'Wow!' He looks up at Elise. 'When can we go to Mars?'

Elise lays her hand on his head. 'Maybe when you're older.' Her lips turn up in a small smile as she looks at Ayla. 'Maybe you'll go visit your aunt someday.'

'I'd like that,' Ayla says, and stands.

'Can I go in?' Ashwin loud-whispers to Elise.

She nods, and they watch as he dashes back into the house.

'I suppose he's my reminder of you and Mom,' Elise says with a broken laugh. 'I wish we'd done this sooner, that you could've gotten to know the boys. At least you met Ashwin. Paco – my older one – is at his friend's house.'

Ayla reaches for Elise's hand. She squeezes it lightly before letting go. 'I'll write you?'

'Yes. Of course. We'll stay in touch.'

Ayla's last image as she drives away is of her sister, standing in the driveway of their childhood home, arms wrapped around herself against the chill.

She replays their conversation, over and over, as she drives to Corpus Christi. The regret stings: all the years she missed, not seeing her nephews as babies, not being a part of their lives. *Is Mars a mistake?* Will that be her next great regret?

Ayla considers turning around. Highway 77 is devoid of cars, and she pulls into the grassy median and stops. She steps outside and looks up.

'What should I do?' she whispers.

The stars blaze overhead in a giant bowl over the plains. They beckon her, reassure her. *If it hadn't been for the mission*, they murmur, *this reconciliation would never have happened. Be glad for what the future holds.*

As she climbs back into the car, Ayla realizes that at last she can let go of the past. She can start afresh, not because she can leave her past behind, but because it will anchor her as she ventures onward and outward. She gets on the highway and continues through Corpus Christi to the base.

The *Mayflower* stretches up into the night sky, ablaze in floodlights and drawing her in like a beacon in a storm. The silver scaffolding hugs the ship, but she can already feel the struts falling away. She's light enough to fly.

REUNION

VANDANA SINGH

When Mahua wakes up, the first thing she sees is a map. It is a map of her life's journey, it is her heart's desire, it is the abstract landscape of the new science, the new knowledge she has helped develop. More mundanely, it is the cracked plaster on the ceiling. In some places, the cracks remind her of the map of Delhi when she was a student there; other places are like the aerial view of the Gangetic delta. Smaller cracks branch off the wider ones, and so on, and so on, and some even connect to other cracks, forming a web as delicate as the veins of a leaf. She can lie in bed for hours, observing the ceiling, reminiscing, making metaphorical leaps, intellectual exercises that only delay the inevitable. But, later today, the journalist will be coming. The thought of him, and the news that he might bring – about Raghu, after all these years! Pain stabs her heart. *I must be prepared.* The man from Brazil is only bringing her the confirmation that she needs. She doesn't see journalists any more – they tend to hail her as the heroine of the Great Turning, the *Maha Parivartan* – such nonsense! But this man, he said he had some information about Raghu. She breathes deeply and deliberately until the anxiety dissolves and rises carefully from the bed. She stands on her own two slightly shaky legs, acknowledging their loyalty to her body for over seven decades.

Later, in the kitchen, she makes a cup of tea in the semi-darkness. The others will be downstairs soon – she can hear creaks, mumbles, the sleepy, shuffling walk to the bathroom upstairs, the muted sounds of the flush. The domicile houses 23 people, so the three bathrooms require a patience for queues and some bladder control. Sipping her tea by the window, she watches the sunrise, accompanied by the dawn chorus of mynahs, doves, jungle babblers and birds she can't identify. The light is sufficient now for the shadows to have acquired clarity – the trees in their mist-wrapped

greenery, the vegetable gardens between the domiciles lower down the hill. From her vantage point, she is looking south-west toward what was once Mumbai, the greatest of all cities of the Age of Kuber. In the distance, the glass towers rise above the drowned streets, glinting gold where they catch the low light of the sun. She can see dark patches and holes like blind eyes on the sides of the buildings, where storms and human violence have taken out the windows. The sea has reclaimed the city – fish now swim in what was once Charni Road, and crabs and mussels have taken up residence in the National Stock Exchange. The fisherfolk ply their boats and barges in the watery streets, and she thinks she can hear their calls mixed with the cries of seabirds on the wind.

