

## "The Cathedral" Translated from the Polish by Stanley Bill

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### THE CATHEDRAL

In the name of the Father, and of the Son, and of the Holy Spirit, Amen. Izmirids within reach, seventy days from perilevium, storm in one hundred and twelve hours. Rosemary has almost leveled out the velocity vector with their vector and the Cathedral is within sight. I have it on the ceiling in a real-time image. I close and open my eyes and it swoops down upon me like a bird of prey - scrawny neck, the wings of its towers outstretched, bony talons, and a skeleton of a body.

I've taken a double dose of stupak, my head is bursting from the weightlessness. I've been trying to read Feret but keep on losing the thread after a few sentences. Token conversations with Mirton. This is a charter flight and it's just me and Doctor Vasofemgoose, who practically never comes out of hypersleep, so it's just me. I dialogue with Rosemary as I moon

about inside her, artificial day and artificial night. She has a very amiable interface. Sometimes during my exercises in the fitness room, when I'm high on endocrine secretions, I nearly forget that she's just a program. She has her priorities. She makes sure I don't feel lonely and draws me into conversations on subjects she thinks might interest me.

"So, Father, you think he wasn't a saint and there haven't been any miracles?" she asks suddenly.

"I don't have a ready answer," I reply.

"Oh, you're sure to have one, Father," laughs Rosemary.

"And what do you think?" I return the ball.

With a moment's silence Rosemary lets me know that she's thinking it over.

"I think," she begins, "that if he was insane in that moment, then it was a madness from grace. And if God ever permits Himself direct intervention, then Izmir wouldn't have been the worst pretext."

"So you believe?"

"In God? Do I believe? Rather. . . I surmise," says Rosemary.

Who knows, maybe Turing was wrong about this one too.

I check out the current data on the planetoid's rendezvous with Madeleine. Still nothing certain. On the Astronomical Center's computational meadows in Lizonne the hawcryst of the equations has grown out to almost a hectare, but still there's no one-hundred-percent conclusion. In the worst case scenario I've got a month. Could the Church really afford to shift such a large planetoid? And would this phantasmagorical Huan Ma-

chine even permit that kind of shift in the first place?

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I'm here. First day on the Izmirids. I've seen the tomb and I've spoken with Father Mirton. In the meantime the storm has boiled itself away on the other side of the planetoid. They knew where to land the Sagittarius. (No, that's got nothing to do with it; everything depends on the time of day, the torque of the rock. Unless the Huan Vector. . .).

The Cathedral stands outside the town's biosphere: it's too tall and it would puncture the dome. The Rosemary's shuttle set us down on the other side. The town itself (town! - that's saying too much: more a hemisphere of air covering a cluster of temporary habitations) lies in a shallow crater and so the black escarpment of its sloping sides blocked our view of it. This Izmirid is called Horn: it's the second in the whole cluster when it comes to size, but even here gravity practically doesn't exist. We hopped into the gruis straight away. Vasofemgoose gave me a hand with my spacesuit. These self-contained pressure suits are real monstrosities - a man has to think for half a minute before he can move a leg.

The gruis on the route from the landing field to the dome runs along a brightly illuminated traction rail, fastened to it by way of two flexible bow collectors. It looks almost like a cable car.

As we rode along the doctor pointed out to the right of us:

"There's the wreck," he said.

I figured he was talking about Izmir's tug craft. I gazed in that direction, but I couldn't make anything out.

"Just beyond the horizon," said Vasofemgoose. "There's a line running out there as well. On a pilgrimage, Father?"

"No," I replied and tried to make a joke: "On business."

I couldn't really see his face through the plastic of his helmet, but he probably wasn't smiling.

"I'm just here for a little while," he muttered. "I took advantage of the fact that people were booking charters for the evacuation. Do you think Madeleine will let us go, Father?"

I wanted to shrug my shoulders, but nothing much came of that.

"I don't know. They're still calculating."

"Yeaah."

The sky here isn't a sky, but merely the cosmos stretched out across a high hemisphere. Even worse than that: you lose the illusion of two-dimensionality in an instant. It's enough to stare at it for a few seconds and you're crushed by the monstrous abyss. Before long your mind adjusts itself to spatial imaging and then you haven't the slightest doubt that you're nothing more than a tiny speck in the ocean, a bacterium on a pebble. You can fall into a panic. People going out into open space for the first time feel it almost physically, as their minds lose all points of orientation. The falling begins and they tumble down into the infinite emptiness. There have been cases of people losing consciousness, vomiting and sobbing, even cases of madness. On the planetoid itself there's no real danger of that; in spite of everything there's some sort of horizon here, ground beneath your feet, a hypothetical plane of "down." But when you raise your head and lose it from view. . . my God. Indescribable.

We rode up onto the lip of the crater. The airlock of the dome was already opening up before the gruis. The dome presented itself from the outside as a milky white hemisphere and nothing at all could be seen through it. We entered the airlock and shot straight out again; the doors closed and opened so quickly that I didn't even notice them. I raised my head and the stars were raining down upon me once again: the dome is entirely transparent from within.

In spite of all that smoothly-polished blackness a shadowless light floods the interior.

The buildings stand in four concentric rings - the oldest in the middle, most of them two or three stories high. According to the doctor the fourth ring, on the outside, is almost entirely abandoned.

The gruis detached itself from the traction rail and Vasofemgoose switched to manual. With his left hand he pointed at the hawcryst walls we were passing and began to declaim (not over the intercom any more, we had removed our helmets):

"That's Matabozza's. They started to split as soon as it came out that we were bound for Madeleine. They were the first to calculate it. Right now they're fighting a lawsuit over the lots on Lizonne's puppies: two thousand hectares of dense analytical forest, it puts the Center to shame. At the peak of activity, five years ago or so, one third of this forest was apparently grinding out gravitational equations for the Izmirids. While they were testing the control parameters they lumped in seven heavy-metal meteors with Peanut. That was still before critical perilevium and, well, now we have the Trial of the Fourteen. I can just see the lawyers explaining

chaos theory to the members of the jury. Matabozza will probably go for bifurcation; nobody can prove that it isn't true. So that makes two massive court cases. No wonder they're cutting the budget. They're the first. While that row of arcades on the left is the NASA affiliate. In theory they're limiting themselves to monitoring. Ha! On my last visit, when the proposal to tear the black veins apart with nukes was raised, NASA came out with a veto. There was an assassination attempt on their brainiac. If you look from here - you see, Father, the green one - the UL investigation team lives there. At least they used to live there, although it doesn't look like they've moved out yet. And that section's all guest quarters. Honzl rents it to pilgrims; during wide windows he's full. Now he's praying that Madeleine lets us go."

"He rents it out, you say. Do you know the legal status of the Izmirids?"

"Ah, it's a plunderer's law, virtual land parceling. Are the rumors true? Is the Church going to save Horn?"

"Listen, Mr Vasofemgoose. . . "

"Okay, okay."

We had already passed through the center of town, which was a circular place with a fountain in the middle (great drops of water tumbled down from absurdly high parabolas). Vasofemgoose turned off after a white-walled building with exquisite Arabic architecture and then brought the gruis to a halt. He got out, waved his hand at me, and made off towards the shadows of the soaring arcades. I watched as he walked. His knees barely worked at all - it was pretty much all achilles. The guy had skill. He soon vanished into the gloom.

I switched the gruis into auto and entered the address for the lodgings the Lizonne diocese had rented out at Honzl's. The car shunted off and again I was riding through the silent town. Only now did I become fully aware of its terrifying desertedness. The whole time, right from the very airlock, I hadn't seen a single inhabitant. It looked as if it wasn't just the fourth, but all the circles of hawcryst buildings which had long been abandoned.

I only saw for myself that this wasn't really the case when I got to the main lobby of Honzl's hotel. Nothing about it resembled the hotel lobbies of Lizonne or Earth (more of an old-fashioned electronics stall), nothing except for one detail: the receptionist. The moment I crossed the threshold (to tell the truth, I soared across it, and in a much steeper arc than necessary) he got up from behind the broad counter, on which the jumbled-up entrails of a disassembled machine glistened, walked over and held out his hand. I shook it in spite of the glove.

"Father Lavone, I'm so glad that you made it after all." He was very young, thirty-five at the most. A sure, firm handshake belied the shy smile on his olive-toned face. "Jack - that is, Father Mirton - is waiting for you. Room number two hundred and two."

"Nice to meet you, Mr. . . ."

"Honzl, Stefan Honzl."

And so I met the local hotel industry magnate. I went to fetch my luggage from the gruis. My room bore the number two hundred and three. In the lift a set of handholds had been fitted: the acceleration could hurl a person against the ceiling and a careless initiate might emerge with a lump on his

head the size of a walnut.

As far as hotel luxuries went, after catching a glimpse of the second-floor corridor I ceased to entertain any illusions about the character of Honzl's enterprise. He had used standard hawcryst and most definitely had not put himself to any great expense over embellishments to the decor. Even the Rosemary was more of a hotel than this place. Bare walls, bare floor, the greenish luminescence of the ceiling, doors cut out in identical rectangles. On Lizonne such quarters would be rated below the guaranteed social minimum.

I knocked at two hundred and two.

Mirton really was waiting for me. I walked straight into some kind of vast 3D visualization. He switched it off as fast as he could and I just managed to catch sight of some complicated symbols for evolutionary algorithms. Mirton is Honzl's age and in the flesh he looks even younger than over the telephone. A dreadfully nervous man. Into the welcoming waterfall of ardent words he slipped so many affected sighs and signs of indignation that I began to suspect him of putting it on. But that's just Mirton, Mirton *par excellence*.

"Father, you don't have powers to issue any binding recommendations with regard to places of worship, do you? Uh-huh, because I was just wondering. . . Yes, I know that these are unconfirmed miracles, but if the Church decided to mobilize its resources. . . Some of the consortia engaged here would certainly be very willing to get themselves involved. I can put you in contact, Father - I mean, excuse me, Pierre - I can put you in contact with some local agents who, on behalf of the decision-makers in Lizonne, have hinted at . . . Why no, no, no, on the contrary, I've already sent out requests and

they've even found several candidates for my replacement, but somehow. . . You understand, this is my fourth year already, more or less straight out of seminary, and with the sort of people I'm dealing with here, you must admit that it's high time I went back to Lizonne; if you'd be so kind. . . At your discretion, of course. Nerves? Maybe that's it. You'll find out for yourself. What can I say? Back in the windows when it was the peak of the pilgrimages and I was celebrating such enormous masses that the Cathedral was literally bursting at the seams. . . But now. Even if Madeleine doesn't get us, there's still about a year of aplevium and then it'll be a hermitage around here, right? I know, I know, I'm complaining. Coffee?"

He went to make the coffee (there's a thermal cooker at the end of the corridor). Honzl peeped in through the half-open door to let me know that he'd delivered my luggage. I nodded my head in thanks. Mirton's room (identical to mine, in fact) was crammed full of paper printouts and the only corridors of empty space through the low-gravity clutter led from the teleprojectors. Clutter at fractional gravitation differs from clutter at 1 g like French pastry differs from bread. To tell the truth, I was sitting there uneasily for the most part because on a subconscious level I was sure that one careless movement from me would be enough to demolish the whole asymmetrical scaffolding of Mirton's chaos. I swiveled round on the chair, paying careful attention to the placement of my every limb. Behind my back, on the wall, there was a row of large black-and-white photographs of the Cathedral. In one of them the blinding rays of Lévie were shooting through its gills, the great shield of the sun emerging from the Izmiridian Tar-

tarus. Another asteroid had made a crack in it - judging by the shape it must have been Horseshoe. In the second photograph the Cathedral loomed over the lens straight out of the starry abyss and the shape of the structure could only be guessed at from the darkness between silvery points. The third photograph was once again overflowing with unfiltered light. Mirton came back with the coffee and I asked him about the photos. He got himself all flustered and began to mutter something about a hobby and that he was sort of corresponding with Ugerzo. The man really does seem to be stressed out.

