

## TIGER, BURNING

Alastair Reynolds

It was not the first time that Adam Fernando's investigations had taken him this far from home, but on no previous trip had he ever felt quite so perilously remote; so utterly at the mercy of the machines that had copied him from brane to brane like a slowly randomising Chinese whisper. The technicians in the Office of Scrutiny had always assured him that the process was infallible; that no essential part of him was being discarded with each duplication, but he only ever had their word on the matter, and they would say it was safe, wouldn't they? Memory, as always, gained foggy holes with each instance of copying. He recalled the precise details of his assignment—the awkward nature of the problem—but he couldn't for the life of him say why he had chosen, at what must have been the very last minute, to assume the physical embodiment of a man-sized walking cat.

When Fernando had been reconstituted after the final duplication, he came to awareness in a half-open metal egg, its inner surface still slick with the residue of the biochemical products from which he had been quickened. He pawed at his whorled, matted fur, then willed his retractile claws into action. They worked excellently, requiring no special effort on his part. A portion of his brain must have been adapted to deal with them, so that their unsheathing was almost involuntary.

He stood from the egg, taking in his surroundings. His colour vision and depth perception appeared reassuringly human-normal. The quickening room was a grey-walled metal space under standard gravity, devoid of ornamentation save that provided by the many scientific tools and instruments that had been stored here. There was no welcoming party, and the air was a touch cooler than conventional taste dictated. Scrutiny had requested that he be allowed embodiment, but that was the only concession his host had made to his arrival. Which could mean one of two things: Doctor Meranda Austvro was doing all that she could to hamper his investigation, without actually breaking the law, or that she was so blissfully innocent of any actual wrongdoing that she had no need to butter him up with formal niceties.

He tested his claws again. They still worked. Behind him, he was vaguely aware of an indolently swishing tail.

He was just sheathing his claws when a door whisked open in one pastel-grey wall. An aerial robot emerged swiftly into the room: a collection of dull metal spheres orbiting each other like clockwork planets in some mad, malfunctioning orrery. He bristled at the sudden intrusion, but it seemed unlikely that the host would have gone to the bother of quickening him only to have her aerial murder him immediately afterwards.

"Inspector Adam Fernando, Office of Scrutiny," he said. No need to prove it: the necessary authentication had been embedded in the header of the graviton pulse that had conveyed his resurrection profile from the repeater brane. One of the larger spheres answered him officiously. "Of course. Who else might you have been? We trust the quickening has been performed to your general satisfaction?"

He picked at a patch of damp fur, suppressing the urge to shiver. "Everything seems in order. Perhaps if we moved to a warmer room . . ." His voice sounded normal enough, despite the alterations to his face: maybe a touch less deep than normal, with the merest suggestion of feline snarl in the vowels.

"Naturally. Doctor Austvro has been waiting for you." "I'm surprised she wasn't here to greet me."

"Doctor Austvro is a busy woman, Inspector; now more than ever. I thought someone from the Office of Scrutiny would have appreciated that."

He was about to mention something about common courtesies, then thought better of it: even if she wasn't listening in, there was no telling what the aerial might report back to Austvro.

"Perhaps we'd better be moving on. I take it Doctor Austvro can find time to

squeeze me into her schedule, now that I'm alive?"

"Of course," the machine said sniffily. "It's some distance to her laboratory. It might be best if I carried you, unless you would rather locomote."

Fernando knew the drill. He spread his arms, allowing the cluster of flying spheres to distribute itself around his body to provide support. Small spheres pushed under his arms, his buttocks, the padded black soles of his feet, while others nudged gently against chest and spine to keep him balanced. The largest sphere, which played no role in supporting him, flew slightly ahead. It appeared to generate some kind of aerodynamic air pocket. They sped through the open door and down a long, curving corridor, gaining speed with each second. Soon they were moving hair-raisingly fast, dodging round hairpin bends and through doors that opened and shut only just in time.

Fernando remembered his tail and curled it out of harm's way.

"How long will this take?" he asked.

"Five minutes. We shall only be journeying a short distance into the inclusion."

Fernando recalled his briefing. "What we're passing through now: this is all human built, part of Pegasus Station? We're not seeing any KR-L artefacts yet?"

"Nor shall you," the aerial said sternly. "The actual business of investigating the KR-L machinery falls under the remit of the Office of Exploitation, as you well know. Scrutiny's business is confined only to peripheral matters of security related to that investigation."

Fernando bristled. "And as such . . ."

"The word was 'peripheral', Inspector. Doctor Austvro was very clear about the terms under which she would permit your arrival, and they did not include a guided tour of the KR-L artefacts."

"Perhaps if I ask nicely."

"Ask whatever you like. It will make no difference." While they sped on—in silence now, for Fernando had decided he preferred it that way—he chewed over what he knew of the inclusion, and its significance to the Metagovernment. Hundreds of thousands of years ago, humanity had achieved the means to colonise nearby branes: squeezing biological data across the hyperspatial gap into adjacent realities, then growing living organisms from those patterns. Now the Metagovernment sprawled across thirty thousand dense-packed braneworlds. Yet in all that time it had only encountered evidence of one other intelligent civilisation: the vanished KR-L culture.

Further expansion was unlikely. Physics changed subtly from brane to brane, limiting the possibilities for human colonisation. Beyond fifteen thousand realities in either direction, people could only survive inside bubbles of tampered space time, in which the local physics had been tweaked to simulate homebrane conditions. These 'inclusions' became increasingly difficult to maintain as the local physics grew more exotic. At five kilometres across, Meranda Austvro's inclusion was the smallest in existence, and it still required gigantic support machinery to hold it open. The Metagovernment was happy to shoulder the expense because it hoped to reap riches from Austvro's investigations into the vanished KR-L culture.

