

Looking Back

FROM: Prof. Anton Van den Brook, Special Scientific Advisor, HQ

TO: Bao Zhang 张宝, Office of the President, HQ

SUBJECT: Follow-Up

Good morning, Bao!

As a result of my recent private consultation with President Inayik in which we discussed future actions to address climate change and worldwide pollution, I did more research in the scientific archives to avoid reinventing the wheel while assessing what the most promising options would be. The results are mixed. I was able to find hopeful data on the recycling and decomposition of plastics, however I found that some theories put forward about alleged red algae being linked to the melting of the ice sheet at the South Pole were downright false. This kind of assumption was unfortunately quite common in scientific circles in the past. They were proposed by specialists whose reputation was so great that no one dared to verify them with supporting evidence, until a sole enthusiastic researcher eventually bothered to collect in situ data. In this case, one hundred years elapsed before it was found that a completely different natural phenomenon was involved, namely microorganisms capable of metabolizing iron present in certain isolated layers of unfrozen subsurface seawater. It is this process that generated ferrous microspheres, hence the red color.

We must avoid such misunderstandings at all costs. Subject to administrative approval, I would like to hire a researcher with strong scientific background to ascertain whether more recent facts have made it possible to refute or confirm the above.

Furthermore, here is another case in point concerning plastics, I read in old Web pages that a young engineering student in then Bangalore had developed a machine to recycle plastics directly from landfills. This device could process as much as five hundred tons of waste per day and plastic was transformed into sustainable building materials such as bricks, panels, etc. Unfortunately, as this was before planetary unification, and the patents were lost. Another site quoted an enzyme called PHL7 that could attack and break down up to 90% of plastic (PET) in only 16 hours. This is the kind of information we need to rediscover...

On a completely different note, I would require your assistance in organizing a short, confidential consultation trip to Geneva approved by the President. I can only be away for ten days, given the time needed for the return journey. Only the travel arrangements themselves need planning since I will be housed by a colleague from CERN for the occasion. I will let you know the exact dates as soon as I have them confirmed.

A.VdB

The professor then travels to Geneva to fulfill his promise to Sarah. After an uneventful journey, he quickly clears the customs thanks to his mission order, however Sarah does not seem to be there to welcome him. Surprised, he scans the surroundings in vain. Suddenly, there she is, coming through a small service door reserved for flight crews. She has lost weight but seems to be in good health. He gestures her and smiles, relieved.

Sorry for the delay, she says, I must now use a more remote parking area and it's been a while since I came to this terminal. I should have landed earlier and parked with the ground vehicles...

[!] You came by chopper?, replied the professor I thought you were afraid to start flying again since the accident...

No, it's a hybrid vehicle that I had adapted for metallic hydrogen. You will see that I lost much more than weight and my phobias, but, on the other hand, I gained as much if not more... Let's go! She leads him through the service door, and they wander for a long time in uncrowded, narrow corridors. I have become more active, she says while walking; I also needed to show that I trust the technology, so I found this flying vehicle tested by a startup called Jade Aviation. I met the test pilot who founded this company. I trust her a lot. I understand that she is under contract from Headquarters to test run all such aircraft.

Jade, did you say? It reminds me of that woman who transported the samples, and then later took me to Guam on a charter with her own modified Ospray. I thought she was operating in the Pacific region. It's a small world!

Indeed, Sarah continued. Here we are. What do you think of my little gem? It can carry two or three people and has a good range, thanks to the improvements we added. Get on board and buckle up. For now, she says, we can only operate in AI-assisted instrument flight, but I guess self-piloting will come when these devices are more common, and users properly trained... [She presses a contact plate with her hand and the dashboard lights up: *Ziel? - Zum Bunker!] The device rises gently a few meters, then tilts slightly and accelerates towards its destination...

Sarah relaxes and turns to face the professor. That's all there is to it, she says. We only need to wait for the landing. This is a little further than when we last met. I had to sell my property before it devalued too much because of climate change. My new home is mostly underground. It's beginning to be fashionable to do so, in order to save on heating and reduce weather-related risks. There is a woodland nearby, but it is no longer very safe to have a house in the middle of nature.

