S. government to in fact have wanted to show, communicate and have analyzed, without beating around the bush, all of the elements that it actually recovered on that occasion.

13.4

Phase Four: Direct Contacts

A fourth phase would be that of establishing direct contact with the locals or with entire populations, whether or not a vanguard of bionic robots were used. Once again, the goals sought must be precisely determined. The benefit and true utility of establishing such contacts must be weighed with care in order to calculate the risks and consequences. A specific program could plan for these. However, a serious technical accident affecting one of our spacecraft could be the start of an unofficial contact, a necessary settlement, or a colonization, or even, if necessary, an information-disinformation campaign. It is also advisable to envision the sedition of some of our crews whom it might be necessary to disembark or who might decide on their own authority to live on one of the worlds discovered and, ultimately, mix with the indigenous populations, going against orders received, whether willingly or against their will, not to intervene or interfere in local affairs. These contacts presuppose that the worlds discovered are populated with human beings or hominids whose complexion is identical or close to ours. But under the hypothesis of contacts and planned long-term settlements of members of our crews, should mixes be prohibited, as prophylaxis, by imposing a major ban on them (12) or, on the contrary, should they be tolerated and even encouraged? Bear in mind that direct or prolonged contacts would inevitably lead the indigenous populations to believe, *in fine*, that we are not so different from them. It would be prudent, however, to send remote-controlled androids in advance in order to assess the reactions that such an intrusion would arouse, or to acclimate the populations to the idea through furtive, episodic appearances.

What would happen if we encountered populations composed of beings that were deformed or monstrous in our eyes? The visual effect would certainly be startling and a choice subject for their media and ours, but the types of contact would consequently be different, or at least we can assume so.

13.4.1

Direct Contacts with Preindustrial-Age Civilizations

It is certain that such contacts would immediately cause the local populations to imagine that they are in the presence of gods. Historical parallels naturally come to mind: the arrival of the Spaniards in Central America in armor and on horseback, or, more generally, the arrival of the Europeans at the time of the discovery and exploration of the globe. The impact on populations that had never seen horses, armor that shone brightly in the sun, or white men, particularly with blond or red hair, had to be felt strongly. However, the shock of these apparitions would be quickly lessened with the multiplication of relations, and even more so if our crews were to take an eminent place in the local political and military orders. This, of course, relates back to the different epics of the discovery of the world, European colonization, and also the end of the western empires.

13.4.2

Direct Contacts with Industrial-Age Civilizations

The day would come when we believed that these civilizations, gradually brought to our level through our efforts, are able to participate in our world. With the ground prepared in advance, contacts could, for example, be established discretely with select individuals or at the highest level of the States, or of some of them, and, if possible, be kept secret. Although leaks should not be ruled out, the leaders selected would then have to conduct information, disinformation, and counterinformation campaigns to maintain the privileged nature of these relations and, who knows, to benefit, from our side, from novel scientific, technical, and political information, giving them an edge over their rivals. The selection of States, rulers, key figures, or mere individuals would, of course, be of paramount importance.

Before or after the implementation of an influencing program, why not imagine having bionic robots that look like humans or resemble the living beings there appear in order not to risk the lives of members of our expeditions? Finally, why not purely and simply present ourselves openly and publicly? It is easy to imagine the huge sensation that this would cause in all psychological, political, military, strategic, and religious spheres, to say nothing of the media, [as well as the] multiple meetings and international colloquiums, uninterrupted sessions of organizations such as the UN, calls for "*world unity*," international consultations, the creation of welcoming committees, etc. [that it would prompt]. The rivalry of the States would be interesting to observe.

It goes without saying that our intentions must be perceived as peaceful. If this were not our policy, there would, of course, be no need to take special precautions to show consideration for the sentiments of the local populations. In all of these scenarios, we should encounter idolaters, sycophants, Herodians, who, out of a millenalist conviction, gullibility, pragmatism, or interest, would welcome us with enthusiasm as saviors, capable of solving all of their problems and bringing them peace and prosperity, preferably without having to exert much effort. These would be our first allies. Zealots, skeptics, and those who have withdrawn into the venerable secular conceptions of their world, which has been turned upside-down, would cast doubt on or deny our existence. If they were to admit it, they would consider us as so many invaders, whose intentions would be perceived as all the more suspect since they would be peaceful. There is but one logical step to take between

that and imagining the creation of defense movements and resistance movements against the invader. The strength of these movements would depend, in part, on our skill in squashing them, convincing them, in the hope of attaching them to us.

But how then do we avoid the pitfall of good intentions and good sentiments that everyone knows the road to hell is paved with? (13) Should we admit how long we have been observing them? Would they reproach us for not having intervened to prevent a world war of this type, or would they blame us for it, or, more generally, would they hold it against us that we changed the course of civilizations? Very severe and lasting psychological disturbances should be envisioned in these cases. Would they be disappointed to learn that we are not immortal? Later, economic and technological exchanges and financial ties should be established with these populations. Would it be a wise policy to involve ourselves in local affairs? And in one manner or another, could we escape the requests to become arbitrators of political disagreements, peace, war, and economic crises?

Whatever the case, one day or another we would have to pay the price for all of the unsolved problems. Would they not go so far as to reproach us for the contributions of our very advanced civilization, or at least for what we thought would be of benefit to them? Changes of opinion and attitude toward us could occur over time. Wouldn't groups of people be one day tempted to consider themselves our equals, because we were not able to remain inaccessible? Protest movements would consequently arise and revolutionary cycles would no doubt be set in motion, as a result of which we, as well as our Herodian allies, would suffer. Our global policy would then be compromised and we would have to consider making our contacts less frequent and, ultimately, withdrawing onto our ships and retreating. We would then have the time necessary to review our policies, based on the still unknown techniques of our catechumens.

The discovery of new worlds could enable us to enter into contact with civilizations just as developed as our own and even far more advanced. Nothing allows us to rule out the possibility that, ultimately, we would encounter explorers from other more distant worlds. Under these hypothetical conditions, it is permissible to imagine that we might have been discovered in space first. It would be our turn then to experience – at least in part – the psychological effects and the political and religious implications that we have described. What would be the policy of local governments toward us? Would they welcome us peacefully or would they prudently keep us at a distance? Should we fear seeing ourselves aim nuclear space weapons or other weapons against, for example, the bases that we had attempted to establish or had succeeded in establishing in the asteroid belt close to one of their worlds?

What would be the results of such encounters? What relations could we establish and what influences would we exert on these different types of civilizations? Anything is conceivable. Having come full circle, we thus return to our concerns and our current questions.

Media Implications

CHAPTER 14

As was stressed earlier, it may seem extravagant that sensible people, scientists moreover, are interested in unexplained – and for the time being still inexplicable – phenomena at the risk of appearing ridiculous. But, as this report tries to demonstrate, there are enough questions regarding tangible evidence to justify the scientific interest generated by these issues. What separates our approach from the media's approach is the researcher's curiosity with respect to the research to be conducted in order to solve the enigmas posed to his sagacity even if science has not

reached an adequate state to answer them fully, as opposed to the curiosity of the press regarding a subject with sudden new developments that are likely to produce marvelous scoops, which generally are not characterized by scientific precision.

It is not a question of putting the press on trial; its aid is often most valuable. But these fleeting events are supported in part by human testimonies, which are all the more flimsy since they come from people who are affected by their encounter with "the unknown" and since they elude the usual benchmarks. The press has a tendency sometimes to either ridicule the facts reported or to make itself look ridiculous because of the excess of information extrapolated from the elements described by the witnesses.