She turns – the child Mina is running down the stairs two steps at a time, her hair a tousled mass. 'Did I miss it?'

'No. Come and look!'

They stand at the window together. At the bottom of the hill, shrouded in the semi-darkness, is the river, waiting for the sun to edge its way above the hills to the east. *There!* The light breaks over the rim. The lazy meander of the river through the land is like a word written in fire. The sun is full on it; the new marsh, dark by contrast, edges the brightness like rust on a sword. This is poetry, this moment, the sun's brushstroke on the water. The suntower on the opposite hill is turning slowly, its petals opening to the light. As they watch, a flock of ducks rise high over the mangroves at the edge of the marsh, wheeling in a sinuous half-arc and settling again among the reeds.

The Mithi River is running full because of the monsoons. Twenty years ago, the edge of the river had been a waste dump, bordered by shoddily built high-rises. The developer mafia had held the reclamation project at bay until the superstorms came, levelling buildings, forcing the river to flow backwards and inundate the city with decades of effluents, sewage and other refuse. Mahua had joined a citizen's group engaged in cleaning the city, and she had eventually recruited them to turn the abused lands into a mangrove wetland that would restore the ecology and clean the water. *Protect us from storm surges. Natural sewage treatment. Experiment with the new ways of living.* She remembers the arguments in the citizen councils, and all that it had taken to win over vested interests. Years and years of work, during which the seas rose, and Mumbai became an archipelago again, and resettlement became a crisis of enormous proportions. All these years later

her reward is this daily ritual with the child, watching from the window. *Raghu, if only you were here!* Each time, she sees the ducks flying over the suntower, turning in a wide arc to settle on the marsh in the dawn light, her heart beats a little faster, a *drut* of joy.

'Has he come yet, the journalist?'

'No, Mina. But he just pinged me. He'll be two hours late. It's the water taxis. They're always slower in the rainy season.'

'But it's not raining now! Aaji, tell me again about your friend Raghu.'

'Later. Let me give the goats a treat.'

All morning, Mahua has been helping the children shell peas. Now she gets up slowly and takes the empty pea pods over to the goat shed. The air is moist with the promise of rain. The house is a dome, a green mound, its roof and walls almost entirely covered with the broad leaves of three different kinds of gourds. The peas grow at the ground level, but the boundary between house and garden is not at all clear. The house is at the top of the hill, and she has a good view of the *basti* she has helped create, the newest one of hundreds of experimental settlements scattered throughout the country.

Once a *basti* of this design was just a dream. Look at it now, the persistence of that dream, the dwellings on this hill: dome-shaped to reduce the impact of the storms, thick walls of clay, straw and recycled brick, covered with greenery, the architecture a marriage of the ancient and the modern. The walkways follow the natural contours of the land. The vegetables cascade off the walls on vines, and down the hill. At the next house, the children are harvesting them, monkey-like, on rope ladders, before the monkeys come. The nearest suntower rises like a prayer to the sun on the next rise, its petals open to the light, speaking through electronic messages to the next one, and the next one, distributing power according to algorithms developed by the networks themselves. This *basti*, like most of its kind, is embedded with sensors that monitor and report a constant stream of data – temperature, humidity, energy use, carbon storage, chemical contaminants, biodiversity. If Mahua wears her Shell, she will have access, visual and auditory, to any and all of the data streams.

There had been a time when she was never without a Shell in her ear and a fully sensorized visor. But in the last few years, the visor has been lying in a box, gathering dust, and she's been leaving the Shell by her bedside. Recently, she has been feeling the effects of aging, and it is a new, strange feeling to acknowledge the body – she, who has led such a rich life of the mind. Her doctors want her to wear medical sensors, but she has refused. There's something she's been listening for, she thinks, watching the goats. She's been waiting for a change.

