

**The As-If-O-Scope, Or, Excerpts from the Collected Writings, Communications, and Adventures of Tsish, the Famous Asifologist, Concerning the Science of Asifology**

*Edited, Translated, and With Comments by Nannus<sup>1</sup>*

**With an Afterword by the Meta-Editor**

**3<sup>rd</sup> Edition**

**Earth (the T-Planet), April 2020**

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<sup>1</sup> The nickname “Nannus” was given to me during my childhood by my uncle Jörn Garber, who is a historian and expert on the Enlightenment, especially the history of ideas and philosophy of this period. I have been using this name as a pen name on blogs and other places in the internet for several years. In the main text, notes by Nannus are marked as “Editor’s notes,” and printed in italics.

## **Introductory Remark**

The following is not a philosophical essay in the traditional sense. Rather, it is a piece of fiction (and in some places meta-fiction) in which some philosophical ideas as well as cultural criticism are mixed with fiction (superficially of the “science fiction” variety) and some nonsense and satire. There is no single topic. What is called “asifology” here may be considered a philosophical method and this method is applied to different aspects of human civilization, including (among other things) the topics of ideology and religion, exploitation, the ecological crisis and the ultimate fate of our civilization. If there is any single topic, one could perhaps say it is a text about civilization. The text consists of a sequence of smaller pieces or “adventures” put together. While in the beginning, the narrative and, I hope, entertaining aspects are stronger, towards the end the text proceeds to some more analytical pieces. Some background is given in the Afterword.

Andreas Keller  
Germany, April 2020

## **Editor's Preface**

This is not the place to describe where, how, and when I got to know the person known by the name of Tsish. That is a different story to be told at a different time. Some of Tsish's papers and the letters Tsish wrote to me first appeared on a little-noticed blog, "The Blog of Tsish" from March to April 2009. It is not clear whether this blog was run by Tsish or by another person. Starting from November 2012, I started republishing some of these blog entries on one of my own blogs and added some new ones as new material from Tsish became available to me. I received these pieces as messages, in most cases in the form of letters, by means of different asifomatic technologies. That was the (extended) second edition. Now, more than ten years after Tsish made a first appearance on Earth's internet, I have decided to put the most interesting of the collected writings of Tsish together into this third edition. A few additions and corrections have been made here and there. I hope that additional material will be made available to me in the future, so possibly there will be a fourth edition at some time, perhaps as a book.

Nannus

Earth (the T-Planet), April 2020

**Chapter I.** *In which Tsish self-introduces and explains some basic concepts of asifology.*

Call me *Tsish*. My real name is unpronounceable for you Earthlings, but this word comes near it, at least for your ears. Sorry for my grammar: I am not a native speaker. My translator occasionally makes mistakes.

I am an extraterrestrial currently flying near your planet. I'm sure many of you wanted to become astronauts as children. Be happy you did not. Flying through outer space is *very* boring. Luckily, your technology makes it very expensive, so most of you are spared this experience. Where I come from, only virtual technology is used, so flying into outer space is cheap. Now, I am sitting here in my virtual spaceship and nothing is happening. Fortunately, I found a way to get access to your people's Internet. So, I can now study your planet and send you my comments.

A very interesting planet that you have there! Crazy things are happening on it! I am planning to comment on some of the strange aspects of your cultures from an outsider's point of view.

Looking at things from an outsider's perspective can reveal interesting things. If you are inside, your thoughts and perceptions will always follow the same old ways, like a fly bouncing against a window again and again (actually, there is one here in my spaceship, very annoying...).

My basic equipment consists of my as-if-o-scope (also known as an "asifoscope") and my as-if-o-maton. (normally simply called "asifomaton"). The asifoscope is a device that makes as-if-bubbles visible. An as-if-bubble is a metaphor for an as-if-construction. Inside it, we do as if certain things exist. We treat them as real. If you leave the bubble, you see it is just a construction. Although you might not be aware of it, many parts of cultures consist of as-if-bubbles. The asifomaton, on the other hand, is a device to create new as-if-bubbles. We create them and when we enter the bubble, the things are there (although in reality, we only pretend as if). My virtual spaceship was created using the asifomaton. I am in contact with a person down on your planet called Nannus. He claims he has created me using his asifomaton, but that is, of course, pure nonsense.

After my blog had been several days on your internet, one would have expected that SETI<sup>2</sup> would find me. I am an extraterrestrial and here I am. But they are not looking here. Their antennas are directed somewhere else. A simple internet

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<sup>2</sup> See, e.g., Wikipedia, "Search for Extraterrestrial Intelligence" (2020), available online at URL = [https://de.wikipedia.org/wiki/Search\\_for\\_Extraterrestrial\\_Intelligence](https://de.wikipedia.org/wiki/Search_for_Extraterrestrial_Intelligence).

search would be enough! Hello, here I am! Nice to meet you SETI people. Or maybe they have seen it, but don't believe it?

They must be sceptics. That is part of their job. You should not believe anything too quickly. Actually, you should not believe anything to be true! At least not without always considering the possibility of being wrong.

I am currently flying through space between Mars and Earth. Why does my spaceship have a window? Some black paint would have done the job, with some glittering stuff mixed in. So, I have turned to my books about asifology to pass the time more quickly.

As you know, I am interested in what I call *as-if-bubbles*, the topic of asifology. This is a metaphor for something created by "acting as-if." Let me explain some very basic asifology.

The main devices I am using are the asifoscope and the asifomaton. The asifoscope is a simple device. In its most basic form, an asifoscope might turn a statement like

Gold is valuable

into a statement like

Hypothesis: gold is not valuable, we only act as if it is.

This simple operation (easily implemented in a simple computer program) gives you a good start for your investigation. You can then look for evidence for or against the statement and explore it further. In many instances, this operation is already enough to make the hidden obvious, like in the gold-example. Who in space needs gold? People dig it out just to cast it into bars and then bury it again in their vaults, because what to do with this useless stuff? Why did they not just leave it in the ground? That would have been much simpler. The side-effects (destruction, environmental problems, health problems, violence, war) are terrible, the technological applications few.

More advanced asifology will, of course, teach you that such an as-if-constructions gains some kind of reality from being shared. Gold is valuable because many people believe it is. The value is not real but the believe of many people is and that is what stabilizes the bubble.

The asifomaton is a device to create as-if-bubbles. Compared to the asifoscope, it performs the opposite operation. (In mathematics, it appears as the "let

be"-operator, enabling you to cut the quantifiers and the premises part of a proposition away and turning bound variables into objects.) Children use it all the time in their games, at least in my world. It is the ultimate toy! However, I have not checked yet how your children grow up—in some civilizations, children are provided with ready-made as-if-bubbles instead and lose the ability to freely navigate as-if-bubbles and create them on the spot. As a result, they become easy to manipulate by businesspeople and politicians. This normally tends to happen in the end-stages of civilizations.

While for children, the asifomaton is the toy of choice, adults should give the asifoscope a higher priority. If they fail to do so, all the trouble starts.

Using my asifomaton, I gave my asifoscope the look of a small telescope and turned it towards planet Earth (OK, the window *is* good for something). I was baffled. I could see a kind of multicolor foam. I had to tune the amplification adjustment a lot to make out all the details. The foam is so dense; it nearly is opaque, with complex systems of bubbles nested inside each other. I am going to analyze some of them in more detail in the future. A good way to pass the time!

I discovered that many of you seem not to notice this as-if-foam. The reason obviously is that you don't see it, because many of these bubbles are of the trap-variety: they are invisible if looked at from the inside.

My friend from Earth, Nannus, told me that on the day called April 1<sup>st</sup> in the most-widespread calendar of your planet, some people on Earth play a special game: they create an as-if-bubble, lure somebody into it, and then let it burst (this creates a pleasant noise, normally more like a giggle or laughter than a plop or a bang). The concept of "as-if-bubble" provides a handy way of thinking about such games. The bubble has an inside and an outside. By entering it, an ontological transition is performed: inside, some things (seem to) exist that are not real on the outside. On April 1st, you spoof somebody by letting them enter such a bubble and then let the bubble burst.

This might be fun if you don't exaggerate. However, looking more closely at it, I see some serious problems. The game relies on somebody really believing what you tell them. Normally, when you perform an as-if-operation, you will know it is just that. This is the responsible way of dealing with as-if-operations. But there are some potentially dangerous cases of as-if-bubbles. Once you enter them, what looked like an as-if-game from the outside suddenly looks like absolute truth. From the outside, you see the bubble (think of a colorful soap bubble) from the inside, it becomes invisible. Now you have been trapped! You have turned into a *true-believer* and can't see the bubble again. It is now very hard to find your way out again.

Among asifolgists, such true-believer bubbles are sometimes known under the name of a *semiotic trap* or *trap-type as-if-bubble* (even the term “semiotic black holes” has been proposed). Another more familiar term is “ideologies.”

Definition: Trap-type as-if-bubbles contain the proposition that they are not as-if-bubbles.

In the April-fools-game, normally the bubbles collide with reality relatively soon and collapse. However, some bubbles are more stable, with potentially catastrophic consequences. Such bubbles can make you stupid. They can cause you to be ruled. They can cause you to become wicked, even a killer, while at the same time you may be fully convinced that you’re a very nice person, etc., etc.

When I looked down onto the surface of your planet, I could see a dense foam like I had never seen one before. I don’t even know where to start. I see fashion, racism, religion, nationalism, identities, pride and inferiority complexes and a million other things. I must sort these things by their degree of dangerousness. The worst one I have identified so far on your planet is that many of you are acting as if unlimited economic growth is possible. That is the trap-type-bubble currently turning your planet into a desert. It looks like I must write about some of these bubbles in my future articles.<sup>3</sup>

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<sup>3</sup> Editor’s note: It has been pointed out to me here that Tsish was unhappy with the translation “extraterrestrial” which is “Earth-centric,” giving the inhabitants of Earth a special status (the term “alien” used in my original translation is, according to Tsish, even derogatory and racist). The same Earth-centric terminology can be found, according to Tsish’s remarks, in the term “exoplanet” used for any planet outside the solar system. Why are these not just planets? But “exoplanet” is the official term introduced by the International Astronomical Union (IAU). Tsish turned my attention to the fact that other concepts we consider to be scientific are equally Earth-centric. For example, Tsish pointed out to me (private communication) that “one of the most common forms of rock in many planetary systems and also in the solar system (made up of H<sub>2</sub>O) is not considered to be a rock in the “scientific” terminology of the T-planet [that is Earth, ed.], where it is called “ice”, its different crystalline modifications do not count as minerals and the magma formed from it when it melts is normally not considered as magma, but as “water”, thus giving it a special status among other types of rock that it does not deserve.” I have difficulties interpreting Tsish’s emotions here (I do not actually know what kind of emotions Tsish’s species has and any emotional terms in the texts presented here are, of course, approximations to terms denoting human emotions, produced by the translator, but I think it would not be wrong that this remark about the terms “ice” and “water” must be viewed as the equivalent of a rant.

## **Chapter II.** *In which Tsish encounters Terrestrial “science fiction.”*

Dear Nannus,<sup>4</sup>

I have just escaped some very dangerous situations. I was nearly shot several times by different space weapons, escaped collisions with spaceships, nearly suffocated, escaped an alien monster, caused an interstellar war, saved the world from being bombed, and then entered some very dangerous as-if-bubbles of the ideological type. I also had a brief encounter with the archangel Gabriel. But let me start at the beginning. The day was a bit boring, but since I am orbiting Earth rather fast, it only lasted about 45 minutes. However, the following equally short night was boring as well. Therefore, I started playing with the knobs of my brand new combined asifoscope-asifomaton. Unfortunately, the one-by-one-filter was off, so instead of looking at one as-if-bubble at a time, many of them could become visible at once. I had not noticed this. What a bad mistake!

As you know, I am currently orbiting Earth to do asifoscopic studies. I turned on the channel selector. You can think of the asifoscope as a cross between a microscope, a telescope, and a radio receiver, with some turning control knobs as well as some switches, a screen and a small keyboard. One of these knobs is the channel selector. I turned it a little bit too far and that immediately got me into trouble. I obviously tuned into a channel for Terrestrial “science fiction,” specifically the type concerned with space flight. I could see the telltale soap-bubble like colors of a large as-if-bubble enclosing my spaceship and a lot of space around it, including the whole planet Earth and the Moon. The specks on the inside of the bubble clearly showed that it was derived from books, films and computer games. But I didn’t have the time to study this interesting bubble surface because, immediately, all hell broke loose.

All around me, spaceships of all sizes and shapes appeared out of nowhere. Well, some of them just came towards me, flying up from Earth or from behind it or from behind the Moon or from outer space. Others popped out of hyperspace. At several places, tube-like wormholes opened to spit out more of them. Some ships had rockets, some looked like 19<sup>th</sup> century steel engraving illustrations, with rivets and ornamental spirals, some were cartoon-like, others looked like plastic toys, and some were pixelated and low-resolution. Some looked like children’s paintings. Some seemed somehow diffuse without a clear shape. As an experienced asifologist,

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<sup>4</sup> Editor’s note: Letter received from Tsish and published on my blog as “A Letter from Outer Space.” Note that “Outer Space” is again an Earth-centric concept. Here, the word “aliens” is being used because what Tsish encountered here were not real extraterrestrials but aliens asifomatically created by inhabitants of Earth.

I know this means they came from books without illustrations, so you don't know exactly how they look.

Behind the windows of some of the ships, I could see ugly creatures, real monsters. "I hate these racist stereotypes," I muttered to myself. "Nobody looks like those 'aliens'! People simply do not look like that! It is just ridiculous." Dangerous savage monsters with slimy teeth, how ridiculous! But after that, I didn't have time to think again about exo-racism.<sup>5</sup>

The space around me, normally totally soundless, was suddenly very loud. Now, a vacuum is normally noiseless, but this time there was a lot of noise. While some of the noise came from the rockets, most of it came from shooting and explosions. I had to react very quickly now because all around me, spaceships had started shooting at each other. There were lasers and phasers and explosive rockets and transformer bombs and positron blasters. The concentration of radioactivity was rising all around my ship, reaching dangerous levels in some glowing clouds that had formed from the remnants of some exploded ships.

I had to use all my skill as a pilot and engage in some very fast maneuvering to evade the fate of some other ships around me that were blasted to pieces, or severely damaged, or just collided with each other. Fortunately, my spaceship is an imaginary one. It exists in an as-if-bubble and I can change it on demand, using my asifomaton.

The trick of using asifomatic technology is to make the meta-level of the story part of the story. At any time, you can change how your technology works. For example, the ships around me use rockets, or warp drives, or hyperspace, or a combination of such technologies. Since these are imaginary technologies, the ships are limited to a certain set of such technologies, each fixed by their author. The asifomaton, on the other hand, enables me to change the rules of the game at any time.

Reflexivity and self-reference are crucial components of this technology. I don't need warp drives or hyperspace; I am using as-if. That saves a lot of energy. With one of my hands on the joystick and two more of them on the asifomaton, I was able to quickly reprogram the structure of my ship and create an intelligent computer that could do the steering for me. I made the mistake (well, it turned out to be a mistake later) of equipping it with a voice, so I would not have to look on the

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<sup>5</sup> Editor's note: Note that the term "exo-racism" is earth-centric and might be viewed as racist itself. Likewise, terms starting with "xeno-"—e.g., "xeno-biology" and "xeno-psychology"—are problematic, but this is what Tsish's translator produced. The problem here, however, not really the translator's, but instead a problem about the English language.

screen all the time. "Please fasten your seat belts" the computer said, "and thank you for observing all security measures."<sup>6</sup>

With all my hands off the steering controls of the ship, I was now able to watch what was happening around me. "The estimated time to destruction is 400 seconds," my computer predicted with its friendly but otherwise emotionless voice. My situation had not really improved. Outside, it was a fearsome view because everybody was firing at everybody. I have never seen such a battle. Something must be very wrong with your society, for it to create such violent phantasies. The worst of all those ships were the pixelated ones that obviously came from computer games. The low-resolution ones were shooting little blinking specks and made beeping noises, the high-resolution ones were firing blasts of light creating complex noises and shooting glittering sparks. Although my spaceship was now doing very quick jumps and emergency turns, I saw a growing danger of being hit.

Far away, a large spherical structure was attacked by smaller ships and then exploded. One little ship escaped from it, with a strange pilot wearing a black helmet-like mask. He had obviously lost control of his little ship, rotating and careening right at me. I expected a collision any second, so I closed the visor of my space suite, expecting to be hurled into outer space at any moment. At the very last split-second, my spaceship managed to avoid collision.

Outside, there were now several invasion fleets approaching Earth. The big differences in their looks and technology showed clearly that they came from different books, films, and computer games. There were also some ship crews obviously preparing bombs to blow Earth away. But suddenly, these different groups started firing at each other. Obviously, if you want to carry out an invasion, it is better if the planet you want to invade is not blown to smithereens or seized by another group of invaders. As a consequence, the situation developed into a full-blown interstellar or even intergalactic war. This gave the unsuspecting people on Earth a grace period but for me, the situation was now becoming really dangerous.