14.1

What Can a Government Fear From the Curiosity of the Media?

- Panic: the media broadcast terrifying information liable to sow panic among the population. The famous example of Orson Welles's fictional program taken literally by radio listeners in 1938, wreaking tremendous havoc in one region of the United States, may have influenced the reaction of U.S. military personnel vis-à-vis the Roswell incident in 1947. The disinformation campaign was skillfully conducted, since it has muzzled the media for 30 years. Panic, which is accompanied by considerable human chaos (suicides, people fleeing on the roads, riots, and vandalism, etc.) would cause any government for which peace alone is a wealth and stability factor to shrink back.

- Mistrust: the fear of seeing accurate information divulged and repeated with obvious irony is also a deterrent to openly mentioning UFO questions. This posture is at the core of the disinformation and confusion in which public opinion is steeped with regard to what is true and what is false. It can only be dreaded by decision-makers.

- Fear of ridicule: although ridicule has no longer killed for some time, it is nonetheless often difficult to overcome.

- Manipulation: the media can be manipulated by lobbies or pressure groups for sectorial purposes (for example, push politicians to create an anti-UFO SDI [Strategic Defense Initiative]) and could thus become the unwitting spokesmen of a disinformation campaign or a destabilization attempt.

14.2

What Attitudes do the Media Adopt?

- For the tabloids, anything is good if it sells. The public's curiosity is great and its demand generates enticing and often phony articles. Although they become the relayer of incredible theories, it is, on the other hand, thanks to the tabloids that the latest revelations concerning Roswell made by old witnesses have begun to become known.

- For the major newspapers, irony or aggressiveness are most often a manner of broaching a taboo subject that no one has a handle on. But the press can also spread the news about an extraordinary phenomenon when, as in the case of San Carlos de Bariloche, dozens of people were witnesses to it. It sometimes also makes a good presentation of the UFO case.

- For television and movies, the subject is in vogue because it can be dealt with as fiction, and there nothing checks the imagination of the producers. The bizarre fashion adopted by Channel + [a French television station] for its "*Nuit des Extraterrestres* [*Extraterrestrials Night*]" does not prompt one to take this subject seriously. However, tribute should be paid to several serious and well-documented broadcasts, like that of Arte in March 1996.

What Should Be Done?

The future of our planet lies in space. Whether it be overpopulation, a spirit of adventure, the search for other raw materials, a liking for conquest and colonization, or other, more or less altruistic, motivations, everything is pushing toward expansion far from humanity. Will we one day be extraterrestrials on other planets? When our probes orbit around more and more distant worlds and film them, what might hypothetical inhabitants think of them?

We must prepare ourselves for this prospect, and the media can help educate the masses.

A strengthened SEPRA could usefully dedicate its efforts to the training of journalists and could create a documentary site on the Internet.

Conclusions and Recommendations

The UFO problem cannot be eliminated by mere caustic and offhand witticisms. Since the publication of the first report by the Association des Anciens Auditeurs of IHEDN 20 years ago, CNES has conducted serious studies in close collaboration with the Gendarmerie National and the Air Force primarily, as well as with other State agencies (Civil Aviation, Weather Service, etc.). These studies tally with other research conducted more or less discretely abroad, mainly in the United States.

They demonstrate the almost certain physical reality of completely unknown flying objects with remarkable flight performances and noiselessness, apparently operated by intelligent [beings]. With their maneuvers, these flying objects considerably impress civilian and military pilots, who hesitate to speak [about them]. The fear of appearing ridiculous, alienated, or simply gullible is the principal reason for this reserve. Secret craft definitely of earthly origin (drones, stealth aircraft, etc.) can only explain a minority of cases. If we go back far enough in time, we clearly perceive the limits of this explanation.

Thus we are forced to resort to other hypotheses. Some can neither be confirmed nor invalidated. They are therefore not scientific, and, certainly, it is very difficult to scientifically study rare, elusive, and chance phenomena, when science is based above all on experiments and their reproducibility. However, the example of meteorites shows that this type of phenomenon can nevertheless end up being accepted by the scientific community after centuries of doubt and rejection.

A single hypothesis sufficiently takes into account the facts and, for the most part, only calls for present-day science. It is the hypothesis of extraterrestrial visitors. Advanced as of 1947 by certain U.S. military personnel, today it is popular worldwide. It is discredited by a certain elite, but is plausible. Scientists (astronomers, physicists, engineers, futurologists, etc.) have elaborated on it enough for it to be receivable – as a hypothesis – by their peers. Different plausible variants concerning the voyage of one or more civilizations from a remote solar system to ours have been developed. A model of magnetohydrodynamic technology, which could be employed to propel the UFOs in the atmosphere, has been well developed. Other manifestations of these objects have begun to receive a physical explanation (automobile breakdowns, truncated beams [of light], etc.).

The purposes of these possible visitors remain unknown, but they must be the subject of indispensable speculations and the development of prospective scenarios.

The extraterrestrial hypothesis is far from the best scientific hypothesis. It certainly has not been categorically proven, but strong presumptions exist in its favor and if it is correct, it is loaded with consequences.

Based on this prudent but solid assessment, we can make several recommendations:

1) Inform the political, military, and administrative decision-makers, as well as the aircraft and helicopter pilots. A gradual information campaign could target:

- ENA [National Public Management College] and IHEDN,
- [Ministry of] Defense schools: Air, Naval, Saint-Cyr, Gendarmerie, (officers and lower-level gendarmes), Santé des Armées [Military Health College], Polytechnique [Polytechnical College], ENSTA [National College of Advanced Technologies], ENSAE [National College of Statistics and Financial Management], CID, CHEAR [Center for Advanced Weapons Studies], CHEM [Center for Advanced Military Studies], etc.,
- civilian schools and their alumni: Ecole Nationale Supérieure de Police [National Police College], Ecole des Officiers de Police [Police Officers Academy], journalism schools, Ecole Nationale de l'Aviation Civile. At the latter school, numerous conferences have allowed air [traffic] controllers to be taught the proper reactions in the event an aircraft encounters a UFO,
- agencies that support or conduct research for military purposes: DGA, ONERA, CEA/DAM [Directorate of Military Applications], etc.,
- special civilian and military departments, as well as the Direction de la Communication de la Défense [Defense Communications Directorate] (DICOD, former central SIRPA [Armed Forces Information and Public Relations Department]), calling their attention to disinformation processes.

2) Boost SEPRA's human and material resources so that it can:

- develop its investigation and analysis possibilities,
- collect information relating to all UFO manifestations, both in Europe and throughout the world,
- maintain and develop databases on different aspects of these manifestations,
- boost its representation and foreign relations status.

3) Have considered the detection of UFOs by civilian and military space surveillance systems, which it is necessary to develop for other reasons (prevention of collisions between satellites and space debris, etc.).

4) Create a unit at the highest State level to collaborate with SEPRA, that would be tasked with:

- formulating all prospective hypotheses,
- promoting scientific and technical efforts and, as such, have an annual budget of a few million francs,
- participating in the establishment of sectorial cooperation agreements with other countries.

5) Initiate diplomatic demarches to the United States, with the support of other States and even the European Union, to urge the superpower to collaborate and, if necessary, exert useful pressure to clarify this crucial issue that can only come within the framework of political and strategic alliances.

6) As speculative as these possibilities are, reflect, at the level of public authorities and with the aid of the unit mentioned in item 4), on the measures to take in the event of a spectacular and indisputable manifestation of a UFO:

- overt attempt to make contact,
- landing before numerous witnesses,
- other substantial actions.