In the evening (local time is standard Lizonne travel time, so I didn't have to adjust) he took me to the Cathedral, to Izmir's tomb. The place really does have something. . . uncanny about it. Later I'll describe it.



First night on Horn. Izmirids closer and closer to Madeleine, logical hawcryst of the Astronomical Center still growing (high system ergodicity).

Honzl's hotel is empty and the whole so-called town looks deserted. No luxuries here. The dome grew out of the functional hawcryst they use for military biospheres so the intensity of the light never changes, whatever the phase of the biocycle. I woke up after two in the morning with the milky white light pouring from the windows. White skin takes on a corpse-like hue in its glow. I got up and yanked at the window frame (only dumb appliances here, you can't even chat with the doors). The bottom of the covered crater slopes right down to the roundabout with the fountain in it and so I had a view of

all the circles of this silent hell. Stillness and soundlessness. Awakening in the belly of a ghostly whale.

But I couldn't get back to sleep and in the end I decided to take a "nocturnal" stroll. I pulled on some shorts and a sweater. The lobby downstairs was empty - no trace of Honzl. I went out onto the sterile white surface of the street. I had to practise walking. I made my way in a sprawling spiral towards the fountain (I could already hear its murmur in the second ring), circling the crater at least one and a half times. I passed shops of devotional items, which were locked and bolted, a medical center overgrown with hawcryst filler, and the vibrant greenery of programmed plants strangling the residential villas of scientists, the majority of whom had already abandoned the Izmirids as well (the corporations had sought to minimize their losses by spending as little as possible on fuel and the period of economical windows had now long since passed). Twice I fell over. Near-weightlessness like this is very tiring in the end: your muscles go numb, your head spins.

Eventually I perched myself on the sculpted edge of the fountain. The spray cooled my sweating skin. The blood was rushing in my ears and so I didn't hear her approach. She touched my shoulder. I shuddered and the shiver alone lifted me to my feet.

At first I thought that she was actually pregnant, as she didn't have a vocalizer on her neck or a boompack on her back. But then I noticed the speaker attached to her arm and the CFG logo on her baggy t-shirt.

"Pierre Lavone?" asked the brainiac.

"Yes. And with whom do I have the pleasure?"

"Angii Telesfer *in utero* of Magdalena Kleinert. Perhaps we can take a seat?"

So I sat back down on the sculpture work of the fountain, with Kleinert beside me.

"It's not that he weighs very much here," smiled Magdalena, "but he prefers me not to strain my muscles."

"I tyrannize over you, just say it," grumbled Telesfer. Kleinert waved her hand.

"Were you expecting my arrival?" I asked.

"Yes," confessed the brainiac. "Of course."

I recalled Mirton's words about the hints of local company representatives.

"If you're all so concerned about the Izmirids," I observed, "you could organize this yourselves much more easily. I don't know where this idea about the vast riches of the Church comes from."

"From the mysteriousness of its representatives," laughed Telesfer. "And besides, there is no 'us.' I'm just one of CFG's drones. I don't sit on the board, I don't have the right to speak in anyone else's name, and certainly not in the name of other investors."

"I get it. Horizontal structures. The Izmiridian scientist lobby is busy plotting away behind the backs of the decision-makers."

"More or less. But if the Church were to announce it was undertaking an initiative to save the Izmirids, that would be a different matter altogether. That would open up possibilities. The majority would probably get involved then. But on their own account," he snorted, "not on your life."

"Is there any kind of internal surveillance system here?"

"Give me a break, we're just talking. I can't sleep anyway. I woke Miss Kleinert up and we went out to look at the stars."

"I see." While I was talking with the unseen brainiac my eyes had been wandering over the bright façades of the nearby buildings. Now I winked at Kleinert: "Have you been carrying this egomaniac around for long?"

"Oh boy, it'll be four years already. He's not even that bad. . ."

Telesfer raised a clownish lament.

"Here we go again, now he's going to cite encyclicals and condescend to have mercy upon me. 'Prideful child,' he'll say; and once again. . ."

"Calm down, calm down. So what exactly is your proposal?"

"There is no proposal," he broke off. "We can only encourage you, Father. Because they're waiting for your report over there, aren't they? We're not so naive as to believe that one word from you will shift the planetoid, but it will certainly weigh upon their decision."

"I can't quite imagine what the means of this encouragement might be," I muttered. "Can you show me any proof of the miracles?"

"So only Izmir's supposed sainthood interests you?"

"No. A great many things interest me. The Huan mystery, for instance. But if you're talking about what interests the readers of my report, then yes, you're right: it's Izmir's sainthood."

The brainiac was silent for a long moment. Magdalena churned the water in the fountain basin with drowsy movements of her hand.

"Please visit me tomorrow," replied Telesfer at last. "In

the main CFG laboratory. The computer will be notified. After six pm. So long as you're really interested in 'a great many things' . . . Well, I wish you pleasant dreams."

Kleinert shook my hand (her fingers were wet from the cold water), then stood up, turned round, and with a stately, measured step went off towards one of the streets which radiated out from the place.

I went back to the hotel and recorded a report of the conversation.



Now the Cathedral. Tremendous, magnificent. You emerge from the biosphere airlock and you see it - the Cathedral - in front of and above you: a jagged shadow upon a background of stars. You need light to appreciate its architecture and it's precisely light that you don't have: Lévie is too far away, Madeleine not yet close enough. Now, in the long period of cosmic interhelium, the Cathedral is more than ever a Mystery. A winding track leads down the slope of the crater from the airlock to the main portal and you descend upon a path hacked out of the cold rock, with a mandatory safety line fastened to your belt by the machine at the external gates. Curiosity usually gets the better of a person as he goes down and so he switches on the powerful reflector on his spacesuit. But the white finger of light can only touch individual, disparate fragments of the construction, shifting from one to another in a bright cuticle which slides across the surface of the Cathedral: here and there, here and there. Going down it's hard to keep the light fixed on one and the same point, so a person

stops, and stares, and runs the warm finger over the rocky creation. The descent from the airlock (two hundred meters) can take a full hour. I know, because that's precisely how long it took in my case - Father Mirton was waiting by the tomb. He said later on that he had been expecting this. Some people just sit down on the slope and fall into a kind of catatonic enchantment: only the alarms on their spacesuits wake them. Small wonder. It's not a building, it's a sculpture. But it's not a sculpture either. Ugerzo knew when he ordered the spec-hawcryst that what he was cultivating here wouldn't serve any normal purpose, that the Cathedral's functionality had no significance in comparison with its symbolism. There was only one limitation: Izmir's tomb and the altar, which were both placed inside, encompassed by an autonomous mini-biosphere. Some free space had to be left over for the faithful, but the rest had been left to the imagination of the designers and the ergodicity of the growth algorithms applied. The sowing encompassed a circular area around the grave - some four hundred square meters. In the near-weightlessness of the planetoid the hawcryst shot up nearly a quarter of a kilometer. When you look at it from the direction of the crater biosphere's airlock this is how it looks: a hyperboloid body with vaulted ribs in the middle unfolded into crooked wings, the asymmetrical towers on its flanks tipped with rocky efflorescences of ragged leaves, like pieces of carbon shrapnel frozen by the black vacuum at the very moment of explosion. The form speaks of the flight of a soul wrenching itself away in terrible agony from the fetters of matter towards the starry void. When the light begins to trace a line here - an edge, a recess, a rib of the cupola - it soon wrings sharp details from the

gloom, dripping heavily with hard shadows, and the eye falls into a spiral of curiosity. There's no end to these details. The fractal algorithms of the hawcryst have lent any possible shapes seemingly fractional dimensions and the eye quickly loses itself. Escher-like spirals of stairs climb around the towers toward freeze-frames of death. From a certain angle they even look like paths that a man might actually tread, but in reality, once the light illuminates a greater part of the Cathedral, you see that it would have to be more of a spider than a man, and even then it'd finish up nowhere in the end. The asymmetry of the towers creates the impression that the whole latticework of the hawcryst is tilting towards the crater, towards the onlooker, towards the right side. At the same time the perversity of the recursive algorithms responsible for the shape of the main nave's external surfaces gives the sense that the Cathedral is being eaten away by some cancer of the stone, or in fact that the viewer is actually looking at the final, dying form of the building, and that before long - in a day or two - it will cave in upon itself, subside, decay, the soaring ribs will crack and splinter under the burden of tortured stone, the spine, crowned with a cross, will collapse into the shadowy space of its internal organs, and a slow avalanche of the Cathedral's brittle blood will pour out through the gaping jaws of the protruding portal. The form speaks of the anguish of dying alone, of the feebleness of matter, which poisons the invisible spirit with despair. And if you put out your light and sit for a moment on the slope, or perhaps walk backwards and forwards along the safety track, if you do this your hungry eyes will catch a few isolated rays of light shooting out from the tall mass of shadow. The stars shine

straight through the Cathedral. After all, it has neither walls nor a roof, since they're of no use to such a building - in any case, it's not a building - and the transparent hemisphere covering Izmir's tomb and the altar fulfils all the necessary functions alone. The fact is that we're not dealing with an ergonomic mass here. The interior of the construction isn't empty - though a person can't see this - but is filled with the same mysterium of hawcryst transformations that has sculpted the visible parts. And so at certain hours certain stars are able to send their light straight through the Cathedral. A person descending towards it registers flashes of luminosity coming every so often from the gigantic stain of darkness, almost like disintegration signals in a vacuum chamber: shots from nothingness. Then he enters the shadow of the portal, the curtains of frozen waves close around him in a thicket of iron bushes, and he wades into the flood of a lake of pain. A turn of a corner, light - and he's standing in front of the tomb.



I've been to visit CFG.

The main laboratory occupies three two-storey buildings arranged in a horse-shoe around a mini-garden in which some deeply reprogrammed trees are growing. The computer really had been notified and it let me in through the main gate into the garden. The sprinklers sprayed me with salvos of cool drops. I could hear birds, but their chirping was probably coming from speakers.

A thin black man in a checked shirt came out to meet me. He

introduced himself as Mood, Telesfer's assistant. From the garden we went down into a shadowy basement. Glass hawcryst divided the expansive room up into a dozen or so office cubicles or display cases. In one of them Magdalena Kleinert was sleeping on a divan. Mood pointed towards her with his chin and then handed me a headset.

"I've temporarily switched the audio," he whispered.

I put on the headset.

"Good morning, Father," said Telesfer. "Have you heard the news? The Astronomical Center's logical hawcryst has stopped growing."

"Yep."

"Go over to the table beneath the palm. There's a glasses case. Please be so kind as to put them on."

I took out the glasses and put them on. Telesfer visualized as a violet-colored elf in a purple jacket. He was smoking a cigar and he beckoned with it for me to follow him. Steering well clear of the softly snoring Kleinert, he led me to the last row of display cases. Some small, misshapen lumps were turning black in blocks of hawcryst by the wall. The Telesfer elf pointed at them with the smoking cigar.

"The number of boreholes drilled by CFG on all the Izmirids has exceeded one thousand. You know what we've been looking for: the Huan Machine. Well, we haven't found it. These are fragments of some of the planetoid cores. What's so interesting about them? After all, you're looking for things of interest, aren't you? Well, here's something interesting: the structure of the iron macro-particles of these cores. This one's from a depth of one kilometer, this one's from almost two, this one's from the very, um, heart of the planetoid."