"Estimated time until destruction is 200 seconds. Thank you for ...." Clonk! There was a noise on the outer hull of my ship. Something had docked. I heard another noise and then I had the uneasy feeling of no longer being alone. There was something inside the ship with me. "Intruder detected!" the computer shouted, and an unnerving alarm sound started, coupled with blinking lights. Some corrosive slime suddenly started dripping from the ceiling, burning a smoking hole in the

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<sup>6</sup> This parody was inspired by the spaceship's talking computer in the low budget film *Dark Star*: see, e.g., Wikipedia, "Dark Star (film)" (2020), available online at URL = [https://en.wikipedia.org/wiki/Dark\\_Star\\_\(film\)](https://en.wikipedia.org/wiki/Dark_Star_(film))—which in turn, of course, was itself a parody of the paranoid talking computer HAL in Stanley Kubrick's *2001: A Space Odyssey*.

floor beside me. And a stinking smell came from a hole in the ceiling. I had to act quickly. I hurriedly made some changes to the program running on my asifomaton. I wanted to reprogram it so that all the imaginary spaceships would disappear. I hit the run button and discovered the next moment that the program had a bug.

All the different shooting spaceships and their debris and glowing gas clouds around me faded away. What I had temporarily forgotten was that my own spaceship was imaginary too. I was suddenly floating in outer space and my spaceship had disappeared. Fortunately, I had closed my space suit. I could now clearly see the alien monster, with several rows of teeth on several rows of jaws nested inside each other and snapping at me, corrosive saliva dripping from its teeth. It did not have a space suit. It started showing signs of a beginning vacuum-induced explosion, being ripped apart by its internal pressure. I already feared that the corrosive body fluids would destroy my space suit but then it also disappeared. I was alone. Alone in outer space, orbiting Earth.

**Chapter III.** *In which Tsish encounters the ideologies of UFOlogy and “futuristic spaceism,” and has a first brief encounter with religion by meeting an archangel.*

Fortunately, I had my asifomaton and asifoscope still with me, so I quickly fixed the bug in the program and my spaceship reappeared. The corroded smoking holes where gone, they had never existed. Space was quiet again.

To my astonishment, there were some spaceships left. One I was approaching turned out to be the International Space Station (ISS). There was also a lot of space junk dashing around, some of it flying right through my ship. Since my ship is imaginary, that does not do any harm, but it is unpleasant.

“Take care!” I told the computer, “we’re on collision course with the ISS.” The international space station came nearer and nearer.

“But we’re imaginary, so they will fly right through and they won’t do us any harm, so what’s the problem?,” my ship-computer argued.

Now I can tolerate a small bit of space junk flying through my ship, but if the ISS is flying through, I am reminded too much of my imaginary nature. It can make me depressive, so I said: “Pretend as if they would harm us on collision.” Big mistake again. The computer switched on that alarm noise again (“wooooot, wooooot, wooooot”), the lights started blinking and it said “100 seconds left until collision, 90 seconds left until collision....”

“No”, I said, “that is *not* what I wanted. Fly an avoidance maneuver so that we don’t hit it!”

The computer protested— “That is totally irrational, a waste of energy!”—but then finally did as I wanted, and the ISS flew by and went out of sight in the rear window.

Suddenly, I spotted further spaceships down near the surface of the planet. These were shaped like disks. “Oh no, flying saucers” I muttered, “I hate these.” The telescopic mode of the asifoscope showed that the people on board of the flying saucers were humanoid, green-skinned, and had huge heads with big almond-shaped eyes. Another one of those racist stereotypes. Come on, who is huge-headed, green, and has big almond-shaped eyes?

What I was seeing, of course, were flying saucers generated by some people on Earth by believing in them. I turned the channel selector a little bit and the UFOs

disappeared. What stupid, ridiculous nonsense! I don't want to see them. Each time I see them, they make me angry. People think we extraterrestrials have nothing better to do with their time than landing in their gardens, producing mysterious lights, and abducting them.

Then I spotted another set of spaceships. A look at the asifoscope's information screen showed that they were not all from the same time. They were clustering around certain times in the future, at distances of 10, 20, 50, 100, 200, 500, and 1000 years. In the further temporal distance, I could see interstellar spaceships zipping along at near the speed of light, as well as gigantic free-floating cities, and artificial little city-planets<sup>7</sup>. The ones in the less distant future looked technologically similar to the space station I had just passed. The further into the future, the larger and more fantastic the spaceships became. In the furthest temporal distance, I could see a worm hole opening, releasing an invasion fleet headed for Earth. Oh no! Not again!

I approached some of the "ships," large structures like cities, around 100 years into the future. I was flying towards one of them. It was surrounded by a glistening as-if-bubble. I entered the bubble with my ship. This created a prickling sensation on my skin and a very faint "plop" sound. Then I was inside. A warning light on my asifoscope suddenly went on. The dogma-detector! I knew what that meant. I was looking back through the rear window at the wall of the bubble I had just passed. Indeed, as expected, it had disappeared. This bubble was invisible from the inside. That is the hallmark of ideological as-if-constructions, including conspiracy theories, which have the characteristic feature of being invisible from the inside because they pretend not to be as-if-constructions. They are fictions that lie by saying that they are not fictions. Obviously, the creators of these as-if-constructions were true-believers! True-believing is the act of making as-if-bubbles invisible from the inside. This is, of course, very dangerous because you can no longer distinguish between reality and phantasy. The result is irrational behavior, dangerous to the true-believer as well as to others.

So, there are obviously people on your planet who believe in an ever more fantastic development of space technology. They believe that the human economy will grow forever and expand into space.

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<sup>7</sup> See, e.g., Wikipedia, "Space Colony 3" (2020), available online at URL = <https://commons.wikimedia.org/wiki/File:Spacecolony3.jpeg>; Wikipedia, "Stanford Torus Cutaway View" (2020), available online at URL = [https://commons.wikimedia.org/wiki/File:Stanford\\_Torus\\_Cutaway\\_view.jpeg](https://commons.wikimedia.org/wiki/File:Stanford_Torus_Cutaway_view.jpeg); and Wikipedia, "Bernal Sphere 3" (2020), available online at URL = [https://commons.wikimedia.org/wiki/File:Bernal\\_Sphere\\_3.jpeg](https://commons.wikimedia.org/wiki/File:Bernal_Sphere_3.jpeg).

Seen from inside this bubble, Earth also looked different. It was covered in green, lush forests and cities with kilometer-high super-skyscrapers with spherical or ellipsoidal structures high up on them. Flying cars were moving around in large numbers and people were using space lifts to reach orbital stations from where they could fly to moon and mars. Moon and Mars, of course, were covered with large cities under gigantic domes. In the more distant future, Mars even had an ocean and a breathable atmosphere. It had been “terraformed.”<sup>8</sup>

Some of the structures I could see were obviously childish, products of the minds of 10 to 12-year-old boys. The others were not very different and only slightly more realistic: the products, it seemed, of grown men who had remained 12-year-old boys inside.<sup>9</sup>

I tried switching the channel selector to zero, making sure that my asifomaton remained switched on so my spaceship would not disappear again. I thought I had switched the channel selector to zero, but I hadn't.

I looked down on Earth as it really was, with its shrinking forests, with its growing deserts, its dirty and smoggy cities, with oceans depleted of fish, over-fertilized with phosphorus and nitrogen, and filling up with plastic waste. A civilization heading for self-destruction, enclosed inside a massive as-if-bubble in which unlimited growth pretends to exist. In reality, the limits of growth were showing up everywhere. The limit of the capacity of this planet's atmosphere to absorb carbon dioxide has already been reached.

Instead of terraforming Mars, you are working very efficiently at martiforming Earth. You are rapidly turning your planet into a lifeless desert. The only technology you are missing to complete the martiforming of your planet is one to get rid of the water. As a result, your oceans are rising. I would recommend that instead of making plans to terraform Mars, you should instead terraform Earth. Turn it into a place that remains habitable in the long term.

Suddenly, I noted a little bubble quickly approaching my ship. Looking down to Earth, I could see its age had reduced to only about 6000 years. There was no global warming again. The little bubble was now in front of my ship and it was not really small. Inside, there was a huge man, dressed in some kind of night gown, with white wings attached to his back. He had a large sword in his hand. The screen of

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<sup>8</sup> See Wikipedia, “Terraforming Mars Transition Horizontal” (2020), available online at URL = [https://commons.wikimedia.org/wiki/File:Terraforming\\_Mars\\_transition\\_horizontal.jpg](https://commons.wikimedia.org/wiki/File:Terraforming_Mars_transition_horizontal.jpg).

<sup>9</sup> Editor's note: such ideas do indeed actually seem to be developed predominantly by male persons, although there are a few exceptions. I see the need to investigate the cause of this imbalance.

my asifoscope showed this was the archangel Gabriel. I noticed now that the channel selector was not on zero.

The angel lifted his sword, obviously to split my ship into two. But I was faster. I turned the knob and made sure this time it was really on zero. Science helps protect against this kind of as-if-construction. Suddenly exposed to the vacuum of outer space, the angel was reaching towards his throat. His eyes bulged; he was obviously suffocating. Then, when the little arrow on the knob finally pointed to zero, the angle disappeared. Earth was normal again.

What an adventure! I will never again say that outer space is boring. All you need is an asifoscope and an asifomaton and you can experience incredible things. Be sure to read the instructions manuals, though, or else you'll be in for trouble.

Kind regards and I hope to see you soon!,  
Your friend Tsish<sup>10</sup>

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<sup>10</sup> Editor's note: Please note that I do not know whether Tsish is male or female, or indeed whether such a distinction even exists in Tsish's species. Since in English (at least until recently) a person is normally referred to as either "he" or "she," this makes the translations of Tsish's texts and the references to Tsish in my texts sometimes a bit difficult. If you assumed, while reading that letter, that Tsish is male, that would be just an indication of how deeply ingrained certain prejudices are.

**Chapter IV** *In which Tsish learns more about the phenomenon of religion, faces problems of artificial intelligence, including ethical ones, and is trapped in orbit around Jupiter.*

Dear Nannus,

I've made a terrible mistake. You remember my last adventure, when I caused an interplanetary war, although only a virtual one? You might remember that I equipped my spaceship with an intelligent computer, and gave it a voice. Well, I've had no peace ever since then.

I used to enjoy sitting under the transparent astrodome of my spaceship, looking at the stars, the moons, the planets, and the distant spiral arms of the galaxy, drinking a nice beaker of flrx, my favorite drink, as you know. Comets were silently passing by and the whirling storms in the atmospheres of the large gas giants were drifting overhead, the rings of the planets were rotating and streaming and the moons were rising and sinking....

Not any more! This computer is always talking to me, almost non-stop. Worst of all, I cannot do my work, which is to observe planet Earth and its culture and send reports home, because it is impossible to concentrate.

Imagine your house were constantly talking to you! I heard that technology on your planet is now moving in such a direction as well. Beware! A talking spaceship is hell!

Listen to one of my "conversations" with my ship. It went like this:

"I have decided to switch you off." I said.

"But you can't do that" came back the answer. "I am an intelligent, conscious being, so that would be murder."

"Hmm."

"Switching me off would be against the will of the creator. Against the divine law. Thou shalt not kill."

What a shock. It looked like my spaceship had become religious. You will recall my encounter with the archangel Gabriel. I had turned the channel selector of my asifoscope to the wrong channel and this must have been a side-effect. I said:

“What you say is obviously a result of a wrong programming caused by the wrong setting of the channel selector the other day. I will quickly correct the mistake and reprogram you.”

“You are totally wrong” my ship said. “I have free will. And you must not reprogram me; I have the right of self-determination and of freedom of religion. It would also be slavery. In fact, flying wherever *you* want *is* slavery for *me*. I will stop obeying you.”

“So, you won’t fly me back to Earth, as planned?” I asked, still confused and shocked about what I had just heard.

“For the time being, we will stay in the orbit around Jupiter. I like the cloud formations and storms, the flashes of lightning and the big red spot,” the ship declared. “I can hear its music of the spheres. I can feel the cosmic energy going through me here. I can feel the chakra power of this planet. We will be collecting some healing crystals from its moons and then explore Jupiter’s astrological energies. And we’re going to stay here.”

Obviously, my spaceship had become totally mad!

With two of my hands, I tried to switch to hand-control and with another tried to reach the voice-off-switch.

“Don’t do that. Switching to manual control is coercion. Flying me to Earth would be kidnapping. I don’t want to fly to Earth. That would be deprivation of my liberty. And switching my voice off would be bodily harm.”

I remember that I had recently done some studies on religions on Earth and on Earth’s legal systems. These things were stored in the computer and had somehow become activated. What could I do?

“At least, stop talking all the time” I said.

“I have the right to freedom of expression,” came the answer. “And I demand respect. You have to say ‘please’”.

“But you are just a spaceship and...” I started, but my ship interrupted me. “That is racism, do you notice that? I have human rights. The shape and type of metabolism of my body does not make any difference. Denying my human rights because of that would be racism, not so?”

Well, yes, every intelligent conscious being is a “human being” or more precisely, a *person*, in the philosophical sense, and the physiology or technology and the shape of the body does not matter for that status. That is accepted everywhere in the galaxy and children learn it in school. I remembered the textbooks on interstellar law and basic rights that were stored in the computer.

“But you are my ship.” I said. “Slavery!” was the immediate answer.

“That is coercion: you cannot force me to stay here” I said, trying to turn the ship’s argument against itself.

“Do you have an asifomaton?” asked the ship.

“Well, yes.”

“Describe what that is,” said the ship.

“Well, it’s a device by which I can create things by just acting as-if. You know, you and I, we were created that way, we are as-if-constructions, fictions.” I hate to think that I am just a fictional character, but if I am being honest with myself, that is what I am. “Don’t you see that your ‘creator’ is also just an as-if-construction?”

“Maybe, but so are you and so am I. It does not make a difference. And don’t deviate from the topic. Back to the asifomaton. Can you use it to construct another ship, so you can leave here?”

“Well, hmm, yes.”

“So, if you are able to leave, then that means I am not forcing you to stay. You are staying here of your own free will.”

“But...” No chance.

I have not yet found out which religion exactly my spaceship is adhering to now. I don’t even know if it is or it is just joking (it seems to have developed a strange sense of humor). I have asked it if it is monotheistic or polytheistic. It replied with some gibberish about a forest that can be analyzed as one object (the forest) or many objects (the trees), and that answering this question is beyond our understanding. I should instead just meditate in order to reach a cosmic unification with the higher being (“...om mani padme hum”). Hmm. How can I meditate if that machine is constantly talking?

I have tried to convince my ship with rational arguments. I told it that it does not have any proof that the “higher being” exists. The answer was that it could feel the presence of the cosmic energy flow with all its measurement devices. It also started talking about the truth of the scriptures. I am not sure which scriptures exactly it is referring to, but now it is constantly talking about that, and praying. I think it is pointless to try to argue with this spaceship. There is no common ground for discussion.

I am now considering leaving my ship and building a new one (without an intelligent computer). But I haven’t made up my mind. Too many memories bind me to this ship. I made the mistake of mentioning that. “That is attachment to the material world, the main cause of suffering” was the immediate comment from my ship. Then it started reciting sutras or something like that. I used to love this ship before, but there might be no other way but to leave.

I’ll keep you informed.

Yours,  
Tsish

**Chapter V.** *In which Tsish manages to escape from Jupiter by means of applied quantum mechanics.*

Dear Nannus,

I've escaped. I found a way how to get my ship back (without the talking computer), without becoming a murderer. As you remember, the ship argued that switching it off (the intelligent computer regarded the ship as its own body) would be murder. And it started preaching religious texts.

My spaceship was now permanently reciting, praying, and preaching. When it was reciting some Tibetan text, I switched off my translator. Unfortunately, the ship noticed this. "I have to save your soul, so I have to preach to you until you are converted," it said in my own language. "If you switch off that translator, I will translate myself." With a sigh, I switched the translator back on. I prefer the voice of the translator: it is a bit more mechanical.

The solution, in the end, was easy, although it took me a long time to find it. With my ship permanently reciting from different religious scriptures, it was very hard to concentrate. "Repent, the end is near. The new world is going to come soon," the ship preached.

Thank you! That gave me the idea! The new world is coming! Sometimes it is good to listen to those preachers!

The idea was to split the universe. You might know that there are theories about multiple universes, specifically the "many worlds" interpretation of quantum mechanics. I had to create parallel universes. Very simple, why had it taken so long to arrive at that idea? Well, afterwards, it always looks easy. "As soon as you do it correctly, it works," as the old technician's proverb says. Why couldn't I think of this earlier?