But that investigation was supposed to be above-topsecret: the mere existence of the KR-L culture officially deniable at all levels of the Metagovernment. By all accounts Austvro was close to a shattering discovery.

And yet there were leaks. Someone close to the operation—maybe even Austvro herself—was blabbing.

Scrutiny had sent Fernando in to seal the leak. If that meant shutting down Austvro's whole show until the cat could be put back into the bag (Fernando could not help but smile at the metaphor then he had the necessary authorisation.

How Austvro would take it was another thing.

The rush of corridors and doors slowed abruptly, and a moment later Fernando was deposited back on his feet, teetering slightly until he regained his balance. He had arrived in a much larger room than the one where he had been

quicken, one that felt a good deal more welcoming. There was plush white carpet on the floor, comfortable furniture, soothing pastel decor, various homely knickknacks and tasteful objets d'art. The rock-effect walls were interrupted by lavish picture windows overlooking an unlikely garden, complete with winding paths, rock pools and all manner of imported vegetation, laid out under a soothing green sky. It was a convincing simulacrum of one of the more popular holiday destinations in the low-thousand branes.

Meranda Austvro was reclining in a silver dress on a long black settee. Playing cards were arranged in a circular formation on the coffee table before her. She put down the one card that had been in her hand and beckoned Fernando to join her.

"Welcome to Pegasus Station, Inspector," she said. "I'm sorry I wasn't able to greet you sooner, but I've been rather on the busy side."

Fernando sat himself down on a chair, facing her across the table. "So I see."

"A simple game of Clock Patience, Inspector, to occupy myself while I was waiting for your arrival. Don't imagine this is how I'd rather be spending my afternoon."

He decided to soften his approach. "Your aerial did tell me you'd been preoccupied with your work."

"That's part of it. But I must admit we botched your first quickening, and I didn't have time to wait around to see the results a second time."

"When you say 'botched' . . ."

"I neglected to check your header tag more carefully. When all that cat fur started appearing . . ." She waved her hand dismissively. "I assumed there'd been a mistake in the profile, so I aborted the quickening, before you reached legal sentience."

The news unnerved him. Failed quickenings weren't unknown, though, and she'd acted legally enough. "I hope you recycled my remains."

"On the contrary, Inspector: I made good use of them." Austvro patted a striped orange rug, spread across the length of the settee. "You don't mind, do you? I found the pattern quite appealing."

"Make the most of me," Fernando said, trying not to sound as if she had touched any particular nerve. "You can have another skin when I leave, if it means so much to you."

She clicked her fingers over his shoulder, at the aerial. "You may go now, Caliph."

The spheres bustled around each other. "As you wish, Doctor Austvro."

When Fernando had heard the whisk of the closing door, he leaned an elbow on the table, careful not to disturb the cards. He brought his huge whiskered head close to Austvro's. She was an attractive woman, despite a certain steely hauteur. He wondered if she could smell his breath; how uniquely, distastefully feline it was. "I hope this won't take too much time, for both our sakes. Scrutiny wants early closure on this whole mess."

"I'm sure it does. Unfortunately, I don't know the first thing about your investigation." She picked up a card from one part of the pattern, examined it with pursed lips, then placed it down on top of another one. "Therefore I'm not sure how I can help you."

"You were informed that we were investigating a security hole."

"I was informed, and I found the suggestion absurd. Unless I am the perpetrator." She turned her cool, civil eyes upon him. "Is that what you think, Inspector? That I am the one leaking information back to the homebrane, risking the suspension of my own project?"

"I know only that there are leaks."

"They could be originating from someone in Scrutiny, or Exploitation. Have you considered that?"

"We have to start somewhere. The operation itself seems as good a place as any."

"Then you're wasting your time. Return down-stack and knock on someone else's door. I've work to do."

"Why are you so certain the leaks couldn't be originating here?"

"Because—firstly—I do not accept that there are leaks. There are merely statistical patterns, coincidences, which Scrutiny has latched onto because it has nothing better to do with its time. Secondly, I run this show on my own. There is no room for anyone else to be the source of these non-existent leaks."

"Your husband?"

She smiled briefly and extended a hand over the coffee table, palm down. A figure—a grave, clerical-looking man in black—appeared above the table's surface, no larger than a statuette. The man made a gesture with his hands, as if shaping an invisible ball, then said something barely audible—Fernando caught the phrase 'three hundred'—then vanished again, leaving only the arrangement of playing cards.

Austvro selected another, examined it once more and returned it to the table. "My husband died years ago, Inspector. Edvardo and I were deep inside the KR-L machinery, protected by an extension of the inclusion. My husband's speciality was acausal mechanics . . ." For a moment, a flicker of humanity interrupted the composure of her face. "The extension collapsed. Edvardo was on the other side of the failure point. I watched him fall into KR-L spacetime. I watched what it did to him."

"I'm sorry," Fernando said, wishing he had paid more attention to the biographical briefing.

"Since then I have conducted operations alone, with only the machines to help me. Caliph is the most special of them: I place great value on his companionship. You can question the machines if you like, but it won't get you anywhere."

"Yet the leaks are real."

"We could argue about that."

"Scrutiny wouldn't have sent me otherwise."

"There must be false alarms. Given the mount of data Scrutiny keeps tabs on—the entire informational content of meta-humanity, spread across thirty thousand reality layers—isn't any pattern almost guaranteed to show up eventually?"