Telesfer waved his hand and a cloud of dark brown smoke unfurled in the air above his head from some under-dimension. I straightened the glasses and moved closer, squinting my eyes. The cloud seemed to be composed of multiple heavily-compressed layers: brown, yellow and black blotting paper, one after another. Not only that, each successive layer had spread out the zones of denser and less dense material in different patterns, so that in its entirety it gave the impression of something in the nature of a random filter.

"That's more or less how it looks," said Telesfer. "While in the larger Izmirids - those like Horn, for instance - we find this structure everywhere below a certain depth. We planted hawcryst for the logical interpolation of these macromolecules, but the hawcryst fell into starvation and we didn't learn anything. There's no such thing as a natural path for something like this to come into existence and in any case we don't know the right boundary conditions. It isn't a mineral or any form of life according to the Hawaiian definition. It doesn't display any capacity for self-replication. We call it Black Wool."

"The Huan postulates?" I asked.

"Nothing," replied Telsefer, perching himself on one of the transparent hawcryst blocks, in which a lump of Wool in the shape of a kidney was lodged. "There's no mechanism for converting the energy, there's no general power source of any kind, it doesn't react on any level. It doesn't fit the Machine at all."

"Huan postulated active space-time moulding," I murmured. "Of course the energy cost would have to be enormous here. But in that case maybe it's something else."

"What?" Telesfer shrugged his shoulders. "There's no doubt that it manipulates gravitation. Apart from that, without knowing the mechanism itself - and ultimately we haven't the foggiest idea about it, our spokespeople can say what they like, but really none of the companies that have invested in research here in the hopes of finding the Holy Grail of physics has advanced even a single step - so, as I say, without knowing the mechanism we can't even speculate about the forces required to engage in manipulation. Huan's default corrective vector was never as large as it would appear; all you have to do is skillfully manipulate the control parameters of the system. You need constant, long applications, but relatively weak, as long as they're well targeted and at the right times."

"Yes indeed, very interesting," I admitted, now looking at the lump of Black Wool, now at the fancy simulation of its molecular structure.

"And that's not all." Telesfer got up, walked past several display cases, and pointed with his cigar at a large diorama depicting a geological cross section of an Izmirid with the name of Kolos (as it appeared from the illuminated legend).

"Take a look at that, Father. Ah, here, this layer."

"Uh-huh?"

"The path of the analysis. . . Ah. And this distribution."

"A gamma-ray burst?"

"Precisely." Telesfer nodded his head. "Rozvorsky, mid-spectrum."

"How long ago?"

"It's hard to tell. You can't rely on planetary geology here or dating by epoch clock or solar clock either."

"Isotopes?"

"Unfortunately that gives a large and very blurred spectrum, since we do the dating by layer and after all the whole thing is just flying through a vacuum. One hundred to twelve million years."

"Phew. Of course. Any known exploded neutron stars in the realm of ninety million light years? Any matches?"

"And what would we feed the hawcryst?" grinned the violet-skinned elf. "The diameter of the Milky Way comes to one hundred thousand light years. Several hundred billion stars. Give me a break."

"Right. Have you found this trace on all the Izmirids?"

"Ah, you see, Father, in fact we haven't. Only on the four largest, as well as on Whistle."

"And the Black Wool? Is there some kind of relation?"

"The Black Wool is everywhere; more here, less there."

"The interpolation of the system's trajectory."

"With the Huan Vector. . .?" Telesfer burst out laughing. "How?"

"Oh, I see." I'd gotten mixed up, because in all this I was forgetting that the tests had been abandoned shortly after Huan. This kind of mechanics only has an effect on macrodeterministic systems in which no unanalyzable moderating factor appears. "In any case a few passes over Madeleine would give the same results. But what could the Izmirids' maximum speed be in the interstellar vacuum? In a ball-park figure. If this gamma deluge had come from so far away, it would have left analogical traces all over the area. And here. . ." I pointed at the diorama ". . . I can see that it's damn heavily blasted. Lizonne would be a sterile planet, a muon cremato-

rium, zero life. So, no, it must have hit them at a considerable distance from here. And quite a long time ago. Does anyone here believe in intergalactic migrations? I don't think so. *Ergo*: let's look along the arm. Maybe you could even derive a rough formula: a relation exists. . ."

"Very nice, very nice," Telesfer nodded his head, "But where would that get us? Even if we did unambiguously identify the source neutron star in the end. Since the distance is so great that it didn't toast either Lizonne or Earth, then it's by definition a distance many times beyond the range of our snail ships. Not to mention the distance in time: light from thousands of years ago. The mystery is here, deep in the Izmirids." Telesfer stamped his foot and pointed at the floor with his cigar. "And it's here that we have to find the answer. But how much time do we have? Two months, then Madeleine, then the devils know what."

"It's not in my power. . ."

"Maybe it isn't, maybe it is. How can you know that, Father, since you haven't tried? Yes, it's true, I admit it: they sent you here only from bureaucratic scrupulousness. The Church is an institution like any other, and it's had plenty of time to ossify. . . But that doesn't change the shape of things."

"You don't understand, Mr. Telesfer!" I have to confess that he'd managed to irritate me. "None of this has any significance for the ruling on the supposed miracles of Izmir Predú! Even if you dug up a whole UFO full of mummified aliens. It doesn't have the slightest significance!"

The elf blew out a series of smoke rings.

"Maybe it does, maybe it doesn't. How can you know that, Father?"



The Astronomical Center's logical hawcryst stopped growing and at last it has bloomed. Madeleine will catapult the Izmirids out of Lévie's gravitational well: that's how the equations have come to completion. This means that within three weeks we all have to evacuate from Horn. Nobody will ever see the Cathedral again, nobody will ever stand in its shadow. Once it leaves Madeleine it will never again throw a shadow. Never again - or, in any case, not in any time comprehensible to our human measure. Today I sat by Izmir's tomb, beneath the sphere of the Cathedral's interior biostasis. The tomb is situated between two rows of pews, in front of the altar with the tabernacle shining behind. The pews stretch out as far as the labyrinth of the exit, each one about twenty meters long. Including standing room there's enough space for more than four thousand of the faithful. Truly a Cathedral. Of course in the sense of canon law a cathedral it is not, but this is the name that Ugerzo gave his project and nobody who has once seen the building calls it anything other than simply that - the Cathedral. From the inside (it's absurd) it seems even larger. The light here disperses from under the hemisphere along various lines of sight and there are no shadows to be seen at all. But in reality the place is swarming with them once you come out from under the protective hemisphere. The Cathedral's interior isn't empty - to tell the truth, rather than talk about the building's interior, it would be better to talk about its entrails. When you raise your head - that is, when you fully tilt it back - you see that where in real, normal cathedrals a

monumental emptiness would burst out for dozens of cubic meters (that multiple sharp in the architectonic score), in the Cathedral the space where the emptiness should be is filled with a chaotic proliferation of hawcryst stone: twisted intestines, ragged lungs, a network of veins, dense in one place and sparse in another, all spreading from wall-skeleton to wall-skeleton, from a comb crowned with a cross to the very surface of the hemisphere. Nothing here serves any purpose; there is no particular teleology for any of those hanging masses in the upper bright-darknesses. The designers of the initiating seeds didn't provide even approximate specifications for the internal architecture and only the most basic input data went into the first hawcryst: the range of the boundary conditions and a few initial steps for the transformations. This is how originality algorithmizes itself, mechanizes a spontaneous art, and conjures the interactions with the cold planetoid into form. Ugerzo paid out and Ugerzo received. Even the catafalque of the supposed saint, stylized into the gravestone bas-relief of a crusader (one of Izmir's legs rests upon the ankle of the other), constitutes an organic part of the Cathedral, growing out of the floor and covering the rhomboidal grave in which the surviving members of the Sagittarius's crew laid Izmir to rest.

I remember learning about the tragedy of the old R-L tug craft on my expedition to Greorne. (How many years has it been now? My God. . .) We'd descended from the Murabiks and set up camp in a small valley entirely plunged in the shadow of the Fourth Murabik. We needed a few days to wean ourselves off the oxygenator; our veins were still burning and our brains were generating fleeting hallucinations. We were sitting in our

tents, somebody switched on the television, and then I heard about the Sagittarius. The rescue mission was already in progress, the chances were being assessed, the tug craft was flying into a wild hyperbola, a side explosion was throwing it slightly over the ecliptic, and all proposed paths of interception required costly active maneuvering from the pursuers. Fuel limits alone excluded ninety percent of vessels. The rapid weak-solution hawcryst yielded a general conclusion pointing to the Lizonne Operating Vessel Fellini, and so this Fellini, without a living member of crew on board, and thus with enormous supplies of oxygen, water and food, was now speeding after the stricken ship at a steady 4.6 g. But everything was conspiring against the Sagittarians. On literally the last reserves of the fuel they had been left with after the initial explosion, they weren't capable of any radical changes in course. Heading *de facto* towards Lévie and falling into the star's tight gravitational embrace, they had lost maneuverability as well. The calculations up till then clearly indicated that so much oxygen was constantly escaping from the closed cycle, as a result of a leak which it was impossible for them to patch up themselves, that they would all suffocate before the LOV Fellini arrived. Last, but not least - Lévie's magnetic blanket was beginning to bend and warp, signaling the approach of a solar storm. Lévie's storms were known to be fatal, even for people working on Lizonne's orbit, and at the alarm signal everybody would take cover in the thick-walled shelters. The Sagittarius, however, was designed to operate in tandem with larger vessels and only in exceptional cases to carry people on board (in cases like this one, for instance, when it served as a makeshift shuttle), so it wasn't equipped

with this kind of shelter. Truly, the accumulation of cataclysms was impressive; they gathered together above the wretched crew members of the tug vessel like dark black clouds of fallout, each one of them fatal. In our tent in the shadow of the Murabik we watched the faces of the four feral travelers heading for extinction: three men and a woman, engineers for Rothschild-Larus, bathed in sweat and filthy. Their looks, numb with the unrelenting terror, reached us with a seven-minute delay. We peered through the big screen into the semi-dark interior of that ship of death, that Flying Dutchman of the vacuum, hungry in a most unchristian manner for the authenticity of their suffering.

The whole planet was offering advice on their rescue (*notabene*: a great media success) and the first piece of advice was this: to make use of any planetoids on their course as shields from the solar storm. In fact, a group of them were located in an orbit that demanded only a relatively low throttle of momentum from the Sagittarius. This sort of approach was correct in every respect: they had to deal with their problems one at a time, starting with the most urgent. And so the tug caught up with some asteroids and landed on one of them in a place which - as it was supposed - would guarantee the maximum safety during the storm. This didn't improve anybody's mood, because by now the Fellini's time lag had been precisely calculated and everybody - most of all the four Archers themselves - knew that this clever hiding away from Lévie's fury would only postpone their execution, and even then by less than a hundred and eight hours. The storm thundered in the radio receivers and with every passing minute they were closer and closer to death. The Fellini would arrive to find a ship of

corpses. The hawcryst had almost immediately bloomed into a solution obvious to the majority of Lizonnites, even without the benefit of its calculations: namely, that what would not suffice for four would be enough for three. On the Sagittarius they had known this from the very beginning; it was enough to look into their eyes to see that. If they made the decision early enough and then ran on the lowest curve of energy demand, that is, if they slept. . . They knew it all too well and they were counting down the hours and minutes. The R-L board had insisted on non-stop transmission mainly for this reason, so that uninterrupted monitoring of their activities might prevent any assassinations or desperate instances of mob law. The effect was such that the poor wretches largely kept a grim silence and just scowled, now at each other and now at the screens. On Lizonne bets were being taken as to the further course of events. Would they survive or would they not? Who exactly? What would kill them? Who would kill whom? Who would be the first to snap? So on and so forth. They landed on the planetoid: a few fortunes were made. The storm didn't kill them: a few people got poorer. Izmir Predú exited the tug craft onto the surface of the asteroid and dehermeticized his suit. Heck, there were even some who bet on that too.