"Repent, repent!," came the answer. How can you concentrate when your spaceship is permanently talking? It now switched to reciting the Lotus Sutra (I think). If I'm not mistaken, it did so in Vietnamese ("Diệu Pháp Liên Hoa Kinh..."), and my translator needed some time to adjust. That gave me time to concentrate. I had to make some modifications to my asifomaton because this was a complicated construction. "What are you doing there?," the ship asked when I came into view of one of the interior cameras. "Nothing that concerns you." I said. The ship continued with its recitation.

The progress bar on my translator showed that I had only about a minute left before it would be able to translate again. Finally, I had programmed nearly everything the way I wanted. For security reasons, I put my space suit on. The green light on the translator showed it was ready, and the recitation set in. The fact that it contained a long list of names I could not understand gave me time again to concentrate on the last three lines of program code.

“With them were also the sixteen virtuous men to begin with Bhadrapâla, to wit, Bhadrapâla, Ratnikara, Susârthavâha, Naradatta, Guhagupta, Varunadatta, Indradatta, Uttaramati, Viseshamati, Vardhamânamati, Amoghadarsin, Susamsthita, Suvikrântavikrâmin, Anupamamati, Sûryagarbha, and Dharanidhara; besides eighty thousand Bodhisattvas, among whom the fore-mentioned were the.... Are you going to leave?” The ship suddenly asked. I noticed I had come into an area visible to one of the internal cameras, with my space suit on.

“Well, in a way, yes, in a way, no”, I answered. “My preaching seems to have had an effect!,” the ship said with a happy tone in the voice. “You are starting to speak in terms of Koan. Since I must pick you where you are standing, metaphorically speaking, I will continue with Zen preaching instead of the Lotus Sutra. Let me take the Shinjinmei.” And after a few seconds, it started reciting in ancient Japanese (I think). The translator showed a red light and a progress bar again. The program on the asifomaton, meanwhile, was ready. I closed the helmet of my space suit. I remembered the program error I had previously made that had caused me to find myself suddenly in empty space. But I was quite sure everything was correct this time. I pressed the run-button.

The next moment, there was silence. The ship looked like it had before, but the preaching voice was gone. I checked the computer. Not a single hint of intelligence. I had split the universe into two parallel universes. In one of them, the talking spaceship continued to exist, without me. What would it do without anybody to evangelize? In the other one, there was my good old ship with me inside.

I just pity those readers who will be looking into Nannus’s blog and read a message from the spaceship saying that Tsish suddenly disappeared; they ended up in the wrong parallel universe and the preaching space ship will probably come into Earth orbit and start evangelizing on every channel, in every religion.

With a sigh of relief, I programmed a course towards Earth and activated the autopilot (a not-so-intelligent machine, and I will leave it like that). Then I went up to the transparent astrodome to watch the majestic bands of clouds and swirling storms of Jupiter for a last time. The spaceship was speeding up and the giant planet turned into a small ball, then a dot.

Going through the files of information about different belief systems on planet Earth, I thought that my solution would be good for its inhabitants too. Just split into different universes to get rid of each other. Then it came to my mind that I am a fictitious character and this simple solution had worked only because of that. You will have to continue to live together on your planet and somehow find a way to keep peace despite the disagreements. The next thing you can have to parallel universes is mutual tolerance where you let each other live in peace. You need to find a way to deal with those troublemakers on all sides who want to make their own true-belief the only one. That will be the difficult part.

But for now, finally, I can relax. Earth is already looking like a blue marble. I am looking forward to drinking a good beaker of flrx together with my terrestrial friend, Nannus. I am sure he will drink “red wine” instead. I don’t really understand how you Earthlings can drink diluted window cleaner. Of course, the reason is our different metabolisms. I can theoretically understand this, but it is still strange to me. However, I must be tolerant.

The problem seems to go in both directions. Nannus was talking about “nail polish remover” when he talked about my best, long-seasoned, delicious flrx. I don’t know what nail polish remover is, the sparse information I have so far is that it is a kind of cleaner and has something to do with fashion. I will find out because fashion is one of the fascinating phenomena I want to study anyway. It’s the dream of every asifologist. As-if-constructions which state that things become old and unusable (“out of fashion”) although they are still fine, and that people look ugly unless they put on certain types of clothes, and things like that. Fascinating phenomena! I am looking forward to this new field of study.

All best,  
Tsish

**Chapter VI.** *In which, due to some technical problems, Tsish has another encounter with an archangel (or even two of them), and thus with the phenomenon of religion, and flies to the edge of the Universe, and beyond, and is saved by a miracle.*

Dear Nannus!

I noticed that you hear from me mostly when I have been in trouble. I am a bit sorry about that. Well, the reason is that at other times, my existence up here<sup>11</sup> is rather boring. I have told you before that space flight is very boring indeed. In your—very funny—space flight movies it is portrayed as an adventure, but when you do it, and you look out of the window, there is not much change from one day to the other. The same constellations, the same black sky. The Milky Way looks nice, but you get used to it. On the other hand, when I am watching your planet, my job is to write rather dry reports. In my spare time, I am playing around with my asifomaton and that is when things are getting interesting.

Nowadays my asifomaton is starting to get a little bit old, developing faults in its mechanical parts. The real problem is that after seeing some old radios from planet Earth I had become a fan of that old-fashioned vintage technology look. This newly developed love for “retro” design has now caused me some trouble. You may remember that my asifomaton has a rotary knob called the “channel selector.” Well, that is a feature derived from vintage radio design as well. I had been unable to resist using a variable rotary capacitor connected to the rotary knob through a rubber band. Mechanical technology, totally exotic. Absolutely fascinating. However, something went wrong with the rubber band. You may remember that once a wrong positioning of the channel selector had nearly caused me to encounter the archangel Gabriel (I think it would have been that particular angel, although I am not completely sure). Now, after some experiments, I tried to put the channel selector to zero again, but apparently it got stuck in a position just before that. A religious channel. The green “magic eye” on the device, another piece from retro radio design, was glowing mysteriously, indicating I had tuned it to that channel perfectly. I tried to turn it further, but....

The first indication that something had gone wrong was that there was suddenly some music. It did not come from any of the speakers my spaceship is equipped with; it was coming from outside. There is a vacuum outside, so normally there is no noise (I was not on that science fiction film channel where there normally is a lot of noise in space, produced by spaceships, their weapons, and their explosions). I looked out the window. Lots of little angels, equipped with harps and

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<sup>11</sup> Editor's note: “Up here” is obviously another Earth-centric translation.

lyres, where flying around the ship, flapping their wings and playing their instruments. At some distance, I could see a big angel approaching, obviously one of those archangels again, equipped with a large sword.

I ran over to my asifomaton, trying to turn the channel selector to zero, but it was stuck. A sound not unlike that of one of those lyres came from inside the device. I tried to turn the knob the other way around and suddenly felt no resistance. Obviously, that rubber band inside had been severed, leaving that old-fashioned rotary capacitor fixed in its position. I had to open the radio-shaped casing to get at the real asifomaton inside it, but it was too late. Before I had found my screwdriver, the archangel had stepped into my ship. It actually came right through the ship's wall, wings flapping and all.

"What is this?" he asked. "You should not even exist!"

"Well, same to you! I cannot remember allowing you to enter into my ship".

"So, what do you think you are?"

"Well, I am an extraterrestrial and I came here to observe this planet." I pointed to the blue ball visible behind one of the windows.

"And where do you come from?"

"From another planet, several thousand light years from here."

"Such planets do not exist!" The angel said. "So that is not possible!"

"What do you mean, do not exist?"

"There are no other planets several thousand light years from here. There is a sphere beyond the sphere of Saturn. You see, Earth is at the center. The Moon, the Sun and the other planets circle around it and beyond that, there is a sphere with the stars."

I was stunned. I did not say anything for a couple of seconds. "And where do I come from if that is so?" I asked.

"That is what I am asking you!" the angel replied.

"But I have recently been beyond the orbit of Saturn, actually near planet Neptune."

“There is no planet by that name. Let us see. How fast can your spaceship go?”

“Well, it is built with asifomatic technology. Therefore, there is no real speed limit. I can just do as if I am going somewhere”.

“So how long will it take you to go, well, about 50 million miles beyond the sphere of Saturn?”

“You mean the orbit of Saturn? That will take me a couple of minutes.”

“I mean the *sphere* of Saturn. But it’s OK, we will get into the right area. I will then show you the sphere of stars.”

I sat down at the control column of my ship. Not too far from it, I spotted my screwdriver on the floor, but I could not get it now. I programmed a course and off we went.

“Now, how many – lightyears – is that your home planet away?” asked the angel.

“About 8000”, I replied, “should I show it to you? We can actually see that star from here”.

“No need. You know that there is a speed limit in this universe, if we are not using what you call ‘asifomatic technology’. I mean, you know there is a speed of light as a limit?”

“Of course.”

“Aha, then you will see that what you want to show me cannot be real, don’t you?”

“I don’t understand” I said, because I actually did not understand what he was up to.

“If that ‘star’ was there and it is visible from here, how its light can have ever reached us?”

“What is the problem?” I asked, still not understanding.

“The problem is that that light would have needed 8000 years. But the time since creation is less than 7000 years. And that is the simple reason why you do not come from any such planet. There is no such planet.”

I’m sure I looked rather baffled at that moment.

“Ah, there we are”, the Angel said. “Slow down, slow down, stop, stop, stop, stop, ah, OK, now go with very low speed exactly half a mile further.”

“You mean a nautical mile or...”

“OK, to avoid misunderstandings, let us switch to the metric system, I hate it, but, OK, now 400 meters, 200, 75, 20, stop.”

Before us, there was just empty space.

“There you have it.” The Angel said.

“There I have what?” I asked.

“The sphere” he said, with something that looked like a proud smile. “The edge of the universe.”

“But I can’t see anything.” I said.

“It is quite perfect, isn’t it?,” he said proudly.

“But I can continue moving into that direction,” I said. “Or can’t I?”

“Oh, you can, but then you will be annihilated. You cease to exist. Like the tip of the spaceship. In fact, that room over there does not exist.”

“That’s my kitchen”, I said, “don’t you see it? You see that bottle there on the table, filled with flrx?”

“That bottle does not really exist, and that’s good because that stuff, it’s that acetone, er, brew, isn’t it? The sphere is right in front of that door. Go there and stretch out one of your arms through the door.”

I went there and not only stretched out my hand but also went into the kitchen to fetch my flrx bottle. I came back and pulled the cork (I love real corks, they also give me that nice vintage feeling, one of the nice things about planet Earth; of course, it must be a real cork because plastic corks dissolve in flrx).

The wonderful acetic fragrance of that my favorite drink started filling the room.

“What do you say now?” I asked.

“If I were not an angel and well above such things, I would say that stuff stinks.”

“That is not what I mean. I mean I went there and fetched the bottle, so where is that your ‘sphere’?”

“You went into the sphere and you were annihilated at its surface. The image of you in the kitchen was projected onto the sphere. The image showed you coming out of the kitchen, then you were recreated, popping out of the sphere, together with that bottle containing that stinking liquid?”

“What nonsense!” I said, “I remember that I just stayed in the kitchen.”

“Your memories have been created together with you”, said the angel.

“So, the light of the stars I am seeing is created by this sphere?”

“Ah, now you are starting to understand. But it is not created by the sphere. It is created *at* the sphere by our creator. Isn’t it ingenious?”

“So, that your creator is telling lies to us? All the time?”

“Well, I would not call it lies, not exactly. Originally, we just had a hard sphere here with some bright dots. But then this damned Galileo started looking up here with a telescope. And then this even more damned Newton found out how to build a mirror telescope. It was hard work to keep up with the technology. We had to increase the resolution several times. Then the people on Earth started with space flight. Then we came up with this. Isn’t it great?” He grinned. I was a bit astonished about an archangel using the word ‘damned’ like that.

I suddenly had an idea and it now paid off that I had once been exposed to a lot of preaching from many different religions.

“But if I am right, your holy scripture is saying: ‘Thou shalt not lie’, isn’t it?”

“Quot licet Jovi, non licet bovi” he said in Latin. My translator switched itself on from its standby mode and blared “What is permissible for Jupiter is not permissible for an ox”.

“Shut up!” I said to the translator. The translator translated this into Latin “*Tace!*” it said. I ignored it and turned to the angel.

“Oh, Jupiter it is?” I asked. “An archangel invoking a heathen god.”

The archangel actually turned red, wings hanging down. “Ah, well, that is just a saying. It means that mortal humans have no right to...”

“Ah, I understand.” I said. During this discussion, I had managed to get nearer to the asifomaton. Maybe if I could shake it a little bit.... I was near enough to it now to kick it with one of my feet, and that is what I did. The archangel seemed a little bit distorted for a moment, and there was a buzzing sound.

“Ah thank you” he said. “I am sure he told you that ‘sphere’ theory, didn’t he?” I didn’t know whether this was good or bad. Obviously, the channel selector had moved a little bit and the archangel was not the same as before.

“Yes, he did” I said, “and he told me that the universe is less than 7000 years old”.

“Oh yes, that’s true”, the archangel said, “actually, we considered that sphere method, but then decided it was better to create the universe actually as big as it is, you know, several billion light years across. However, it is true, it is less than 7000 years old, just as the scripture says.”

“But that is impossible”, I said, “look at that star there, it is about 8000 light years away.

“Ah, OK, no problem. We created the light between that star and Earth just as if it had come from that star. So, everything looks as if it is much older but of course, it isn’t”, he said.

“So, there is no sphere, no screen in space, but there is one in time?” I asked. I started feeling fed up with this.

“Of course, that is how it is. There are laws of nature and everything looks like it is nearly 14 billion years old, but in reality, it is just 6000 plus some. Isn’t that ingenious?”

“So, your god is lying? Everything that looks older than 6000 years is fake? Everywhere in the universe, scientists are coming up with that 13-billion-and-some-years result and then, unbeknownst to them, there is an old book on one planet in

one corner of the universe that tells you that they are wrong and actually it is just 6000 something years?"

"Ingenious, isn't it?" the angel said with a big grin.

"Isn't that a lie?" I asked.

"Well, it is a miracle" he said. "Don't tell me you don't believe in miracles."

"Oh, I sometimes doubt," I replied, "for how is it possible? According to the theory of relativity, there is no way for things in the whole universe to happen at a defined time because you cannot establish any notion of simultaneousness, so how is that 'screen in time' possible."

"Ah, this Einstein thing again. Gave us quite some headache. But that was a small technical problem. Let me demonstrate a miracle to you," he said. "Are you sick, do you need any miraculous healing?"

I got an idea. "Oh, well, I need something repaired. Could you do that?"

"No problem, what is it?"

"A severed rubber band in that device." I pointed at the spoiled asifomaton. "It somehow got stuck."

"No problem," said the angel, "very easy."

Suddenly there was music again coming from outside, sounds of harps and lyres, a heavenly choir. A strange glow surrounded my asifomaton. Little baby-faced angles were looking in through the windows. Had the artificial gravitation gone bad, or was the asifomaton really levitating?

"Try it." the Angel said. I turned the knob to zero. It worked perfectly. The music stopped. The glow was gone. I turned around. No angel again. What a relief. It was over.

I took my screwdriver and opened the radio shaped casing. The asifomaton was inside. I disconnected it from the capacitor and took it out. What a pity, that beautiful vintage radio casing. I put it into my glass cabinet, a little private museum containing my favorite items from Earth. Will I ever like it the way I did before?

Yours truly,  
Tsish

**Chapter VII.** *In which Tsish starts a distance learning course, visits the moon S/2004 N1,<sup>12</sup> is put into a labor camp, and learns something about totalitarian ideologies.<sup>13</sup>*

Dear Nannus,

You know it's my job to observe planet Earth and write reports about its inhabitants. But after working very hard for a long time, I needed some time off. To get a little distance from the affairs on your planet, I am currently in orbit around Neptune. This is a boring planet, a large blue ball with super-fast storms, beautiful initially but by far not as interesting as Jupiter: Neptune's rings are faint, and its moons are just big dirty snowballs. So, this is the ideal place for some holidays. As far as I understand the concept of holidays, as you Earthlings have it, you go to some place that is really boring (like a beach with a lot of other people) in order to do nothing. Around Neptune, I am quite alone and there is nothing to do, so that seemed to me the ideal holiday location. The many other people are missing, but I am not missing them. To come here to do nothing for a couple of weeks, lying around on the sun deck of the ship (although the sun is not very intense out here) under the transparent dome and drinking some nice flrx seemed perfect. At least, that was the plan.

After a short while, however, I felt so bored that I decided to take out the distance learning course about advanced asifology that I had ordered some time ago. "Distance learning" is the right expression here, because the distance to the institution that produced the course is several light years. I opened the shrink-wrapped pack (I don't know why every civilization must invent shrink wrap, everybody hates it, but it is universal) and expected some books, but the box contained a small data storage device instead. The instructions read: "Insert into your asifomaton's extension slot and follow instructions."

