

**A Solution to the Fermi Paradox: The Solar System, Part of a
Galactic Hypercivilization?**

Spanish version

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1 Introduction

This talk is about the possibility that the Solar System belongs to the territory of a hypercivilization spanning our galaxy or a large region of it. I will start introducing the Fermi Paradox (why we do not see aliens around?) and some of its solutions. Then I will present my own solution which includes two proposals called the Subanthropic Principle and the Undetectability Conjecture. This solution states that, at present, all typical galaxies like ours are already colonized by very advanced technological civilizations spread through large regions or the whole galaxies, many of them containing primitive subcivilizations like ours. After discussing some consequences of this solution for our planet and our civilization I will make some comments on recent, very popular theories in the scientific community of Particle Physics and Cosmology. These theories, known as ‘brane worlds’, assume that our visible Universe with three space dimensions is embedded in a much larger Cosmos with more space dimensions. Therefore it would be most natural if other universes would also exist located along the extra space dimensions. As a result, these theories open up enormous possibilities regarding the visitation or colonization of the Solar System by alien civilizations, strengthening the Fermi Paradox. Finally, in the appendix I have included some questions and answers that came up during this Forum.

2 The Fermi Paradox

In the summer 1950, in Los Alamos, the nuclear physicists Enrico Fermi, Edward Teller and other colleagues brought up the subject of unidentified flying objects (UFO’s) while having lunch. This topic was very popular at that time. After a while, when they had changed subjects Fermi suddenly asked: Where is everybody? Performing fast mental computations, Fermi had reached the conclusion that alien civilizations should have been around visiting Earth for many thousands or millions of years. Therefore, why we do not see them? This is the Fermi Paradox.

Although Fermi never explained how he made his computations, nor gave an estimate of the number of civilizations which should have visited Earth, he had to rely on arguments like these: In our galaxy there are thousands of millions of stars much older than the Sun, many of them thousands of millions of years older (in the ‘habitable zone’ of the galaxy they are on average one thousand million years older [1]). Therefore many civilizations must have arisen in our galaxy before ours and a fraction of them must have expanded through vast regions or even through the whole galaxy.

Some other arguments pointing in the same direction involve estimates about the

lifetime of the second generation stars, inside of which the chemical elements of organic matter are made, and also involve estimates of the total time necessary for a technological civilization to colonize, or visit, the whole galaxy. Regarding the second generation stars, they are formed only two million years after the supermassive first generation stars (these burn out exploding as supernovae in one million years only and it takes another million years for the debris to form new stars). Therefore the appearance of organic matter in our galaxy could have happened several thousands of millions of years before the Sun came into existence. As to the total time necessary to colonize, or visit, the whole galaxy by a technological civilization, conservative computations of diffusion modeling give estimates from 5 to 50 million years [2], which is a cosmologically short timescale¹. Besides these considerations, the fact that life on Earth started very early supports the views, held by many scientists, that life should be abundant in the Universe.

3 Solutions to the Fermi Paradox

Many solutions have been proposed to the Fermi Paradox. I classify them as expansionist and non-expansionist. The non-expansionist solutions are based on the assumption that technological civilizations do not expand beyond a small neighborhood of the galaxy. The most popular of these solutions are the following ones:

- Interstellar travel is not possible no matter the scientific and technological level reached by a civilization.
- Generically, advanced civilizations have little or no interest in expanding through large regions of the galaxy.
- Technological civilizations annihilate themselves, or disappear by natural catastrophes, before having the chance to spread through large regions of the galaxy.

On the other hand, the most popular expansionist solutions to the Fermi Paradox, based on the assumption that generically technological civilizations do expand through large regions of the galaxy, make use of one or more of the following arguments:

- Alien civilizations do visit Earth at present times, for different purposes, and/or have visited Earth in the past. In this respect it is remarkable the fact that Francis Crick, one of the discoverers of the DNA structure, proposed in the mid-seventies

¹During this Forum Claudio Maccone, member of the International Academy of Astronautics, has presented a mathematical model that predicts around 150 million years, which is still a short time.

that life on Earth could have been inseminated on purpose by alien intelligences². Besides, some scientists as well as countless authors of popular books, have speculated that some UFO's could be true alien spacecrafts whereas some 'gods descending from the sky', abundant in many ancient traditions, could have been just alien astronauts (see for example [3] [4]).