These reflections would be carried out methodically, while maintaining, obviously, a minimum distance.

Appendices

APPENDIX 1

Radar Detection in France

Radar detection in France is carried out by two radar station networks, the military network equipped with both primary and secondary radars and the civilian network equipped almost entirely with secondary radars. Primary radar permits one to detect and visualize on a screen (or scope) the geographic position and the altitude (three-dimensional radar) of all moving objects via the reflection of radar waves off of the body of the moving object.

Conversely, secondary radar permits the detection and display on the screen only of moving objects equipped with a "transponder" that is able to respond to the coded signals that it emits. Thus any moving object not equipped with a "transponder" could not be detected by secondary radar.

This detail is extremely important in the case in question, because only the primary radars installed at military Control and Detection Centers (CDC) and radar detection aircraft, the Air Force AWACS and soon the Navy Hawkeyes, are able to detect a UFO, provided that the latter is not a "stealth" craft.

Finally, it is necessary to know that all radar information detected by the totality of radar stations in the territory, airborne warning aircraft, and the radar stations of neighboring countries are being collected and processed in the STRIDA (Système de Traitement des Informations de Défense Aérienne [Air Defense Information Processing Center]) network, thus permitting detection coverage over a square more than 4500 km per side.

APPENDIX 2

Astronomers' Sightings

by Jean-Claude Ribes

The following argument has often been raised against the testimonies concerning UFOs: astronomers, who should have a ringside seat, do not relate any such sightings.

The first response is that in actual fact, professional astronomers concentrate on a very small field of the sky, which is observed through an instrument in a dome. Thus they have less chances than a "tourist" of sighting a relatively rare luminous phenomenon. Amateur astronomers, who spend a lot of time looking at the sky, generally in the open air, are much better positioned to sight an unusual phenomenon without confusing it with an astronomical object. But we can expect them to be extremely reticent to relate such a sighting out of fear of ridicule, because amateurs are generally desirous of "professional" recognition. At any rate, no specific investigation has been conducted, to my knowledge, in this particular population.

The results of two independent studies conducted by professional astronomers with their colleagues are quite different: in the 50s, Hynek informally questioned some forty astronomers, a little more than 10% of whom had actually sighted unexplained phenomena. Among the latter, Josef Allen Hynek cites Professor Lincoln La Paz, Director of the Institute of Meteoritics at the University of New Mexico, and Clyde Tombaugh, the discoverer of the planet Pluto, who died in 1997. In the 70s this time, Peter A. Sturrock sent a detailed questionnaire to 2611 members of the American Astronomical Association, guaranteeing them anonymity. Half responded, and sixty sightings were encountered.

No systematic study of this type has been conducted in France, but a sighting by Marseilles astronomers Georges Courtès and Maurice Viton is frequently cited. One of my colleagues also related to me a sighting that he had made in his youth of an object with an apparent diameter of the moon (which, moreover, was visible), moving slowly from north to south. He was not yet a

professional at the time but rather a well-informed amateur, and he does not see any explanation for his sighting, which he has never mentioned publicly.

Thus it appears that the percentage of sightings by astronomers is comparable to that noted in the overall population, although there is a definite reticence among a vast majority to mention them without being assured of anonymity. In addition, the general opinion of astronomers on the subject is much less negative than they say sometimes, and the least that you could say is that there is no consensus, with many wanting an objective study of the phenomenon without any preconceived ideas. The private conversations that I have been able to have with French colleagues confirm Sturrock's conclusion: many would refuse to broach the question with a journalist, but when I speak with them about a serious scientific study, they state that they are in agreement.

APPENDIX 3

Life in the Universe

The question of extraterrestrial life left the domain of belief barely a few decades ago and entered the domain of scientific research, and the advances in this domain have been very rapid for several years. Beyond earth, the solar system proves to be currently unsuited to life, but the "Viking" probes have shown that some three-and-a-half billion years ago, the planet Mars must have offered much more favorable conditions than at present, namely with the existence of liquid water. Thus it is not ruled out that an elementary life form (bacteria) could have existed there, as was then the case on earth. The study of fossils is, besides, one of the reasons for future Martian expeditions, automated first, then with humans aboard. The discovery of fossils in a meteorite originally from Mars, as announced by NASA, is still the subject of a debate in the scientific community. But the very existence of this debate increases the interest in going to take a look on site.

Outside the solar system, astronomers have long thought that, very generally, the stars should be surrounded by planetary systems, but it has only been in very recent years that experience has confirmed this theory: we now know of a half dozen stars each accompanied by at least one planet. Biologists, for their part, are making rapid advances in understanding the chemical mechanisms that give rise to life, and this appears more and more to be a necessity rather than a coincidence.

Twenty years' experience has shown, from Siberia to the ocean depths, that life adapts itself to sharp variations in temperature or to extreme temperatures where it was previously considered to be impossible.

For 35 years, radioastronomers have carried out different programs searching for an intelligent radio signal coming from space (SETI: Search for ExtraTerrestrial Intelligence). No signals have been detected yet, which is not surprising given the immensity of the spatial and frequency domain to be explored. A major NASA program, which was canceled by the U.S. Congress, was revived using private funds and should improve the sensitivity of the search by several orders of magnitude. The French radiotelescope at Nançay, where several SETI studies have already taken place, will perhaps be included in this program.

APPENDIX 4

Colonization of Space

The second half of the 20th century will have been the half century of the exploration of the solar system: man on the moon, probes placed on Mars and Venus, others in the immediate vicinity of the other planets (except Pluto), comets, and asteroids. The 21st century might be the century of the colonization of our system, with permanent human settlements and preparation for voyages to other planetary systems.

The coming years will see the positioning of the permanent orbital station *Alpha*, the

international follow-up to the Russian Mir program. Next, the Americans plan, in principle, to establish a permanent base on the moon, a minimal station like the Antarctic base. Beyond that, it would be necessary to recreate an ecosystem where the essential raw material needs (including air, water, and food) could be extracted on site or recycled. Actually, we cannot consider applying the current method on a large scale, where almost everything must be brought from earth via costly launches.

Ecosystems of this type were studied by the Russians first (the first experiment was in 1961) and by the Americans, namely with Biosphere 2, a greenhouse 1.3 ha in surface area, planned to maintain in closed circuit (with an outside power supply) a set of plants and animals, including the presence of eight people. This experiment, which was carried out using private funds, was unjustly criticized by the press and a portion of the scientific community. In fact, despite certain "amateur" sides, it has already contributed a great deal: during an initial two-year experiment from 1991 to 1993, four men and four women lived almost entirely self-sufficiently, demonstrating the validity of the principle. The recycling of water was total, while the recycling of air was imperfect (it was necessary to add oxygen after fifteen months of total isolation), and the production of food slightly inadequate (the inhabitants of the biosphere left thinner, having started in on the reserves).

After another six-month experiment, the structure was taken over by the University of Columbia, which seems interested especially in the ecological aspect, to the detriment of the space application. However, it is a descendent of Biosphere 2 who could represent the future autonomous moon base of the middle of the next century. A human settlement on the moon is first of all a scientific necessity, namely for astronomers. It is also a springboard into space. Almost all the materials necessary for the construction of stations and spaceships can be found on the moon. So many resources [exist there], the exploitation of which will be much more economical than on earth because the reduced gravity and the absence of atmosphere on our satellite enable an easy and sure launch into orbit.

