TILEPADEION

I KNOW WHAT'S IN YOUR MIND

JOAQUIM CASAL



eMilenio



Joaquim Casal is professor of chemical engineering at the Universitat Politècnica de Catalunva (Barcelona) and a researcher at the Centre for Technological Risk Studies (CER-TEC). He has published several works of fiction, including Entropia minvant (Ictineu Prize 2012) and volumes of short stories such as L'esperit de fum i altres relats (2012) and Una recerca en dos temps, which received a Special Mention in the UPC Science Fiction Award 2010, Tilepadeion, Sé què penses (Tilepadeion. I know what's in your mind), winner of the Manuel de Pedrolo Award for Works of Science Fiction presented by the City of Mataró in 2014, speculates on two technological achievements: the thermobaric bomb and the enigmatic Tilepadeion, which would mean the end of equal weapon strength and privacy of thought. The paths of the intellectually restless scientist Adam Barnes and the equally restless international spy Shedarak cross in a journey that takes them from San Francisco to Akademgorodok, Edinburgh to Barcelona, in an unrelenting game of cat and mouse to find out what is being concealed, and to conceal what is known.



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The secret formula for Coca-Cola?

Many have claimed to know it and have published it, but the company has always strongly denied these claims.

Maybe it's time to...

And why not? That would be good.

The short man looks down the street cautiously. There's nobody there. It's drizzling, and slightly foggy. "Raining again. Damn the weather!" He hurries off. Nobody has seen him, but he feels he's in danger. The faster he gets away, the better.

1. THE EXPLOSION

The explosion was extremely violent. I saw a flash and was blown off my feet. All around me, it was raining stones and sand, a cloud of dust and smoke. Immediately after the explosion, total silence. I was knocked out; I'm not sure how long I lay there on the ground. When I sat up, my left arm was hurting. I felt something wet on my face and touched it: my hand came away covered in blood. I rested my back against the wall beside me and tried to calm down.

While I was recovering, a van braked a few metres from me. Two men got out and came running towards me. They spoke to me, but I couldn't hear them. I had gone deaf; all I heard was a buzzing noise. They helped me up and into the van and we headed to the offices. I saw that the side wall of the pumping station had been destroyed. A fire was spreading over the dry grass towards the stream; a man was running towards it, dragging a hose behind him. Guilt washed over me: I had caused the explosion that had half demolished the building and started the fire. I closed my eyes and tried not to think about it. My entire body hurt.

Suddenly, though, a feeling of success, triumph, invaded me. An overwhelming feeling that I had never experienced before. I had done it! It had seemed impossible, but I had done it! Where the Russians, British and Americans had failed, I had succeeded! What did it matter that the pumping station was half demolished compared with that?

The van braked sharply, bringing me back to reality; we had reached the office block. Young men in orange overalls, students on a fire-protection course, surrounded the van. They

helped me down attentively. A young woman dressed in white ran up, she said something to those who were helping me, and they accompanied me to the first aid room. Two other men came running up to me and said something. I still couldn't hear anything, only the background buzzing. It was a strange sensation: there were all these people around me, moving around doing things frenetically, but I was in total silence.

They took me into the building and laid me on a narrow bed. The young woman, who was clearly a nurse, began to clean my face with a wet gauze. The coolness did me a lot of good. I heard a distant voice ask, "Has he broken anything?" and another voice replied, "I don't think so, he can walk." Then the young woman spoke to me.

"Can you hear me?" "Can you hear me?"

I told her I could, but very badly, as if she were far away. Just then, Mr. Vidal, the head of the testing ground came in; he looked very worried. I heard him ask "What happened?" I thought of the pumping station and my stomach dropped. Then he started talking anxiously with the manager of the fire ground.

Slowly I began to feel better. After cleaning my face, the nurse asked me if I could move my arms, to see if I'd broken any bones; if it hurt I had to tell her immediately. I could move them easily, although my left arm was hurting me a lot. I sat up and told her that apart from the head wound, which was making me feel bad, and general pain, I was fine.

"You've got a cut on your forehead. It looks worse than it is. I'll disinfect it now and bandage it. Are you up to date with your tetanus jabs?"

I told her I didn't know. In fact, what was worrying me increasingly was not tetanus or the wound on my forehead, but how to explain to Mr. Vidal that I had caused the explosion. But before I could open my mouth he started speaking.

"I'm very sorry about what has happened, Mr. Barnes. It seems that the explosion was caused by a cloud of petrol vapour. Yesterday we found out that the tank had a small leak. It must have got bigger. This morning the tank was scheduled to be emptied and the crack repaired. We should have closed off the area, but I'm afraid it wasn't done. I'm very sorry about

what has happened. We'll take care of everything, any treatment you need, don't worry."

At first, I wasn't sure what he was talking about, but suddenly I realised: he thought the explosion was his responsibility: a petrol leak in one of the tanks had generated a flammable cloud, which had exploded. Then I remembered that there had been a strong smell of petrol when I passed the pumping station, but I had thought nothing of it.