"It is," Fernando conceded, stroking his hair tufts. "But that's why Scrutiny pays attention to context, and to clustering. Not simply to exact matches for sensitive keywords, either, but for suspicious similarities: near-miss designed to throw us off the scent. Miranda for Meranda Ostrow for Austvro, that kind of thing."

"And you've found these clusters?"

"Nearly a dozen, at the last count. Someone with intimate knowledge of this research project is talking, and we can't have that."

This amused her. "So the Metagovernment does have its enemies after all."

"It's no secret that there are political difficulties in the high branes. Talk of secession. Exploitation feels that the KR-L technology may give the Metagovernment the tools it needs to hold the stack together, if the dissidents try to gain the upper hand."

Austvro sneered. "Tools of political control"

"An edge, that's all. And obviously matters won't be helped if the breakaway branes learn about the KR-L discoveries, and what we intend to do with them. That's why we need to keep a lid on things."

"But these clusters . . ." Austvro leaned back into the settee, studying Fernando levelly. "I was shown some of the evidence—some of the documents—before you arrived, and, frankly, none of it made much sense to me."

"It didn't?"

"If someone—some mole—was trying to get a message through to the breakaway branes, why insist on being so cryptic? Why not just come out and say whatever needs to be said, instead of creating jumbled riddles' Tames mixed up . . . names altered . . . the context changed out of all recognition . . . some of these keywords even looked like they were embedded in some kind of play."

"All I can say is that Scrutiny considered the evidence sufficiently compelling to require immediate action. It's still investigating the provenance

of these documents, but I should have word on that soon enough."

Austvro narrowed her flint-grey eyes. "Provenance?"

"As I said, the documents are faked: made to appear historical, as if they've always been present in the data"

"Which is even more absurd than there being leaks in the first place."

He smiled at her. "I'm glad we agree on something." "It's a start."

He tapped his extended claws against the coffee table. "I appreciate your scepticism, Doctor. But the fact is I can't leave here until I have an explanation. If Scrutiny isn't satisfied with my findings—if the source of the leaks can't be traced—they'll have no option but to shut down Pegasus, or at least replace the current set-up with something under much tighter government control. So it's really in your interests to work with me, to help me find the solution.

"I see," she said coldly.

"I'd like to see more of this operation. Not just Pegasus Station, but the KR-L culture itself."

"Unthinkable. Didn't Caliph clarify where your inspection ends, Inspector?"

"It's not a question of jurisdiction. Give me reason to think you haven't anything to hide, and I'll focus my enquiries somewhere else."

She looked down, fingering the striped orange rug she had made of his skin.

"It will serve no purpose, Inspector: except to disturb you."

"I'll edit the memories before I pass them back down the stack. How does that sound?"

She rose from the settee, abandoning her card game. "Your call. But don't blame me when you start gibbering."

Austvro led him from the lounge, back into a more austere part of the station. The hem of her silver dress wised on the iron-grey flooring. Now and then an aerial flashed past on some errand, but in all other respects the station was deserted. Fernando knew that Exploitation had offered to send more expertise, but Austvro had always declined assistance. By all accounts she worked efficiently, feeding a steady stream of titbits and breakthroughs back to the Metagovernment specialists. According to Fernando's dossier, Austvro didn't trust the stability of anyone who would actually volunteer to be copied this far up-stack, knowing the protocols. It was no surprise that she treated him with suspicion, for he was also a volunteer, and only his memories would be going back home again.

Presently they arrived at an oval aperture cut into one wall. On the other side of the aperture, ready to dart down a tunnel, was a two-seater travel pod.

"Are you sure about this, Inspector?"

"I'm perfectly sure."

She shrugged—letting him know it was his mistake, not hers—and then ushered him into one of the seats. Austvro took the other one, facing him at right angles to the direction of travel. She applied her hand to a tiller and the pod sped into motion. Tunnel walls zipped by in an accelerating blur.

"We're about to leave the main body of the inclusion," Austvro informed him.

"Into KR-L spacetime?"

"Not unless the support machines fail. The inclusion's more or less spherical—in so far as one can talk about 'spherical' intrusions of one form of spacetime into another—but it sprouts tentacles and loops into interesting portions of the surrounding KR-L structure. Maintaining these tentacles and loops is much harder than keeping the sphere up, and I'm sure you've heard how expensive and difficult that is."

Fernando felt his hairs bristling. The pod was moving terrifically fast now; so swiftly that there could be no doubt that they had left the main sphere behind already. He visualised a narrow, delicate stalk of spacetime jutting out from the sphere, and him as a tiny moving mote within that stalk.

"Was this where your husband died, Doctor?"

"A similar extension; it doesn't matter now. We've made some adjustments to the support machinery, so it shouldn't happen again." Her expression turned

playful. "Why? You're not nervous, are you?"

"Not at all. I just wondered where the accident had happened."

"A place much like here. It doesn't matter. My husband never much cared for these little jaunts, anyway. He much preferred to restrict himself to the main inclusion."

Fernando recalled the image of Austvro's husband, his hands cupping an imaginary ball, like a mime, and something of the gesture tickled his interest.

"Your husband's line of work: acausal signalling, wasn't it: the theoretical possibility of communication through time, using KR-L principles?"

"A dead-end, unfortunately. Even the KR-L had never made that work. But the Metagovernment was happy with the crumbs and morsels he sent back home."

"He must have thought there was something in it."

"My husband was a dreamer," Austvro said. "His singular failing was his inability to distinguish between a practical possibility and an outlandish fantasy."

"I see."