Human expeditions will necessarily follow automated missions to Mars, if for no other reason than to verify the past existence of traces of life. As for the development of permanent Martian colonies, this can be envisioned, but one can also imagine skipping this step, by creating artificial planets. The idea was conceived by American physicist O'Neill, who studied in detail cylindrical structures 30 km in length by 6 km in diameter, in rotation to create an artificial gravity and able to shelter millions of people in an earth-type biosphere.

These artificial planets could be constructed in the asteroid belt, between the orbits of Mars and Jupiter, where we find an abundance of materials that are easy to exploit, which will be able to provide numerous chemical bodies, including oxygen and water.

In the very long term, and when the industrial-scale manufacture, storage, and use of antimatter is mastered, smaller models of these same craft will be able to leave the solar system. They will be able to reach the vicinity of another star, after a voyage of several centuries, during which generations will succeed one another in these "ship-worlds" (unless we have mastered human hibernation by then).

These migrations probably will not take place until after reconnaissance [missions] conducted by automatic probes [have been completed]. The preferred destinations would obviously be systems where a planet supposedly shelters evolved life.

Imagine that a human expedition settles in the asteroid belt of a system where a civilization exists that is quite probably at a lower stage of technical development than ours (if the reverse is true, it is likely that the contact was made via telecommunications, or else that the most advanced civilizations made the voyage before us): for ethical reasons, but also in the interest of a serious scientific study, it would not be a matter of intervening openly, at the risk of inducing a fatal culture shock. The study should therefore be discrete, using high-speed and silent craft to move through the planet's atmosphere (MHD propulsion offers interesting prospects in this respect), and nonlethal weapons to avoid the consequences of an untimely encounter (the paralyzing effect of

pulsed microwaves is under study in several countries).

When the civilization visited has reached the stage of space voyages, it will become necessary to make it aware of the existence of visitors. One way to do this, without causing trauma, would be to commit "calculated indiscretions" that would accustom the population, little by little, to the idea that there could indeed be extraplanetary visits.

APPENDIX 5

The Roswell Affair – Disinformation

1) Roswell: indisputable facts

Note: the parenthetical annotation (video) indicates that video testimonies are available

Summer 1947 – The Roswell (New Mexico) base houses the only nuclear-armed bombers in the world. The bombers still have propellers.

June 24 – Sighting of nine UFOs by American Kenneth Arnold. The news is broadcast throughout the world.

July 8 (morning), Roswell – The base provides the local radio stations with information that would circle the globe: a flying disk had crashed on a ranch and the military personnel from the base recovered the debris (video).

July 8 (afternoon), Fort Worth (Texas) - General Ramey, Commander of the 8th Air Force, who commands the base, announces to journalists that after examination of the debris, [it was determined that] they were from a weather balloon. He shows them some of the debris, which the journalists photograph. The affair was buried for over thirty years.

1978 – Lieutenant Colonel Marcel (ER), an intelligence officer on the base in 1947 who recovered the debris, declares on television that the debris is definitely of extraterrestrial origin (video). The debris that General Ramey had shown the journalists was not the debris that Marcel had brought him from Roswell.

American ufologists conduct numerous investigations and collect affidavits (sworn and notarized written statements) and filmed testimonies. Many witnesses state that in July 1947, military personnel had threatened them with death if they talked (video). According to some testimonies, at some distance from the field of debris, the Army had found the frame of a sort of space glider and cadavers of small humanoids (video).

1991 – General du Bose [sic] (CR), who was General Ramey's chief of staff in 1947, confirms by affidavit that the latter had substituted the debris from a weather balloon, which he had shown the journalists, for the debris sent by the Roswell base.

Beginning of 1994 – U.S. Representative Schiff (New Mexico) asks the Department of Defense (DoD) for explanations regarding the affair. Not obtaining any, he requests that the General Accounting Office (GAO) conduct an inquiry into the manner in which the Air Force, primarily, had handled the documents relating to the Roswell crash.

September 1994 – The Office of the Secretary of the Air Force publishes a report on Roswell: the debris found on the ranch cannot be from an aircraft or a missile. They are probably debris from a series of balloons from the secret Mogul project. To protect the secret, General Ramey leads everyone to believe it is a weather balloon, the materials of which (essentially the shell and radar reflector) are the same. The report shortens the affidavits of certain witnesses so that the debris that they describe appears to be debris from a Mogul balloon. It does not mention the frame and attributes the "bona fide testimonies" regarding humanoids to "foggy weather."

July 1995 – The GAO report mentions the new Air Force version, and states:

- page 1, "The debate on what actually happened at Roswell continues."

- page 2, "All of the base's administrative documents for the March 1945-December 1949 period were destroyed, and all radio messages sent by the base from October 1946 to February 1949 were destroyed. The destruction report does not mention when, by whom, and on whose orders this destruction was carried out."

The GAO inquiry provided him with practically no documents of interest concerning the Roswell incident, despite his requests to numerous organizations (CIA, FBI, DoD, DoE, NSC, etc.).

Summer and fall of 1995 – A film of the autopsy of an alleged “*humanoid cadaver*” in 1947 is aired by about thirty television stations around the world. Its authenticity is questionable, but, above all, nothing in the film proves that the cadaver has even the slightest connection with the Roswell incident. The hodgepodge is, however, made up in large part from written and televised press, thus making the Roswell affair look ridiculous. The conclusions of the GAO and the videos of the principal witnesses presented by TFI [a French television channel] go unnoticed, lost in the middle of the film of the autopsy.

1996 – The film *Independence Day* and the [television] series *X-Files* make numerous references to Roswell.

2) Opinions on Roswell

- Very consistent interviews, affidavits, and video testimonies describe the discovery of material that no one knows how to make in our time: a thin sheet that looks like metal with very great resistance and that is so elastic that after it has been crumpled up into a ball, it spontaneously returns to its initial shape without the least sign of a residual fold.

- It does seem that the crash occurred on July 4, Independence Day, at around 2330 hours. The date and time symbolize American power, whence the following question [arises]: if the crash was in fact that of an extraterrestrial vessel, was it truly an accident or was it a deliberate crash constituting a message and/or the authenticator?

3) Roswell and disinformation

The disappearances of files and the Air Force's clumsy attempts at explaining [the incident] show that U.S. military personnel are hiding something important that occurred at Roswell in July 1947, just as they concealed their experiments on the effects of plutonium. The hypothesis of an extraterrestrial vessel that is supported by quality testimonies cannot be dismissed.

To protect the secret, two main types of disinformation, simplified and enhanced, were used in the Roswell affair. It is advisable to note, however, that the dissemination of information and contradictory analyses – by ufologists, for example – may be a spill-over effect of this.

Simplified disinformation is apparent in the Air Force report: testimonies on the debris have been cut down so as to give credence to the Mogul balloon hypothesis. It is also found, more subtly, in *Roswell in Perspective*, a book by “ufologist” Karl Pflock, a former CIA and DoD employee: affidavits mentioning the tear-proof and crease-resistant material are given in full in an appendix, but they are ignored or cited only in shortened form in the text.

In France, sociologist Pierre Lagrange appears to be a victim of this simplified disinformation. After having endeavored to put the Air Force report and the publications of Karl Pflock into perspective, he concluded:

“[I will] close with a bit of psychology. Why do many people not believe in the Roswell saucer like they believe in Mogul balloons or the V2s? Because it reminds them too much of popular science fiction. As Bertrand Meheust emphasizes, the topic of the Martian craft that had the exquisite courtesy to crash in the vicinity of a military base comes under the heading of the technological imagination of the beginning of the century, just like the detail regarding the ultralight and ultraresistant materials that were used in its construction.” (the journal *Ovni-présence*, February 1995).