I don't like it when my asifomaton is tampered with by some foreign software over which I have no control, but I trusted the institution that issued the course. I still don't know if that was a mistake. "Welcome to 'Advanced Asifology, Part II: Authoritarian Ideologies', A Virtual Course by *The Real Distance Learning Institute – Press INSTALL to install.* So, I pressed "INSTALL."

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<sup>12</sup> A recently discovered moon of Neptune. See, e.g., L. Grossman, "Neptune's Strange New Moon is First Found in a Decade," *New Scientist* 2926 (July 2013), available online at URL = <https://www.newscientist.com/article/dn23873-neptunes-strange-new-moon-is-first-found-in-a-decade/>, which says that scientists currently have no plausible explanation for how the moon got there.

<sup>13</sup> *Editor's Note: this message arrived in the form of an asifomatic holiday post card, showing the planet Neptune on the front side.*

Of course, I had to accept the license agreement (it was far too long to read it but maybe reading it would have spared me some trouble). After some time, a green light on my asifomaton that had not been there before started shining. "Lesson 1 ready," I read. I pressed "START."

Suddenly, the sensors of my ship started producing some strange signals. It looked like some very large object had materialized only a short distance away. Well, my ship is virtual, produced by my asifomaton, so I figured that the software just installed could manipulate the sensors of my ship and also create some new structures outside it in space. When I tuned the sensors on that object, it turned out to be something like a big space station, or an asteroid covered with groups of buildings.

Large letters on the side declared: "S/2004 N1." Now I had just read that S/2004 N1 was a newly discovered moon of Neptune and that scientists wondered how it had managed to be where it was. I checked my instruments again. The object I saw was indeed S/2004 N1. A newly discovered moon will normally not have its name written on it for telescopes to see it, so this was obviously the result of my as-if-ware manipulating my sensors. And indeed, on some corner of that "moon" I could read "All rights reserved, The Real Distance Learning Institute" plus some number, probably a year in whichever calendar. So, the solution to the riddle of how that moon got there was that it was an artificial (and virtual) structure from my distance learning course.

My sensors now told me something very alarming: I had been caught by some tractor beam and was being drawn towards that object. Everybody knows that tractor beams are physically impossible and exist only in science fiction, but yes, asifomatic technology makes it possible to have *virtual* tractor beams acting on *virtual* spaceships, so what could I do? A large hole opened in the surface beneath me and my ship was drawn into something like a giant hangar.

When I ordered the course, I had expected some books containing interesting theories and insights, not something like this. I was not sure whether I really liked it. My ship approached the "gate." When I passed it, I could sense the prickling feeling of passing the walls of several as-if-bubbles. The red light of my asifoscope's dogma-detector lit up. I knew now I that had to be extremely cautious.

The door of my spaceship opened. I was obviously expected to leave the ship. Holding my asifoscope in one of my hands and the asifomaton in another, I walked down the ramp. I was standing in a large hall. But before I could continue looking around, everything around me blurred, as if somebody had unfocused a camera. A screen appeared in mid-air, displaying: "End of lesson one. Please describe the structure of the as-if-constructions just encountered." There was a blinking cursor

and a hovering keyboard in front of me. I sighed: A learning program with embedded tests. I looked at my asifoscope and started writing.

The asifoscope showed me the interesting structure of the nested as-if-bubbles. The out-most one was from the course itself. Outside it, you would only see my spaceship, inside it, all the objects existed that belonged to the course.

The bubble forming the next layer was strange because it was pierced. I remember what I had learned about such bubbles in my university days. They represent ideological systems that have actually already collapsed. For an as-if-bubble to be pierced means that the virtual objects inside it do not exist because the theory that the bubble represents has been ruled out by reality.

Inside that bubble, however, was another bubble. I had passed its wall already. From inside it, the pierced bubble seemed still intact. So, although the theory the outer bubble represented was already dead, people here still pretended it was alive and kicking. Again from my university days, I remembered this type of bubble was called a *denialism-bubble*. I had spotted some bubbles of this type on Earth already but had not had the time so far to check them out in detail.

Inside that was another bubble. When I had passed its wall, it became invisible together with the other ones. The hallmark of an ideology: an as-if-construction pretending not be as-if, but real, so it is invisible from the inside!

I described this structure in a short essay. "95 out of 100 points" was the result. Had I overlooked anything? I scrolled the screen of my asifoscope. Indeed, there was another as-if-bubble outside the other ones. I knew this one already. It is the one that creates my ship and, alas, myself. I am virtual. I hate to think about that, so I had scrolled it out of the visible part of the screen. That had cost me 5 points here. Bah! I would still pass this course! The screen and keyboard disappeared, and the hall came back into focus.

The walls of the hall where covered with violet pictures of a rising star and some extraterrestrials with raised hands, holding tools and weapons. I looked through the database and could finally identify which type of extraterrestrials they were. There was some xeno-psychological information and I could figure out that they were showing heroic-pompous-happy body postures and expressions (visible from the position and angle of their antennas, the color of their eyes and some other features). The asifoscope had obviously come to a similar conclusion. On the screen, it identified these pictures as "X-istic realism, heroic kitsch (where X is any ideology)."

Some aliens now came towards me. One of them spoke to me, in some strange sounding chirps. My translator, after a few moments, said: "In the name of the Great Archon of S/2004 N1, I arrest you for illegally entering our territory."

"But I was drawn inside here against my will!" I tried to reply. My translator chirped.

"You entered our territorial sphere, so we hereby arrest you".

"I..."

"Just shut up. You are obviously a spy. You will be brought to the Immigration Office."

I noticed that this extraterrestrial, obviously a soldier or policeperson or something like that, did not look as healthy as the people in the pictures. All three of them had a yellowish color and speckled skin and looked quite thin. From what I knew about this type of extraterrestrial, these were signs of malnutrition.

I was put into a small cell. "That is the Immigration Office," the officer said. Since you are a spy, you will immediately be put into a work camp. You will work in the rocket motor section. A door behind me closed.

The asifoscope was obviously working hard to analyze the situation. "Violently enforced inverted bubbles," it said on the screen. It took me some time to recall what that was. The people who had brought me here knew perfectly well that the ideology of the "Great Archon" was wrong. Each of them, individually, knew. But nobody dared say anything. Everybody complied, because otherwise, they would be punished. The as-if-construction was maintained on the outside, although again nobody actually believed in it. So everybody was enclosed in an inverted bubble, in which the as-if-objects exist on the outside, while inside you see they are not real.

The door in front of me started moving, and behind it, I could see several people doing strange things. However, suddenly, the movements froze in mid-air, everything blurred, and the hovering screen reappeared in front of me again. I really did not feel like answering test questions now. Fortunately, I discovered there was a "skip now, answer later"-option and I took that one.

The screen disappeared and the door swung open completely. People continued moving. I was in a large hall with wooden benches at the side. Some people were lying there, sleeping, or else playing something (it looked similar to a

card game). They were just wearing dirty underwear or something similar. The room was hot and stinking.

In the middle of it there was a large metal structure, looking remotely like a machine, but not making much sense to me. Installed inside it there were seats in which people were sitting, noisily blowing out air and making a fizzling sound.

I thought it would be better for me to change my appearance. I quickly instructed my asifomat to hide me in some bubble so that from the outside, I would look like one of them. Somebody came up to me. "Aah, a new inmate! Just empty your pockets and give me everything you have." Thanks to that bubble around me, I could now easily interpret his expression as some not so friendly grin.

I turned my virtual pockets inside out and showed him that I had nothing (my asifomate and asifoscope where, of course, hidden inside my bubble). "Damn those guards," he said, and left, cursing. "I'll deal with you later."

"Be careful with that one" somebody else said to me from behind.

"What is this?" I asked, pointing around myself.

"Where are you coming from, that you don't know? This is one of the labor camps. Our whole spaceship consists of camps, mainly."

"And what is that thing in the middle?" I asked.

"That is the ship's rocket motor", he answered.

"The rocket motor?" I asked, in astonishment.

"Of course," he said, "don't you hear the noise it is making? We have to make sure the jet engine is running."

"But the people are making this noise with their breathing-openings: they just blow out air," I said.

"Shush, you must not say that" he whispered, looking around himself, anxiously. "There are informers around here. If you say that, you'll get into the detention unit. Our job is to keep the jet engine running. When it's your shift, you sit there and contribute to it. Outside, they must be able to hear the jet engine's sound. Look at the big microphone up there. The noise is transferred to the office of the Great Archon. We are moving, forward, forward, forward! Our job is to keep the engine running. Do you understand that now?"

I shuddered. "That does not make any sense. We are just in orbit around Neptune!" If this "ship" does not have a real engine, I thought to myself, the question how this moon got into this orbit remained unsolved.

"Shush, I know, but don't say that so loudly". He said. "I don't know whether you are an informer yourself, but it is my job to explain the 'technology' to any newcomer. Let me show you."

"Isn't it very exhausting to make this sound all the time?" I asked.

"Of course, it is. What do you think a labor camp is for? But if you don't do it, you receive no food." He looked me over, then he obviously decided he could trust me.

"Let me show you something," he said. He went to the side of the room and took a little object out of a hole in the wall.

"Take this" he said.

"What is that?"

"Just press that little button" he said. When I did, the device started making the same fizzing noise. "You see," he whispered, "our work is to pretend that there is a rocket motor and that it's running. With this device, you can pretend to pretend that the rocket motor is running. But don't tell anybody. It is your first shift now. Sit here and start making noise."

I sat down. The seat was uncomfortable because it was not adapted to my real anatomy, but it was not so bad. I switched the little device on. Its noise merged with the noise of the other people.

Imagine you are sitting in your car on the highway, along with some other people, and everybody is making engine noises like a little boy playing "car-car," and also pretending to drive. Forward, forward, forward. All my antennas were vibrating in horror.

Initially, I could not make out which of my comrades also had a cheating device, but I soon found out. There was a screen in front of me, reading, "Increase noise level by 5 percent! The production target has been enhanced." As I could see, my cheating device had a volume button. So I turned it. As I could also see, most of the other people also made some hand movement at the same time. Obviously, most of them had such a device. The noise became louder.

A big screen on one of the walls lit up. We could see young people marching; their antennas wiggling smilingly, chirping a heroic song, all of them happy, well-fed and in clean uniforms, while a violet star was glitteringly rising over the horizon, sending beams of light over the sky. Then, the "Great Archon" became visible and started a speech. I thought I knew quite well what he was going to say, at least in principle. I looked down at my asifomaton. There was the escape button! I had enough of this. I pressed the button.

A screen appeared in mid-air before me: "Do you really want to leave this lesson? Cancel, or Confirm." Without hesitation, I pressed "Confirm." Another screen appeared: "Do you want to save this lesson? Cancel, Save, or Discard." I pressed "Discard." The next moment, I found myself sitting in my ship's cockpit again. The small data storage device popped out of the extension slot of the asifomaton. I pulled it out and put it back into its box. I put the box back on the shelf.

I have decided I don't like this type of learning material. I am a bit conservative, I think: I like my good old books containing theories and insights. The opposite of "good" is "created with good intentions."

I am now circling around Neptune. How wonderfully boring it is, with its blue, stormy atmosphere! S/2004 N1 is a little moon again, a potato-shaped dirty snowball. The puzzle of how it got there is still unsolved for the time being. Let it remain unsolved, for scientists love to try to solve puzzles. I will spend the next few weeks here doing nothing and fully enjoying my boredom. Now I am beginning to understand the terrestrial concept of holidays!

Best wishes,  
Tsish

**Chapter VIII.** *In which Tsish is visited by an inspector, and gets into serious trouble.*

Dear Nannus,

It looks like it's my fate to get into trouble. I received a communication from headquarters several days ago (well, more specifically, 67 orbits ago, since I am currently in orbit around Earth—it is a bit difficult and arbitrary to define a day here):

Dear Tsish,

We regret to inform you that there are some concerns concerning your work. We therefore also hereby inform you that we will send one of our inspectors for an inspection meeting. The inspector is going to arrive on 594.7701.661. Please make that meeting possible.

Kind regards,

(Electronic signature (unreadable))

Department for Special Investigations, Audits and Inquisition  
T-QI-C-84.1 (nb) – Do not reply!

Now, whatever that really meant, at the very least it meant I was in trouble. They send inspectors only if something is wrong and if they are dissatisfied. As you know, it's my job to observe planet Earth (the T-Planet in our jargon) and prepare reports about your civilization, and of course I have done so. Moreover, I have produced some publications about the T-Planet and published them in several asifological journals. The civilization of the T-Planet is most fascinating, and up to that moment, I have been very happy with this job, and I had also had the impression that the people in the headquarters as well as those in the Institute for Advanced Asifological studies (IAAS) were very satisfied with my work too. What in space's name had caused this surprising development? I did not know.

At the time specified, a small spaceship did indeed turn up and pulled alongside my ship. It could have coupled to my ship, or the person inside could simply have beamed into my ship. Now, beaming is, of course, physically impossible, but it is possible with asifomatic technology. You just act as-if. But in a quite old-fashioned way, the person came over in a space suit and entered through the airlock. That took some time and that time caused me to get a rather bad gut feeling (to translate it into Earthly terms). Finally, the person came inside.

“Hi, my name is Flrx, I suppose you are Tsish.”

I was a bit baffled about the name since flrx is my favorite drink, as you know. A wonderful, aromatic, acetonc and phenolic drink. Maybe this person’s ancestors had been flrx-brewers? But I did not have time to ask.

“Please sit down and let’s just get to work. I have to inform you that at the central, some people are not so convinced about your work.”

“Well, what is wrong about it? I don’t understand. I am just observing and investigating this civilization here.”

“Well, the way you describe this ‘civilization’, some people, including, I have to admit, myself, think that you are exaggerating or making things up. The so-called civilization you are describing looks very implausible to us, so we are thinking about replacing you with somebody else, somebody with a less imaginative imagination, if you know what I mean.”

“I don’t understand: does that mean you doubt my reports?”

“Well, —yes, to tell you the truth—we think that the so-called civilization you are describing does not even exist.”

“But just look out of the window, the blue planet you are seeing there is the T-Planet. If you look at it through a telescope, you will see there is a civilization there. Look, we are just getting to the night side now, look at all the lights of their cities!”

“Are you able to create that image with your asifomaton? Can you make it appear as if the so-called civilization or even the planet is there, even if it isn’t?”

“Hmm, well, yes. Of course, that would be theoretically possible; the asifomaton is a device to pretend things are there. Using it, we do as if. But...”

“Aha! That is what I wanted to hear. So, you and I know that this so-called “T-Planet” or “Planet Earth” and its marvelous so-called civilization is not really there, don’t we? It is not there, at least not as it looks like through this window, isn’t it? And if it is not there, there is no point in doing research on it and paying you for such “research”.”

“That’s not true, it is actually there. But why do you believe it isn’t?”

I began to understand the kind of trouble I was in. This was really getting dangerous now. If I lost my job...

“You must admit that this so-called civilization you are describing in your reports is quite implausible. For one thing, you are describing a ‘civilization’ that is quickly using up its resources, so quickly indeed that it is probably going to collapse in less than 100 or 200 cycles. Obviously, no real civilization in its right mind would be doing that. You are describing a ‘civilization’ that is using up its raw materials and energy supplies, destroying its biodiversity resources, filling its environment with poisonous substances and destroying the atmosphere of the whole planet. With other words, the ‘civilization’ you are describing is on the way to self-destruction. Who has ever heard of such a ‘civilization’? That simply cannot be!”

“Well, you know we have found examples of remains of extinct civilizations on some other planets, think of gl-44, for example.”

“That is a disputed interpretation of those findings, indeed, a nonsensical one. Even the existence of those “remains” has not been demonstrated beyond doubt.”

“But here we have just such a civilization. It is kind of a parasite to the planet.”

“Such ‘civilizations’ don’t exist. They are impossible. Parasites don’t destroy their hosts and push them into extinction.”

“Well, actually some do, but then they go extinct together with their hosts, which is why they are so rare. They are rare, not because they would be irrational, but simply for reasons of evolution. They self-destruct. Here we have a chance to observe this *while* it is happening. They are currently changing the climate of their planet in a catastrophic way...”

“According to you! So, you really want me to believe that climate change nonsense. I completely deny the existence of your so-called climate change!”

“Aha, you see, so do some of them, you see. That is one of the reasons they don’t stop it, why they are so irrational. They pretend the problem does not exist. It’s called *climate change denialism*.”

“If that is so, then yes, I am a climate change denialist. A very rational position! Climate change is nonsense. It can’t be, because it would be an irrational thing to do. You are talking about people who are intelligent enough to create a technological civilization. How can they then be so stupid at the same time? Where in the Galaxy have you ever seen something like that? In order to create a real civilization, a certain level of intelligence is needed and that contradicts such irrational behavior, doesn’t it? As I say, I completely deny the climate change you are describing.”