"I don't mean to sound harsh. I loved him, of course. But he could never love the KR-L the way I do. For him these trips were always something to be endured, not relished."

He watched her eyes for a glimmer of a reaction. "And after his accident—did you have misgivings?"

"For a nanosecond. Until I realised how important this work is. How we must succeed, for the sake of the homebrane." She leaned forward in her seat and pointed down the tunnel. "There. We're approaching the interface. That's where the tunnel cladding becomes transparent. The photons reaching your eyes will have originated as photon-analogues in KR-L spacetime. You'll see their structures, their great engines. The scale will astound you. The mere geometry of these artefacts is . . . deeply troubling, for some. If it disconcerts you, close your eyes." Her hand remained hard on the tiller. "I'm used to it, but I'm exposed to these marvels on a daily basis."

"I'm curious," Fernando said. "When you speak of the aliens, you sometimes sound like you're saying three letters. At other times."

"Krull, yes," she said, dismissively. "It's shorthand, Inspector: nothing more. Long before we knew it had ever been inhabited, we called this the KR-L brane. K and R are the Boltzmann and Rydberg constants, from nuclear physics. In KR-L spacetime, these numbers differ from their values in the homebrane. L is a parameter that denotes the degree of variation."

"Then Krull is . . . a word of your own coining?"

"If you insist upon calling it a word. Why? Has it appeared in these mysterious keyword clusters of yours?" "Something like it."

The pod swooped into the transparent part of the stalk. It was difficult to judge speed now. Fernando assumed there was some glass-like cladding between him and the inclusion boundary, and somewhere beyond that (he was fuzzy on the physics) the properties of spacetime took on alien attributes, profoundly incompatible with human biochemistry. But things could still live in that spacetime, provided they'd been born there in the first place. The KR-L had evolved into an entire supercivilisation, and although they were gone now, their great machines remained. He could see them now, as huge and bewildering as Austvro had warned. They were slab-sided, round-edged, ribbed with flanges and cooling grids, surmounted by arcing spheres and flickering discharge cones. The structures glowed with a lilac radiance that seemed to shade into ultraviolet. They receded in all directions—more directions, in fact, than seemed reasonable, given the usual rules of perspective. Somewhere low in his throat he already felt the first queasy constriction of nausea.

"To give you an idea of scale . . ." Austvro said, directing his unwilling attention towards one dizzying feature, ". . . that structure there, if it were mapped into our spacetime, and built from our iron atoms, would be larger than a Jupiter-class gas giant. And yet it is no more than a heat dissipation element, a safety valve on a much larger mechanism. That more distant machine

is almost three light-hours across, and it too is only one element in a larger whole."

Fernando fought to keep his eyes open. "How far do these machines extend?"

"At least as far as our instruments can reach. Hundreds of light-hours in all directions. The inclusion penetrates a complex of KR-L machinery larger than one of our solar systems. And yet even then there is no suggestion that the machinery ends. It may extend for weeks, months, of light-travel time. It may be larger than a galaxy."

"Its function?" Seeing her hesitation, he added: "I have the necessary clearance, Doctor. It's safe to tell me."

"Absolute control," she said. "Utter dominance of matter and energy, not just in this brane, but across the entire stack of realities. With this instrumentality, the KR-L could influence events in any brane they selected, in an instant. This machinery makes our graviton pulse equipment—the means by which you arrived here—look like the hamfisted workings of a brain-damaged caveman."

Fernando was silent for a moment, as the pod sped on through the mind-wrenching scenery.

"Yet the KR-L only ever occupied this one brane," he said. "What use did they have for machinery capable of influencing events in another one?"

"Only the KR-L can tell us that," Austvro said. "Yet it seems likely to me that the machinery was constructed to deal with a threat to their peaceful occupation of this one brane."

"What could threaten such a culture, apart from their own bloody-minded hubris?"

"One must presume: another culture of comparable sophistication. Their science must have detected the emergence of another civilisation, in some remote brane, hundreds of thousands or even millions of realities away, that the KR-L considered hostile. They created this great machinery so that they might nip that threat in the bud, before it spilled across the stack towards them."

"Genocide?"

"Not necessarily. Is it evil to spay a cat?"

"Depends on the cat."

"My point is that the KR-L were not butchers. They night their own self-preservation, but not at the ultimate expense of that other culture: whoever they might have been. Surgical intervention was all that was required."

Fernando looked around again. Some part of his mind was finally adjusting to the humbling dimensions of the machinery, for his nausea was abating. "Yet they're all gone now. What happened?"

"Again, one must presume: some fatal hesitancy. They created this machinery, but, at what should have been their moment of greatest triumph, flinched from using it." "Or they did use it, and it came back and bit them." "I hardly think so, Inspector."

"How many realities have we explored? Eighty, ninety thousand layers in either direction?"

"Something like that," she said, tolerantly.

"How do we know what happens when you get much further out? For that matter, what could the KR-L have known?"

"I'm not sure I follow you."

"I'm just wondering . . . when I was a child I remember someone—I think it was my uncle—explaining to me that the stack was like the pages of an infinitely thick book, a book whose pages reached away to an infinite distance in either direction: reality after reality, as far as you could imagine, with the physics changing only slightly from page to page."

"As good an explanation as the layman will ever grasp."

"But the same person told me there was another theory of the stack: taken a bit less seriously, but not completely discredited."

"Continue," Austvro said.

"The theory was that physics kept changing, but after a while it flattened out

again and began to converge back to ours. And that by then you were actually coming back again, approaching our reality from the other direction. The stack, in other words, was circular."