This is, on the whole, the simplistic theory concerning UFOs stated by French “sociopsychologists.” It can be refuted as follows: at the beginning of the century, popular science fiction described light rays capable of killing or healing. Nonetheless, military or medical lasers exist today.

Enhanced disinformation was manifested when the film on the autopsy of the “Roswell creature” was aired. In expanding the Roswell affair with this spectacular, but questionable,

autopsy, some have succeeded in discrediting it and, especially, in covering up the publication of the GAO report and the dissemination of video testimonies. It is tempting to believe in a well-orchestrated manipulation.

4) Simplified disinformation on UFOs

The Air Force has practiced this from the onset, as has been revealed by the astronomer Hynek, who was an Air Force consultant from 1948 to 1966 and who described how he aided in trivializing numerous cases by giving them unjustified astronomical interpretations.

The disinformation policy was intensified as a result of the recommendations of a "scientific" committee assembled by the CIA in December 1952, the Robertson Committee, which suggested "*stripping the UFO phenomenon of its aura of mystery.*" The same committee recommended "*monitoring*" the ufological movements, which were infiltrated by the CIA mainly.

Several key figures have tried to nullify numerous important cases. Philip Klass, then editor of *Aviation Week and Space Technology*, took on, among others, three major aeronautical cases: Lakenheath in 1956, RB-47 in 1957, Tehran in 1976, which are described in Chapter 2. He is hardly convincing. In the Tehran case, for example, he correctly cites the testimonies at the beginning of his account, but doesn't take certain aspects into account when he discusses them.

Simplified disinformation is effective on those who do not want to accept the possibility of the extraterrestrial hypothesis. Enhanced disinformation is aimed at others.

5) Enhanced disinformation on UFOs

This policy was probably implemented very early on; Adamski's alleged contacts with a Venusian in 1952 no doubt fall into this category.

It has become considerably extensive since the resurgence of the Roswell affair at the end of the 70s. The point of departure is the Bennewicz case. This ufologist physicist recorded pulsed microwaves from a testing ground at Kirtland (New Mexico) Air Force base. He attributed them to UFOs exerting control over "abductees" (kidnapped humans) furnished with implants! Fearing, it seems, the publication of his recordings, the Air Force Office of Special Investigation (AFOSI) and, namely, its special agent Doty from the aforementioned air base, as well as, perhaps, other agencies, induced him to make fantastic "revelations": there were numerous kidnappings, with the placement of implants to control the "abductees." Furthermore, technology transfers were supposedly carried out on bases in New Mexico and Nevada jointly owned by the U.S. Army and extraterrestrials baptized EBEs, Extraterrestrial Biological Entities.

Bennewicz disclosed this information to American saucerists, much of which was increasingly cut off in this manner from the common opinion. John Lear, son of the aircraft builder, contributed on his part details that he had obtained from friends in the Air Force: the Nevada base is Groom Lake base, in "area 51" (Groom Lake does in fact exist; it is so secret that the Air Force does not recognize its existence; nevertheless, it is mentioned in the June 1996 issue of *Jane's Defence Weekly*). Later, a Marine officer from the 2nd Marine Division, Bill Cooper, "revealed" that the Council for Foreign Relations (CFR), which, according to him, governs the world through the Bilderberg [Group] and the Trilateral [Commission], supposedly does so in close union with the EBEs...

Enhanced disinformation has probably permitted the protection of research on microwave weapons at Kirtland and on new types of aircraft at Groom Lake. It has certainly allowed the weapon of the ridiculous to be used against certain gullible ufologists.

The Long History of the UFO Phenomenon – Elements of a Chronology

The UFO phenomenon truly experienced worldwide dissemination as of Kenneth Arnold's sighting on June 24, 1947, in the area of Mount Rainier in the northwest United States. In reality, air phenomena that are still unexplained today are much older.

Before going further, it is interesting to note that between May and July of this year, 850 different sightings were recorded across the United States (Blue Book) and that in January an RAF Mosquito night fighter tried in vain to intercept a very rapid object detected by radars over the North Sea.

In 1946, phantom missiles overfly Sweden

From February to December 1946, many witnesses sighted generally fusiform objects (occasionally resembling spheres or disks) flying horizontally in Swedish skies, in some cases leaving a luminous trail, but also capable of very suddenly ascending or descending.

Called "ghost rockets," these apparitions (close to a thousand were detected) considerably worried Scandinavian, British, and U.S. military authorities, who conducted investigations.

Although no debris was ever found (officially), it was long thought that it could have been a case of Soviet tests conducted with craft recovered in German factories. This hypothesis has since been completely ruled out.

During World War II, the "foo fighters"

From 1940 to 1945, numerous aviators sighted either swarms of red or green luminous balls several dozen centimeters in diameter or groups of small metal-looking disks that followed the aircraft or flew around them, giving the impression of intelligent behavior. Most often not detected by the radars of the time, they did not seem "material" in nature. In fact, some observers saw them touch the wings or the tail assemblies of the aircraft without causing any visible damage to them.

First called "Kraut fireballs," then "foo fighters" (probably in reference to a comic strip), they were reported in all theaters of operation as of the start of the war. They began to appear in number during the first major day bombings over Germany. They were also observed from the ground and were the subject of numerous reports as of June 1944.

These sightings were the cause of much concern to the Allied authorities, who believed them to be a secret German process in the beginning. It became clearly apparent at the end of the war that it was nothing of the sort.

It seems that, for their part, the German pilots had been persuaded that it was a case of a secret U.S. weapon. A board of inquiry reportedly was even created in Berlin to study the matter.

The current explanation of electrical phenomena such as the Saint Elmo's fires is not convincing because it does not take into account the diverse characteristics observed. The files relating to the "foo fighters" seem to have been subject to military secrecy at least until 1949.

Many other sightings concerning larger, cigar-shaped, disk-shaped, or sphere-shaped objects were recorded in both camps.

From 1880 to 1900, "airships" over the United States and Great Britain

During these years, tens of thousands of witnesses sighted flying machines resembling modern dirigibles, which were not produced by factories until twenty years later. In most cases, it was a matter of fairly voluminous, fusiform, vessels equipped with powerful searchlights, often emitting engine sounds, and, in some cases, even seeming to have propellers.

In the United States, the majority of the sightings occurred between 1896 and 1897. Other

cases were reported, particularly in Spain, Germany, Sweden, and Russia. A second wave [of sightings] occurred at the turn of the century in Great Britain.

The explanation that comes immediately to mind is that of true dirigibles (and right away we think of the craft of German origin). However, it has a hard time holding up to a thorough examination.

In actuality, in 1880, the technology of these craft was still in its infancy. It is true that Colonel Giffard did conduct an initial test in 1852 with an elongated balloon equipped with a very low-power steam engine. Then in 1885, Renard traveled several kilometers for the first time, overflying Paris with a dirigible equipped with an internal combustion engine, but it was still extremely slow and not very easy to fly.

In fact, the first truly efficient aircraft were subsequent to 1910; however, even the zeppelins built during World War I far from possessed the characteristics observed by the witnesses to these phenomena.

From Greco-Latin antiquity to the beginning of the industrial age

Human beings in all ages have sighted phenomena in the sky that they considered, rightly or wrongly, to be abnormal. It is true that our epoch naturally has a tendency to doubt the accuracy of ancient testimonies, and especially so the further back into the past we go.