The Fellini rescued the remaining three. Before transferring into the undamaged LOV they buried Izmir in the cold, black rock of the planetoid. In his final recording, Izmir had asked to be buried there on that cosmic boulder. At the same time he had said farewell to his family and friends and commended his spirit to God. Psychologists later analyzed every tremble in his voice, every catch in his breath, every single one of his most banal formulations. Was he sane or was he not? Had the

pressure prevailed or had he taken the decision in full presence of mind? Even before that the reporters had traced back the life histories of the entire foursome and now the earliest family reminiscences from Izmir's childhood were being dragged out into the light. The trouble was that it soon became clear he was a completely average person. Even bearing in mind the context in which he was presently being remembered, he still appeared in these artificially induced retrospections to differ from the mean in no particular way. He had been a good employee, but his file wasn't exactly bursting with commendations either. He had been a practising Catholic, but it was hard for those questioned to come up with any examples of ostentatious religiosity on the spot. He hadn't committed any crimes or misdemeanors (the Lizonne police didn't know of any). There was no evidence of any earlier psychological wobbles either. So what then? Who was Izmir Predú and how exactly was his deed to be described?

The engineer's body remained on the planetoid and thus from the mouths of the commentators it became Izmirid. The Sagittarius and the Fellini stayed there long enough in the end so that the data collected on the cluster might suffice for the Astronomical Center's analysis. Rothschild-Larus had demanded an account of the costs of recovering its tug craft and they needed a precise prediction of Izmirid's path, which - considering the proximity of the sun and the chaotic structure of the cluster - was not entirely clear to the onboard computers. But the Center's logical hawcryst, against all expectations, from a single little bush of what were after all simple simultaneous equations, grew out to tens of meters and demanded further data about the planetoids. This was no mere cluster,

no moving trash heap left behind after the smashing up of a larger object: it turned out that it was moving along a constraint curve and that the relative positions of the asteroids belonging to it were changing frequently in direct defiance of Lévie's gravitational field. Everything pointed to the existence between the moduli of the planetoid complex of a stiff bond of unknown character, which was neutralizing certain external influences. The first to clearly articulate this was Doctor Huan from the Center, who thereby immortalized his name. Suppositions regarding the nature of this bond were essentially limited to generalities about exotic matter, as well as exotic technology (aliens entered into the guesswork and the journalists loved it), since neither the Sagittarius nor the Fellini has registered any phenomena associated with known forces. The interest in the Izmirids (the name had quickly expanded) grew all the more and an expedition to the planetoids seemed a foregone conclusion.

Sure enough, that's just what happened on the complex's next return (a return which wasn't so certain, considering the Huan Vector). Among the sponsors of the enterprise were the Lizonne government, R-L, CFG, as well as NASA. This was reflected in the selection of the crew for the Laos: to say that it was rational would be to tell a barefaced lie. In the lineup of the team, among others, was the nephew of R-L's vice-president, Stefan Ugerzo. This nephew was an amateur astrophysicist, but he was dying of mercuriosis and his uncle wanted to give him some pleasure in life before he died. This very same Kotter Ugerzo is the direct cause of the whole affair with Izmir's sainthood. In the third week after his arrival on the Izmirids he announced to all and sundry that Izmir Predú had heard his

prayers and interceded for the remission of his disease. Kotter apparently visited Izmir's tomb every Laos night (the on-board computer confirmed his exits). Apparently he returned to health within three days (the diagnostor on the Laos confirmed a significant improvement in the state of his health). Before the Laos had even made it back to Lizonne - with Kotter on board, happy and filled with a sense of mission - before the specialists had verified the news of the miraculous remission (in the end they verified it and Kotter made a complete recovery), before those few months had passed, the mighty industry of cosmic pilgrimages was already in motion in the orbital ports of Lizonne. Saint Izmir of the Planetoids! I remember the bishop nearly had an apoplexy. Of course a request was sent out to the Vatican, but in the meantime we were left here by ourselves, locked in the bubble of our event horizon. I was there and so I know the great caution with which the decision was taken. The first, nigh on involuntary, reaction is always the same: "We are refraining from making any comment. The matter demands detailed investigation, free from the pressure of expectation." It's easy to make a decision, but much more difficult to back out of one; in the case of the Church, there's practically no way. That's why we start from the position of devil's advocate as a rule, and rightly so. We wait. But the world doesn't wait with us, and before we knew it the Cathedral, funded by Stefan Ugerzo, was growing on Horn.



By now we all know the coordinates of the point of no return. If this wasn't a farewell banquet, then it was certainly

something very similar to one in mood.

The party was jointly organized by NASA's Izmiridian affiliate and Matabozza. Tables of beverages were laid out under the arcades of the NASA administrative building, which is already almost empty.

A lot of people turn up their noses at this fraternizing of Matabozza's with the overseers. Vasofemgoose grabbed me right by the entrance and enlightened me straight away:

"They know they've lost them now," he muttered over his glass, indicating with a jerk of his head the nearby discussants. "They're minimizing their losses."

Vasofemgoose works for Space Investments Ltd., by chance a subsidiary of Rothschild-Larus.

"There don't appear to be any lamentations," I observed.

"That would be in very poor taste," smiled Vasofemgoose. "But if only you knew, Father. . . You just don't move in these circles. . ."

"Heck, even here there are 'circles.' How many of us are left? Two hundred people?"

"Something like that."

"And you still have to hobnob. Well, what are they saying? At least by now I hope they've stopped expecting any miraculous interventions from the Church. . ."

Vasofemgoose gave me an astonished look.

"I don't know where you got that idea into your head from, Father. Nobody seriously expected that."

"Apparently I really have been moving in the wrong circles."

In fact, these "circles" of mine over the two weeks of my stay on Horn have meant almost exclusively pilgrims and people who've had some sort of contact with them over the years. By

now the number of interviews I've conducted has exceeded forty.

Then, looking over Vasofemgoose's left shoulder, among the attendees of this little wake I spotted the one pilgrim I hadn't had the chance to talk with and about whom I had heard so much from so many of my interlocutors. He was leaning against a white wall and slurping a thick liquid from a narrow glass. He was dressed all in shades of gray: saggy sweater, dirty trousers, even his skin was an unhealthy gray in the muted light. His name was Gazma and he'd been on Horn for over three years. He claimed that Satan had appeared to him; he claimed that God had cured him from serious schizophrenia over Izmir's grave; he also claimed that he was destined to die on the Izmirids.

But when I approached him and asked (he recognized me, he had it in his eyes) he denied it.

"No, no, no. You don't ask, Father. You leave me alone, Father."

I leaned towards him. He was shorter than I and he seemed even shorter now, standing hunched over like that against the wall. I leaned forward, looked him in the eyes, and mentally violated him. I don't know what came over me. The obscene defenselessness of certain people would provoke even a saint and Gazma represented just such a victimological phenomenon.

"He's alive," he whispered, throwing a glance to either side. "Have you been in the Cathedral, Father. . .? Have you seen. . .?"

"Why haven't you left?" I asked. (Of course I knew the whole story very well).

"I can't," he groaned. "I can't, I can't, I can't. He has me

in his clutches. Whenever I try. . ."

I knew that he'd tried at least twice. Then his schizophrenia had come back, or whatever it was that was really bothering him, and by then organically incapable of leaving Horn (he would fall into a kind of epileptic convulsion) he had returned as quickly as possible to the surface of Izmirid, to the Cathedral, to Izmir's tomb. Mirton related that he'd found him there sleeping in the legs of the hawcryst catafalque. More than once Gazma had taken Mirton by surprise, when he suddenly and unexpectedly emerged from somewhere in the entrails of the Cathedral and rushed back to the internal biostasis on his last mouthfuls of air. Then, after replenishing the supplies of his spacesuit straight away, he would disappear once again - a gray pilgrim in the kingdom of shadows. Mirton had developed a mild neurosis from this. "Whenever I celebrate mass now, whenever I approach the altar," he admitted to me, "In spite of myself, I peer into the darkness and squint into the senseless chaos of the hawcryst, certain that he, Gazma, is staring back at me with those chameleon eyes of his, from out there, from the heights, from the wilderness of stone, as motionless and misshapen as it is."

"But really. . .?" I continued to question Gazma. "What was it?"

"What?"

"We have to set up a serious conversation. You don't have anything against that, do you? I wouldn't want to miss out such an essential witness."

"Of course, of course. . ."

At this particular moment I was entirely disinterested by what Gazma might have to tell me. There was only revulsion for

him and revulsion for myself. Opposing vectors shoved us apart and I returned to the outside tables.

Here Telesfer tracked me down. Magdalena Kleinert was nibbling languidly on a piece of some exotic fruit and she just winked as a sign that she'd noticed me too. Oftentimes I'm struck by the artificiality of these rules of etiquette, inherited from the times of wild biology. After all, the brainiac sees and hears through the eyes and ears of his carrier too.

"When are you taking off, Father?" asked Telesfer.

"I don't have confirmation yet."

"How's the report going?"

"What the heck does that matter now? The potential costs are growing almost exponentially. Come on, admit it, you never really believed in the Church's intervention. What was the point of this farce?"

"So what do you think, Father? That I was making fun of you?"

"Everything that you told me and showed me was true. I checked. The Black Wool, the gamma-ray burst. Only the supposed readiness of the corporations to participate in the costs of the enterprise, as it turns out. . . . Something doesn't add up, Mr. Telesfer."

"You know, Father, there are different kinds of corporations."

I would have looked him straight in the eye, but of course I couldn't really do that. Magdalena was still nibbling away at the juicy piece of fruit. I raised my eyes towards the sky, that is, towards the fearful cosmos, muted by the brightness inside the stasis. It seemed to me that I had suddenly comprehended everything and now I digested my new knowledge.

"You people were looking for a cover," I muttered. "An obvious dummy. But who guaranteed the funds?"

"What 'people'? What 'people'?"

"Sunday conspirators. Not entirely certain, but still with a strong motivation all the same. Some kind of non-commercialized values would have to be worth considering, otherwise. . . Uh-huh? Mr. Telesfer?"

He laughed through the speaker.

"Is the Church based on commercialized values?"

"That's why it seemed to you that you might find an ally here."

"Mistakenly."

"Mistakenly."

"The Church is only concerned with Izmir's sainthood."

"Exactly."

"The Church is not concerned with God's children under alien suns."

"Oh, for pity's sake, Mr. Telesfer!"

"Well?"

"That's old news, there have already been two encyclicals, we assimilated the possibility long ago."

"And the certainty? Can you handle that?"

"Let's come back down to earth, shall we?"

"I'm stamping my foot. This is earth. And you know what's in it, Father."

"Facts, Mr. Telesfer, facts. Nothing's been proven."

"Which is exactly why. . ."

"Who? You? Then who exactly? A few scientists?"

"Because we believed, Lavone."

"In what? In Wool?"

The brainiac said nothing in reply; Kleinert spoke up instead.

"He really devoted himself to this," she smiled melancholically. "I feel sorry for him. The poor old thing could already see his name in the encyclopedias."

I'm relating this conversation so precisely, because I suppose that Telesfer was being completely honest by then. Or at least as honest as it was possible for him to be. If I could have seen his face during the conversation I would have understood everything. That's what I think.