- Advanced alien civilizations might have strong ethical codes against interfering with primitive life-forms [5].
- Advanced aliens ignore us because of lack of interest due to our low primitive level. For example Robert Jastrow, ex-director of Mt. Wilson Observatory, claims [6] that, on average, advanced civilizations should consider us as larvae due to the fact that they should be thousands of millions of years ahead of us... and who would be interested in communicating with larvae?
- Alien civilizations have not reached us yet because intelligent life is extremely difficult to emerge. Otherwise alien civilizations would necessarily be here. As a result we could find ourselves among the most evolved technological civilizations in our galaxy or we could even be the only one.

Besides these simple solutions there are many more exotic proposals. For example, a rather drastic expansionist solution is given by the theoretical physicist Cumrun Vafa, at Harvard University, who thinks that the fact that we do not see aliens around could be the first proof of the existence of brane worlds: all advanced aliens would have emigrated to better parallel universes [7].

4 My Solution to the Fermi Paradox

Two years ago I made a proposal for solving the Fermi Paradox [8]: *At present, all the typical galaxies of the Universe are already colonized (or large regions of them) by advanced civilizations. In the vast territory of these hypercivilizations a small proportion of their individuals belong to primitive subcivilizations, like ours.* That is, I put forward the possibility that our small terrestrial civilization is embedded in a large hypercivilization unknowingly and this situation should be common in all typical galaxies.

²It is less known that several years before Crick, in 1960, the astronomer Thomas Gold suggested, during a congress in Los Angeles, that space travellers could have brought life to Earth some thousands of millions of years ago. Curiously, this claim was also made, with a detailed description of 'the facts', by the 'popular metaphysics' writer T. Lobsang Rampa in the book *The Hermit* (1971).

The primitive subcivilizations would know or ignore their low status depending, most likely, on the ethical standards of the advanced civilization in which they are immersed. If the standards are low, the individuals of the primitive subcivilizations will be surely abused in many ways and therefore will be painfully aware of their low status. If the ethical standards of the advanced individuals are high instead, then they will respect the natural evolution (social, cultural) of the primitive subcivilizations, treating them ‘ecologically’ as some kind of protected species. In this case, which could well describe the situation of the terrestrial civilization, most primitive individuals would be completely unaware of the existence of the large hypercivilization.

Now some remarks follow:

- Needless to say, the primitive individuals would not be considered as citizens of the hypercivilization and direct open contact would completely destroy the primitive subcivilization.
- The ‘alien visitors’, from the viewpoint of the primitive individuals, would not be so from the viewpoint of the advanced individuals from the hypercivilization because they rather would be visiting, or working in, their own territory. (The advanced civilizations would surely have underground and/or submarine bases in their primitive planets for military and scientific purposes.)
- I distinguish between aggressive and non-aggressive advanced civilizations. I do not believe that advanced civilizations must have ethical codes concerning primitive life-forms.
- The fact that our civilization has never been attacked by aggressive aliens, as far as history knows, could well be a clue that we belong to a non-aggressive advanced civilization which protects planet Earth, as part of its territory.

If this scenario is true for our civilization, then the *Subanthropic Principle* [8] would also hold: *We are not typical among the intelligent observers from the Universe. Typical civilizations of typical galaxies would be hundreds of thousands, or millions, of years more evolved than ours and, consequently, typical intelligent observers would be orders of magnitude more intelligent than us*³.

One may argue against this principle saying that a much higher level of science and technology does not necessarily imply a much higher intelligence or brain capacities. My answer to this objection is that there are two main reasons to think in this way. The

³This means that, if we ‘score’ 10, then they would score 100 or 1.000 or 10.000, etc.

first is simply natural biological evolution as we see it in our planet. The individuals of our species (*homo sapiens sapiens*) are more intelligent than our ancestors and these were more intelligent than their own ancestors, etc. Since there is no reason why this process should stop with us, it is fully realistic to expect that individuals of much older civilizations must be genetically more intelligent than us. But there is an even stronger argument supporting the views that the older the civilization, the more intelligent the individuals: As the civilizations would reach some mastery in the field of genetic engineering, the general tendency would be to ‘improve’ themselves, that is their own species (among many others species) giving rise to an acceleration of biological evolution at unimaginable rates.