During the first three quarters of the 19th century, chroniclers related several dozen sightings of spheres and luminous wheels resembling present-day UFOs. The 18th century was marked by one strange case. Goethe recounts, in fact, that in his youth, in 1768, during a trip between Frankfort and Leipzig, he and two other witnesses saw a type of large luminous tube positioned on the ground, surrounded by a multitude of small, very bright, moving flames.

In the 16th and 17th centuries, authors mentioned numerous sightings, not only in Europe but also in America and Japan. Among these, a few hold our attention due to their spectacular appearance and the multitude of witnesses. In the skies of Nuremberg, in April 1561, a large number of brightly colored spheres, disks, and "cigars" seemed to wage a sort of battle that left a profound mark on the population and caused the authorities great concern. A spectacle of the same kind took place in August 1566 in Basel.

From the year one thousand to the year 1500, chroniclers mentioned various sightings of luminous spheres, wheels, lances, or bars moving more-or-less rapidly in the sky. The monastery at Detchani, built in Yugoslavia between 1327 and 1335, is decorated with frescoes that represent angels enclosed in sorts of vessels flying in the sky.

Even further back in time, during the reign of Charlemagne, it is reported that Agobard, Bishop of Lyons, succeeded in saving from the stake three men and one woman who had descended from an airship, claiming to be returning to earth after having been kidnapped by celestial beings who allegedly showed them wonders.

Elsewhere, luminous celestial phenomena similar to modern UFOs seem to have been relatively frequent in China and Japan, particularly in the Middle Ages.

Several other Latins, Dion Cassius, Pliny the Elder, Titus Livy, Julius Obsequens, and even Cicero relate the appearance of lights in the sky, glowing shields, multiple moons and suns, [and] golden flying spheres.

As for the testimonies reported by the Greek chroniclers, these are fewer in number. Daimachos recounts that a globe of fire crossed the sky several times during the 78th Olympiad. Anaxagoras asserts that he saw celestial lights the size of a large beam. Appearances of beams and shields of fire are described several times, by Homer among others.

Reflections on Various Psychological, Sociological, and Political Aspects of the UFO Phenomenon

Note: these reflections apply primarily to the United States; many of them, however, can be transposed to other countries

A large number of Americans are convinced of the physical reality of UFOs, of their extraterrestrial origin, and of the fact that the U.S. government is systematically covering up the truth with lies and disinformation.

Most of the recent American works that have been published on the subject end with this conclusion, and almost all of them close with a demand for a partial or full lifting of the alleged secrecy. The media frenzy surrounding the Roswell affair (cf. Appendix 5), which experienced a resurgence at the end of the 70s after a more than thirty-year blackout, and which has not ceased to go from new development to new development for 15 years, is a typical illustration of this line of thought. By admitting that the extraterrestrial hypothesis is the good one, the secret, say some, would be kept out of fear of panic reactions; which, they assure, would not fail to occur, as demonstrated by the unfortunate experience of the radio program "*The War of the Worlds*" broadcast by Orson Welles in the United States in 1938 (only nine years prior to Roswell). This explanation should not necessarily be rejected; however, it does seem a bit narrow. In fact, the roots of the matter probably go deeper, and the sociopsychological motivations seem to be more complex.

7.1 The UFO Paradox

While a majority of Americans seem to support the idea of the existence of intelligent extraterrestrial [beings], a very strong resistance remains in scientific circles, among leaders, and in most of the media to the idea that these entities, whatever they may be, have been able to or continue to visit our planet and travel our solar system.

The idea is ridiculed by much of the media. At the same time, in this spirit, most politicians and the vast majority of members of the intelligentsia state that humanity has better things to do than to chase such rainbows.

7.2 Why this Resistance?

7.2.1 On the Part of Scientists

Given an official attitude of contempt, and in view of the fear of being likened to the activists from "saucerist" sects and the "lunatic fringe," the vast majority of scientists, although they are interested, quite obviously hesitate to tackle such a heretical problem and naturally do not wish to call their reputation, career, and the funding of their research into question (cf. Appendix 2, "Astronomers' Sightings"). This being the case, there appear, upon analysis, to be other, deeper reasons.

A general school of thought has existed for close to two centuries that tends to dismiss the idea that terrestrial phenomena could be influenced from the outside.

At the start, this was a positive, rational, and creative reaction to ancient beliefs. Compared with ancient times, modern science has, in fact, advanced by eliminating the gods. It would seem counterproductive and incongruous to bring them back in other forms.

The idea prevails in almost all minds that man is master of the earth and, by extension, of the immediate cosmic vicinity, that it is the best nature can produce in this small corner of the galaxy,

and that he alone remains the controller of his destiny. Various American philosophers have termed this concept "*anthropocentric humanism*."

To admit that intelligent [beings], which are not only outside [our planet] but are also superior due to their scientific and technological knowledge, could have interfered or might continue to interfere in our affairs, in our domain, or in proximity to it, is considered by many to be frightening and unacceptable, because admitting it would cause the collapse of the framework of comfortable thoughts of anthropocentric humanism.

Moreover, in some disciplines such as physics, the risk run is to find oneself confronted with a science that is more advanced by several centuries, milleniums, or even more.

Our own concepts could literally appear infantile, which would completely demobilize the researchers who employ them.

It is clear that under the hypothesis that the existence of UFOs of extraterrestrial origin is proven, there is a risk that not only the position of the intellectual authorities but, quite simply, the social position of the scientific elite would be considerably compromised. This is, furthermore, what happened each time that groups or nations found themselves in contact with a more developed human civilization, with the notable exception of Japan in the Meiji period, which it would be advisable to look into.

We know that advancing knowledge of the UFO phenomenon, at the risk of succeeding, would not necessarily be a thrilling prospect for a number of scientists, who thus might not really want to lend a hand in this effort.

7.2.2

On the Part of Politicians

7.2.2.1

With a few rare exceptions (President Jimmy Carter, Senator Barry M. Goldwater), the majority of politicians have almost always displayed a very skeptical and most often ironic attitude regarding the question. However, some have had a more positive attitude.

The best known allusions to the possible existence of extraterrestrials and to the dangers that they might represent come from General MacArthur and President Ronald Reagan.

While he had already touched on the problem in 1955, in a conversation with the mayor of Naples, Achille Lauro, General MacArthur said in an address at West Point Military Academy in 1962:

"You now face a new world, a world of change. The thrust into outer space... marks a beginning of another epoch in the long story of mankind... We deal now, not with things of this world alone, but with the illimitable distances and as yet unfathomed mysteries of the universe... of ultimate conflict between a united human race and the sinister force of some other planetary galaxy."

[French translation of the quote from General MacArthur's address]

General Secretary Mikhail Gorbachev, for his part, revealed during a private discussion at the 1985 summit conference that President Reagan had told him that if earth had to confront an invasion by extraterrestrials, the United States and the Soviet Union would join forces to repel that invasion.

In addition, at the end of a speech before the 42nd General Assembly of the United Nations on September 21, 1987, President Reagan affirmed:

"In our obsession with the antagonisms of the moment, we often forget how much unites all the members of humanity. Perhaps we need some outside, universal threat to make us recognize this common bond. I occasionally think how quickly our differences worldwide would vanish if we were facing an alien threat from outside this world."