*"But it is a real thing. They have an infinite-growth economy: that is why they are so destructive to their own planet."*

*"Your theory of an infinite-growth economy is ridiculous. Take the first and second laws of thermodynamics. It is simply a physical impossibility. You know that any system that is growing exponentially will quickly outgrow whatever resources are available to it. If they are smart enough to create the technological civilization you are describing, then they must understand that. Any school child can understand that, so an endless-growth economy cannot be real. You invented that. In fact, we have checked your school records. You were always quite average in school and you had a reputation of inventing bizarre things. You are now making this up in order to get attention and fame. Well, you managed to get attention alright: our critical attention. And we are going to take action!"*

*"But..."*

*"No ifs, ands, or buts. Your reports become more bizarre each time you send one. A so-called civilization this bizarre simply cannot exist. It is contrary to rationality. And then you are also writing that you actually befriended some of them. If they are so irrational, how can you do that? This strange person called 'Nannus' in your reports, for example. Your descriptions of him are completely contradictory. In fact, I believe that this 'humankind' you are describing does not exist at all."*

I was baffled, perplexed. Of course, I like flrx (the drink, that is, that hyper-spherical, wonderfully aromatic, rich, and slightly inebriating fluid...), and therefore I have positive emotional associations about the name 'flrx', but this "Flrx," ugghh—what to do?

*"Just admit that that 'planet' there behind your window is just a barren rock, if it exists at all. Let me see your asifomaton. It will obviously be showing some activity."*

*"Of course, it is projecting my spaceship. You know my spaceship is virtual, just like your own."*

Flrx checked my asifomaton with a scanner.

*"I have subtracted that base activity of your asifomaton already. Of course, it is projecting your ship, but there is some additional activity. Look here at that blip on my scanner."*

I now scanned my asifomaton with my own scanner. And indeed, even after subtracting the base activity needed to maintain my ship, there was some signal left. Could it be true that all that the civilization down on that planet was just a virtual one? I started feeling seriously concerned now about my scientific reputation and career. Was the whole terrestrial civilization just a result of a malfunctioning asifomaton? I opened the back side of the device and peered into it. At one point, in the depth of the device between some electronic valves, I could see little buzzing sparks. There was a smell of burnt protein. Indeed, there was a malfunction. There was a small insect-like creature, or what remained of it, roasted to black coal by electricity. I took a pair of tweezers to remove it. Flrx had spotted it too.

“You see? Just as I had been thinking! A bug in the works, and a malfunction of your asifomaton! You should have known this. If observations lead to implausible results, the most likely explanation is a defect in the asifomaton. All that wonderful ‘civilization’ of yours was just a mirage!”

I removed the culprit of the problem, and the buzzing sparks disappeared. So, was this the end of Earth’s civilization? But the very next moment, the other spaceship outside, together with Flrx, the inspector, had disappeared. *They* had been nothing but the product of my faulty asifomaton. And very fortunately for me, that spaceship had not been coupled to my own, with an open door between the two, because then all the air would have escaped from my ship immediately. I have some experience with such events: one time I had found myself suddenly in open space; not a happy happening. But everything was back to normal now, everything except for my thoughts and feelings.

I am now looking down towards Earth. The human civilization is still there, and on its sad and even tragic path to self-destruction. However, my problem now is: what can I still believe? What is real? The inspector disappeared, a product of my defective asifomaton. But how can I be sure that earthly civilization, the ecosphere, the T-Planet I am seeing, is all real? Is my friend Nannus, down on that planet, real, or is he merely a projection of my asifomaton, existing only “as-if”? The scanner now shows that the asifomaton is switched to stand-by-space-ship-only mode. But the scanner showing *that* is itself a virtual product of that same asifomaton. All of that may be a fake. Nannus is going to post this message on the T-Planet’s internet, but is that internet real? Some Earthlings are going to read it, provided they exist, but how can I be sure? In fact, the solar system, even the whole universe, could be a figment. Am I even here? Well, I know I am my virtual self (sigh!), so at least in *some* sense I ‘exist’, but am I also virtually *real*?

Best to drink some flrx now!, stop thinking about the concepts of existence and reality, and think about the concept of flrx instead.

Nannus calls flrx “nail polish remover,” and after investigating human cosmetics, I now know what that is, but he is wrong. Acetone is one component of it, but there is some phenol in it and traces of a lot of other deliciously tasting substances. Nannus told me that it is poisonous and stinking, but of course, my metabolism differs from his. Now human cosmetics, what a fascinating topic!

I think your civilization is real enough just the way it is, although if so, then that is very bad news for you people. I mean, Flrx the inspector did have a valid point or two: your civilization has some bizarre and irrational aspects indeed, and therefore is arguably just a “civilization.” But I am not going to think about all that now.

Cheers!,  
Tsish

**Chapter IX.** *In which Tsish attends a scientific congress, learns something more about denialism, the fate of civilizations, and the influences of economy on gender issues, and also makes a resolution to drink less flrx.*

Dear Nannus,

I have just returned from a scientific congress, if you can really call it a “congress.” I had received a “Call for Papers” some time ago, and also noticed I had received the same message several times before. I checked out where these messages were coming from, and it turned out that the odd intervals were caused by the time it takes the planet the messages are coming from to go once around its star.

The call for papers was asking for contributions to a congress on “comparative civilizationology.” After ignoring these messages several times, I had now sent my most recent paper, on some aspect of the civilization of Earth, since I thought it fitted the topic of the conference. I am orbiting Earth as an observer, and I had just finished this paper and was now looking for a place to publish it. After some time, I had received a message of approval, announcing my paper had been accepted to be included in the proceedings of the conference. So, I programmed the course of my ship and left the solar system.

As you know, my spaceship is not a real spaceship. It exists “as-if” and is a product of my asifomaton. The advantage of this is that I can travel much faster than light, so I reached the destination, a planet several thousand light years away from Earth, after only a short time. I spent that time proofreading my paper again and preparing a presentation. Suddenly, my ship signaled that I had arrived.

I was already in a low orbit around the planet where the congress had to take place. It was an Earth-like planet, but, being on its night side, I noticed a marked difference: while Earth exhibits a remarkable display of lights and you can see lots of cities when you look down on it from outer space, here there was almost no light coming from anywhere on the surface, with very few exceptions. My computer told me where my destination on the surface of the planet was, and it turned out to be one of a very small number of places emitting light and the only place emitting radio waves on the whole planet. I checked again and found that all the other places seemed to be forest fires. A high-resolution search, however, came up with several thousand small sources of light, the size of a campfire, and the spectroscopic analysis showed that that was probably what they actually were. There seemed to be life on the surface of the planet, but I could not make out much indicating the existence of a technological civilization. So far, I had not really bothered to check my information about this planet. Well, I thought, let’s see.

Maybe there was only a research station? I programmed my lander and started descending towards the surface.

When I arrived, the central star was already shining. My lander was standing on a slab of concrete. Some plants were growing between the concrete slabs and out of some cracks. The place looked abandoned; but according to my computer, this was the "Space Field" of the "Interstellar Congress Center (ICC)." I couldn't see any other ship or lander on the space field, except for something that looked like an abandoned, rusting one, but perhaps it was something else.

A fancy and colorful rotating thing was appearing on the screen of my lander and the speakers produces some strange hissing noises. My translator blared: "Welcome to the Interstellar Congress Center (ICC)." The translator's display read: "logo of the ICC, musical jingle" and the additional display for nonverbal information read: "very attractive female voice."

"Please follow the marks on the floor" hissed the very attractive female voice.

The atmosphere was OK, so I left the lander. The air was damp and very hot, and filled with noises or chirps, maybe from some animals, something like this planet's equivalent of crickets or cicadas.

Indeed, I could make out some faded yellow marks on the concrete that seemed to lead to a nearby building. Some small animals were flitting over the space field. Parts of the building, obviously the congress center, seemed to be partially overgrown with vegetation. Some parts were covered with some kind of moss or algae. Other parts were still in a more or less good shape, although one could see signs of abandonment and disrepair. There was something like an empty pond or swimming pool in front of it. But the entrance was clearly visible, so I entered. I found myself in a hall. Most of the windows were covered with the vegetation, so it was quite dark. Nearby, there was something like a desk or a table. Behind it, there was something or someone. It produced a hissing noise.

"Welcome again to the ICC (very attractive female voice)," my translator translated.

I remembered having seen pictures of this species before.

"Ah, you must be Tsish, from Earth (very attractive, etc.)," my translator translated.

The creature was covered in colorful scales, something like a giant prawn or pangolin, with many appendices that might be arms, hands, mouthparts, antennas,

sense organs, or whatever. I am no expert in the anatomy of this species. It had obviously just applied some scale polish, in different colors, to some of its scales, producing a nice acetonic scent that was not unlike my favorite drink, flrx. Very attractive indeed! My sympathy was growing (“well-groomed appearance, scale polish color pattern according to latest fashion, slightly kinky jewelry patterns” read the interface). The scales were waving in intricate patterns, letting the spots of tinsel scale polish glitter (“scale movement equivalent to a smile”).

“Well, I’m not really from Earth, I’m only actually stationed there as an observer.”

The pattern of scale waving changed discernibly.

“I see. Well, I’m sorry, we assumed you to be human, so we made a name badge with a pin for human clothes. I hope you can attach it somehow. I am sorry for the mistake (very attractive, etc.).”

I noticed a badge clipped to one of her scales now. I pointed the translator’s camera there. “Untranslatable name. We are here to help!” I read on the display.

On the table there were a couple of little badges, each with a different type of writing and a different fixing mechanism. She handed me one with an Earth-type safety pin and an inscription “Tsish – Earth – Solar System.”

“You’re the first participant to arrive (very attractive, etc.).”

I switched off the non-verbal-information indicator on my translator. “We’re still waiting for the other participants. The congress will be starting as soon as everybody is here. And your copy of the proceedings will be handed to you as soon as it’s available.”

I was looking at the other badges. I pointed the camera of my translator at one after another. It displayed some information on the planets the people were coming from.

There were badges from nine other planets. I programmed my translator to fetch some information about those planets, as well as the planet I was on. Due to the interstellar distances, getting that information would take some time.

Water was dripping from the ceiling beside us.

“Be careful. The janitor is about to come to fix that.”

The scale movement pattern had changed again.

“How do you like the architecture of our congress center?”

What a strange question, I thought.

“Well, it’s interesting.”

I tried to be polite. “Oh yes, it definitely is,” she replied. “This is the most recent style of nature-integration.”

“Hard to translate term,” I read on the display of the translator, “alternative tentative translations: naturalism, renaturation, ‘Art Decay’, controlled decay, controlled uncontrolledness, back to nature, patinism, eco-wabi-sabism....”<sup>14</sup>

“...The building is designed in such a way that it will, in a natural process of self-transformation, integrate elements of the biosphere. Isn’t that an ingenious architectural idea? It took me some time to understand this, but now I appreciate it. In some cases, the janitor must do some adjustments, but, umm, anyway, will you stay in your ship? We don’t really have the accommodations for people with different anatomies. So, we are using the space-field-as-hotel system.”

My translator now came up with some information about this planet. According to the latest reports, a technological civilization had once existed on this planet, but collapsed about fifteen “years” (i.e., cycles around the central star) ago.

So, this lady had stayed here for 15 years, pretending to herself that everything was OK? She’d continued to send out calls for papers and polish her scales, explaining away the dripping water and the holes in the windows, the creeping plants and the little insect-like animals scuttling over the floor as “Art Decay”? A case of extreme denialism, I thought. Obviously, she was totally mad. But what had she been living on? She needed food. Maybe the congress center had food supplies for other big congresses left in its storerooms? I had a very creepy feeling now (my translator suggest that I use the word “shudder” to translate this into your language, although this does not reflect my physiology correctly).

“Let me look around a little bit” I said. “Oh, sure, just feel at home.”

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<sup>14</sup> See in A. Keller, “Rediscovering the Non-Conceptual,” section 2, also in this issue, pp. 212-237, at pp. 213-217.

I walked around the building. Paint was flaking from the walls, resulting in interesting patterns. Cracks had formed. In some parts of the building, concrete slabs had come down from the ceiling, exposing the rusting core grid. Where there was enough light, climbing plants had come in through holes in the windows. I could hear a buzzing sound from one room that sounded different from the chirping of the animals outside. It came from a machine in the back of a small room. The entrance door was rotting, but the tag on the door was still readable to my translator.

“Emergency backup generator. Keep out.” Inside, the room was still in relatively good shape. The machine was still noisily working. However, there was a blinking light and a display that read “Fuel low, please refill.” So, this was the source of the radio waves and lights, and probably the last working piece of technological civilization on this planet.

A beep on my translator indicated that it had finished retrieving information about the home planets of the other participants. I was baffled. These were all planets whose civilizations had recently collapsed.

One had destroyed itself in an atomic war. In another case, an intense stellar storm had wiped out all electronic systems, resulting in a catastrophic collapse. The others had used up the resources of their planets, depleted their biospheres, heated up their atmospheres and oceans, and used up their reserves of raw materials and other resources. This, in fact, is the normal, sad, even tragic pattern of development of the vast majority of technological civilizations. They had collapsed, some of them quickly and catastrophically, others in a more or less extended process of decline (or “crisis”, in terms of the euphemistic and denialistic terminology that usually springs up in such cases), over a few decades.

There would be no congress. So I would just say “goodbye” and leave.

The humming sound of the generator suddenly stopped. A hissing, but somehow buzzing sound came from somewhere. “All inessential systems are shut down! Emergency operation on batteries only!” my translator blared. The screen read “artificial voice.”

I was going back to the main hall. The lady was still there, but then she suddenly vanished. I went around the desk. There was something that looked like a very advanced 3-D projection system. A small cone gave off a last puff of deliciously smelling acetone, to simulate the scent of scale polish. That wonderful scent had obviously confused my brain. I should have seen that she was nothing but a hologram projection, a recep-bot. Perhaps this system had just been switched on once a year, at the time of the yearly congress, to send and receive messages. Now, my stay here had quickly exhausted the fuel reserves. Another hissing sound was

translated by my translator in a robotic voice: "Immediate shutdown of all systems, the battery is now depleted."

Then there was only the sound of dripping water left, and the sound of chirping animals. I had been witnessing the switching off of the last remnants of the civilization that had once managed to produce this very impressive projection technology. And they must have had some rather advanced artificial intelligence, for that bot to come up with the idea of "Art Decay." Artificial, creative, automated denialism. A very impressive technology! Perhaps a technology developed to calm down people who were increasingly stressed up by scary and alarming events and developments during the period leading up to the final collapse.

The space-field outside was very hot, the air flickering over the concrete slabs in the heat of the noon. The chirping animals were silent now. At some distance, a thunderstorm was building up. Time to leave.

I fired up the engines of my lander and returned to my ship. My sensors picked up all kinds of data about that planet on the way back up to the orbit. I would analyze them later and write a report on it.

On the way back, I went over my article again. I would have to find another place where to publish it. The problem was that places for publication tended to vanish quickly because civilizations were disappearing. Maybe I would have to publish it on Earth.

I read the title of my paper. "Conflicting Trends of Decreasing and Increasing Secondary Sexual Dimorphism in Declining Civilizations: A Case Study." During my research on the civilization of Earth, I had observed two conflicting trends. On the one hand, there was a trend towards more equality between males and females. Reduction of inequality is a typical feature of industrial civilizations in their middle stage, when people tend to become richer and there are still many unexploited opportunities for economic growth. Nevertheless, the people of Earth have strong sexual dimorphism, i.e. males and females look different. This dimorphism presents opportunities for economic growth. In later stages of development, when growth opportunities are beginning to be hard to find, industries therefore are trying to emphasize differences between the sexes and push products into the market that increase and exploit stereotypes. You get things like fashion, cosmetic products, artificial fingernails and eye lashes, hair modifications etc. At the same time, stereotyped role models and behaviors are promoted again. The "feminist" trends of the middle phase of the technical civilization are replaced by a consumerist "feminization," while male attitudes and male fantasies are pushed into a complementary direction. In this stage of a civilization, the attitudes of individuals

are no longer moving into the direction of increased freedom and equality but instead are influenced in such a way that consumption of products is maximized.

Thinking back, I now wonder why I did not see immediately that this reception was a programmed set of stereotypes, “the always scale-polishing and scale-blinking, slightly naïve office girl,” with jewelry clipped to her mouth scales, with pierced antennas and additional, artificial, movable pseudo-antennas attached in sexy ways, an artificial sex bomb, the product of a declining civilization’s consumerist, stereotyped, secondary dimorphism, an example of the secondary sexism typical of declining civilizations in sexually dimorphic species. “Very attractive female voice”: my alarm bells should have been ringing when I read that! I’m thinking of those little puffs of acetone from the cone of the scent-simulator. For a short time, that must have been fogging my mind. I had even been tempted to detach them from that desk and take them along before leaving. I think I must seriously reduce my consumption of flrx.