Now there is a crucial question. If the Solar System is part of a large hypercivilization, why we do not detect any signs of intelligence from outer space at all? My answer is related to my views that aggressive advanced civilizations must exist: *Generically, all advanced enough civilizations camouflage their planets for security reasons, because of the existence of aggressive advanced civilizations, so that no sign of civilization (or any other form of life) can be detected by external observers, who would only obtain distorted data for disuasion purposes.* This hypothesis I call the *Undetectability Conjecture* [8].

Observe that this conjecture predicts a rather low probability of success for the SETI (search for extraterrestrial intelligence) project. The reason is that only *primitive* civilizations able to produce electromagnetic emissions would be susceptible to being detected by the SETI antennas. But after reaching the level of producing electromagnetic emissions it would take only a few hundred years for a civilization to learn to hide themselves from external observers, becoming undetectable. As a result, the period of detectability of an average civilization could be very short and the probability that a primitive civilization, like ours, detects another primitive civilization would be negligible. For example, it could have happened that planet Earth received the last TV or radio programs from another planet 200.000 years ago, for a period of about 500 years.

Observe also that, if the Undetectability Conjecture turns out to be true, then we cannot be sure whether the terrestrial civilization is the unique civilization inhabiting the Solar System, as we firmly believe. The reason is that in the astronomical observations of planets and satellites we scientists assume that there are no intelligent beings there manipulating the data that we receive, and then we conclude that there is no signal of intelligent life, *as the data prove*. But this assumption could turn out to be wrong because advanced civilizations would be technologically able to fool our telescopes, detectors and space probes, and would not allow themselves to be detected.

The relevance of this solution to the Fermi Paradox for our planet and, especially, for

our civilization, depends strongly on when, how long ago, the Solar System was taken over by extraterrestrial hypercivilizations (this could have happened more than once since our galaxy is very old).

- If the Solar System was visited already thousands of millions of years ago: Planet Earth could have undergone insemination procedures, together with many other ‘promising’ planets, as suggested by Thomas Gold and Francis Crick. As a result, all terrestrial living beings would have common building blocks of DNA with the living beings of thousands of other planets which would have undergone similar insemination procedures with the same bacteria. Consequently, many plants and animals, including our own species, could have been brought to Earth (at any time in history or prehistory) and their extraterrestrial origin would be impossible to detect by any biologist or geneticist. Moreover, at present, we probably would have countless ‘relatives’ in many planets, what has advantages (possibility of positive, closer relationships) but also disadvantages (predators). Not to mention the high probability that many past and present species, including ourselves, could have resulted from genetic manipulation simply as a routine procedure for the improvement of the planet. (I am convinced that advanced and not-so-advanced civilizations widely make use of genetic engineering to improve all the species around, including themselves.)
- If the Solar System was first encountered only when life on Earth was well developed (for example, a few million years ago): It is still very probable that many present species would have resulted from genetic manipulation by the ‘owners’ of the Solar System for the general improvement of the planet; that is, among many other improvements like getting rid of unwanted species or ameliorations of geological type. (Observe that the sudden appearance of the homo sapiens sapiens species some 40.000 years ago is still a complete mystery for science.)
- If the Solar System was first encountered only after homo sapiens sapiens had appeared: This hypercivilization must have found our species ‘good enough’ so that they did not try any genetic improvements on us. This does not mean, however, that they would have adopted a complete non-interference policy with respect to human affairs.

In fact, if my scenario is correct and the Solar System belongs to the territory of a non-aggressive hypercivilization, then my guess is that this civilization treats us as a protected species and cares about us. As a result, they could well have decided to help us, discretely, many times in history and prehistory regarding our social, cultural, scientific, etc. evolution, apart from protecting us and the planet from several dangers of

various types: large meteorites, predators from outer space, nuclear accidents, extremely devastating earthquakes, etc.