"You're quite right: that theory is taken a bit less seriously."

"But it isn't discredited, is it?"

"You can't discredit an untestable hypothesis."

"But what if it is testable? What if the physics does begin to change less quickly?"

"Local gradients tell you nothing. We'd have to map millions, tens of millions of layers, before we could begin . . ."

"But you already said the KR-L machinery might have had that kind of range. What if they were capable of looking all the way around the stack, but they didn't realise it? What if the hostile culture they thought they were detecting was actually themselves? What if they turned on their machinery and it reached around through the closed loop of realities and nipped them in the bud?"

"An amusing conceit, Inspector, but no more than that."

"But a deadly one, should it happen to be true." Fernando stroked his chin tufts, purring quietly to himself as he thought things through. "The Office of Exploitation wishes to make use of the KR-L machinery to deal with another emerging threat."

"The Metagovernment pays my wages. It's up to it what it does with the results I send home."

"But as was made clear to me when I arrived, you are a busy woman. Busy because you are approaching your own moment of greatest triumph. You understand enough about the KR-L machinery to make it work, don't you. You can talk to it through the inclusion, ask it do your bidding."

Her expression gave nothing away. "The Metagovernment expects results."

"I don't doubt it. But I wonder if the Metagovernment has been fully appraised of the risks. When they asked you what happened to the KR-L, did you mention the possibility that they might have brought about their own extinction?"

"I confined my speculation to the realm of the reasonably likely, Inspector. I saw no reason to digress into fancy."

"Nonetheless, it might have been worth mentioning."

"I disagree. The Metagovernment is intending to take action against dissident branes within its own realm of colonisation, not some barely-detected culture a million layers away. Even if the topology of the layers was closed . . ."

"But even if the machinery was used, it was only used once," Fernando said.

"There's no telling what other side-effects might be involved."

"I've made many local tests. There's no reason to expect any difficulties!"

"I'm sure the KR-L scientists were equally confident, before they switched it on."

Her tone of voice, never exactly confiding, turned chill. "I'll remind you once again that you are on Scrutiny business, not working for Exploitation. My recollection is that you came to investigate leaks, not to question the basis of the entire project."

"I know, and you're quite right. But I can't help wondering whether the two things aren't in some way connected."

"I don't even accept that there are leaks, Inspector. You have some way to go before you can convince me they have anything to do with the KR-L machinery."

"I'm working on it," Fernando said.

They watched the great structures shift angle and perspective as the pod reached the apex of its journey and began to race back towards the inclusion. Fernando was glad when the shaft walls turned opaque and they were again speeding down a dark-walled tunnel, back into what he now thought of as the comparable safety and sanity of Pegasus Station. Until he had recorded and transmitted his memories down the stack, self-preservation still had a strong allure.

"I hope that satisfied your curiosity," Austvro said, when they had disembarked and returned to her lounge. "But as I warned you, the journey was



of no value to your investigation."

"On the contrary," he told her. "I'm certain it clarified a number of things. Might I have access to a communications console? I'd like to see if Scrutiny have come up with anything new since I arrived."

"I'll have Caliph provide you with whatever you need. In the meantime I must attend to work. Have Caliph summon me if there is anything of particular urgency."

"I'll be sure to."

She left him alone in the lounge. He fingered the tiger skin rug, repulsed and fascinated in equal measure at the exact match with his own fur. While he waited for the aerial to arrive, he swept a paw over the coffee table, trying to conjure up the image of Austvro's dead husband. But the little figure never appeared.

It hardly mattered. His forensic memory was perfectly capable of replaying a recent observation, especially one that had seemed noteworthy at the time. He called to mind the dead man, dwelling on the way he shaped an invisible form: not, Fernando now realised, a ball, but the ring-shaped stack of adjacent branes in the closed-loop of realities. "Three hundred and sixty degrees," he'd been saying. Meranda Austvro's dead husband had been describing the same theoretical meta-reality of which Fernando's uncle had once spoken. Did that mean that the dead man believed that the KR-L had been scared by their own shadow, glimpsed at some immense distance into the reality stack? And had they forged this soul-crushingly huge machinery simply to strike at that perceived enemy, not realising that the blow was doomed to fall on their own heads? Perhaps.

He looked anew at the pattern of cards, untouched since Austvro had taken him from this room to view the KR-L machinery. The ring of cards, arranged for Clock Patience, echoed the closed-loop of realities in her husband's imagination.

Almost, he supposed, as if Austvro had been dropping him a hint.

Fernando was just thinking that through when Caliph appeared, assigning one of his larger spheres into a communications console. Symbols and keypads brightened across the matte grey surface. Fernando tapped commands, claws clicking as he worked, and soon accessed his private data channel.

There was, as he had half expected, a new message from Scrutiny. It concerned the more detailed analysis of the leaks that had been in motion when he left on his investigation.

Fernando placed a direct call through.

"I lello," said Fernando's down-brane counterpart, a man named Cook. "Good news, bad news, I'm afraid." "Continue," Fernando purred.

"We've run a thorough analysis on the keyword clusters, as promised. The good news is that the clusters haven't gone away: their statistical significance is now even more certain. There's clearly been a leak. That means your journey hasn't been for nothing."

"That's a relief."

"The bad news is that the context is still giving us some serious headaches. Frankly, it's disturbing. Whoever's responsible for these leaks has gone to immense trouble to make them look as if they've always been part of our data heritage."

"I don't understand. I mean, I understand, but I don't get it. There must be a problem with your methods, your data auditing."