It was clear, at least to me, that the explosion had nothing to do with the leak. But after hesitating for a moment I realised, not without a slightly guilty conscience, that I should accept this explanation, as it resolved the entire problem for me. Rebuilding the pumping station would be easy for them, whereas for me and my department it would've been a very serious problem. And thinking about it, there had been a smell of petrol, so there must have been a leak in the tank. And that isn't something you can leave to chance: it should have been sorted out immediately. In any case, that area of the fire ground should have been closed off so that nobody could get into it. Considering all these factors, I decided that the petrol leak version was fine; there was no need to get involved by giving unprompted explanations.

"Don't worry, Mr. Vidal. These things happen. The cut on my forehead is just a scratch, and apart from that I've just got a few bumps and bruises that I'll have forgotten about in no time at all. Don't worry, I'm fine, really."

I could see that he was relieved. He insinuated that, if I agreed, it would be better not to inform the administration about the accident.

"In fact, if you're fine, we could say that it's as if there were no accident at all, don't you think?" he said.

The truth is that I really didn't want there to be an investigation into the explosion either; the less said about it, the better. I told him I totally agreed, and noticed how he relaxed immediately.

"How on earth can the cloud have ignited? Were you smoking?"

It was the manager of the fire ground who was asking me.

"No, no. I don't smoke. I've no idea, I was walking and suddenly..."

"It must have been a spark of static electricity!"

Mr. Vidal agreed. I hesitated a minute, but then concurred: yes, that seemed the most likely reason.

Meanwhile, the nurse had finished dressing the wound.

"Get up slowly and let me know if you're OK," she said. I got up.

"How are you? Do you feel alright?"

I assured her that I was totally fine. My left arm still hurt me, but, apart from many bruises all over my body, I was alright. I had a bit of a headache, but I could hear perfectly. The nurse had kindly brushed my jumper and trousers, to get rid of all the soil and bits of dried grass. Mr. Vidal offered to take me back to Barcelona, but I told him that it wasn't necessary.

"Are you sure? Are you well enough to drive?"

I assured him that I was absolutely fine and could drive without any problems. I thanked the nurse for her care, and said goodbye to the fire ground manager and Mr. Vidal. He reiterated:

"Mr. Barnes, if you have any problems, please call me immediately and we'll sort it out. If the university people want any clarification, tell them to get in touch with me. In any case, I'll phone Professor Fontcoberta now to tell him what has happened."

I told him again not to worry, I was alright, and I went to get my car.

There was nobody in the car park. I sat in my car for quite a while, thinking. It had clearly been successful. An extremely powerful explosion, much stronger than I could've imagined! And with only half a litre of petrol. Incredible. Extraordinary efficiency of the blast wave. I couldn't believe it, it seemed impossible!

I'd have to calculate the efficiency. I'd heard the fire ground manager say to Mr. Vidal "Half the windows are broken in the extinguisher block". Perfect! I have a map of the testing ground, so I can use the distance to this block to find out the strength of the explosion and its mechanical efficiency. I decided I'd calculate it as soon as I reached the office.

I started the car. My arm was bothering me, but I could drive without any difficulty. My shoulder and back also hurt. Clearly, the next day it was going to be even more painful. But none of that was important compared to the success of the test. I was sorry about the damage caused, but what could you do. That was science for you. Luckily, nobody had been hurt. And, fortuitously, the explosion had been attributed to a petrol leak. It could easily have been caused by that. In fact, the area should have been completely closed until the leak had been repaired. It wasn't my fault they hadn't done that. Well, this way they would learn to be more careful about safety. In short, it had all been a success!

SHEDARAK I. A SPECIAL PROFESSION

He looks thoughtfully out of the window. It's an overcast, cold and drizzly day, the fog is almost covering the castle. Shedarak thinks, once again, that maybe it's time to move to a warmer climate, one where he can see the sun he misses so much.

He looks around him. His flat in Princess Street is small, but cosy. It's well-furnished and comfortable, in the city centre, with an unobstructed view of the castle and the Scott Monument. He's happy with it. Edinburgh is an interesting, pleasant city. He likes the Scottish. But, unfortunately, the climate is terrible: rain, fog, snow, cold, more rain, a sky that is frequently leaden, and a rather timid sun in the summer. He can't get used to it.

He stops looking out of the window and sits down again in front of his computer. He reads the message that he's just received again:

Subject: Device

From: Malakian < malakian@gmail.com > Sent: Sat, 17 February 2013 15.21:10

To: Sky <sky@gmail.com>

The first design is finished. However, some technical capabilities should be discussed and redefined.

Another meeting is needed.

Malakian

The message is certainly laconic, but it has sufficient information and is clear: a first version of the device is ready. But some of its features need to be redefined, and that requires another meeting.

The device he'd ordered from Professor Malakian three months ago is almost ready. The Professor has kept his word and has finished the job before the deadline, but he wants another meeting. Shedarak wonders what on earth he wants to "redefine". He will have to go and see him, the sooner the better. He smiles: he will just have to take a short break in Athens. At least he will see the Mediterranean sun there. It is a perfect excuse to get away from the rain and the fog. If he can, he will leave tomorrow. He types on his computer, finds the British Airways website and begins to check available flights: from Edinburgh, to Athens.