Therefore my solution to the Fermi Paradox is compatible with the speculations that some UFO's could be true alien spacecrafts, whereas some 'gods descending from the sky', for the benefit of mankind, could have been alien astronauts. However, I would not call them alien astronauts but extraterrestrial scientists and extraterrestrial military personnel instead, since working in their own territory, they would not be truly astronauts nor aliens.

My solution is also compatible with the possibility of more general close contacts between individuals of the hypercivilizations and primitive individuals like us, besides the 'gods descending from the sky' issue. I have identified three major causes or reasons which could motivate individuals of advanced civilizations to seek interactions or relationships with primitive individuals: scientific purposes, entertainment/affection purposes and criminal purposes (for the details see [8]). The 'gods descending from the sky' could simply correspond to various scientific teams, assisted by military personnel, sent by the government in order to help develop the terrestrial primitive civilization.

5 Brane World Cosmologies

To finish I would like to make some comments about brane world cosmologies. In the last seven years brane world models have been of increasing interest for both Particle Physics and Cosmology [9] [10]. They put forward the possibility that our Universe with three space dimensions is located in a subspace (brane) of a higher dimensional Cosmos. These models allow large, and even infinite, extra dimensions⁴ and they offer the possibility to solve, or view from a newly different perspective, many longstanding problems in Particle Physics and Cosmology (see [11] for brane world reviews).

Brane world cosmologies have the potential to dramatically strengthen the Fermi Paradox. Namely, if our observable Universe is embedded in a much larger Cosmos there may exist other universes along the extra spatial dimensions which could be parallel to our own, or intersecting it somewhere. Then it would be natural to expect that some of these universes would have the same laws of Physics as ours and many of the corresponding advanced civilizations could master techniques to travel or 'jump' through the extra dimensions for visitation or colonization purposes. Moreover, one has to take into account that many of these universes could be very close to ours, even at only one millimeter distance along an extra dimension.

⁴Previously, in theories and models of Particle Physics extra dimensions were only allowed if they were compactified with a very tiny radius.

This opens up enormous possibilities regarding the expansion of advanced civilizations simultaneously through several universes with the same laws of Physics, resulting in multidimensional empires. It could even happen that the expansion to other ‘parallel’ galaxies through extra dimensions could be easier, with lower cost, than the expansion inside one’s own galaxy. In particular, the ‘owners’ of the Solar System (if they exist) could have come from another universe and could have created a huge empire with large pieces of territory in several ‘parallel’ galaxies.

At present we physicists are still in a premature phase in the study of brane worlds and we do not know whether these ideas are in fact realistic. Nevertheless, the idea of large extra dimensions and parallel universes is acquiring greater and greater importance in the scientific community, among both theoreticians and experimentalists. As a matter of fact, the experimental signatures expected from large extra dimensions, at present and future colliders, are well understood by now [12] and an intense experimental search is currently under way. For example, experiments starting in 2007 at the LHC (Large Hadron Collider) at CERN will be looking, among other things, for signatures of large extra dimensions.

6 Final Remarks

One final remark. I am convinced that the main feature of the scenario that I propose: the existence of primitive subcivilizations embedded in large hypercivilizations spanning vast regions of the galaxies, is true at present and/or has been true in the past and/or will be true in the future in most or all galaxies in our universe and in any other possible universes with the same laws of Physics as ours. Whether our terrestrial civilization is actually a subcivilization completely unaware of the existence of the large hypercivilization is something to be discovered in the future. This will happen either due to some advanced technology that would allow us to discard this possibility some hundreds of years from now (if we do not annihilate ourselves first), or through the decision of our hosts, provided they exist, of showing their faces openly, which could happen long before.