Madeleine is in sight. Even from within the Cathedral, from within its biostasis: rays of vivid purple are shooting inside. I'd been waiting for Gazma half an hour already. I took off my spacesuit and set it down on the first pew, next to my helmet. I prayed for a little while. Gazma still didn't appear. Instinctively I raised my head and set about contemplating the tangled entrails of the Cathedral. The feeling wasn't as strong as Mirton had described it, but I too turned every hundredth thought to the labyrinths of towering shadows, with the conviction that somebody, Gazma, was watching me from somewhere out there. I went up to the very border of the biosphere so as to inspect the hawcryst rock from up close. The carvings were very complicated. One pattern merged into another and the geometry of congruent figures led the hungry eye beyond the range of the light. Of course they weren't carvings as such; after all, nobody had hewn them, nobody had worked the rock of Horn. From the very first seeds the form conceived

had bitten into the cold ground of the planetoid and started a wave of nano-transformations until, one particle after another, the monument to Ugerzo's thankfulness had been raised. But how much could have been contained in the original algorithms of the seeds, in the architectonic codes of the hawcryst? That face - it was a face, I had no doubt of it - that face and that figure, and that meniscus of stone, and the overhang of empty-socketed skulls, and that procession along the intestine higher up, along the string of darkness stretched straight through the loins of the Cathedral, that procession of skinny forms, that *danse macabre* of inhuman skeletons, none of this could have been found in the code of the initiating seeds. I don't know their precise capacity, but it seems to me improbable that the designers wrote into them the future position of every single speck of Izmiridian mineral. That's not how the ergodic hawplanning works at all; you have to leave a significant margin to chaos. So if it wasn't the hand of the designers, if it wasn't their artistry, then whose was it? Who had done the carvings? Who had given the brittle angels their charm, the heads of the stalagmite demons their ferocity, the wavy recesses of the Cathedral's internal skin their illusion of fluidity? Who had created this work of art? I made up my mind to read a little more about nanogenic technologies.

I climbed up onto the backrest of the pew and from there onto the bony projection of one of the Cathedral's crooked ribs. Here, halfway along the main nave, from under the surface of stone, as if through a thick distorting film, their outlines appear, or show through, as multiple heads of natural, lifelike proportions. The shadows spill softly over cheeks and brows. I moved my hand. The tips of my fingers were

cold, very cold, and the skin was chapped. I wrenched my hand away, fearing that I might get frozen stuck - that would really give them something to laugh about. Too violently, much too violently! It's the Izmirids, minimal gravity, and the slightest jerk back can hurl you up for meters. I soared in a shallow arc, slammed my back against the protective barrier of the biosphere, which partly absorbed the force of the impact. It flung me back towards Izmir's tomb. I managed to grab hold of one of the pews, then I whirled round in the air and smashed against the floor with my left shoulder, my skull thumping against the stone. The words come easily now, but then I was certain of at least a concussion. It wasn't the fact that I'd lost my vision but pain which dominated all my senses, veiling the world. Blinking, I felt my head. Sticky. Only a moment later did I see the red on my fingers. Hair sticky with blood. In a stagger I dragged myself over to my spacesuit. I put it on, put on my helmet, sat down and turned on the diagnostor. The microprobes entered my body. No broken bones, but a long gash in the skin. It hadn't hit any major vessels and the blood loss was minor. I waited for my head to stop spinning. Still no sign of Gazma. To hell with him. He was a confirmed lunatic anyway, how could I have supposed that he would show up on time or even show up at all. Ooph. It stung where the suit was closing up the wound. The sedatives began to work. I went back to Hotel Honzl.



I'll note down what their reports said.

Vasofemgoose, who was sitting right next to me in the lan-

der, says that from the outset I was sweaty, nervous, and wanted to get back out again. When take-off was announced, I apparently threw myself at the airlock.

Kretcher, who was monitoring me, says that I wasn't able to get my helmet on. They're supposed to be sending me the file with that sequence.

On the other hand, the people from the crew maintain that they had to catch hold of me and hold me back by force, so that I wouldn't kill myself running headlong over the surface of Horn.

Two of the doctors, McVine and Bedusadus, after analyzing the results of the tests pronounced that I was in excellent physical and mental condition - or, at any rate, definitely within the normal range.

I remember nothing. I don't know why I ran.

Mirton's flying out tomorrow. He came to my room and expressed aloud my own fears.

"It seems that it's the *casus* Gazma. The symptoms check out. What are they saying?"

I told him what they were saying. He sighed - as if he were already pitying me. I cursed.

"But I've got to get out of here somehow!"

"Give it a try with me tomorrow," he proposed.

"And what did they try with him? I mean with Gazma. . .?"

He turned away from the window and fixed his eyes on me with an unhealthy mixture of fascination and aversion, timidity and impudence.

"How did it happen? What exactly did you do?"

"Nothing!"

He doesn't believe me. He suspects - God alone knows what.

With Gazma it went like this: they put him to sleep and loaded him onto the lander unconscious. The lander took off and then Gazma's heart stopped beating. Resuscitation, stimulators, adrenalin shots. Until one of the doctors from under the dome made the connection and ordered them to go back (a brainiac, of course; he couldn't explain his intuition later). They landed again and with great effort they reanimated Gazma. The poor devil had registered a clinical death.

I'm not sure if I want to attempt any similar experiments. But I have to get back to Lizonne somehow! Madeleine is about to fling the Izmirids out into the interstellar void, into absolute darkness. The window is closing fast.

Telesfer came over too. That is, Kleinert came. Telesfer wanted to know the same thing as Mirton: what had I done. Nothing! He made some allusions. That brainiac is incapable of uttering a sentence without packing it with a whole bundle of insinuations. Oh well, that's just how their minds function.

I got in touch with the bishop. An irritating conversation, especially with such a long delay on the connection. It seems that Bishop Hauptert thinks I've been infected with something here. I wonder what - the town in the crater has been sterile since its creation and Horn itself doesn't have even a trace of an atmosphere, not to mention the biosphere. All the same, I do understand the bishop. The situation is delicate and the last thing we need is the death of a cleric on the Izmirids.

I made confession.

I don't know what to do. The report has now been fully completed; in any case, I'd already been sending the materials to Lizonne as I got them. But Gazma - I need to talk to Gazma, quite apart from the interview for the report.

I went to the town administration. The terminal for the biosphere's control system is located there. I know that they register all the airlock openings and that spacesuits are identified. If the number of records for Gazma is odd, it means that he's inside, under the dome. It was even.

There are two airlocks: one to the Cathedral and one to the landing strip. Actually there are more than that, but the other ones aren't normally used - you need special codes (I asked, the computer told me). So, it was the Cathedral or the landing strip. I would have betted on the Cathedral. I checked the last record. The landing strip. Well, he has the right to try and get out of here too.

I hurried over to the airlock. Just in case, I was in my spacesuit. I sat down in the garden of the abandoned villa - ten meters or so from the airlock doors - and I waited. The people on their way out of here passed me by in guises and D-mucks. Some of them just exchanged glances among themselves, some of them waved goodbye to me. They all know, of course.

He showed up after an hour. He took off his helmet and then he spotted me. I thought he might run off, but he calmly walked into the garden and sat down on the grass. He looked at me in a completely different way now: he wasn't afraid. Yep, he knew too.

"How are we going to get out of here?" I asked.

He grinned foolishly.

"We can't."

"Why not?"

"Izmir's taken us."

I must have had an unpleasant expression on my face, because he shrugged his shoulders in a defensive gesture.

"They say that this kind of thing happens to people in Jerusalem, in the vicinity of the Lord's Tomb. When somebody has gone up close and experienced. . . you understand, Father. . . after that he can't go any great distance away from it, he can't leave the city. The tomb attracts him like a magnet attracts iron; you can plot the lines of potential. People go crazy from it, they die or become hermits, or they join an order, or they kill themselves."

I wanted to ask him which career he was predicting for himself in that case.

But I restrained my derision.

"And you? What have you experienced?"

"It's alive, you know that, Father. Isn't it?"

"What?"

"The Cathedral."

"Ri-i-ight. So you've worked out the reason for this. . . incarceration?"

"He's touched us. He's taken us. Me at any rate. We belong to him, to the Cathedral."

"You mean Izmir?"

"Who else? Didn't you pray by his tomb, Father? Didn't you kiss his hands?"

"You prayed and he interceded for your recovery."

"Yes. Yes. Yes."

"What was the good of that, since you can't get out of here anyway? You'd be living longer if you'd stayed on Lizonne. As far as I know schizophrenia isn't fatal."

Gazma, insulted, leapt up as if he'd been burnt.

"And a priest is saying this?! A priest. . .?!" he choked out above me.

He calmed down a little before he fell back down to the ground.

"And yet you're trying to get out of here." I observed.

"What?"

"Isn't that why you're going over to the landers?"

"I was visiting the Sagittarius," he snapped out with a scowl (the old Gazma again) and then he departed.

For a little while I could still seem him springing up in arcs over the roofs of the buildings in the lower circles, such was the furious energy of his strides.

So, he was visiting the Sagittarius. Well, well. It was possible. Although what on earth was he supposed to be doing in that empty, cold, dehermeticized wreck of a tug craft? But I wouldn't put anything past Gazma.

I had gone out there once too, as part of my work on the report. After all, that too is a place of worship, with popularity enough that they had stretched a safety line out to it from the port. The Sagittarius - not adapted for landing on the surface of planets, even for this kind of almost zero-gravity touchdown - had inevitably pitched down on Horn askew, on its side, crushing some of its antennae and jibs, as well as one of the nozzles (a landing on its stern would have smashed all of them). The emergency airlock is located at a height of eight meters above ground level and a hawcryst ladder has been planted there, latticing down from the top. Both the doors to the airlock are open and phosphorescent arrows point the way through the cramped corridors to Izmir's cabin. The cabin itself has been grown over with transparent hawcryst for the preservation of the site and the prevention of thefts or intentional frauds. From the ladder the so-called Predú's

Way stretches out across the plain of black rock. Every fifty meters along its length stands an iron cross. The way leads to the Cathedral itself. In the years of the greatest boom in cosmic pilgrimages worshippers in their dozens would follow the way on their knees, some of them even crawling, tracing the steps of Izmir's final journey. They protested loudly against proposals to extend a safety line along the way. Saint Izmir walked it without any safety! Right, he certainly didn't do it on his knees. Several of them died. Their rocky graves mark out Predú's Way in alternation with the iron crucifixes.

I can picture Gazma very clearly, performing his penance each day all alone, crawling over the harsh rock beneath the cold dome of the cosmos, from cross to tomb, from wreck to Cathedral and back again, with the name of Izmir on his lips, a white spacesuit on the black planetoid, covered by darkness, nobody to hear his hoarse prayers with his radio switched off.

Tomorrow Bedusadus is going to try and get me out of here in a coma (he just called). I guess I'll go and celebrate mass; I'll ask Mirton to concelebrate. He's flying out on the same charter. Madeleine is just rising over the lip of the crater, big as a fist and getting bigger. Very beautiful.



It didn't work.

I stayed. Bedusadus has flown out, Mirton has flown out (most people have flown out by now). All the same, thanks to me the Winston's departure was significantly delayed. They had to take me off the ship and put me back on Horn. Even my EEG had flatlined.

I was dead.

God, give me the strength of hope. I'm afraid. I'm petrified.

. . .

That my body could react so allergically to distance from the Izmirids - that was one thing. But how could their proximity bring me back to life when according to all the criteria - medical and non-medical - I was already dead?

I don't even want to think about it.