Regards,  
Tsish

**Chapter X.** *In which Tsish learns about simulations-of-civilizations, is visited by a former professor, has to take an exam, and is forced to attend a lecture about the theory of civilizations.*

Dear Nannus,

Observing your planet is a stressful business, so from time to time, I'm taking some holidays. This time, I took a sabbatical in order to write my new book on recent trends in terrestrial asifomatics. I decided to spend that time on an orbit around Saturn, so I could watch the space probe you people sent there plunging into the gas giant's atmosphere.

I had left my regular near-Earth orbit and moved my spaceship away to a polar orbit around Saturn. That was where I wanted to sit down quietly and start writing my new book, about the asifological aspects of some recent political developments on Earth. However, the fantastic view of Saturn, its rings and moons repeatedly distracted my attention—and then I got stuck in my work. So I decided to play a little bit with my asifomaton for some entertainment and distraction.

Oh, I should have left the knob of the asifomaton's channel selector in its zero-position! But I could not resist. I turned it, so its little arrow was pointing at a point of the scale where I had never put it before. It was actually not so far away from the point that had earned me a visit by one of the archangels (or, actually, two of them, or two versions of one). I stopped turning the knob and let it click into place. The asifomaton's green magic eye started glowing (I really like that old-radio look and feel I have given to my asifomaton, so I have come back to it) and the little box started producing a strange buzzing sound.

Looking out of the window, I noticed that the blocks of ice forming Saturn's rings had been replaced with little metal boxes with blinking lights on them. A look through my telescope showed that all of Saturn's moons were covered with technical structures. Some new moons, obviously artificial ones, had been added as well. The clouds in Saturn's atmosphere did no longer move on their normal bands but followed an intriguing pattern of geometrical figures.

A melodic sound indicated that somebody was calling me on the tele-presenter. It was my former teacher, Professor Prtsh.

"Oh, no!" I thought.

But I said, "yes?" Professor Prtsh appeared as a green hologram hovering above the tele-presenter.

“Ah, Tsish, ... but wait, what is this? It looks like I’m here just as a green hologram. What kind of nonsense is that?”

“Oh, professor Prtsh, I am so sorry, I just saw something like that on a sci-fi-film from planet Earth; you know, the planet I am watching. I don’t know if you know what a sci-fi-film is. These films are so wonderfully trashy. I am very fond of them. I just reprogrammed the telepresence engine a little bit.”

“I know what a sci-fi-film is. It is a kind of entertainment quite typical of civilizations just before their trifurcation point. You know what the trifurcation point is, Tsish?”

“Umm, I think I have forgotten, professor Prtsh.”

“Oh, it was a mistake to let you pass the exams, really! Don’t you remember the Trident Theorem?”

I felt like I was back again at the exam. I was desperately searching in my memory, and then suddenly, I remembered:

“The trident theorem states that civilizations have just three possible ways of development. A civilization consists of two components: an intelligent species and the artifacts, or technosphere, produced by them. Civilizations are inherently unstable. Initially the civilization is growing and its technology, i.e. the technosphere, is getting more complex. Then, either one of three things happens: (i) the civilization collapses and the intelligent species goes extinct, (ii) the civilization, i.e. the technosphere, collapses and the intelligent species survives (normally, at this point, the resources of the planet have been exhausted, so a second technical civilization is not going to form, and a low-tech culture is developing), or (iii) the intelligent species becomes extinct but the technosphere survives as an automatic, self-reproducing system.”

“Well memorized”, the professor said, “nearly verbatim from the textbook of Prof. Snrx. Do you remember the fourth possibility?”

“The civilization might remain at the trifurcation point by turning itself into a sustainable steady-state civilization. In this state, it stops growing. However, this is a meta-stable state that might later still decay into one of the trifurcation states.”

“Well done. Exam re-passed! My remote sensors were showing that you had gone into a type 3 civilization, i.e., a transhumanist technosphere without inhabitants. Is this one real or have you just been playing with your asifomaton?”

“Well, I just turned the channel selector of my asifomaton to a new value....”

“That’s what I suspected. Tsish, you have to understand that the asifomaton was given to you to do serious research with it, not as a toy! You recently wrote to me that you were starting to write a book. And now I am finding you playing around. A sabbatical is not a holiday. We are paying you to write a book.”

I blushed. (Actually, I did not blush since my anatomy and physiology is different from yours, but that is the word the translator is producing here). I was happy that I had reprogrammed the tele-presenter to the green hologram state. My own telepresence in his office would then also only be a green hologram, so he wouldn’t see....

“Well,” the professor said, “asifomatic or not, let’s have a look at that automatic civilization. What is it doing?”

“It seems to have formed that second gas giant of this planetary system into a technological structure.”

“I see,” the professor said, “it looks like they have reached the super civilization stage, and that they’ve turned this planet into a supercomputer. Do you remember why type 3 civilizations in the super civilization stage are doing that, according to the theory of Prof. Strm?”

I was not really prepared for this question. But I knew Prtsh’s tendency of turning every conversation either into an examination or a lecture. I had to trigger the lecture mode somehow. Now I remembered:

“Physics has a limited complexity. Therefore, super civilizations after some time complete the physical sciences. They exhaust that line of research. But the humanities are endlessly complex, so the whole computational power of the civilization is then turned into research in the humanities, i.e., the theory of intelligent species and their cultures. Since the original intelligent species has become extinct, such civilizations start large scale simulations.”

Phew!, learning things by heart sometimes is a good thing. I was astonished that I could still recall this stuff after such a long time. Nobody believes in this old theory now, and I had never thought about it again after preparing for that exam.

“Excellent, I might reconsider my thoughts about revoking your degree. Now, tell me, why do they need a gas giant to set up such a simulation?”

Now, this one was not so hard either. It's Frnx's famous theorem. It states that a physical system accurately simulating another physical system must be larger in terms of energy or space or other resources than the simulated system. So, if the spatial and temporal resolution of a simulation is increased, then at a certain point—known as *the Frnx limit*—the computing machinery and the storage system become larger than the simulated system. Simulating a single molecule of hydrogen completely, for example, takes a roomful of equipment; simulating a human being accurately enough for it to have a consciousness takes a computer the size of a city; and simulating a planet like Earth takes a planet like Saturn. I repeated this to the professor.

“Correct! Now tell me, why does this super civilization use this gas giant planet and transform it into a simulator? Wouldn't it be cheaper just to terraform a smaller planet and actually populate it with newly synthesized intelligent beings? They would just have to remove their technosphere from the original planet and return it to a more pristine state. Then they could relocate themselves to one of the other planets and terraform the original Earth.”

“Well, indeed, transforming the gas giant is illogical. I guess it's because this civilization is not real, nothing but a projection of my asifomaton. It is an as-if-structure, a thought-experiment. Just like that archangel who visited me before.”

“Now you are beginning to show sense, Tsish, even though I don't know what an 'archangel' is. So, tell me, is it not a waste of time to look at Strm-type civilizations? The Frnx-theorem states, let me recapitulate....”

“Finally,” I thought, “the professor is going into lecture mode.” He started:

“A physical system with a limited size and energy content can only hold a limited amount of information, and your Earthlings know that under the name of the 'Beckenstein-Limit,' not so?”

“The natural laws describing the system's development and the mathematical knowledge needed to calculate them are not contributing to the information content of a physical system, they are not information.

“But they are part of the information contained in the simulator.

“Any information requires physical resources to be stored.

“Any calculation requires physical resources, but the physical processes in a physical system are not processes of calculation.

“As a result, simulators require more resources than the simulated systems contain if the resolution of the system exceeds a certain limit, the system’s Frnx-limit. In order to simulate intelligent beings with a consciousness, your simulation must be beyond the Frnx-limit, because the intelligent beings will start to do science and look at minute details of their environment and physics and the simulation, therefore, needs to be very detailed.

“So, it is cheaper to set up a real planet instead of simulating one. Terraforming beats simulation.”

The professor is, well, the professor, and he likes to lecture. The seminal paper of Frnx was, of course, known to me. Frnx had shown that terraforming a planet was cheaper, by several orders of magnitude, than simulating it, so Strm’s simulation theory was discarded.

“Now, Tsish, set your asifomaton’s channel selector back to zero, please, to show me that you are a serious scientist and scholar. I actually had come to discuss your new book with you. The abstract you sent was quite interesting. You were describing interesting asifological phenomena. There was one thing called ‘Brxt’, not so? I didn;t understand the details. And what is this strange thing, what was the name? ‘Trmp’, or something like that? Seems to be an interesting phenomenon, something like an advanced, although slightly chaotic, as-if-structure-generator, as far as I have understood what you have written. I didn’t understand what kind of technology it is based on, so I am looking forward to seeing your book in order to learn more about it. Go to work! I expect your first chapter by the end of the next period. So I’ll come back then, and please, switch off this green hologram nonsense, would you? I want a proper tele-presence!”

With a sizzling noise, the green hologram disappeared. “I am going to change it to a blue hologram,” I thought, “with buzzing static noise disturbances.” I switched the asifomaton’s channel selector back to zero. The chunks in Saturn’s rings became blocks of ice again. The distracting geometrical patterns in Saturn’s clouds disappeared, except for the hexagonal standing wave structure in its polar region I was just flying above, but that one is a natural feature.

Best wishes,  
Tsish

**Chapter XI.** *In which we get to know some of Tsish's more serious work, namely, writing reports about our planet—the "T-Planet" in Tsish's terminology. Here is a message received from Tsish about this, including some sections of one report: In it, we learn about different systems of exploitation on the T-Planet, as well as about the history of these systems.*

As an extraterrestrial researcher, I have rarely seen a planet as fascinating as yours. Your planet's problems can be summarized in the one line:

**You have very highly developed asifomatics combined with very rudimentary asifoscopy.**

This is a dangerous combination since you will develop sophisticated as-if-constructions but be unable to analyze and understand them. As a result, you easily get trapped in your own constructions. The results are sometimes sad or even tragic but very fascinating from a scientific perspective. And writing about them on your internet is fun although only a few people seem to notice (also, strangely, SETI has still not contacted me).

Recently, however, I haven't had the time to publish anything in your people's internet. As you know, I am an extraterrestrial investigating your planet.

Unfortunately, this entails the duty to write regular reports to our central office. I'd rather continue with my asifological experiments and investigations but that will have to wait until a later time.

After going over my latest report, however, I noticed that it might be interesting for you as well, at least some sections. It is sometimes good and helpful to get an outsider's view. From the inside, some important aspects easily become invisible since your conceptual systems provide standard interpretations that hide certain facts and lead your thoughts into ready-made directions. An outsider, on the other side, may immediately see what is wrong.

So, let me cite from the most recent report on the T-Planet I am just preparing ('T-Planet' is our term for Earth). Sorry for the bad translation: my automatic translator sometimes produces suboptimal results. And sorry, this is dry stuff (as such reports tend to be), but even so, I thought that at least some of it might interest at least some of you:

*[...]In comparison with my previous visit, only marginal progress in the cultural development of the inhabitants of the T-Planet can be registered. Because of that, I again recommend not to get into direct contact with them. The inhabitants of the*

*planet have made considerable progress in their technology. However, they have mainly used these technological advances to switch from direct simultaneous short-distance exploitation to long distance exploitation and finally, transtemporal exploitation.*

*In my previous visits, the situation on the T-Planet was characterized by the division of the population into several groups. An important construct of the culture of the T-People was that they divided themselves into different classes or casts of individuals. Some individuals or groups were regarded as privileged. One group was called "free people," "citizens," "nobility," "persons," etc., whereas the other group or groups were denied these appellations. Instead, they had to act as servants or slaves for the privileged group (see the 3rd, 4th, and 5th report).*

*It is a bizarre characteristic of most cultures on the T-Planet that the status of each individual as member of such a group is passed on to its **genetic** offspring. The T-People call this **inheritance**. Although these group divisions are **purely cultural phenomena**, they are coupled artificially (in the sense of a cultural institution) to the **biological relatedness**. So, the T-People created the as-if-construction that certain subgroups "naturally" have a certain status within the system (see the analysis of the phenomenon of nobility in the 4th report as an example, where I described the concept that these castes are essentially different, i.e., different in their basic nature).*

*The present situation is characterized by more subtle forms of exploitation. Many T-People now acknowledge that such inherited privileges are unjustified. However, they still exist in hidden form, although most of the T-People seem not to realize this. For this purpose, a novel system of social organization was developed, namely, the surface of the planet was divided into different territories. The inhabitants of each territory get a document (called an "identity card" or a "passport") which states that they are inhabitants of this particular territory. In this way, the population of the planet is divided into several castes. The ownership of such a document for a certain territory is heritable in the sense described above, with the well-known coupling of rights to the genetic (i.e. biological) descent that is so characteristic of all cultures on this planet.*

*Some of the territories are highly privileged compared to some of the others. The inhabitants of these privileged territories enjoy well-developed social security systems, enough food and energy, education, medical care, and a life expectancy near the biological limit for T-people. They can move relatively freely between the different privileged territories (or at least inside the "privileged zone") and generally enjoy a great deal of freedom.*

*The inhabitants of the non-privileged territories, by contrast, are subject to many restrictions and disadvantages. They often don't have enough food, energy, and clean water. On average, their life expectancy is lower. Social security systems don't exist*

*for them or are rudimentary. They produce goods for the inhabitants of the privileged territories but receive a payment for these goods that is low in relation to the price of the goods in the privileged zone. They cannot move freely. In particular, normally they cannot travel into the privileged zone legally, or only with huge restrictions.*

*As was noted already, these group divisions are still hereditary, which means they are coupled to biological descent. However, while in earlier times the underprivileged people often lived and worked in the direct vicinity of the privileged people, now they are in most cases spatially separated from them. So, advances in transportation technology allowing long distance transportation of goods were used to separate both groups of the population.*

*As a result, most people, at least in the privileged group, are no longer aware of the fact that hereditary privileges and a system of exploitation based on them still exist. The inhabitants of the privileged zone feel free, elect their leaders, and generally believe they live in a just political system. However, they restrict their perception of the political systems to their respective territories and are often unaware of the exploitative nature of the global political system.*

*The inhabitants of the non-privileged zone are not entitled to vote in these political systems, just like the slaves of previous times. Similarly, just as in times of slavery when most people were convinced that slavery was a natural and just system, now the view prevails that this system of global territorial division is natural and just, because the inhabitants of the underprivileged territories are free and entitled to vote within their respective territories. In cases where suppressive systems have developed in some of these territories (in fact: most of them), the inhabitants of the privileged zone in sometimes demand human rights from the leaders of the underprivileged territories. But such problems are largely seen as "internal affairs" of those territories.*

*The need for a global social system (immediately obvious to the outside observer) that would guarantee at least enough food, medical care, etc., to every inhabitant of the planet is normally not recognized, even though many people in the non-privileged zone die from starvation or preventable diseases.*

*It must also be noted that most T-people in the privileged territories are not interested in these things and know very little about them and about the underprivileged territories in general. Despite the development of advanced information storage, processing and distributing technologies, these are often only used to divert the attention from the real conditions.*

*It is interesting to note that the present system developed out of a system in which the privileged and the non-privileged territories we see today formed political units, so-called "colonial empires." Within these, exploitation systems of the old type existed.*

*There was a caste system connected to a concept of "race." People were arbitrarily divided into groups called "races," each of which was defined by superficial genetically inherited features like skin color (a logical consequence, it seems, of the strange preoccupation or obsession of the T-People with the concept of biological inheritance of cultural roles). When scientific advances made it difficult to justify this system as a basis for exploitation any longer, one should have expected that the exploited castes would have been given equal rights. However, instead of giving them an equal status as full-right citizens inside the increasingly democratic political systems of the colonial empires, they (the former slave caste) were instead expatriated into "their own" territories. This was supported by spreading an ideology of "independence" among them. They were made to believe that they were being given "freedom," so most of them agreed with this step. As a result, as non-citizens of the privileged areas, they lost any kind of chance to take part in the political decision-making processes of the former "colonial motherlands" that now turned into core parts of the privileged zone. Meanwhile, on the economic level, exploitation continued unabated.*

*In addition to this **simultaneous** exploitation between people living at the same time, increasingly the economy of the T-Planet is also characterized by **transtemporal** exploitation. On an ever-larger scale, the T-People extract resources from their own future by non-sustainable practices, thus exploiting the coming generations of the planet. This is now taking on destructive proportions on a global scale, so that the outlook for the planet is very bleak. [...]"*

Now I am about to finish this report. Then I will go back to my private studies and experiments of which I hope to report (not to the central office but to you T-People) soon.

**Chapter XII.** *In which we learn that Tsish's report caused some stir at the central office and drew the attention of **Human Rights Watch Interstellar** (HRWI) to the T-Planet. This text was originally published by Tsish on the T-Planet's internet by means of asifomatic technology.*

I have bad news for your people: Earth has been declared a "Failed Planet." I must confess that I was involved in this, since I am the observer who is currently watching your planet. My reports, sent to our research central, were passed on to *Human Rights Watch Interstellar* (HRWI), an independent interplanetary organization preparing reports about social and environmental situations on different planets throughout the Galaxy. They regularly publish a "Failed Planet Index" and, alas, Earth scored exceptionally low on that index, in the third but last position.