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Appendix: Questions and Answers

- **Why do you say that the open contact with the hypercivilization would destroy our civilization?**

This is very easy to understand. Imagine how we would feel if the citizens of the hypercivilization happen to live 1.000 years and, in addition, always looking young. We would feel devastated, right? I can imagine pathetic demonstrations all over the world demanding ‘our right’ to live 1.000 years as well. What about if they explain to us that we are allowed to live on planet Earth because of their kindness and hospitality? Also, and this is very important, we need to believe in ourselves, in our capabilities to make progress, to build the future. This psychological need would crash in contact with a far superior civilization and far superior intelligent beings and we would only feel worthless and stupid, especially scientists, but everybody else as well (for example, the gap between them and us, regarding brain capabilities, could be bigger than the corresponding gap between us and the gorillas). Not to mention the shock we would receive if they had created our species by genetic engineering and they would tell us. It is difficult to predict who would feel more offended under such circumstances: the fundamentalist creationists, the intelligent design advocates, the plain hard-core darwinists or the ecologists.

As for myself, I find this last issue quite harmless in fact because, as I said, I am completely convinced that advanced civilizations widely use genetic manipulation on all species around, including themselves. Thus, if an advanced civilization has created the homo sapiens sapiens, then I am pretty sure that the individuals of this civilization have also resulted from genetic manipulations of their own ancestors who in turn have a high chance to have resulted from genetic manipulation by a much older alien civilization, who in turn were manipulated by their own ancestors, etc. It could even happen that at present there is not a single species that remains ‘virgin’, free of genetic manipulation, in our whole galaxy nor in most typical galaxies⁵. So, regarding the possibility that we have been created by scientists of an advanced civilization I feel like in that joke where somebody is on the phone: ‘This is a recording. Doesn’t bother me, I’m a hologram’.

- **Do you think could it be possible that some of the parallel universes that you mentioned could be inhabited by angels and other spiritual beings?**

I must say that I have been asked this question many times already. At the present stage, our scientific knowledge can neither prove nor disprove the existence of angels and other spiritual beings described in our traditions. My opinion is that, if these

⁵This scenario would constitute the ultimate nightmare for ecologists!

beings happen to exist, I would expect to find them inhabiting parallel universes with *different laws of Physics* than ours. The crucial point is the laws of Physics that hold in a particular universe. Unfortunately we only know one universe and one set of laws of Physics, which renders our knowledge very limited and ‘provincial’. Nevertheless, we particle physicists assume that if something would enter our universe from another universe with different laws of Physics then the matter of this something and the matter of our universe would almost not interact (perhaps only gravitationally). As a consequence this something would be invisible for most of us and would go through our ‘solid’ matter (walls, ceilings) effortlessly, as the angels and other spiritual beings are supposed to do, right? I say ‘most of us’ instead of ‘all of us’ because the existence of special psychic capabilities, such as telepathy, has not been discarded yet and therefore it could happen that specially-gifted people could see and/or communicate telepathically with beings coming from such universes with different laws of Physics than ours. These beings would include, in particular, plain extraterrestrials (not especially spiritual) coming from other universes just for scientific or other mundane purposes.

As a matter of fact, a good question for a psychically-gifted person (or for a cat!)⁶ would be how he/she/it can distinguish ‘who is who’ among the entities he/she/it is supposed to see. I already asked this question to a reader of my article who told me that other dimensions and parallel universes truly exist because he can see, and sometimes communicate with, intelligent beings coming from them. So I asked him what these beings look like and how he can distinguish among them. He said: ‘I see different types of entities, including angels, although most of them are human beings in their ‘astral bodies’ (either alive or dead). I have rarely seen extraterrestrials, but I don’t know if they were in their physical bodies from another universe, as you suggest. I have the impression that they were in their astral bodies, in the same way that astral travellers among us visit other planets as well.’⁷ One distinguishes these entities by their general appearance: body, face, clothing and also the aura. In addition, alive beings in their astral bodies have some sort of ‘silvery cord’ that connects them with their physical bodies, although

⁶Cats have the reputation of having great psychic powers and of being able to see all kinds of entities invisible to the human eye. The aforementioned T. Lobsang Rampa even claimed that his book ‘Living with the Lama’ had been written by one of his cats who dictated the contents to him telepathically, the introduction being written by another cat.