Cook looked pained. "That's what we thought, but we've been over this time and again. There's no mistake. Whoever planted these leaks has tampered with the data at a very deep level; sufficient to make it seem as if the clusters have been with us long before the KR-L brane was ever discovered."

Fernando lowered his voice. "Give me an example. Austvro mentioned a play, for instance."

"That would be one of the oldest clusters. The Shipwreck, by a paper-age playwright, around 001611. No overt references to the KR-L, but it does deal with a scholar on a haunted island, an island where a powerful witch used to

live . . . which could be considered a metaphorical substitute for Austvro and Pegasus Station. Contains a Miranda, too, and . . ."

"Was the playwright a real historical figure?"

"Unlikely, unless he was almost absurdly prolific. There are several dozen other plays in the records, all of which we can presume were the work of the mole."

"Mm," Fernando said, thoughtfully.

"The mole screwed up in other ways too," Cook added. "The plays are riddled with anachronisms; words and phrases that don't appear earlier in the records."

"Sloppy," Fernando commented, while wondering if there was something more to it than mere sloppiness. "Tell me about another cluster."

"Skip to 001956 and we have another piece of faked drama: something called a 'film'; some kind of recorded performance. Again, lots of giveaways: Ostrow for Austvro, Bellerophon—he's the hero who rode the winged horse Pegasus—the KR-L themselves . . . real aliens, this time, even if they're confined to a single planet, rather than an entire brane. There's even—get this—a tiger."

"Really," Fernando said dryly.

"But here's an oddity: our enquiries turned up peripheral matter which seems to argue that the later piece was in some way based upon the earlier one."

"Almost as if the mole wished to lead our attention from one cluster to another." Fernando scratched at his ear. "What's the next cluster?"

"Jump to 002713: an ice opera performed on Pluto Prime, for one night only, before it closed due to exceptionally bad notices. Mentions 'entities in the eighty three thousandth layer of reality'. This from at least six thousand years before the existence of adjoining braneworlds was proven beyond doubt."

"Could be coincidence, but . . . well, go on."

"Jump to 009655, the premier of a Tauri-phase astrosculpture in the Wenlock star forming region. Supplementary text refers to 'the aesthetic of the doomed Crail' and 'Mirandine and Kalebin'."

"There are other clusters, right up to the near-present?"

"All the way up the line. Random time-spacing: we've looked for patterns there, and haven't found any. It must mean something to the mole, of course . . ."

"If there is a mole," Fernando said.

"Of course there's a mole. What other explanation could there be?"

"That's what I'm wondering."

Fernando closed the connection, then sat in silent contemplation, shuffling mental permutations. When he felt that he had examined the matter from every conceivable angle and yet still arrived at the same unsettling conclusion—he had Caliph summon Doctor Austvro once more.

"Really, Inspector," she said, as she came back into the lounge. "I've barely had time . . ."

"Sit down, Doctor."

Something in the force of his words must have reached her. Doctor Austvro sank into the settee, her hands tucked into the silvery folds of her dress.

"Is there a problem? I specifically asked . . ."

"You're under arrest for the murder of your husband, Edvardo Austvro."

Her face turned furious. "Don't be absurd. My husband's death was an accident: a horrid, gruesome mistake, but no more than that."

"That's what you wished us all to think. But you killed him, didn't you? You arranged for the collapse of the inclusion, knowing that he would be caught in KR-L spacetime."

"Ridiculous."

"Your husband understood what had happened to the KR-L: how their machinery had reached around the stack, through three hundred and sixty degrees, and wiped them out of existence, leaving only their remains. He knew exactly how dangerous it would be to reactivate the machinery; how it could never become a tool for the Metagovernment. You said it yourself, Meranda: he feared the machinery. That's because he knew what it had done; what it was still capable

of doing."

"I would never have killed him," she said, her tone flatly insistent.

"Not until he opposed you directly, not until he became the only obstacle between you and your greatest triumph. Then he had to go."

"I've heard enough." She turned her angry face towards the aerial. "Caliph: escort the Inspector to the dissolution chamber. He's in clear violation of the terms under which I agreed to this investigation."

"On the contrary," Fernando said. "My enquiry is still of central importance." She sneered. "Your ridiculous obsession with leaks? I monitored your recent conversation with the homebrane, Inspector. The leaks are what I've always maintained: statistical noise, meaningless coincidences. The mere fact that they appear in sources that are incontrovertibly old . . . what further evidence do you need, that the leaks are nothing of the sort?"

"You're right," Fernando said, allowing himself a heavy sigh. "They aren't leaks. In that sense I was mistaken."

"In which case admit that your mission here was no more than a wild goose chase, and that your accusations concerning my husband amount to no more than a desperate attempt to salvage some . . ."

"They aren't leaks," Fernando continued, as if Austvro had not spoken.

"They're warnings, sent from our own future." She blinked. "I'm sorry?"

"It's the only explanation. The leaks appear in context sources that appear totally authentic . . . because they are." "Madness."

"I don't think so. It all fits together quite nicely. Your husband was investigating acausal signalling: the means to send messages back in time. You dismissed his work, but what if there was something in it after all? What if a proper understanding of the KR-L technology allowed a future version of the Metagovernment to send a warning to itself in the past?"

"What kind of warning, Inspector?" she asked, still sounding appalled.

"I'm guessing here, but it might have something to do with the machinery itself. You're about to reactivate the very tools that destroyed the KR-L. Perhaps the point of the warning is to stop that ever happening. Some dreadful, unforeseen consequence of turning the machinery against the dissident branes . . . not the extinction of humanity, obviously, or there wouldn't be anyone left alive to send the warning. But something nearly as bad. Something so awful that it must be edited out of history, at all costs."