He is neither tall nor short, rather slim, around forty years old and dressed with discreet elegance. His face is inexpressive, he doesn't tend to show his feelings, although in certain situations he can try and put on a friendly face. He is perhaps a little dry and distant in his dealings with others, but he is aware of this and for some time has been working to improve it, though he suspects that he is rather unsuccessful. He is educated, clever, observant, patient, a good psychologist without having ever studied psychology, calculating, risk-taking when necessary but without ever losing his composure; he has all the qualities required for his profession.

A profession that, in fact, he had never planned to take up. It all began when he was still very young, two years after arriving in the United Kingdom. An engineer from a rival company had offered him a substantial amount of money to obtain detailed information, including temperatures and times, on the thermal treatment of composite parts produced in the company where Shedarak worked. The owner of Shedarak's company was exploitative and treated his employees badly. Shedarak had developed a dislike for him from soon after joining the company, so it was easy to accept the offer without much thought.

It hadn't been difficult. He knew one of the workers who produced the parts. A good man, but rather fond of drinking.

An invitation for a beer on Friday after work; the first pint was followed by another, and another, and another, until, after Shedarak had admired the excellent work on the parts, the worker explained the entire process in detail. The next morning, Shedarak had handed over the information to the engineer, and pocketed a handful of pounds in return.

Two months later, he'd carried out a similar task for the same engineer. This time, the target was an electrochemical surface treatment, kept by the company as top secret. Shedarak also managed this without any problems, as he gained direct access to the information. After this, the engineer had proposed a more complicated task, in another company.

This represented a major change, but Shedarak was beginning to enjoy the job that paid him much more than the normal salary someone like him could earn. He'd accepted. This time it'd taken him longer, but he'd had a stroke of luck: he knew a secretary who worked in the company. Jane, a cheerful, rather crazy woman was part of a group that he'd gone out with a few years before. Things had not gone too well for her. Now, a single mother, she was going through a bad patch and needed money. It was not hard to convince her, with the promise of more than generous compensation. Two weeks later he had the information.

From that time, his profession was decided. He left the company and continued to work for the same engineer. Gradually, he made more contacts and gained clients. It was all very discreet: it wasn't in anyone's interest to talk more than necessary.

He gradually moved from industrial espionage into the weapons industry, although it was a circumstantial, unplanned change. He'd never suspected that this world, in which vast amounts of money moved, existed. Once he'd specialised in this sector, he inevitably came into contact with various country's espionage services. He gained a good reputation through two successful operations, and his number of contacts increased. This had taken place many years ago. And in all the time since then, he'd never failed.

Along with this change in focus, his income had shot up. But an element of risk had also appeared. In recent years, he had been embroiled in some frankly dangerous situations that he only just managed to get out of alive. With increasing frequency, he thought that he couldn't go on like this indefinitely and would have to change career sooner or later.

Now, after booking the plane ticket for the next day, he wonders again if the time has come to retire. In fact, he'd already been promised a job, pending an interview, that he'd accepted in advance although he didn't really know what it involved. He is a professional and will have to do it, and afterwards... well, he will see. Maybe the time has come for a change in life.

He shuts down his computer and thinks about whether to eat at home or in a restaurant. It is raining outside, but his fridge is almost empty. He grabbs a coat and hat and leaves his flat. It is cold in the empty street. There are no taxis in sight. Resignedly, he turns up the collar of his coat and walks quickly down Princess Street, under a gentle, but constant, drizzle. Without a doubt, the climate in Scotland is a disaster. *Terneki plioha*! The damn rain!

2. LAIA

My name is Adam Barnes. I'm twenty-nine years old and I'm from Santa Barbara, California. The son of a Californian father and a mother of Spanish ancestry. At home, from an early age, I'd heard stories about Santander, the Picos de Europa and Spain. My grandmother spoke Spanish and I half learnt the language from her.

I studied chemical engineering at the University of California, Irvine. At the end of my degree, I worked for three years in industry. First in an oil refinery in Texas, but the work was very routine and after a year I was bored of it. Then another opportunity arose in an engineering company specialised in fire protection systems. It was an international company and I worked all over the place for them: Texas, California, Alaska, but also Saudi Arabia, Kuwait, Qatar, Indonesia, and some oil platforms in the North Sea.

Although I found this field quite interesting, after a while the work again became a little too routine for my liking: even though no two systems were the same, they were all similar. Initially, I was excited by the travelling, but I soon discovered that travelling for pleasure and travelling for work are two different things: for work there was no time, I went from meeting to meeting and refinery to refinery, hotel to hotel and airport to airport. The airports were the worst: the security checks, the hours spent waiting, the queues.

So, when Bill, a friend who'd studied with me at university and now worked at the University of California, Berkeley, told me his department had announced a call for applications for a doctoral grant, I jumped at the chance. I was interviewed by