Telesfer called from the lander (he's flying out today with the rest of the CFG personnel). His questions suggested answers to me that I would have preferred not to consider. He asked if I had at any point come into direct contact with the Wool? What the heck is "direct" contact supposed to mean? In the end, we're talking about a rock formation! Hundreds of meters under the surface of the ground! And so then I started to wonder what he might have been on about. I had known from the beginning, back then in the CFG laboratories, that he wasn't telling me everything about the Wool. He had given away only as much as he wanted to. He was throwing out a line, testing the waters. After all, CFG had drilled hundreds of boreholes; they must have extracted kilograms of Black Wool. The other companies hadn't been idling their time away either. What kinds of experiments had they been conducting with it? What had they discovered? Telesfer probably thought that I'd gone off to the competition. And that competition. . . What could the Wool have to do with the incarceration of Gazma and myself on the Izmirids?

They called from Lizonne too, from the curia and the Academy. In fact, all day long there was some transmission or other

coming in from the planet every second moment. I can just imagine what a headache my story has given them. In the evening the bishop is summoning a council on my case. The day after tomorrow the window is closing for the fastest of the ships circling the Izmirids. I can't really imagine exactly what they might decide to do. Oh well. You have to hope.

Soon Honzl's flying out too. It seems that I'm his last guest and he's given me the key code to all his real estate on Horn. He tried to say something in farewell but gave up on the idea and just darted off. I must have had a truly peculiar expression on my face.

Mirton left his quarters in the same messy state in which he'd been living in them. I walked in and something fell on the floor with a thud. There were some differences too: the bare walls. It was clear that he'd taken the photographs of the Cathedral with him. I switched on the projectors, but the memory had been wiped. I started to dig around in Mirton's stuff - it's a good way to kill time, to distract myself. Tidying up this chaos will definitely take me more than two days.

On the shelf I found a carton containing a few dozen rolls of transparency with enlargements of the black-and-white photos of the Cathedral etched onto them. I unrolled them one after another. Mirton had scrawled all over them, making remarks in a sprawling hand with arrows pointing to fragments of the picture ringed by misshapen circles, all in a thick red felt-tip marker. I stuck a few of them up on the wall so as to examine them more closely. What was it all about? Mirton had circled certain minute architectonic details: a cornice on one of the towers, some quasi-gargoyles over the portal. Beside

them he had written: 2 MTHS. EXCR.? PERILEVIUM. And elsewhere: MASS TRANSFER? And by another: 3 MM/H.

He'd also left a few dozen books, unbound editions of the self-printed variety. They were mainly academic textbooks on nanogenic technologies: *Hawcryst: Structure and Functions; Chaos Bound, or Paths of Life; Programming Open Negentropic Systems - An Introduction; A Self-Executing Language for Nanogenic Machines*. Textbooks and suchlike. I remembered the holo that I'd almost walked into on the first day. So Mirton had been studying the Cathedral from the very basics: from its architecture and how it had come into being right down to the material technologies.

About the hawcryst itself I know enough to be able to peruse these tomes without feeling that I'm beating my head against the wall of hi-tech esotericism. To be honest, I've never fully grasped the theory of programming it. The mind somehow rebels and refuses to grasp the idea of planning the unpredictable, calculating the incalculable. But I know the practice; once I even sowed it myself. In truth it was only a little summer house by the lake at my grandparents' place on Hoolstalona. I did everything strictly according to the instructions: I marked out a rough square (raking the tip of my boot across the ground), opened the hermetic packaging of the hawcryst (the "Venice Summer House" series, if I remember correctly - self-lethal of course), measured out a portion of seeds onto my palm, and sowed them along the line. A little of it was still left over, so I sprinkled it over the corners. Then I slopped out two buckets of mud I'd prepared earlier on top. During the night the summer house grew beautifully. How old was I? Thirteen? Even then the intentional imprecision of

the process bothered me. It didn't matter if I sowed the seeds exactly along the line or if I sprinkled them out in a broad ribbon; it didn't matter where some of them might fall; it didn't even matter if I sprinkled them all out or only a quarter of them (it was written in the guarantee that a mere dozen or so might suffice - the whole bag, two hundred grams, was there simply to raise the probability of attaining the ideal target shape as near as possible to one). Of course, there undoubtedly exists - *nomen omen* - a fundamental difference between the mass-produced, closed hawcryst from which my grandparents' summer house had sprung and the original, entirely unique, open hawcryst of the Cathedral. This difference lies in the method of preprogramming their codes. The hawcryst of the Cathedral belongs to one of the "incomplete" varieties: not all the data of the target form is strictly defined at input. The summer house, in this instance, would have grown identically, right down to the microscopic structure, whether I'd sown it on a volcano, on the bottom of the Lizonne Ocean, or on the rock of Horn. The Cathedral, on the other hand, the Cathedral would have grown into something considerably different with a change even to such a minor parameter, for instance, as the time of sowing.

With my nose buried in these books I managed to forget about the time steadily ticking away (a person is capable of steering his own thoughts after all) and only the connection signal with the planet brought me back to reality. The council was over.

"There's not very much I can say to you in this dark hour," said the bishop. "Two possibilities remain and both of them are equally tragic. We here don't have the right to speak for

either of them. Perhaps you'll return to life on Lizonne if you decide to leave in spite of everything. But in reality there is no logical evidence to suggest this. By staying on the Izmirids you'll save your life, as they are persuading me, perhaps even for another several years, but in the end it will come down to you dying alone, in the void." He pursed his lips. "It may seem to us that in suffering we are always alone, but this isn't so, it's never so. Remember that, when you're out there, in the darkness. God will never leave you, my son." He blessed me. "Forgive me for sending you."

Yes, in moments that are truly final we return to the simplest of words, speaking the language we speak to children. In the beginning and in the end we find the same honesty, certainty and simplicity.



In less than five hours the window closes and the Portwine will launch automatically at its pre-appointed time whether Gazma and I are on board or it's just the last two NASA engineers. It will take off. It must.

Gazma won't be there for sure; I know this, he told me so. He actually wants to stay here.

And me? I feel like tossing a coin, but I guess that even then I wouldn't yield myself up to the sentence of fate.

The town under the dome is empty, swollen from side to side and from top to bottom with a great silence. Only the fountains are murmuring and the plants rustling in the artificially-induced breeze. I walk along the broad streets, down to the bottom and up to the top of the crater, and then along its

sides. All morning (it was morning, because I had just woken up and gulped down a double stupak) I submitted myself to remote tests conducted by specialists from the planet. A great deal of high quality equipment has been left behind, which in spite of everything was not valuable enough to be worth the cost in fuel per gram of weight on the return journey to Lizonne. Now I'm the only person using it. On the planet brainstorming sessions are currently in progress; it seems that it's leaked out somehow. There's a difference after all: an official envoy of the curia and a possessed schizophrenic. They're pumping out one theory after another - a dozen lone brainiacs, straining their metaintuition. I fled when they started talking about punctures.

Of course in truth the choice is clear, there's nothing to toss a coin over: I just have to get myself onto the Portwine, stupak myself into a stupor, and turn myself over to God's mercy. Because even if I don't know just how faint it is, then at least some hope will remain - that once I'm on Lizonne, someone, sometime, will come up with something, so that they might somehow wake me up again. And Gazma? Gazma will perish, die like a dog on the Izmirids as they hurtle through the cold, dark void. I asked the machines. It turns out that it won't be from hunger in the end, or from thirst or from lack of air: the crater biosphere makes a closed system and nothing leaks out of it. Nothing apart from heat. The dome will gradually cool (according to the semi-computer's estimates) over the course of eight to ten years. If they sowed the logical hawcryst it would give a more precise prognosis. One way or the other the relations are the same: the farther away from Lévie, the less energy the collectors will pick up. Even now

the sun is no bigger than a berry. And because the ban on building private nuclear installations is still in force throughout the cosmos (which is ultimately absurd, everybody admits that) and because nobody has any desire to lose a fortune by leaving supplies of fuel behind here "to go to waste," Gazma will freeze to death. It's true that in theory he could dig somewhere into Horn and carefully isolate a small habitat. (Are any of the right seeds left here now?) In any case I don't think he's planning anything of the sort. I don't know what's become of him: he's not answering over the radio and there's no sign of him in the town. No doubt he's walking Predú's Way, there and back again.

I shouldn't sneer. I'm sure that (illness or no illness) he's been given greater peace of mind.

Because he probably doesn't have all his relatives and friends ceaselessly calling him up, as well as people whose existence he has long since entirely forgotten about but who now can't deny themselves the pleasure of sending personal expressions of sympathy to the Man of the Moment. I know that some of them are quite sincere about it, but - "I'm so sorry, really" - how pathetic it sounds on this empty rock, under a cold sky, under the quiet dawn of death. . . Cruel mockeries. I say nothing in reply; probably I would curse them all to hell. Envy, yes, I recognize the taste of it on my tongue. You shall not covet anything that belongs to your neighbor. But if that thing is life. . . You have to covet, you need to envy.

The bitterness springs from a deep feeling of injustice: "I don't deserve this." And then the same old theodicy cut out for simpletons. Again: how crude it is! The intellect rejects it, but in the heart the poison festers. The Divine judgment -

in the end we're all really awaiting it in earthly life. It can't be eradicated, it's subconscious: this hope and fear, that all our good and bad deeds will eventually be returned to us, that the universe will give up what it has received. The scales must remain in balance. The homeostasis of fortune and misfortune - *Wa*. That's why in the depths of my soul I feel somehow cheated. Pride? Without a doubt.

And the worst of it is that I don't understand anything in all this. If there were some kind of physical element at least. . . That is to say: something recognizable. (Because there's no doubt that it isn't purely mental). Some kind of disease entity. Or a clear correlation between myself and *Gazma*. Anything nameable. But in this kind of situation. . . It's very easy to bear a grudge against God. Only profound believers are capable of great blasphemies.

Even though, as I say, it's so horribly crude. . . Here, beneath the black dome of the universe. . . *Madeleine*. . . By now I can't blot it out with an outstretched hand. *Rooster* has leapt over the *Flowers*, *Salamander* is chasing *Key* and will probably swallow it. And from the north pole some new storm is rising, thus far nameless, of a crimson color smoldering into a purple which is terribly harsh on the eye. It's very strange, for it should be going in the opposite direction, away from the equator, but *Madeleine* has always been Our Lady of the Miracles. From below the Tropic of Cancer the round shadow of *Asmodeus* is glowering at me, a black drop on a disk of vivid pastels. Before long *Peanut* will take a bite out of it; the eclipses of the giant by the planetoids are more and more striking.

Time remaining. . . four hours. Two hundred and forty mi-

minutes of life. Less: I have to get to sleep over there a little earlier. I've been trying to pray, but I can't help feeling that it's a deception. Cold feet and hands: problems with the circulation again in the microgravitation. I wouldn't mind eating something - I'm damn hungry - but the brainiacs have advised against it. Better on an empty stomach.

One last look at the Cathedral. I took a few of Mirton's photos with me. What exactly had he been up to? (Yes, okay, I just wanted to think about something else). I suspect that this is how he was tracking the changes in the Cathedral's architecture. He had found some bug in the hawcryst code, a gap in the self-building procedures. The pictures confirm it. Several times I walked right round the Cathedral, picking out with my light some of the fragments of the building he had photographed and then comparing them with the pictures. They're different, they've changed, they've flowed in their form into other shapes more or less akin to their originals. The ones that I didn't find I didn't find surely because they and their surroundings had changed too much for me to recognize them at all from the pictures. How quickly is it progressing? Mirton, it seems, was trying to measure the tempo. There's no question that it's a lot slower than the tempo of the original growth; after all, the Cathedral has stood here long enough and otherwise people would have noticed something. Nonetheless, it appears that even Mirton wasn't entirely convinced himself. Or perhaps he suspected something else entirely?