⁷The astral body is supposed to be able to travel many orders of magnitude faster than light. This would not contradict any known laws of Physics, curiously, because the astral body would not be made out of matter/energy of this universe, but out of matter/energy of the ‘astral universes’, with different laws of Physics. The high speed and low cost of astral travel would not be the only advantages with respect to exploration of outer space: astral astronauts could also approach stars and black holes as much as they wanted and even jump inside, returning safely, since the astral body, endowed with the senses of sight and hearing with respect to this universe, would neither feel gravity nor heat.

it can be very faint and difficult to spot'. Then I asked him whether it would be possible to confuse an angel or any other 'spiritual being' with an extraterrestrial visiting us from this or another universe. He said: 'Yes, it could be possible because angels and all spiritual beings create their appearance at will with their minds (face, body, clothing, wings on and off, etc.). Angels like to look like handsome human-like beings (whether terrestrial or extraterrestrial). For this reason angels watching over ugly extraterrestrial humanoids also look very ugly, according to our taste, although very beautiful for them. So, it would be possible to confuse 'ugly' angels with equally ugly aliens, and the other way around, very handsome extraterrestrials may look like beautiful angels for us'.

- **There are many reports of 'extraterrestrials' who look like pure-energy beings of light without bodies. Do you think that all the extraterrestrials could be in fact disembodied beings? Also, do you think that in the future we could become like these beings of light, too?**

These questions are related to the previous one. First of all, there are also many reports about extraterrestrials with physical, solid bodies. For example, today Ed Mitchell, lunar module pilot of Apollo 14, reported that the Roswell incident was true and one of the aliens on board was still alive when the spacecraft was found by the USA military⁸. So I don't see any reason to think that all possible extraterrestrials around (if any!) must lack a physical body. On the other hand, I do not believe in the existence of disembodied beings at all, although perhaps there are beings which are visiting our universe from another universe with different laws of Physics. This would explain why we could not see their bodies and why they could go through walls and ceilings! And the other way around, these beings would not be capable of seeing our bodies either unless they had that psychic capability, provided this capability exists at all. So, to me this is very simple: all intelligent beings who happen to exist (be human-like, or animal-like or angel-like, or whatever-like) must have a body (at least one!)⁹, no matter from which universe they come, and these bodies are solid and well visible to the inhabitants of their own universes, or another universes with the same laws of Physics as their own.

About the second question, if you ask if our biological species could evolve towards 'pure-energy beings of light' in this physical universe, the answer is no. I do not

⁸In July 1947 the military base near Roswell (New Mexico, USA) issued a press release announcing that they had captured an alien spacecraft that had crashed nearby. Three days later they retracted their statement: the alien spacecraft was only an atmospheric balloon.

⁹The metaphysical 'standard model' says that human beings (terrestrial and extraterrestrial) have seven bodies: physical, etheric, astral, mental and the three superior bodies, each belonging to a different universe or 'plane of existence'. Animals would have the four inferior bodies whereas angels and all other 'spiritually advanced' beings would have only the three superior bodies.

believe that the laws of Physics of this universe will ever allow the emergence of disembodied intelligent beings, as I just said.

As a matter of fact, your question fits better in metaphysics than in ordinary science. In the metaphysical ‘standard model’ all conscious beings (human beings, animals, angels, etc.) are just visitors of the universes they inhabitate. The reason would be that consciousness cannot be created in any universe, no matter the laws of Physics. For example, this implies that nobody in any universe could ever construct a robot or computer that could become conscious. Individual consciousness would have been separated, not created, from an enormous ocean of consciousness that has always existed, without beginning and without end, and is the ultimate cause for the existence of everything else. So, following these views, since our consciousness cannot emerge from any complex system (such as our brain), it turns out that we are all aliens in the universes we inhabit and our bodies are nothing but the astronaut suits necessary to live in these universes. Coming back to your question, in the metaphysical standard model, we human beings are supposed to live many lives in ‘physical universes’, where the mind has very little power over matter, working very hard, and resting in between in ‘astral universes’, where it is always vacation time because the mind can create all the basic needs: housing, furniture, clothing,... Now, after many incarnations in the physical and astral universes we can be promoted to better, more spiritual universes where the power of the mind over matter is much stronger than in the astral universes. This way, we would become spiritual ‘beings of light’ without any physical, etheric and astral bodies, although we would still have the more superior bodies made out of the matter/energy of the more spiritual universes we would inhabit. These bodies would be invisible for most inhabitants of the physical universes and also for most inhabitants of the astral universes.