[French translation of the quote from President Reagan's speech]

[continuation of French translation of quote]

7.2.2.2 However, for political leaders, just as for scientists, to be officially interested in UFOs and extraterrestrials is firstly to risk ridicule before commentators and the media, who regularly use omission, destructive irony, and even lies.

7.2.2.3 But other elements should be taken into consideration. Although a significant number of U.S. citizens seem to accept the existence of UFOs of extraterrestrial origin, some political leaders might hesitate to call for resources to research this subject, because they might fear they would then be accused of incurring expenses for one of the most dangerous of subjects.

7.2.2.3.1 Under these circumstances, if we advance the hypothesis that political leaders at the highest level in the United States possess specific information attesting to that existence, their situation would be particularly uncomfortable. The armed forces have officially reiterated for fifty years that this phenomenon does not threaten the security of the country, which does not mean that the phenomenon does not exist.

 However, there have been disturbing sightings such as visits above secret installations and missile bases, intense electromagnetic effects, military aircraft shadowed (as in the RB-47 case) or the object of mock interceptions. In reality, faced with the impossibility of countering this type of threat, the authorities have thus far been tempted to affirm that it does not exist.

 In the absence of a direct threat, and although there never truly was any attack in the past, the potential threat itself can appear overwhelming in the eyes of the authorities (and especially the military).

 “They” come from the stars, “their” craft watch us and seem to taunt us, “they” have perhaps been on earth for thousands of years, and we don’t know “their” intentions. “Their” science and “their” technology, thus “their” power, are incomparably superior to ours.

 Without being completely disarmed, and even taking into account the enormous resources that we have on the earth and our obvious ability to learn quickly, we can only feel anxious in the face of “their” presence.

 Bringing this out into the open by calling for the manpower and funds to conduct the necessary research is hard to visualize officially for the only superpower in the world.

7.2.2.3.2 This is all the more true since, under the additional hypothesis that the U.S. armed forces actually already possess formal proof of this threat, for example, in the form of extraterrestrial ships that have crashed on the ground, intensive research on foreign technologies should have already commenced a long time ago under the cover of the highest level of secrecy.

 As will be seen in 7.3.3, it would then be completely out of the question to divulge this type of information.

 In fact, revealing a situation as novel as it is upsetting too quickly would perhaps be running the risk of social upheavals, accompanied by panic, a demobilization of energies, a multiplication of millennialist sects, and a massive move of people to take refuge in religious fundamentalisms.

 The loss of trust in the leaders in power could even lead rapidly to their ousting.

 Given such a problem, their normal reactions would obviously be to gain as much time as possible by continuing their denials, all the while continuing work in secret and fervently hoping that their successors will take on the responsibility when the reality becomes manifest.

7.3 **U.S. Leaders and the Politics of Secrecy**

7.3.1 **The U.S. Army and UFOs**

The U.S. Army has been directly confronted with the phenomenon since World War II. It seems to have been the only army to have officially broached the problem with considerable resources.

7.3.2 **The Spill-Over Effect of the Study of UFOs**

The U.S. Army has, in actual fact, designed aircraft that exhibit the characteristics described by the most reliable witnesses. The spill-overs are potentially considerable in the areas of propulsion, materials and structures, stealth technology, and weapons.

7.3.3 **Finally, Why the Secrecy?**

We are currently not aware of the extent of the knowledge that U.S. military personnel have gleaned from all of the studies that they have conducted on this subject either based on sightings or, as has sometimes been written, based on materials that have allegedly been recovered.

Whatever the case, it is clear that the Pentagon has had, and probably still has, the greatest interest in concealing, as best as it can, all of this research, which may, over time, cause the United States to hold a position of great supremacy over terrestrial adversaries, while giving it a considerable response capacity against a possible threat coming from space.

Within this context, it is impossible for them to divulge the sources of this research and the goals pursued, because that could immediately point any possible rivals down the most beneficial avenues. Cover-ups and disinformation (both active as well as passive) still remain, under this hypothesis, an absolute necessity.

Thus it would appear natural that in the minds of U.S. military leaders, secrecy must be maintained as long as possible.

Only increasing pressure from public opinion, possibly supported by the results of independent researchers, by more or less calculated disclosures, or by a sudden rise in UFO manifestations, might perhaps induce U.S. leaders and persons of authority to change their stance.

It does not seem that we have arrived at that point yet.

Glossary

AFB	Air Force Base	EMAA	[French] Air Force Chief of Staff
AFOSI	Air Force Office of Special Investigation	ENAC	[French] National Civil Aviation School
AIAA	American Institute of Aeronautics and Astronautics	ESO	European Southern Observatory
Airmiss	Name of the investigation procedure covering the risks of air collisions	ETCA	[French] Central Technical Armaments Institution
ALAT	[French] Army Air Corps	FOIA	Freedom of Information Act
Blue Book	Name of the U.S. Air Force study of UFOs	FUFOR	Fund for UFO Research
CCD	Charge-coupled device cameras	GAO	General Accounting Office
CCOA	[French] Air Operations Center	GEPA	[French] Aerospace Phenomena Study Group
CDC	[French] Control and Detection Center	GEPAN	[French] Unidentified Aerospace Phenomena Study Group
CEA	[French] Atomic Energy Commission	IHEDN	[French] Institute for Advanced National Defense Studies
CEAT	Toulouse Aeronautic Test Center	INRA	[French] National Institute for Agronomic Research
CFR	Council for Foreign Relations	JANAP	Joint Army Navy Air Force Publication
CHEAR	[French] Center for Advanced Weapons Studies	MEGASETI	see SETI, which MEGASETI is an expansion of
CHEM	[French] Center for Advanced Military Studies	MHD	MagnetoHydroDynamics
CIA	Central Intelligence Agency	MOD	[British] Ministry of Defence
CID	[French] Interarmy Defense College	MUFON	Mutual UFO Network
CIRVIS	Communications Instructions for Reporting Vital Intelligence Sightings	NASA	National Aeronautic and Space Administration
CNES	[French] National Center for Space Studies	NORAD	North American Air Defense
CNRS	[French] National Center for Scientific Research	NSC	National Security Council
CODA	[French] Air Defense Operations Center	ONERA	[French] National Aerospace Study and Research Office
Condon	Physicist at the University of Colorado who signed the UFO report ordered by the U.S. Air Force	RAF	[British] Royal Air Force
CRNA	[French] Regional Air Navigation Center	SEpra	[French] Atmospheric Reentry Phenomena Consulting Department
CUFOS	Center for UFO Research [sic]	SETI	Search for ExtraTerrestrial Intelligence
DGA	[French] General Delegation for Armaments	SIRPA	[French] Armed Forces Information and Public Relations Department
DGAC	[French] Civil Aviation Directorate	SPOC	[French] Sky Observation Probe System
DIA	Defense Intelligence Agency	STRIDA	[French] Air Defense Information Processing Center
DICOD	[French] Defense Communications Directorate	UAP	Unidentified Aerospace Phenomenon
DoD	Department of Defense	UAP D	Category D Unidentified Aerospace Phenomenon
DoE	Department of Energy	UFO	Unidentified Flying Object
EBE	Extraterrestrial Biological Entity	VLt	Very Large Telescope