Mahua's particular talent has always been the recognition of patterns and relationships. Whenever she has had a shift of perspective or revelation, it has been preceded by a feeling of waiting – as though her unconscious knows well beforehand that something new is coming. But why now, so long after she has stopped doing active work? What has she been waiting for, apart from confirmation of Raghu's death in the Amazon? When she first moved to the Mumbai shores for good, 27 years ago, she used to watch the western sea for his arrival, in defiance of all reason. Reason had won, eventually.

What old age has taught her is patience. The epiphany, if that is what it is, will come in its own time. For now, for today, she has to prepare herself for the journalist's visit, for the reality of Raghu's death. *How did we get to this point, old friend, in our lives, in history?*

History is not a straight line. That's Raghu's voice in her mind, but she's saying it with him as she wanders back to sit in her chair. The children are having an argument over whether the biggest gourd – a pumpkin – is ripe enough to harvest. Mahua looks over at the western sea, from which he would have come, if he were coming, and sees how the light of the sun is shattered by the water's surface into diamonds.

The past is a palimpsest. She imagines unrolling it – the surface is smooth, like vellum, but as she moves her hand over it, the words fade and disappear, to be replaced by a new script that is slowly revealed to the light. And touching the new lines, they, too, fade, and in their place appears what lies underneath. What is the last layer – if there is one? She's dreaming over her second cup of tea in the garden chair, oblivious to the children's voices. The palimpsest. Faces, voices, word fragments appear, disappear.

When Mahua had been a child in Delhi – between the scholarship that had rescued her from the slums and the start of college – she had been afflicted by a disease she could scarcely remember now, except for the fatigue, the lines of worry between her grandmother's brows and the smell of boiled rice and strange herbs. At the time, there hadn't been much to do but lie in bed and look out of her second-floor window into the branches of an old mango tree. It stood in a small courtyard, the only greenery enclosed in a block of cheap flats where the roof leaked in the monsoons and one could hear the arguments of neighbours through the thin walls. But in the leafy, airy spaces of the tree, there were small, daily dramas. A black drongo chased off a cheel coming back to strut on the branches and fluff its feathers. A line of large ants moved over the bark, negotiating each tiny gully, each ravine, with mathematical precision. A bird's nest, with the eggs a blue surprise, and later the ever-open mouths of nestlings. Too feverish to think clearly, she had let go of herself, crawling with the ants, soaring with the cheel. It had been an escape from her illness, her incarceration and, as she later understood, an expansion of her own limited self. Her cousin, Kalpana-di, home from work, would sit Mahua up to lean against her, and spoon rice water into her mouth while her grandmother went out to buy vegetables. Later, she had never had the courage to ask her grandmother precisely what kind of illness she had had; secretly, it was one of the happiest memories of her childhood.

As she grew up, she practised this letting go, this hyper-awareness. It helped to be a student of the sciences because that added another dimension. Walking in the rain, she would imagine the drops coalescing in clouds high up, then falling, faster and faster until drag reduced the acceleration to zero. She imagined the fat drops coasting down, shaped by surface tension and gravity, little water bags bursting against the concrete rooftops of the lab buildings, leaving a circular signature, a ring of daughter drops. Imagining she was there in the moist, cloudy heights, she was falling, refracting light, buffeted by wind, ridden by bacteria that travelled by cloud. She would be startled out of this reverie by a drop falling on her head, or her hand, and that would snap her back into herself, but not without a laugh of comradeship with water, with the clouds. It was a weird way to be. Impossible to explain to her grade-driven, ambitious fellow students, who scoffed at anything remotely poetic.