"You should listen to yourself, Inspector. Then ask yourself whether you came out of the quickening room with all your faculties intact."

He smiled. "Then you have doubts."

"Concerning your sanity, yes. This idea of a message being sent back in time . . . it might have some microscopic degree of credibility if your precious leaks weren't so hopelessly cryptic. Who sends a message and then scrambles the facts?"

"Someone in a hurry, I suppose. Or someone with an imperfect technique."

"I'm sure that means something to you."

"I'm just wondering: what if there wasn't time to get it right? What if the sending of the message was a one-shot attempt, something that had to be attempted even though the net hod was still not fully understood?"

"That still doesn't explain why the keywords would crop up in . . . a play, of all things."

"Perhaps it does, though. Especially if the acausal signalling involves the transmission of patterns directly into the human mind, across time, in a scattergun fashion. The playwright . . ."

"What about him?" she asked, with a knowingness that reminded him she had listened in on his conversation with Cook.

"The man lived and died before the discovery of quantum mechanics, let alone braneworlds. Even if the warning arrived fully-formed and coherent in his mind, he could only have interpreted it according to his existing mental framework. It's no wonder things got mixed up, confused. His conceptual vocabulary didn't extend to vanished alien cultures in adjacent reality stacks. It did extend to islands, dead witches, ghosts."

"Ridiculous. Next you'll be telling me that the other clusters . . ."  
"Exactly so. The dramatised recording—the `film'—was made a few centuries later. The creators did the best they could with their limited understanding of the universe. They knew of space travel, other worlds. Closer to the truth than the playwright, but still limited by the mental prison of their contemporary worldview. The same goes for all the other clusters, I'm willing to bet."

"Let me get this straight," Austvro said. "The future Metagovernment resurrects ancient KR-L time-signalling machinery, technology that it barely understands. It attempts to send a message back in time, but it ends up spraying it through history, back to the time of a man who probably thought the Sun ran on coal."

"Maybe even earlier," Fernando said. "There's nothing to say there aren't other clusters, lurking in the statistical noise . . ."

Austvro cut him off. "And yet despite this limited understanding of the machinery, the—as you said—scattershot approach—they still managed to score direct hits into the heads of playwrights, dramatists, sculptors . . ." She shook her head pityingly.

"Not necessarily," Fernando said. "We only know that these people became what they were in our timeline. It might have been the warning itself that set these individuals on their artistic courses . . . planting a seed, a vaguely-felt anxiety, that they had no choice but to exorcise through creative expression, be it a play, a film, or an ice-opera on Pluto Prime."

"I'll give you credit, Inspector: you really know how to take an argument beyond its logical limit. You're actually suggesting that if the signalling hadn't taken place, none of these works of art would ever have existed?"

He shrugged. "If you admit the possibility of time messages . . ."

"I don't. Not at all."

"It doesn't matter. I'd hoped to convince you—I thought it might make your arrest an easier matter for both of us—but it's really not necessary. You understand now, though, why I must put an end to your research. Scrutiny and Exploitation can decide for themselves whether there's any truth in my theory."

"And if they don't think there is—then I'll be allowed to resume my studies?"

"There's still the small matter of your murder charge, Meranda."

She looked sad. "I'd hoped you might have forgotten." "It's not my job to forget."

"How did you guess?"

"I didn't guess," he said. "You led me to it. More than that: I think some part of you—some hidden, subconscious punt—actually wanted me to learn the truth. If not, that was it very unfortunate choice of card game, Meranda."

"You're saying I wanted you to arrest me?"

"I can't believe that you ever hated your husband enough to kill him. You just hated the way he opposed your research. For that reason he had to go, but I doubt that there's been a moment since when what you did hasn't been eating you from inside."

"You're right," she said, as if arriving at a firm decision. "I didn't hate him. But he still had to go. And so do you."

In a flash her hand had emerged from the silvery folds of her dress, clutching the sleek black form of a weapon. Fernando recognised it as a simple blaster: not the most sophisticated weapon in existence, but more than capable of inflicting mortal harm.

"Please, Doctor. Put that thing away, before you do one of us an injury."

She stood, the weapon wavering in her hand, but never losing its lock on him.

"Caliph," she said. "Escort the Inspector to the dissolution chamber. He's leaving us."

"You're making a mistake, Meranda."

"The mistake would be in allowing the Metagovernment to close me down, when I'm so close to success. Caliph!"

"I cannot escort the Inspector, unless the Inspector wishes to be escorted,"

the aerial informed her.

"I gave you an order!"

"He is an agent of the Office of Scrutiny. My programming does not permit . . ."

"Walk with me, please," Fernando said. "Put the gun away and we'll say no more about it. You're in enough trouble as it is."

"I'm not going with you."

"You'll revive a fair trial. With the right argument, you may even be able to claim your husband's death as manslaughter. Perhaps you didn't mean to kill him, just to strand him . . ."

"It's not the trial," she snarled. "It's the thought of stepping into that thing . When I came here I never intended to leave. I won't go with you."

"You must."

He took a step towards her, knowing even as he did it that the move was unwise. He watched her finger tense on the blaster's trigger, and for an instant he thought he might cross the space to her before the weapon discharged. Few people had the nerve to hold a gun against an agent of Scrutiny; even fewer had the nerve to fire.