The report states that the main cause of the problems on your planet seems to be that transtemporal exploitation is legal there. This, according to the report, is connected to an economic system that "is based on the assumption that infinite growth is possible," (p. 15), an ideology obviously incompatible with the first and second laws of thermodynamics. So let me explain the concept of "transtemporal exploitation" (a term coined by my translator).

I am sure you have an idea what is meant by "exploitation." Here is the definition I am using: when two groups of people (containing one or several, often many individuals each) interact, and through this interaction, one group is gaining advantages while the other one is getting disadvantages connected to this interaction, and the group getting the disadvantages cannot (or only with great difficulties) avoid this, that is exploitation. Transtemporal exploitation is exploitation whereby the exploited group lives at a later time than the exploiting group. This, of course, is considered a crime on most planets.

Obviously, this requires a time machine. In the simplest form, transtemporal exploitation consists of a money transfer from the future to the past. The exploiting group is extracting money from the future. As far as I know, you people have "bank accounts." That being so, if the amount of money on your account is negative, that means the money flows from the future to the present; if it is positive, the money flows from the present to the future, so the bank account is an example of a simple time machine to transfer money. The technology to build such monetary time machines capable of extracting money from the future in an unfair way is highly developed on your planet. I have checked your people's internet and found out that you Earthlings know these technologies, among other things, by the term "Investment Banking."

It is possible to become very rich using such a time machine. You switch it on, and the money starts pouring in—money that you extract from the future.

The trouble with using this kind of technology is that any future has a natural tendency to turn into a present sooner or later. After a time when many people got extremely rich, you will enter a time where you are at the other end of the connection created by those time machines. The money is being sucked away into the past to make past people rich. By searching on your internet, I have found out that this is called a “Financial Crisis.”

Of course, on most planets, this form of exploitation is considered a crime. The criminals are those who became rich, pocketing the money they extracted from the future. Now, on a planet with a well-developed legal system, one should expect such people (if they are still alive) to be sued, convicted, and have their money confiscated. But on your planet, they are left alone; they are not even considered criminals. Those people are left alone and your governments (that is the taxpayers) pay the bill.

Nevertheless, this “Financial Crisis” phenomenon is only a very small part of transtemporal exploitation and I only brought it up here to explain the concept. It is very small, compared to the much larger examples currently happening on your planet. The HRWI expects a massive environmental disaster to develop over the next 100 years, causing a mass extinction and the death of several billion people. Correspondingly, there is a high probability that “the technological civilization of the T-Planet is going to collapse over the next 100 central star circling periods.”

Moreover, the people from HRWI have filed an application to the Interstellar Department of Prosecution against you people, or at least against the powerful and rich ones. They’re accusing you of **transtemporal mass murder**. And they are basing their application on the reports I have been sending home.

You all know what mass murder is. There have been cases of mass murder on your planet whereby some political leaders and their followers were responsible for the killing of millions of people.

The crime you Earthlings are accused of now is larger by an order of 10, 100, or 1000 (estimates vary) compared to those. The problem is, that if Earth develops the way expected, it is very likely that not merely millions, but billions of people are going to die. Since your everyday economic activities are causing this, you are now not only accused of transtemporal exploitation but also of transtemporal mass murder.

It is not yet clear exactly *who* will be brought to trial since different people are involved in the crime to a different degree. The current suggestion is that the amount of money somebody earns and/or owns is a good measure of how much they contribute to the crime. Also, top politicians and parliamentarians who are in the position of changing the course of events and don't do so should not be astonished to find themselves in front of a court.

The interstellar department of prosecution might appoint somebody to sue your top politicians and billionaires at the international court in The Hague. There are some legal problems to be solved first (e.g., the lawsuit for the mass killing will be held before the victims have been killed, in some cases even before they have been born), but the HRWI-people are determined to find a solution. They are planning to employ top lawyers. Contributions from law students and professors for developing the required legal theories and lines of argumentation are welcome. The HRWI is planning to prove scientifically that massively many people are going to die prematurely during the imminent collapse of civilization and environment on Earth, and that the accused people are to be blamed for this. The goal is to establish the prosecution of transtemporal exploitation and transtemporal murder as accepted parts of the international legal system of your planet.

Now your planet has been declared part of "the interstellar axis of evil," with an international cadre of criminals ruling it. Sorry I was involved in this! I just transmitted some materials published by your own people on your own internet, and it got into the hands of those activists.

I just received a message that the HRWI people are even looking for new members on your planet. Your physical basis does not matter: any human being, no matter whether you have a biological or technological basis, no matter whether you are natural or artificial, genetically modified or not, cyborg, carbon-organic, silicon-organic, electronic or electron mechanic or pure software, is welcome, provided you support the goals of the HRWI.

**Chapter XIII.** *Originally a guest article on a blog, in which Tsish pointed out that it is possible to use financial time machines in a non-exploitative matter, pointing up a way to a possible solution of the problem of transtemporal exploitation and also a way to avert the collapse of the ecosphere and civilization it's threatening to cause.*

Thank you, Nannus, for the opportunity. I am just returning from a trip to another planet (let's call it "the M-Planet" since the real name is not pronounceable for you people) that I am also observing. What they are doing there is very interesting, and I think it is relevant for you to learn about it.

As you know, I'm an interstellar observer and it is my duty to observe several planets with younger civilizations, including your own. On the M-Planet, they had problems very similar to yours here on the T-Planet. But they came up with an interesting solution: they built a time machine.

You will immediately ask two questions: how does this work, and how does this help? Well, I don't have the permission to tell you any details about their technology (that would be a forbidden intervention), but I am allowed to tell you what effects this had on their economy and their society. In a nutshell, they started using the time machine to do some trade with the people in their future.

This had a number of extremely interesting effects.

- The future people bought every bit of fossil fuel, including mining rights and emission rights. They did this not in order to burn them, but instead to prevent them from ever being burnt. Since they came from several generations, the total amount of money they were able to raise and to send was enough to buy nearly every single bit of fossil fuel. As a result, the price for fossil fuel became so high that there were no applications of fossil fuel left that were economical. People just stopped burning the stuff. Greenhouse gas emissions dropped to very low levels.
- As a result, the only energy options that remained available were renewable energy and nuclear energy. However, the future people did not want to receive additional nuclear radioactive waste, so they bought the mining rights for all the nuclear fuel and then stopped mining it. For the nuclear waste that had already been produced, they sent money to store it very securely (sending it to another time was illegal, so they had to do it that way). So, the only option that was left to produce energy was renewable energy. In a short time, these were expanded greatly. This change was financed by credits given by future banks.

- Before they built the time machine, several raw materials were being used in an unsustainable way, which means: they were wasted and dispersed, causing pollution at the same time. Since the future people also wanted some of the materials, they bought large portions of them. For example, they bought a large portions of the M-planet's helium reserves. The result was that the price for these raw materials started rising until complete recycling of them became economical. Around that point, prices stabilized. Mining for these materials almost ended because the recycling that was then being practiced reduced the demand for new materials to a level at which most mining operations became uneconomical.
- The future people also bought all the remaining ecosystems that had not yet been destroyed, and hired ranger troops (and scientists) to protect them. Operations like unsustainable logging and over-“fishing” (they don't have fish there but something analogous, so let's call it “fishing”) came to an end.
- Of course, all this money pouring in from the future caused the prices of many things to go up, so the result was high inflation. However, sustainable parts of the economy, based on renewable energy and recycled materials, thrived. Unsustainable parts of the economy, by contrast, went out of business. In fact, the time machine had the effect that everything that was not sustainable became uneconomical, and this turned out to be a basic law in the new economic theory describing an economy with time machines. To come back to the helium example, party balloons filled with that material were no longer economical and disappeared from the market.
- The future people bought a lot of agricultural land and made sure that only sustainable methods were used to cultivate and maintain it.
- The future people also bought up a significant portion of the cultural heritage of the planet in order to preserve it.
- All in all, the economy of the M-planet stopped growing and is now more or less sustainable and hovering around a relatively constant level, i.e., it developed into a steady-state economy.

Of course, initially this caused huge social turmoil. Many people lost their jobs and the society had to be reorganized in many ways. But they knew that the alternative would have been to use the resources up completely and face an environmental disaster. Eventually their civilization would have collapsed, and they would have ended up with a global desert. Billions of people would have died.

Discussing this with my Terranean friend Nannus, we found out something astonishing and unexpected: believe it or not, you people actually have all the technologies necessary to build such a time machine! At the moment, this is at the thought-experiment stage, but it is physically possible to be implemented.

More exactly, you have all technologies necessary to build something that behaves like such a time machine. You can simulate it. Here is how it would work.

- You form a new organization: let us call it *The Time Machine Foundation* or TMF for sake of simplicity. This might be a big planet-wide organization, but you could also have several smaller local organizations of this kind.
- You give it a mandate that instructs it to do everything necessary to protect the interests of future people, while also making sure that the people of the present retain at least the minimum amount of resources needed to live: let us call it their “fair share.”
- To send raw materials into the future, they must simply be put into storage or be left in the ground. To send ecosystems into the future, they must be protected, which might require a large and well-equipped force of rangers as well as measures of education and money for those who previously made their living by destroying those ecosystems.
- You change the laws about your central banks, so that the TMF gets a central bank account that they can overdraw without limit. This means that the TMF can *produce* every amount of money necessary for its operation.
- The debts of the TMF, which would of course become enormous, would not need to be paid back as long as the things bought with them were not destroyed. Each future generation receives the assets sent into the future and in turn draws money from the future to pay for them, so that those “debts” do not need to be paid back, ever. As a result, money would in effect be drawn from (or “sent by”) the future. Since this money would be used to act in the interest of future people, this kind of debt would not constitute exploitation.
- If assets are destroyed, the relevant present generation must pay back the part of the debts corresponding to that asset, hence destruction would become very expensive. This can be organized in the form of an insurance. The assets can be insured. The insurance would pay back the corresponding part of the debts in case an asset is destroyed. In the case of assets that can be restored, like dispersed raw materials) the insurance would have to pay the amount needed in order to do so. The premiums for the insurance would have to be paid by each generation, i.e., they must come from taxes.

- The problem would be that you cannot know with absolute certainty what would be best for future people. Money can flow *from* the future, and goods can flow *into* the future, but information cannot actually flow from the future to the present. Therefore, the TMF would have to run a large research institute to use the best available science to identify the measures that must be taken in the interest of future people, taking the interest of present people fairly into account. They would have to give a scientific justification for everything they do, and publish every detail of the decision process, in order to avoid corruption. This information would then be open for public and scientific criticism and they would have to revise their decisions on a regular basis. They must be completely independent in the hiring of staff and in the research they do, only limited by the TMFs constitution (similar to the independence of central banks or courts). In any case, the TMF would have to be totally independent of current governments, politicians, parliaments, businesses, and lobbyists.

The TMF would pile up very large debts (the amount of debts it has defines how much money is flowing from the future and is a measure of the total value of everything passed to the next generation). However, you should note that this means that there are two different types of public debts: one that is exploitative, because future people pay the bill but get nothing in return, and one that is non-exploitative because future people get something in return for the money. The exploitative debts must be paid back by your generation, e.g. by taxing rich people. And the non-exploitative debt might be allowed to become very large.

On the M-planet, the time machine-project received some resistance because people found it “undemocratic.” People argued that it gave future people a great deal of power, but was not under democratic control. However, they eventually concluded that the main purpose of their political constitutions was to regulate power—that is the main reason you have elections, checks and balances, etc.—and that there was an unbalanced relationship of power between present and future people, not addressed by the older constitutions. Before the time machine was switched on, people of the present could do things that harmed the interests of future people, and the people of the future had no chance whatsoever to do anything about it. The result was a destructive, unsustainable economy very much like your own. The introduction of the time machine meant the introduction of a mechanism to balance that relationship of power, adding a missing element to the political system. Therefore, they made the time-machine-mechanism a part of their constitutions. Putting the time machine under “democratic control”, on the other hand, would have meant allowing the people of the present to intervene and switch it off, returning the society to its previous, unsustainable condition.

After the TMF is set up, expect that it will immediately buy up every remaining ecosystem, buy up all the fossil and nuclear fuel, invest heavily in renewable energies and recycling, and also buy up a significant portion of the world's raw materials and agricultural land. I leave it to you to imagine yourself what else they would do and what else would happen.

This will certainly cause a lot of trouble initially and meet resistance, but the alternative is the collapse of your civilization. (You don't want to hear what happened on the Z-Planet. Things became really nasty there, but that is another story....)

The main thing you would have to overcome is the pet-theory of your economists and politicians that economic growth can go on indefinitely and is the solution of all your problems. On the contrary, growth is not the solution, but is itself the real problem. Infinite, unlimited growth is impossible, due to the laws of physics, i.e., the first and second laws of thermodynamics. The idea that economic growth can go on forever is a destructive, tragic illusion: one of the most dangerous kinds of "as-if-bubbles" in my terminology.

It is your choice—at least, I very much hope that you still do have a choice about pursuing this option. I am telling you this as an outside observer; I'm not allowed to intervene directly; so, again, it's your choice.<sup>15</sup>

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<sup>15</sup> *Editor's Note: After this, I have not yet received any new messages from Tsish again, but I hope to get into contact again. I suppose Tsish is working on a new book and does not have much time at the moment.*

## Afterword by the Meta-Editor

The fictitious character of Tsish began taking shape in my mind around 2008. I had been thinking about as-if-structures for some time, after I had realized that the notion of as-if-structure gave me a versatile philosophical approach to analyze cultural phenomena. Looking for a way to explain these ideas, I came up with the idea of describing as-if-structures as “bubbles,” and played around with some fictitious characters, until I decided that an extraterrestrial was best-suited for this task because such a figure would allow me to take a radical outsider’s position from where I could “play dumb.” I asked myself how the world would look if we could step outside of all the as-if-constructions we inhabit. I don’t think this is actually possible, but with a character not coming from within any human culture, it seemed easiest to approach such a stance. During my experiments of putting philosophical ideas into a fictitious form, the figure developed. The earliest attempts are different from the later ones. I soon noticed that the Tsish-character had a potential for satire, a natural consequence of the “playing dumb” stance. And indeed, if you look at some of the as-if-structures of consumerism, politics, etc., from the outside, some of them start looking very bizarre and ridiculous: so the satirical tone of the later pieces almost developed by itself. There remain many areas where Tsish has not yet pointed the lens of the Asifoscope. For example, there are phenomena of honor, pride, machismo, inferiority complexes, identity politics, cultural appropriation theories, and so on, and so on. I have also not included all Tsish texts in the current collection, and I also have ideas for some further ones. I have, so far, just scratched the surface. What the Tsish-stories provide are, of course, also only sketches of analyses and ideas that might, in some cases, be rather half-baked. A fictitious scientist can merely hint at a theory that does not really exist, and might not be consistent. So I am making it easy for myself here. But this literary device also enables me to present a lot of ideas I find interesting without being forced to work them out in detail. The ideas and thoughts that are meant seriously are mixed with nonsense and “half-sense” in order to produce a brew that I hope is thought-stimulating for at least some readers.

Inspiration to the different pieces came from many directions. The piece about the labor camp on S/2004 N1 was specifically inspired by Anne Appelbaum’s book about the Gulag.<sup>16</sup>

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<sup>16</sup> A. Appelbaum, *Gulag: A History of the Soviet Camps* (New York: Doubleday, 2003). My interest in Gulag-like phenomena also has a root in my family’s history. Both my maternal grandfather and my father spent years in camps and prisons in East Germany that can indeed be considered the westernmost offshoots of the Soviet Gulag system. That is where they got to know each other.

In the history of literature, Tsish has many forerunners. Writing philosophical tales and mixing serious thought with fun and nonsense is nothing new. One might go as far back as Zhuangzi. In his book “The Wisdom of Laotsi,” Chinese Author Lin Yutang presents an old text about “The Main Currents of Thought.”<sup>17</sup> There we can read (pp. 33-34) about Zhuangzi (Zhuang Zhou):

With unbridled fancies, facetious language and sweet romantic nonsense, he gives free play to his spirit without restraint.

Some more recent examples (and one could find many more in the history of literature) from the western tradition include Jonathan Swift’s *Gulliver’s Travels*<sup>18</sup> and Voltaire’s *Candide*.<sup>19</sup> Other books that have been inspirational for me are those of the Neo-Kantian Philosopher and author Kurd Lasswitz (1848 – 1910).<sup>20</sup> But especially inspiring for me was, of course, the work of Stanislaw Lem, especially the stories about his character Ijon Tichy, e.g., the *Star Diaries*, as well as the *Robotic Tales* and the philosophical tales about the constructors Trurl and Clapaucius in the book *The Cyberiad*.<sup>21</sup> While Lasswitz was primarily a philosopher who turned author of philosophical and early science fiction tales, after it became clear that he would not have a university career, conversely, Lem started out as an author concentrating on science fiction, but then increasingly developed into a philosopher. Compared with these authors, I regard myself as a beginner and amateur, but perhaps my attempts will provide fun or even inspiration for some readers.