Gazma flashed by in the cone of light: I spotted a rapid movement in the upper tiers of the Cathedral's left tower. He must have hidden himself straight away somewhere deeper in its

entrails, for then I could see only motionless shadows. What was he doing there? How had he climbed up there in the first place? The Cathedral - and I don't have to remind myself of this, it's obvious - is not a building with any respect for ergonomics, its architecture doesn't serve human beings, there are no stairs and no maintenance shafts, so Gazma must have tackled a genuine climb. Gravitation is weak, that's true, but if he fell from up there he'd break every bone in his body for sure - mass is mass, momentum is momentum.

I went inside. I'm standing over Izmir's grave. What was that lunatic saying? That there's an attraction? That you can't break free from it? Like iron filings. Maybe with him. I don't feel anything of the sort. I've taken off my helmet and gloves. The stone of the tomb is cold and smooth. The angular face of Izmir Predú fills my hand. I rewound the diary and listened to the recording of my conversation with Telesfer in the CFG laboratories once again. Let's say that the Black Wool is an alien artifact. That it's the Huan Machine, though we're not able to detect the medium. The traces of the gamma-ray burst suggest some kind of cosmic catastrophe on a giant scale. The Izmirids have been traversing the interstellar void for hundreds of thousands of years. Could it be that they were consciously shot out into space before the explosion? What for? Where are they headed? After all, if it weren't for the random meeting with Madeleine they would have finished their journey right on Lévie's orbit. So it's one thing or the other: either there's some purpose in this, or there isn't. But no. Let's take this hawcryst. There are possible in-between explanations. After all, time - time - the million-year abyss - that's not the perspective of a civilization. . .! And even

if it's all true, in that case what is the Wool? It's holding the planetoids together in a cluster. But to what purpose? Because if that was supposed to be its only function. . . Give me meaning! Give me meaning! The stone of the tomb is so smooth that it's almost wet. *Deo Optimo Maximo*. The sculpture is beautiful; it's good that the tomb at least hasn't been left to the elements. Ultimately it's not too difficult to understand Gazma's fascination: aesthetics is the very first language of religion. One hundred and ninety-five minutes. The reds, yellows, and blues of Madeleine are shining through the ribs of the Cathedral and everything here is either shadowy or dripping with viscid colors. I will sit down and calm my beating heart. I thought that it would be fear most of all, animal terror, but now I feel only sorrow - a great, motionless, heavy sorrow - a crushing mass of dark waters. No thoughts, no commands for my body, even my eyes are dry; I can just feel something tightening in my chest. But why speak? Silence is better.

●

I didn't leave.

I fell asleep there by the tomb. I stayed behind. The Portwine launched on time.

Christ the Lord.

●

A week later.

I'm living at Honzl's. Gazma is wandering around somewhere, but I haven't seen him. I'm not opening any transmissions from the planet - only questions there.

Madeleine is taking up two-thirds of the sky and it's so bright that I have to go around in dark glasses.

I read. I sleep. I contemplate the Cathedral.

. . .

Fuck, what's the use anyway



I called Mirton.

He said that he'd been photographing the changes in the Cathedral's phenotype, precisely because the genotype, the very code of the seeds, is infallible.

"It took a long time, because I kept looking in the initiation algorithms for the bugs responsible. I had the right sequences of pictures and I could approximately define the gaps in the procedures." It had become his hobby and so he had devoted himself to analyzing the code for the sake of relaxation. He didn't want any help or consultation and he would have refused any that had been offered: the whole joy of completing a puzzle is in the fact that the image comes into being thanks to you alone. "In the end I reached almost one-hundred-percent certainty that there weren't any errors. But the Cathedral was changing beyond any doubt. I tried to assess the tempo of the changes. I was there long enough to notice some correlations between the speed of transformation and Lévie's proximity. I'll send you the files with the analyses and the raw data. The curve is quite complex. Below 2 AU it

drops down to zero. In the vicinity of aplevium it jumps sharply, but you'll be better able to ascertain that, because now the Izmirids will be coming out of their present orbit and breaking free of Lévie's gravitational well. It shows up nicely in the first derivative. Are you going to commit yourself to this?" he asked. "Will you send the data? Listen, I know that. . ." and he began to get flustered in his Mirtonish sort of way until I had to really ham it up for the cameras so that he would calm down. "After all, you've got to have something to do. To hook your mind into something. The more mundane the better. Otherwise. . ."

Well? Otherwise what?

Oh boy, poor old Mirton is no exception here. Nobody has the strength to look me in the eye and speak the truth: that I'm a corpse.

Maybe it's a good thing that I haven't seen Gazma. God alone knows what I might do. There are moments when I'm filled with such rage that my whole body literally trembles with it. Ha, so I've discovered the root of the expression. "To tremble with rage": because a man truly does fall into a kind of pathological convulsion, all his muscles tensed, rapid movements of the jaw, hyperventilation, a sort of fog over the eyes, and hands reaching out to grab - whatever - even though they're trembling more than anything. I destroyed several of Mirton's books like this, ripping those fat volumes into shreds.

Only within the Cathedral am I calm. And so I come here, I sit (at the back or at the front), and I peer through its convoluted skeletal body at the stars or at the divine lantern of Madeleine. There's no echo when I record. There's no echo when I celebrate mass. The color of the subtle glow reflecting off

the tabernacle changes in the light of Our Lady of the Miracles. Here I can be sure of my hands. I raise the body of Christ and I watch as the rainbow of the planet's warm colors breaks through the sacred host. Sometimes I fall into the opposite extreme and then I freeze like that for a long moment, completely calm, devoid of all fears and desires, rooted in eternity, until the ceaseless turning of the Izmirids shifts Madeleine away, beyond the Cathedral and under Horn.

I don't know if it's the same thing that Gazma has, but I think I'm sick too.



In spite of everything, I've taken up Father Mirton's work and now I'm systematically registering the metamorphoses in the Cathedral's phenotype.

I'm making use of the largest of the computers left behind on Horn - Matabozza's machine. The main terminal is located in the basement of their palace, but I only had to go there once, just to grant myself the highest priority and open a dedicated line with Honzl's computer. Now I don't have to leave my room.

Matabozza's AI laughed at me when I asked about the 3D imaging program.

"I improvise those kinds of things," snorted the dialogant, defaulted as an insufferable teenage nerd. "And what do you want it for, Father?"

I explained it to him and on the spot he fired out five extensive variants of programs on a grandiose scale for testing and observations. I chose the most modest one. It sets up several dozen BuI full-spectrum cameras - six full sets of which

fill the shelves of Matabozza's storehouses - on a mounting around the Cathedral, as well as on the side of the crater and the town's dome. The image goes directly to Terrence (that's the AI's name) and he does everything necessary with it instantaneously. That's the end of Mirton's amateurism, with his little pictures snapped every now and again.

I went to fetch the Swiss miracles of cosmic surveillance. And they really are miraculous. It's enough to pick one up and press it against a reasonably smooth surface.

Do I have anything better to do?



Yesterday I think I must have drunk myself blind. I don't remember drinking anything, but, my God, what a hangover. . .! Nothing helps, not even stupak. I'm throwing up into the fountain. Every time I lift my head Madeleine shines straight into my eyes, there's another explosion under my skull, and I can't see. How high is the albedo on it anyway? Maybe in the meantime it's ignited and started to burn hydrogen, the brightness is unbearable. Especially when Salamander is on this side. I've got to hide somewhere.

. . . .

Ooph. Oh well. One day aliens will find my skeleton here and decipher the recordings. They'll know as much about me as they can hear (or smell, after conversion). So this skeleton once possessed quite a considerable muscle bulk, a little more fatty tissue than it might appear from the proportions, skin of a color a tiny bit lighter than these rocks, but hair exactly the same. As a matter of fact he was just as miserable a rep-

representative of *homo sapiens* (that's the internal code name) as the rest of his species brothers, who swarmed out from their native planet into the ecospheres of the nearby stars. The information processed by his nervous system did not cause - at least not to his knowledge - any great changes to the environment. Right up until terminal shutdown he wasn't sure whether his existence had raised or lowered the total entropy of the system. For the majority of the time he functioned relying on the assumption that it was a moderated system and that the main admin never forgot all the access codes. But sometimes he changed the assumptions: when he came across any exceptionally bugged procedures he submitted urgent proposals for patches to the maintainer, but on relaunch it turned out that no upgrade was to be forthcoming. But that passed after the next reload from the ROM.

He existed in only one copy.

. . . .

Ravings, damn it.

Maybe I'll get some more use out of all these miracles of medical technology. Somehow it seems to be happening too often that I just doze off.



Terrence is giving me three-dimensional projections of the Cathedral, at whatever scale and acceleration I want them. It reminds me a little of time-lapse photography from the life of plants. Dead, but alive. Here and now, right in front of me, in the intersection of dull columns of light, the Cathedral changes from stone into an animal. It's not breath, but some-

thing seems to move it all the same: a rhythm exists - a multi-houred, complicated rhythm - in which the ribs of the main nave rise and fall, the talons of the towers clutch into the void, phalanxes of boney crests bristle and heel towards the spine, and the spine, the spine itself grows larger and larger. And yet beneath this rhythm, in the background, a whole lot more is going on; it's just that the human eye, or rather the human brain, doesn't register it so easily, for there's no regularity here and no plan. The changes are small but numerous; they overlap with one another - sometimes obliterating, sometimes compounding one another. It all runs with the rhythm or against it and it doesn't seem to possess any real plan or final form.

Still, I have to guard against hasty judgments like these. Anyone who's ever sown hawcryst has seen with his own eyes how a pre-determined order is born from genuine chaos.

How is beauty born . . . For there's one thing I can say about the Cathedral for certain: it is beautiful. It isn't picturesque and it isn't pleasant to the eye - it doesn't soothe the viewer's soul - but it is beautiful. The aesthetics of a solid mass are different from the aesthetics of a two-dimensional image or the aesthetics of movement. It doesn't merely engage the sense of sight, but rather it sets much deeper processes in motion. It presses upon you. It reorganizes space and the person within that space.

*Acheiropoieta* - that's what the Cathedral is. A natural sacred artifact. Long ago the calcareous dripstones would form into pietàs on stone walls. Long ago people had seen the silhouettes of saints in roadside rock formations or the faces of Jesus and Mary on window panes, in factory dyes, and in flakes

of smog. These were the relicts of nature, the miraculous art of nobody's hand. Now we have hawcryst. *Acheiropoietos* means a thing not made by human hands, an object with an obvious teleology deprived of an author. For who will give me the name of the Cathedral's creator? Who will point to the architect from whose design sprang this composition of shapes so transfixing to the imagination? To whom are we to pay tribute? The programmers of the hawcryst knew only what the Cathedral was supposed not to be: they set the boundary conditions. The Cathedral as such did not exist in their minds. Then who is the author of this work of art?

The Izmirids?

Chance?

God?

Nobody?

Chaos theory?

How much of art is there in a piece of wood thrown up on the shore by the sea? How much of profundity in the random coagulations of material? I raise my head and before my eyes I have the cosmos: the Rorschach blots of nebulae, the great river of the Milky Way, the delicate flowers of star clusters, the silvery sand of distant galaxies, quasars, the grating luminous *stacatto* of pulsars. . . . And the mind absorbs it all, turns it over, organizes it, and gives names to forms.

The first cosmonauts, returning from orbit, often spoke about a mystical experience. It was given to them to commune directly with high transcendence. The cosmos - the Cathedral - act in precisely the same way.

It's dangerous to stare too long.