But Meranda Austvro was one of those few. The muzzle spat rapid bolt of self-confined plasma, and he watched in slow-motion horror as three of the bolts slammed into his right arm, below the elbow, and took his hand and forearm away in an agonising orange fire, like a chalk drawing smeared in the rain. The pain hit him like a hammer, and despite his training he felt the full force of it before mental barriers slammed down in rapid succession, blocking the worst. He could smell his own charred fur.

"An error, actor Austvro," he grunted, forcing the words out.

"Don't take another step, Inspector."

"I'm afraid I must."

"I'll kill you." The weapon was now aimed directly at his chest. If her earlier shot had been wide, there would be no error now.

He took another step. He watched her finger tense again, and readied himself for the annihilating fire.

But the weapon dropped from her hand. One of Caliph's smaller spheres had dashed it from her grip. Austvro clutched her hand with the other, massaging the fingers. Her face showed stunned incomprehension. "You betrayed me," she said to the aerial

"You injured an agent of Scrutiny. You were about to inflict further harm. I could not allow that to happen." Then one of the larger sphere swerved into Fernando's line of "Do you require medical assistance?"

"I don't think so. I'm about done with this body anyway." "Very well."

"Will you help me to escort Doctor Austvro to the dissolution chamber?"

"If you order it."

"Help me, in that case."

Doctor Austvro tried to resist, but between them Fernando and Caliph quickly had the better of her. Fernando kicked the weapon out of her way, then pulled Austvro against his chest with his left arm, pinning her there. She struggled to escape, but her strength was nothing against his, even allowing for the shock of losing his right arm.

Caliph propelled them to the dissolution chamber. Austvro fought all the way, but with steadily draining will. Only at the last moment, when she saw the grey hood of the memory recorder, next to the recessed alcove of the dissolution field, did she summon some last reserve of resistance. But her efforts counted for nothing. Fernando and the robot placed her into the recorder, closing the heavy metal restraining buckles across her body. The hood lowered itself, ready to capture a final neural image; a snapshot of her mind that would be encoded into a graviton pulse and relayed back to the homebrane.

"Meranda Austvro," Fernando said, pushing the blackened stump of his arm into his chest fur, "I am arresting you on the authority of the Office of Scrutiny. Your resurrection profile will be captured and transmitted into the safekeeping of the Metagovernment. A new body will be quickened and employed

as a host for thee patterns, and then brought to trial. Please compose your thoughts accordingly."

"When they quicken me again, I'll destroy your career," she told him. Fernando looked sympathetic. "You wouldn't believe how many times I've heard that before."

"I should have skinned you twice."

"It wouldn't have worked. They'd have sent a third copy of me."

He activated the memory recorder. Amber lights flickered across the hood, stabilising to indicate that the device had obtained a coherent image and that the relevant data was ready to be committed to the graviton pulse. Fernando issued the command, and a tumbling hourglass symbol appeared on the hood.

"Your patterns are on their way home now, Meranda. For the moment you still have a legal existence. Enjoy it while you can."

He'd never said anything that cruel before, and almost as soon as the words were out he regretted them. Taunting the soon-to-be-destroyed had never been his style, and it shamed him that he had permitted himself such a gross lapse of professionalism. The only compensation was that he would soon find himself in the same predicament as Doctor Austvro.

The hourglass vanished, replaced by a steady green light. It signified that the homebrane had received the graviton pulse, and that the resurrection profile had been transmitted without error.

"Former body of Meranda Austvro," he began, "I must now inform you . . ."

"Just get it over with."

Fernando and Caliph helped her from the recorder. Her body felt light in his hands, as if some essential part of it had been erased or extracted during the recording process. Legally, this was no longer Doctor Meranda Austvro: just the biological vehicle Austvro had used while resident in this brane.

According to Metagovernment law, the vehicle must now be recycled.

Fernando turned on the pearly screen of the dissolution field. He tested it with a stylus, satisfied when he saw the instant actinic flash as the stylus was wrenched from existence. Dissolution was quick and efficient. In principle the atomic fires destroyed the central nervous system long before pain signals had a chance to reach it, let alone be experienced as pain.

Not that anyone ever knew, of course. By the time you went through the field, your memories had already been captured. Anything you experienced at the moment of destruction never made it into the profile.

"I can push you into the field," he told Austvro. "But by all accounts you'll find it quicker and easier if you run at it yourself."

She didn't want it to happen that way. Caliph and Fernando had to help her through the field. It wasn't the nicest part of the job.

Afterwards, Fernando sat down to marshall and clarify his thoughts. In a little while he too would be consumed by fire, only to be reborn in the homebrane. Scrutiny would be expecting a comprehensive report into the Pegasus affair, and it would not do to be woolly on the details. Experience had taught him that a little mental preparation now paid dividends in the long run. The recording and quickening process always blurred matters a little, so the clearer one could be at the outset, the better.

When he was done with the recorder, when the green light had reported safe receipt of his neural patterns, he turned to Caliph. "I no longer have legal jurisdiction here. The 'me' speaking to you is not even legally entitled to call itself Adam Fernando. But I hope you won't consider it improper of me to offer some small thanks for your assistance."

"Will someone come back to take over?" Caliph asked.

"Probably. But don't be surprised if they come to shut down Pegasus. I'm sure my legal self will put in a good word for you, though."

"Thank you," the aerial said.

"It's the least I can do."

Fernando stood from the recorder, and—as was his usual habit—took a running jump at the dissolution field. It wasn't the most elegant of ends—the lack of an arm hindered his balance—but it was quick and efficient and the execution

not without a certain dignity.

Caliph watched the tiger burn, the stripes seeming to linger in the air before fading away. Then it gathered its spheres into an agitated swarm and wondered what to do next.