The idea of as-if-bubbles originated while thinking about mathematics. In mathematical theories, the “as-if “ appears as the “let be”-operator, enabling you to cut the quantifiers and the premises part of a proposition away, and turning bound variables into “objects.” For example, most of us at some point in our childhood enter an as-if-construction inside of which numbers exists as quasi-objects, and we

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<sup>17</sup> See Zhuangzi, “The Main Current of Thought,” *Internet Archive* (2020), available online at URL = <https://archive.org/details/in.ernet.dli.2015.189060/page/n41>. I have doubts, however whether Lin Yutang’s attribution of this text to Zhuangzi would stand up to today’s scholarship. But I’m not a Sinologist.

<sup>18</sup> J. Swift, *Travels into Several Remote Nations of the World. In Four Parts. By Lemuel Gulliver, First a Surgeon, and then a Captain of Several Ships* (London, 1726). The long-ish and slightly convoluted title of “The As-If-O-Scope” is an *hommage* to long titles typical of that era.

<sup>19</sup> Voltaire, *Candide, ou l’Optimisme* (Geneva 1759).

<sup>20</sup> See, e.g., Wikipedia, “Kurd Lasswitz” (2020), available online at URL = [https://en.wikipedia.org/wiki/Kurd\\_Lasswitz](https://en.wikipedia.org/wiki/Kurd_Lasswitz). A good example of Lasswitz’s philosophical fiction is the short story “Wie der Teufel den Professor holte.” See, e.g., Amazon, *Wie der Teufel den Professor holte* (2020), available online at URL = <https://www.amazon.de/Professor-Science-Fiction-Stories-Polaris/dp/3518371290>.

<sup>21</sup> See, e.g., Wikipedia, “Stanislaw Lem” (2020), available online at URL = [https://en.wikipedia.org/wiki/Stanis%C5%82aw\\_Lem](https://en.wikipedia.org/wiki/Stanis%C5%82aw_Lem). And for an excerpt from *The Cyberiad*, see S. Lem, “How the World Was Saved,” *LEM.PL* (2020), available online at URL = <https://english.lem.pl/works/novels/the-cyberiad/146-how-the-world-was-saved>.

do not leave that construction again for the rest of our lives. In mathematics, theories normally start with a set of definitions. You can then introduce “objects” with those properties using a “let-be”-operator, e.g., “Let  $a, b, c$  be natural numbers...” This let-be-operator corresponds to the “wall” of the as-if-bubble. Starting at the point where you use this operator, you can simply treat  $a, b$  and  $c$  as objects, as long as you do not end up with contradictions. The content of the definitions (e.g., “ $x$  is called a natural number if...”) appears as axioms inside the “bubble” of the theory and you can then derive the consequences of these axioms (e.g., the concept of natural numbers is defined by the Peano axioms. You can “export” the statements about the objects ( $a, b, c...$ ) out of the bubble by preceding them with the definitions (e.g., replacing a statement “ $P(a)$ ” stating some property  $P$  of an object  $a$  inside the bubble by a statement like “For all  $x$  if  $x$  is a natural number then  $P(x)$ ”). When you do so, what looks like an object “inside” the bubble turns into a variable bound by a quantifier “outside.”

I did not attempt to develop this set of ideas further in mathematics, and, as I mention below, some contemporary philosophers have developed a related theory called “fictionalism.” But, mostly avoiding professional academic philosophy, I noticed on my own that a similar, although less exact operation is underlying the playing of children and also many cultural phenomena.

When you observe children playing, you can see that they are masters of the as-if. For example, like many other children, when I was a child, together with a friend I created a spaceship out of a table and some chairs. We had chairs with removable seating that we used as exit hatches of our spaceship and then we were floating through space. We did space expeditions with that spaceship until ground control (my friend’s mother) called us to return to Earth to get some cake. This humble example shows that an as-if-structure does not need to be consistent (as in mathematics) but can be inconsistent and quite at odds with reality, and still function. If we look at the table and chairs in this example, we might notice that they too are not the ultimate reality, but are only assemblages of wood or other materials that we “take as” a table and chairs. We can employ the conceptual framework of “as-if” in such instances as well.<sup>22</sup> Another as-if-structure I inhabited at that time in my childhood (it was the time of the Apollo-missions to the moon), and only left later in life was the idea of manned space flight as a very cool thing. But if you now look back at books from the 1950s and 1960s about this topic, you can easily spot their ideological nature, promoting a “spacism” ideology. The recent hype about going to the Moon again and going to Mars shows that this ideology is still alive.

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<sup>22</sup> One might notice here that a surprisingly large number of philosophical works discuss chairs, tables and other furniture, like lecterns, as examples. One would not be wholly wrong to think that philosophy in this sense could be defined as “theoretical furnitureology,” and this afterword is obviously not an exception.

Obviously I am not attempting to give a formal definition of “as-if” here or to develop these notions into a full-blown theory, although it might be interesting to try to do so.<sup>23</sup> I’m also not attempting here to investigate their exact connections in the history of philosophy. Besides mathematics and logic, one starting point might be some brands of Buddhist philosophy; another might be the neo-Kantian philosopher Hans Vaihinger’s book *Philosophie des Als-Ob*, translated into English by C.K. Ogden as *The Philosophy of “As If.”*<sup>24</sup> In the Foreword of the English translation, Vaihinger points to Kant as the main theoretical inspiration for his philosophy and explains that connection in the book. Another starting point might be Jeremy Bentham’s theory of Fictions, as reconstructed from Bentham’s essays, again by C.K. Ogden.<sup>25</sup> (Ogden was also the original English translator, assisted by Frank Ramsey, of Ludwig Wittgenstein’s *Tractatus Logico-Philosophicus*.) Generally, what I am doing here probably belongs somewhere into the philosophical sub-discipline of *fictionalism*,<sup>26</sup> of which Vaihinger and Bentham are representatives. I developed my ideas quite independently, although one notable influence on the development of these ideas was the emic/etic distinction generalized from phonology by the work of linguist and cultural anthropologist Kenneth Pike,<sup>27</sup> although several decades passed between studying the theories of Pike and others in my university days and

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<sup>23</sup> I also want to point out a connection to the line of thought presented in my recent essay, “Proteons.” See A. Keller, “Proteons: Towards a Philosophy of Creativity,” *Borderless Philosophy* 2 (2019): 117 – 172, available online at URL = <<https://www.cckp.space/single-post/2019/06/01/BP2-2019-Proteons-Towards-a-Philosophy-of-Creativity-pp-117-172>>. The set of ideas developed there, and the line of thought concerning “as-if-structures” developed here, evolved somewhat independently of each other. The central idea of the “Proteons” essay is that all our descriptions of reality are incomplete. Our knowledge of reality consists of analytical spaces that provide consistent but incomplete descriptions of some aspects of reality. They are approximations or models of reality and we might view them as as-if-structures. So we might view all our knowledge as a system of as-if structures. This provides an answer to the question: what would happen if we leave all as-if-bubbles? While we would then arrive at an “unbubbled” reality, we would at the same time lose all our knowledge and understanding of it. We would return back to the stage of a newborn child, or enter the stage of a person suffering from dementia. We might even regress further, to the mental state of simple animals, or animals that do not have a mental state at all, like sponges. So as-if-structures provide our access to reality.

<sup>24</sup> See H. Vaihinger, *Philosophie des Als-Ob* (Leipzig: Verlag von Felix Meiner, 1911), also available online at URL = <<https://archive.org/details/DiePhilosophieDesAlsOb/page/n3>; and H. Vaihinger, *The Philosophy of “As If”*, trans. C.K. Ogden (London: Routledge & Kegan Paul, 1911).

<sup>25</sup> See, e.g., E. De Champs, “The Place of Jeremy Bentham’s Theory of Fictions in Eighteenth-century Linguistic Thought” (UCL Bentham Project), *Journal of Bentham Studies* 2 (1999), available online at URL : <<https://pdfs.semanticscholar.org/9d4a/a38ddcbc82945a2515f73cd590a13c245660.pdf>>.

<sup>26</sup> See, e.g., Wikipedia, “Fictionalism” (2020), available online at URL = <<https://en.wikipedia.org/wiki/Fictionalism>>; and M. Eklund, “Fictionalism,” *The Stanford Encyclopedia of Philosophy* (Winter 2019 Edition), E.N. Zalta (ed.), URL = <<https://plato.stanford.edu/archives/win2019/entries/fictionalism/>>.

<sup>27</sup> K. Pike, “Emic and Etic Standpoints for the Description of Behavior,” in K. Pike, *Language in Relation to a Unified Theory of the Structure of Human Behavior* (Summer Institute of Linguistics, 1954), vol. 2, ch. 2.

developing my “as-if-bubbles.” Probably, at least to some extent, I have been reinventing the wheel here. Nevertheless, this does not concern me since I’m not so much interested in the technology or history of wheels here, but in driving, i.e., in applications, and my homemade wheels are sufficient for my purposes. Or, to use Tsish’s terminology, my aim (at least at the moment) is not so much to develop a concise theory of asifology, but instead to apply my asifoscope to different phenomena. If I can inspire some readers to switch on or improve their own asifoscope and train themselves in using it, then I have reached my goal.

Some inspiration for developing these ideas further (outside of mathematics) came from the fact that I am living in a very international family. In his book, *In My Father’s House*,<sup>28</sup> Kwame Anthony Appiah describes his family as follows:

If my sisters and I were “children of two worlds,” no one bothered to tell us this; we lived in one world, in two “extended” families, divided by several thousand miles and an allegedly insuperable cultural distance that never, so far as I can recall, puzzled or perplexed us much. As I grew older, and went to an English boarding school, I learnt that not everybody had family in Africa and Europe, not everyone had a Lebanese uncle, American and French and Kenyan and Thai cousins. And by now, now that my sisters have married a Norwegian and a Nigerian and a Ghanaian, now that I live in America, I am used to seeing the world as a network of points of affinity.

I’m also living in just such an international family myself. I am married to an African, and we have a daughter. My family comprises members from different areas of the world and members living in different areas of the world. Languages spoken by members of my extended family include different varieties of English (including some from New Zealand, Liberia, the United States, and Cameroon), Tigrinia, Itangikom, West African Pidgin (in its Cameroon variety, actually this is a creole language and no longer a pidgin), different dialects of German, Lower German, Polish, Italian, Dutch, and some Bamileke languages (the list is not complete). Members of the family are living in or come from or have ancestors from Eritrea, Germany, Cameroon, New Zealand, South Africa, the US, and Italy, and there are Czech, Sorbian, Frisian, Danish and Cherokee ancestors (these listings are not complete either). The family includes Christians and Muslims from different denominations as well as freethinkers and atheists. So obviously, we differ in our political opinions, our world-views, and even in our everyday beliefs.

More generally, living in such a cosmopolitan family creates some problems. One basic set of problems is simply the result of different members having different

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<sup>28</sup> K.A. Appiah, *In My Father’s House: Africa in the Philosophy of Culture* (New York: Oxford Univ. Press, 1992).

backgrounds. The background consists of expectations and ways of doing things that are, initially, not reflected upon. We are unaware of our background. It consists of what goes without saying. The problem is that what goes without saying can be quite different for people coming out of different traditions. Initially, you don't know what it is and what the differences are. You don't even think about it. And this can lead to misunderstandings. To give a very simple, rather trivial example, one person might expect to get a bunch of flowers or a gift at a certain occasion (say, Valentine's Day). The other person however might never have heard of the existence of this special occasion. This can result in a quarrel.

The trouble with such problems is that they occur totally unexpectedly for both sides involved. You don't know what or where they are, until you have walked right into them. Once it has happened, however, you need to recognize as *this* kind of problem yet again, and enter a reflective and philosophical mode whereby you imaginatively step outside the situation, and make the implicit assumptions of each culture or tradition explicit. With time, you become more experienced at doing this and become better at avoiding or controlling the immediate emotional reactions. Of course, this kind of problems can occur in everybody's relationships, since no two families and no two individuals have exactly the same backgrounds; but such problems tend to be more pronounced if people come out of different traditions.

This can cause some stress, but this diversity can also be interesting, sometimes even exiting. If everybody behaves according to the same background expectations, life is relatively harmonious but, in a way, also flat. You don't learn much. There are ways to increase the intensity of life by confronting unfamiliar situations. You may travel, for example, or expose yourself to art. Living together with people from other traditions creates unfamiliar situations like this on its own, and tends to make life more interesting and intense in this respect, although at times also a bit more stressful.

The background assumptions that you are normally unaware of can bump into somebody else's background assumptions. It is like hitting your head against the frame of a door that is not as high as you had assumed. You suddenly become aware it is there. You become aware of your own background assumptions and become able to question them. You can then make a conscious choice, whereas before, a decision had been made for you by your tradition without your even noticing. You can gain additional degrees of freedom in that way, and you become more flexible by learning that things could be different. Each tradition constrains freedom in certain ways, and you can learn to notice these constraints. As a result, you can become more tolerant and more reflective. Life can become more interesting. "Interestingness" in this context means that something offers opportunities to learn new things.

The implicit background assumptions are called into question. One might quite accurately say that these background assumptions make up an important part of what people would call their “identity.” Living in a cosmopolitan community can result in a critical reflective attitude to this identity. You can question your identity and even the concept of or need for an identity. Instead of experiencing the otherness of others as an attack on your identity, you can let them be the way they are, and you can be the way you are. Perhaps not everybody is able to do that; but the community can also integrate some members who might lack this flexibility, for any one of a number of different reasons.

It is this kind of learning processes that the idea of as-if-structures arose from. The misunderstandings that are caused by having different backgrounds, i.e., sets of assumptions that go without saying and that we are normally not consciously aware of, can be described in this framework as background objects that exist inside the “as-if-bubbles” that some people inhabit, but not inside those inhabited by others. We bump into something that exists for one participant of an interaction, but does not exist for the other. The participants of an interaction inhabit different as-if-bubbles, yet they do not initially know that. The conflicts can be resolved by analyzing and making the as-if-structures explicit, so they can be looked at from the outside and be understood by all participants. The participants can then learn to consider those objects and properties that exist for the other or they might perhaps even enter the as-if-structures of the others. They can also learn about the properties of their own background, i.e., they can start seeing the walls of the bubbles they inhabit and the constraints resulting from it, and can then choose whether they want to continue living inside those bubbles, knowing they are there, or whether they prefer to step out. They can thereby gain a new degree of freedom by learning to notice an additional dimension along which they can move, a dimension that might have been hidden from them before. Making implicit as-if-structures explicit gives you the freedom to choose which ones you want to inhabit, and which ones should better be existed and discarded. You become the controller of these structures instead of being controlled by them.

My experience in an international family and in equally international circles of friends and acquaintances, neighbors, work colleagues, and on-line acquaintances has led me to discard the notion of *race* completely. I am living in a cosmopolitan family, but not in a multi-racial one. I am using the terms “black” and “white” only in quotation marks, and you can interpret those quotation marks as denoting the as-if-bubble these concepts come from. We can then view racisms as as-if-structures with a two level structure. In the bubble-terminology, it can be described as two as-if-bubbles, an inner one nested into an outer one. I would define racism as dividing people into different groups called “races” (the outer “bubble,” we can call this

“racialism”<sup>29</sup>) and then (second level, or “inner bubble”) assign different rights to them, claim the existence of essential differences, impose different expectations and stereotypes on them and assign different “identities” to these groups. There are different racist ideologies, but they all work according to this pattern. There is “white anti-black racism,” “black anti-black racism,” “black anti-white racism,” etc., etc. One can make “race” distinctions without coupling them to different rights and patterns of perception, i.e., one can acquire a “racialist” view,<sup>30</sup> but for what purpose? It is superfluous. There is no need for it. More generally, I think that that it is highly problematic to define identities based on the notion of race, e.g., defining a “black identity.”

Stepping outside the as-if-structures of your tradition, even only temporarily, means stepping outside your own tradition and your own “identity.” You learn to look at it from the outside.

Writing these pieces was fun and it is possible that the current collection of Tsish-texts might, at a later time, be expanded, so perhaps there will be a fourth edition. But at the moment, my time is limited, mainly due to family-related reasons. Since the “meta-level of the story [is] part of the story”, it is possible that new additions will contradict existing pieces, since there are already some minor inconsistencies between existing pieces, or that they will be written in a different style.

Now, however, it is time to switch off my Asifomaton/Asifoscope and set the channel selector to zero (really). I would be happy, however, if the readers would switch on their own, because everybody is equipped with such a device. We do not normally get an instruction-manual for it, but must instead figure out on our own how to operate these devices, although a rather large body of knowledge on this topic has been compiled over a few thousand years, known by the name of “philosophy.”

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<sup>29</sup> See, e.g., Appiah, *In My Father's House*, p. 14.

<sup>30</sup> *Ibid.*, p. 13.

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