There's no error in the original code of the Cathedral's hawcryst. Terrence confirms it - the code has strong, unbreakable terminal deactivation commands. Plenty of breathing space was left over for most of the parameters, but the growth barriers supplied were the strongest possible - namely, the classic Povost sequence. Terrence has laid it all out for me, so I'm pretty much an expert by now. Practically only logical hawcryst can sprout without Povost; every other kind has to have it, otherwise God alone knows what might happen. A dozen seeds flung out to get a chair or a table and before you know it they set about multiplying with abandon: 1-2-4-8-16-32-64-128-256-512, a veritable tumor of hawcryst. A courier flies in from Earth and instead of the planet he sees a chair circling Lévie on Lizonne's orbit, but by now it's a fucking CHAIR, each leg ten thousand kilometers long, or perhaps a septillion chairs of normal dimensions grown into one another. Hence the AI tells me plainly: Povost is one-hundred-percent certain, it always blocks.

The facts don't agree with the theorem - so much the worse for the program. Terrence is working himself to the bone, trying to explain the variance.

But this time I turned out to be the more inventive and so it was I who first hit upon the obvious. I went to the Cathedral with a percussor, chipped off a fragment of quasi-sculpture which had been slowly hatching out of the left absidiole over the last week, and then lugged it across to the AI for analysis.

Terrence chewed it over, x-rayed it, ground it down, took it

to pieces, froze it, and fried it. And after all that:

"The structure of the nanogenic seeds doesn't correspond with any of the hawcryst structures accessible to my memory. I can't read their program. Their code doesn't even roughly resemble SLNM."

I ask him what this means exactly. Is he trying to say that the Cathedral isn't built of hawcryst?

"No," he replies, "It's hawcryst, in the same sense that the native fauna of Lizonne is still fauna, even though it's not DNA which replicates and it's not proteins for building blocks."

In light of this information I replied to one of the transmissions I had received long before, one from Stefan Ugerzo, and without any pleasantries I got straight down to brass tacks (a *de facto* dead man can permit himself a few liberties after all - what do the forms mean to the Liberated? Behold this Raskolnikov of *savoir-vivre*).

The game's up, I told him. You took advantage of your nephew's miraculous recovery for the safe testing of your company's new hawcryst. Here on the Izmirids, where nobody's jurisdiction extends and where the threat of infinite expansion of the nanogens doesn't exist, you could quite easily launch a hawcryst test series for Rothschild-Larus under the cover of - or in the form of - a sacred structure. Now the whole experiment is hurtling off into interstellar space, so what's the harm in admitting it? Give me the real original code, not the false one which you patched into the specifications. Give me the programs for analysis so that I can plant the logical hawcryst for an extrapolation with a tolerable margin of error.

That's the message I sent.

And this is how Ugerzo replied:

"I understand the kind of mental stress you're living under, Father. But please be good enough to get a hold on yourself and refrain from spreading this kind of foolishness around. It's all trumped-up nonsense. I feel sorry for you, Father, but I can't allow myself to be slandered."

"And what're you going to do to me, you son of a bitch?"



We're leaving Madeleine now. It gave the Izmirids such a wallop that it's shrinking on the horizon more than twice as fast as it had been growing before. But how monstrous its glare is! I'm darkening my helmet to almost absolute opacity.

I have to go out on the scarp and the dome, because that bastard Gazma is systematically destroying the BuI on me. I think that's the tenth camera now. And he even manages somehow to sneak up to them so cunningly that I never spot him before he's already smashed the apparatus. The supply of them is limited after all and I have to monitor the Cathedral without interruption; it's changing faster and faster, Mirton's function checks out, and the curve is going up. Maybe I should program the town airlocks so that I'm the only one they let through. Like this, for example: any attempt at opening them without supplying a password would be blocked, say, if more than twenty hours had passed since the previous attempt (after all there are no supplies of food and water in the Cathedral). That would keep him in the crater. To be on the safe side I could also link the airlocks program with the Cathedral airlock. Or even better: set up a single BuI in front of it.

Yes, when I look at it now, with the light of Madeleine behind my back. . . from here the Cathedral is at its most beautiful. Even the angle and the perspective are somehow similar to those imposed by Terrence's projections. I half expect that the Cathedral might begin to transform before my eyes into a stone imago. It's growing, yes, it's definitely bigger than it was the first time I saw it. The gaps in the exoskeleton are getting bigger too. Some sort of crooked, asymmetrical cloisters are sprouting out from the towers. In the middle of the main nave. . . I'm not sure, probably it's the shadows from Madeleine.

It's impossible - but perhaps I really am able to perceive in real time the changes taking place within it?

In real time - yeah, right! Two hours I've been hanging around here and I think some kind of lethargy must have got hold of me. Something is wrong with me.



Not good. I don't know what the hell it is, but it looks terrible. Black fractals of thorns. Why didn't Bedusadus and McVine detect it? Now it's visible on every enlargement of the plasma and on all the tomography scans. Neohawcryst in my body. Lots of it - and more and more of it all the time.

It's killing me. Terrence says: "Weeks."

Someone must have injected me with it. When? Where? How?

Why didn't they detect it earlier?!

Gazma. Him too? They examined him, that's for sure.

I can't find him. Neither the airlocks of the crater dome nor the Cathedral airlock have registered his entry over the

course of the last twenty-four hours. I could just assume that he was hiding somewhere in the town, but then I know he was outside when I started up the program because he was still busting up my BuI. I don't get it.

I'm not handling the light very well. Madeleine's getting smaller and smaller all the time, but I'm still in glasses. I'd black out the whole dome if I could.

I feel like sleeping. It's hot here.

●

I can feel the way things are going now. Stone.

Medical history knows cases of hawcryst infection. Invariably they ended in death: swift and painful.

I'm testing myself every few hours (when I don't oversleep). The Rothschild-Larus hawcryst is devouring me.

Not a trace of Gazma.

I wonder whether I shouldn't call. But who. To say what. And now, with this damn delay. And what could they tell me. Nothing, nothing at all.

I've been tripping over more and more frequently. I weighed myself: a rapid increase in mass.

Madeleine's the size of a pea. Darkness. But it's scorching, how scorching it is.

I seem to have accidentally demolished my room at Honzl's.

. . . .

I'm just looking at the latest medical analysis. The growth curve of the neohawcryst in my body is identical with Mirton's curve.



I woke up next to Izmir's tomb. I can't remember how I got here. I took off my suit - but where did I stow it? It's not anywhere here inside the Cathedral's biosphere. Maybe this is Gazma's work. . . Who else's?

I sit down and I wait. Madeleine is completely invisible through the ribs of the Cathedral. A lot of shadow. Pleasant. Somehow I'm not afraid.

Gazma has to show up sooner or later.

I'm looking at the Cathedral in quite a different way now, like at an organic relict. A kind of gnarled protuberance, which I don't remember from previous visits, has knotted itself together above the hemisphere of the biostasis behind the altar. It's large, ten meters at the least. I stare at it and I see the beginnings of an organ. Horizontal tangles dangling down from the towers. . . Arteries? Sinews? But it's all evolved in the scale of days; stone is stone, the construction won't budge, the hawcryst is smooth and cold.

The figure of Izmir Predú is emerging from the tombstone more clearly, although the shadows are softer. My hands yearn to touch it, as if my body sensed some kinship of matter.

I take off my glasses for a moment, but the glow of the tabernacle dazzles my eyes.

I look out from under the airlock. The greatest gaps in the Cathedral's skin are here. I can see the path on the crater slope and the lights of the dome; I can even see some of the cameras as well as the nearest of the iron crosses on Predú's Way. Higher up there are irregular holes in the field of stars - those are the other Izmirids. Still I can't recognize them

from their shapes.

And if in spite of everything Gazma doesn't come. . . I wonder what would kill me first: dehydration or the R-L neohawcryst?

●

And what if Ugerzo was telling the truth?

●

My watch tells me that I've slept for more than two days. Maybe it's the truth. And yet I feel neither hunger nor thirst. I think I have a fever.

. . .

Peculiar - it's as if the black stains of the Izmirids are larger now against the background of stars. The Huan Machine must be running at full steam.

I've been listening over and over through the recordings of my conversations with Telesfer. It seems to me now that he knew all along and that he wanted to tell me, but this might just be an illusion (and most probably is). It's always like that with brainiacs. After all, that's what they're cultivated for. When it comes to reverse analysis it's even harder to conduct with them than it is with open hawcryst, because they don't even have an initiating program. There's just a tangle of nerve tissues as big as a ball in the womb of the carrier. It's never born and it never comes to an end: renewal, proliferation and reconfiguration of its nerve cells. It's just one great war of neurons and the evolution of the metaprogram.

Brainiacs never attain the same precision of proposition as logical hawcryst either, but they're able to probe deep into dark clouds of beyond-calculability, to rapidly provide an approximation, and to touch the Mystery with their brainiac intuition. If they speak in allusions and vague insinuations, it's because they themselves don't know. Telesfer had absorbed the data and begun to dream - about the Wool, about the Huan Machine, about some sort of aliens. He and the other brainiacs couldn't present any proof, because the provable isn't their thing. So they were trying somehow to get around the structures of their companies and to spearhead a conspiracy. Without success. Politics is not their strong suit.

. . .

I've been sitting with my shoulder leaning up against the wall of the Cathedral and I caught myself turning my head and trying to reach the stone with my outstretched tongue. But it's not even damp.

I think I really do have a fever.

●

Another three days. Where is Gazma?  
The Cathedral, it's. . . my God, my God, my God.  
Don't crawl, get on your feet.

●

What? How long has it been now? The Izmirids, darker and darker, even Lévie is constantly obscured.  
It's hard for me to talk.

I've hurt my mouth. I think I was trying to bite into the hawcryst.

I'm going to celebrate mass. For the last time, yes, I will.



. . . switch it on, because then I caught sight of them. I put aside the chalice. My shadow from the tabernacle falls as far as the airlock. They're filling the pews. There's something strange about the light. The sky is blurry, not a single star, just one pale blue fog. And the great holes from the Izmirids. How close they must be. But they're all blurry too, smeared out over the fog in long streaks from horizon to horizon, and I'm convinced that if I were to climb up onto the spine of the Cathedral, I could touch. . .

It seems that something's wrong with my voice; of course I'm mouthing everything wordlessly, but it's as if my throat is paralyzed. Am I speaking clearly? They are standing and watching. "They" - perhaps another pronoun would be better: "it," "It." Emerging from somewhere out of the darkness of the Cathedral. But how? Through the sphere of the biostasis? Christ, there are holes in it, the sphere has been breached! But that's impossible! How can I. . .

My God.

The Cathedral, they, Mirton's curve, the Black Wool, what Telesfer said, may Ugerzo forgive me, I judged him unfairly, yes, hawcryst, hawcryst, *acheiropoieta*, DNA and SLNM, now that it was far enough away from the sun for the executive functions to start up again, and all the Izmirids. . . Kotter Ugerzo too. . . That gamma-ray burst. The code. Languages of

stone.

The Cathedral is breathing, stretching out black umbilical cords towards me. It's growing. It's reaching out towards the planetoids. It's approaching in gentle waves. Gazma?

The sky, amazing, the universe dissolved. I orient myself by blurry shadows. It's not they who have entered my time, but I who have entered theirs: the Cathedral's, the Wool's.

Can you still understand what I'm saying? It's getting harder and harder. If it was going into a microphone there'd be no chance - I doubt if there's even a whiff of air left in here.

Judging from the sky. . . Farther and farther, slower and slower. How many days is it since I lowered my hand? Heavier still. I have to prop myself up against the altar. They're congregating in the nave. The Cathedral is enfolding us, we are the Cathedral, fragments of the mass, of a single work of art. Peacefully now among the shadows fluttering like butterflies. Only my shadow thrown motionless from the tabernacle.

We await the Architect.

To the memory of Antoni Gaudi  
and the art of his imagination.

*November 1998 - May 1999*