Upon arrival, a gate opens into a rocky section, then closes behind them. Sarah disembarks and invites him to follow her. They pass through a small laboratory equipped with a variety of electronic equipment, then enter the living area itself, more or less like what the professor had known from his previous visit. Space is expensive, in these premises, she says. I had to make choices. I no longer have a spa, but I kept the salt-water pool for my training. Let's go for a drink at the bar and we'll have a swim a little later, when we've relaxed a bit. In any case, it's very private!

What's this little electronics lab near the entrance, the professor asks. That, she answers, it's my new hobby. I am working to develop a secure 3D holographic system that could be used for long-distance space communications...

[?+?! The professor says nothing, but wonders: Would she have dared? She is quite capable of it... Um, better keep this to myself, for now.]

They head for the bar and have a drink with side dishes. By the way, says the professor, I am here to consult you informally on energy conservation issues, as a result of the President's public statement. We have metallic hydrogen now, but how about smaller systems for portables and decentralized power generation?

That's another story, Sarah replies. Tests with cheaper, readily available metals such as sodium would have to be done for more powerful batteries, but caution should be exercised because this metal reacts strongly with water and air. Many accidents have occurred with lithium in the past, as you must remember. Not a bad move from your president, but a simple appeal to everyone will not necessarily yield results.

He is not my president, but the President, the professor replies. However, I agree with your estimate. That being said, I am not sure that he will stay in this position for long, as you have already feared. He himself believes he was chosen as transitional president so that people may forget his predecessor and the inaction of the Eleven. Going back to electricity generation, I was wondering if it would be possible to use differences in energy levels between two neighboring dimensions or a micro-black hole bending space-time very locally, but this kind of problem would be more in your province than mine.

Indeed, she replies. I can't understand how you dream of such possibilities while dealing mostly with administration. I'll think about it, but enough talk let's go for a swim. She gets up and heads for the pool, undresses on the spot and keeps only a small monokini made of a tissue like fish scales, dives directly into the deep section and starts a frenzied crawl. The professor raises an eyebrow, but undresses in turn and dons a swimsuit, then says to himself: Wow! She swims like a pro: there she is, already coming back the other way around... How long have you been training, he says?

It's been a few months, she replies... I started after the move. I think it's better in salt water and then there is never any wind nor waves, here.

Yes! Um, I say, you really must introduce me to your prosthetist. I have no need for such, obviously, but your new implants are very realistic, albeit a little smaller than before.

You think so, do you, she said teasing him with half a smile. Take a closer look...

He approaches, incredulous, then stutters after a moment: Are they grafted or clones?

No, better than that! Remember Odo Brookensis? I took stem cells from myself and injected them into the symbiont, then applied a layer to the right spots and it only took a few weeks for the result you see... Wonderful self-repair, isn't it?

The professor suddenly shudders. What have you done, he said. Unthinkable! Introducing foreign elements into the human genome. The consequences are unfathomable.

Not at all, she replies sharply, in anger. I analyzed the DNA of the substitutes; it is mine! The symbiont copies and adopts stem cell genes and adapts to its host. Moreover, I never wanted to have children. If there are any consequences, they will be for me alone! You're too shy. Think about the possibilities of healing and life extension! Our species is endangered if we must migrate to other worlds. It will be necessary to offer these improvements to volunteers who want to risk it, a kind of compensation for the one-way trip. I want our survival and I accept the risks!

Maybe, he admits, calming down a little. But let us not forget that we are overpopulated. If the truth were to be discovered by the public, there could be a global revolt due to the fear of becoming a lower breed of humans, or a population explosion that would lead to serious food problems. The Earth could not support such numbers, and not everyone will necessarily buy this idea of spreading to other planets. Mars is not yet ready for terraforming and our ships do not have interstellar capability. I am convinced that the current "borrowed" technology is not complete and has deliberately been provided to us as such to prevent us from swarming into the galaxy... We are trapped in the magnetic tunnel of the sun until we understand how to use trans-dimensional bridges.