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(Cf. également : livre de la Genèse, XIV 5, Nombres, XIII 32-33, Deutéronome, II 10-11).
- (4) *La Bible : Ecrits intertextuels* - Callimard, la Pléiade (Paris), 1987 :
Livre des secrets d'Hénoch :
VI 1-2 : "Il arriva que lorsque les humains se furent multipliés, il leur naquit des filles frêches et jolies. Les anges, fils du ciel, les regardèrent et les désirèrent.
Ils se dirent l'un à l'autre : « Allons nous choisir des femmes parmi les humains et engendrons-nous des enfants. (...) »"
VI 6 : "Ils étaient en tout deux cents. (...) "
VII 1-2 : "(...) ils leur enseignèrent les drogues, les charmes, la botanique et ils leur montrèrent les herbes. Les femmes conçurent et engendrèrent des géants (...)"
VIII 1-3 : "Azazel apprit aux hommes à fabriquer des épées, des armes, des boucliers, des cuirasses, choses enseignées par les anges. Il leur montra les métaux et la manière de les travailler, ainsi que les bracelets, les parures, l'antimoine, le fard des paupières, toutes sortes de pierres précieuses et les ceintures. Il en résulta une grande impiété. Les hommes se débauchèrent, s'égarèrent et se perdirent dans toutes les voies."
X 10 : "(...) leurs pères n'obtiendront rien de ce qu'ils ont demandé pour eux-mêmes et pour eux, alors qu'ils espéraient pour eux-mêmes une vie éternelle et pour chacun de leurs fils cinq cents années de vie."
(Cf. également le livre des Jubilés : V 1-5 : même récit).
- (5) G. Pauthier, *Les Livres secrets de l'Orient* (p.e. Le Chou-King ou le Livre Sacré, Part. III, Ch. X-2) - Ed. Au Bureau du Panthéon littéraire (Paris), 1852.
- (6) Arnold Toynbee, *La civilisation à l'épreuve*, Callimard (Paris) 1951 - p. 89.
- (7) cf. les Immortels, Dieux, fils et filles des Dieux, Héros, Titans et Géants chez Hésiode, Homère, Virgile, Plinie, Hérodote, Plutarque, etc., également les représentations divines et colossales de Memnon, de Karnak, d'Hermouchis, d'Abou-Simbel et le Sphinx de Glizich, les colosses de l'île de Pâques, les géants de Bamyan en Afghanistan, ceux de Ninive et de Khorsabad ; les Hrinthunars des Eddas scandinaves, le géant Skrymer combattu par Thor, etc.
- (8) Peter Lawrence, *Le culte du cargo* - Fayard (Paris), 1974. (Le premier débarquement de marchandises d'un avion-cargo strappa fortement l'esprit des Papous, au point qu'ils instaurèrent le "culte du cargo", dispensateur de richesses, bien qu'ils se soient, par la suite, accoutumés aux produits occidentaux et aux vols des avions).
- (9) Arnold Toynbee - op. cit. - p. 88 : Al-Gabrati.

(10) G. Pauthier – *op. cit.* "Manava-Dharma-Sastra ou Lois de Manou, comprenant les institutions religieuses et civiles des Indiens", p. 331 et s. : "Le nom de Manou rapproché (...) de ceux de Ménès et de Minus, appartient à chacun des sept personnages divins qui, suivant les idées des Indiens, ont successivement gouverné le monde."

(11) "Mais qui a découvert l'Antarctique ?" – *La Recherche*, n° 161, décembre 1984.

(cf. aussi Charles Hapgood – *Les cartes des anciens rois des mers* – Ed. du Rocher (Monaco), 1981 – p. 85 et s.

(12) *La Bible : Ecrits intertestamentaires* – *op. cit.*

Livre des secrets d'Hénoch :

X 2 : "Ordonne-lui en Mon nom de se cacher et annonce-lui que la fin est proche : toute la terre va périr, un déluge va arriver sur toute la terre et détruire tout ce qu'elle porte."

X 7 : "La terre que les anges ont souillée sera assainie. Annonce la guérison de la terre : on guérira sa plaie, et tous les humains ne périront pas à cause de tout le mystère meurtrier que les Veilleurs ont enseigné leurs fils."

XII 6 : "(...) ils pleureront la perte de leurs fils, ils supplieront éternellement, mais il n'y aura pour eux ni pitié ni paix."

Livre des Jubilés :

V 6-11 : "La punition des anges et des géants (...)"

VII 20-25 : "(...) lorsque les Veilleurs s'écartèrent de l'ordonnance qui les régissait pour forniquer avec les filles des hommes, se prirent des femmes parmi toutes celles qu'ils avaient choisies, provoquèrent le début de l'impureté, engendrèrent des fils, les Nephilim qui étaient tous différents et se dévotaient les uns les autres (...)"

(13) Graham Greene – *Un Américain bien tranquille* – Ed. Robert Laffont (Paris) 1956.

ANNEXE 2

• Brad Steiger

"Un rapport du projet Grudge : entretiens du Pr Hynek avec des astronomes" – *Ovni : le projet Blue Book* – Belfond, 1979, p. 178 sq.

• Allen J. Hynek

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"Report on a Survey of the Membership of the American Astronomical Society Concerning the UFO problem" – *Rapport n° 681* – Institute for Plasma Research, Stanford University, CA, janvier 1977.

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La vie extraterrestre – *op. cit.*

ANNEXE 4

• O'Neill

Les villes de l'espace – Laffont, 1978.

• André Lebeau

L'espace en héritage – Odile Jacob, 1986.

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• J.-C. Ribes et G. Monnet

La vie extraterrestre – *op. cit.*

• Thierry Gaudin et al.

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• Jean-Claude Bourret et Jean-Jacques Velasco

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ANNEXE 5

Roswell

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2) *The Truth about the UFO crash at Roswell* – Evans, USA, 1994.

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• Karl Pflock

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Désinformation réductrice

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Roswell in Perspective – *op. cit.*

• Rapport Condon

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ANNEXE 6

• Don Berliner, Marie Galbraith, Antonio Huneus

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• Michel Bougard et al.

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Les OVNI et la Défense : les hommes du rapport

Quelques membres de COMETA : de gauche à droite, l'ingénieur en chef des Mines Christian Marchal, M^{re} Michel Algrin, avocat à la Cour, le général de l'armée de l'Air Denis Letty, l'amiral Marc Merlo, l'ingénieur général de l'Armement Alain Orszag.



B. THOUVENEL



D. R.

Le professeur André Lebeau, ancien président du Cnes.



D. R.

Jean-Claude Ribes, astrophysicien et ancien directeur de l'Observatoire de Lyon.



SIRPA AIR W. B. THOUVENEL

Le général Bernard Norlain, ancien directeur de l'IHEDN, l'Institut des hautes études de défense nationale.

UFO, Unidentified Flying Object...

Since 1947, the subject has disturbed, fascinated, called out.

Oh how debated, the question has been studied with extreme meticulousness and from many points of view (scientific, technical, aeronautical, strategic, political, religious, media) by a French committee composed of former auditors of the very serious-minded Institut des Hautes Etudes de Défense Nationale [French Institute for Advanced National Defense Studies] and qualified experts from every background, COMETA [Committee for In-Depth Studies].

For the first time, men, some of whom occupy very high positions, have agreed to write a report devoted entirely to the UFO problem in the belief that based on the knowledge that has been acquired to date, sufficient questions of national interest are raised for the Chief of State and the Prime Minister to be provided with this information.

In this report, COMETA studies several unexplained French and foreign UFO cases.

Very well documented, these sightings are often supported by traces on the ground or tracks confirmed by radar. Are these secret terrestrial craft? In some cases, perhaps. Are we in the presence of craft of nonterrestrial origin? This hypothesis cannot be ruled out. If it were to prove correct, it would be loaded with consequences for Defense.