- **Did you have any unusual experiences yourself that motivated the writing of your article?**

Not directly; I have never seen a UFO, nor have I tried to see one or to get in contact with aliens, as some people do. Indirectly, I had a most unusual experience more than twenty years ago that has been a source of inspiration indeed, although the true motivation to write the article was simply to reply to the ideas of the cosmologist Ken Olum, as I explain in detail in the article.

- **What kind of experience did you have? Could you say something about it?**

This is a rather long story. In May 1984 a cousin of mine invited me for coffee at her place and she also invited an old friend of hers. She warned me about

the possibility of hearing strange statements because her friend was in contact with extraterrestrials for several years already. At her place the conversation was revolving around ordinary matters. He was a completely normal-looking guy with a normal job. After one hour or so we brought up the subject of summer vacations. At his turn he said, with a completely normal voice and straight face: ‘I will go with my friends in July, we have already arranged things. We will be a couple of days in the bases of the Moon and then they will bring me three weeks to Ganymede¹⁰ again. Last summer I spent some days in Confraternity City, where there is a terrestrial colony of about 12.000 people. They have a very interesting museum of History of Earth, where one can see the bodies of the prophet Elijah and the patriarch Enoch. They lived in Ganymede for hundreds of years until they died’.

Although I didn’t believe a word and I really thought he was crazy, I tried to show some interest, mainly out of politeness (he was very polite himself), and so I started asking some questions. I asked how the view of Jupiter was from Ganymede, how long it takes to travel to the Moon and to Ganymede, how many people inhabit the satellite and what his friends look like. His answers were: ‘Jupiter is enormous, it covers almost the whole sky’, ‘The trip to the Moon takes only two or three minutes, to Ganymede it depends on the spacecraft. In standard ones the trip takes a bit more than three days whereas in cylinder-shaped motherships the trip takes only three hours’. ‘There are about two and a half million people in Ganymede, that they call Morlen, distributed mainly in five cities. In Crystal City is the government of Morlen as well as the government of the Confederation to which Morlen belongs. It is a Confederation of the 24 more advanced worlds in our galaxy and the government is called the Council of the 24 Elderly’. ‘My friends from the bases on Earth are mainly from Ganymede, although one can meet people from the other 23 worlds as well. Most of them look similar, although taller or shorter depending on which world they come from. In general they are very handsome (angel-looking faces) with long blond hair, white skin and light-colored big eyes (a bit oblique), and most of them look like 40 years old, although they can be 300, 600, 800 years old since they can live until 1.200 (terrestrial) years and they master anti-aging technology. The most impressive-looking ones are the giants from planet Apu, in Alpha Centauri, who are about three meters tall and in addition wear very long, almost white hair. My friends from Ganymede are also quite tall: more than two meters’.

At that moment I replied back: ‘So, they are quite similar to us, although taller and more handsome, and in addition they are the most evolved people in our galaxy. What a coincidence! How lucky we are that we have such wonderful neighbors!’ Then he said with a serious expression: ‘This is not a coincidence, I am affraid, but I prefer not to give you the details. You are still too young and you wouldn’t be

¹⁰Ganymede, one of the moons of Jupiter, is also the largest satellite in the Solar System, larger than the planets Mercury and Pluto.

able to handle the facts. Just let me tell you that they arrived at this part of the galaxy: Alpha Centauri, the Solar System, the Pleyades, etc. almost three million years ago. They established themselves in artificial colonies without any natural life, so they constructed their worlds completely from scratch. They didn't bring animals along and therefore they only have plants and are vegetarian'.

Then I asked him how he got in contact with his friends and how they could understand each other. He said: 'They contacted me; I had never been interested in UFO's and extraterrestrials'. 'They have three glands inside the brain that we don't have. One of them produces very strong telepathic capabilities, so they do not speak with the mouth, only by telepathy. It is very easy to understand them because they speak a 'universal language' that is converted inside the receptor's brain into his/her mother tongue. For this reason they don't use technological devices for communications either, like phones or radios, they communicate exclusively by telepathy, even from one planet to another'.

Then he gave us the advice that we should never try to get in touch with aliens: 'There are some very dangerous humanoids, who come from another universe, that do horrible things to us. Although some groups of people have been lucky and have entered into telepathic communication with people from the Confederation, including some of my friends, the risk of getting the wrong extraterrestrials is high'. Then I asked: 'What do you mean by another universe, do you mean that they come from another galaxy? No, I mean another universe. There are 22 dimensions, not just the three that we know. For this reason there are lots of universes. These guys live in a universe nearby which has an entrance to our universe very close to the Solar System. Once they enter they only have to travel for three days to reach Earth. They are not allowed to come here, of course, but they do it anyway. So, these guys are a real nightmare for my friends who do their best to chase them away. In fact, they have already crashed more than once during the persecutions because their technology is far below the technology of the Confederation. Otherwise they would have taken over the planet and made us their slaves'. Finally I asked him whether all the universes are like ours. He said: 'The universe of the intruders is like ours, unfortunately, but as far as I have heard, many universes are different'.

I never saw him again (nor did I want to!). I had no doubts that he had a deep psychiatric illness whereas my cousin defended him saying that she had known him very well for many years and he was neither a liar nor crazy, therefore the story had to be true, no matter what.

For the following fourteen years or so I did not think at all about the subject of extraterrestrial civilizations. Unexpectedly, one day around 1998 the subject came up somehow when talking to my friend Maite at her place. Then she showed me a couple of curious books about alleged contacts. One of the books, 'Los Manuscritos

de Geenom (II)' (The Manuscripts of Geenom (II)) was written by a group based in Madrid, the Aztlán group, which claimed to be in telepathic communication, once per week and for about twenty years already, with some citizens of planet Apu¹¹ (the 'communications' were supposed to be transmitted from planet to planet). The other book had for its title 'Yo visité Ganímedes' (I visited Ganymede), by Yosip Ibrahim. So, suddenly I got 'teletransported' back to the coffee session fourteen years earlier. I read these two books and, for the first time, I realized that I had never spent a single minute thinking seriously about the subject of extraterrestrial civilizations, even though I had always been open-minded regarding the possibility of alien visitors. I became aware that this issue could be much more important and have much more far-reaching consequences than I, and most open-minded people, naively could have imagined.

After spending some time thinking about this issue I reached the conclusion that it was not possible to discard the scenario described by the friend of my cousin, no matter how strange it seemed to me. There were only two crucial questions to be answered: Would a civilization, millions of years ahead of us, be able to colonize places like the large satellites of Jupiter? and, would such a civilization be able to completely conceal itself from external observers? My answer to these two questions was undoubtedly positive.

For the following year Maite and I read a few more books [13] about the Confederation-Apu-Ganymede affair, for our own records, and that was all. It never crossed my mind to write an article about primitive versus advanced civilizations, and even less to try to find out *the truth* about the whole issue¹². However, in March 2003 the article by Ken Olum [14] appeared and triggered my attention again to the subject. He was saying that our small terrestrial civilization should be part of a galactic civilization spanning a large region of the galaxy, as followed from his computations, but however we are not part of such a civilization, as observation confirms. Needless to say, this article stirred my mind notably, even though I didn't agree with Olum's arguments and computations. So I started thinking seriously again about this issue of extraterrestrial civilizations and shortly afterwards I had the ideas of the Subanthropic Principle and the Undetectability Conjecture. Then I decided to write an article discussing the possibility that our terrestrial civilization could be embedded in a large advanced civilization without being aware of it.

¹¹In the 'communications', which started in 1975 and still continue, it is reported that Apu orbits the star Alpha B Centauri, at a distance of 4.35 light-years from the Sun. Alpha Centauri, which is the closest stellar system to us, consists of a binary system of stars with sizes similar to that of the Sun - Alpha A (yellow) and Alpha B (orange) - accompanied at a much greater distance by a dim red dwarf, Proxima Centauri, which is the nearest star to the Sun in our observable universe, 4.22 light-years away. One can find interesting astronomical information about Alpha Centauri in the web site <http://homepage.sunrise.ch/homepage/schatzer/Alpha-Centauri.html>

¹²This is left for the interested reader.

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