Her classmates had mocked and teased her for her poverty and her dark skin. *'Junglee'* they had called her, although she had lived in Delhi most of her life and knew nothing about her maternal grandmother's people. Her grandmother had tried to teach her something of their origins, but the grinding toil of life in the slum, followed by the pressure of studies after the scholarship changed their lives, left no time for anything but the imperatives of the present. Within only a few years at the elite school, the *junglee* shocked her classmates by topping the final exams. Grumbles about reservations gave way to a resentful silence when it became clear that this demonstration of academic excellence was a trend, not a one-off. Those were difficult years – she would not have got through it all without her grandmother's determination and Kalpana di's affectionate presence – Kalpana di, whose life and death she still could not remember without pain.

'Kalpana-di, help me with my homework!'

The two of them would sit cross-legged on the bed, and Kalpana di would look at Mahua's mathematics notebook. After about an hour, she would say, with a little laugh, 'Mahua, your sister is not as clever as you! Let's eat something, then you try again. You can do it!'

Working into the night, Mahua would come upon the solution to the problem. Beside her, Kalpana-di would have fallen asleep, a faint smile on her lips.

Kalpana-di laughed no matter whether she was happy or sad. Fuelled by a desire to improve her lot, she had been the first to leave their village in Bihar. In Delhi, she had been a maid in rich people's houses, and had saved to go to night school so that she could get her school certificate and move up in the world. When Mahua's grandmother and mother arrived, with the newborn Mahua, they had stayed in the slum in Mehrauli with Kalpana.

When Mahua was in high school and doing well, Kalpana decided she, too, wanted to go to college. It was then Mahua's turn to tutor her. Kalpana di grasped ideas, but slowly, and had to repeat rules of mathematics or grammar so that they would not slip out of her mind.

'I am slow, I am slow,' she would say, laughing. 'Things go out of my mind very quickly. I'll try again.'

'It's that fall you had when you were a child,' Mahua's grandmother would say, shaking her head. 'Fell off a tree, hurt her head. Now she can't remember anything unless she repeats it a hundred times!'

Later, Kalpana had gone to live in her college hostel, thanks to a grant for underprivileged students. Whenever Mahua asked how she was doing, Kalpana would laugh and say all was well. But, after a while, her eyes turned sad, and her ready laugh sounded forced. It was only later that Mahua put two and two together. Kalpana-di's fellow students – privileged, upper class – were like aliens from another world. Her English was utilitarian, but they were at home in it; their mannerisms and customs were unlike anything she had encountered. There were sexual orgies in the hostel to which she was mockingly invited. She was teased constantly by a group of college boys who called her Essie Esty, and mocked her dark skin and slow mind. She started failing her courses, but she was too ashamed to tell her family, especially now that Mahua was doing so well. In her suicide note, she wrote that three boys – sons of rich businessmen and government officers – offered to help her with the final exams in return for sex. Having been teased for what she herself had come to think of as her ugliness and her heavily accented English, she assumed at first that this was another cruel joke. But the boys were serious, she wrote. They said that nobody would want to marry her, so why not get a little experience?

The next few lines had been crossed out so many times that they were unreadable. 'I can't bear it,' she wrote at the end of the letter. 'You'll be better off without me. Forgive me.'

The police investigation came to nothing – the three young men had resources that Mahua's grandmother did not. For months afterwards, Mahua carried within her a fierce and all-consuming anger. She couldn't get the image out of her mind: Kalpana-di's body hanging from the curtain rod in her hostel room. Not knowing what to do with her rage, Mahua turned to her studies with increased vigour, carrying off honours and awards, feeling, after every victory, a vengeful satisfaction. *For you, Kalpana-di*, she would say to herself.

Mahua formed her first tentative friendships in college, but her friends tended to think of her as an oddball genius. When she described her out-

of-body experiments of comradeship with water or birds or ants, they called her brilliant and strange, and changed the subject. At first this upset her – she felt passionately that what she had, this desire and ability to be companionably present with the non-human and the inanimate, was something potentially important, that it could be developed and learned by anyone and improved with practice. But nobody believed her when she tried to explain. It was one of her first life lessons – that most people are content to live within their perceived limitations.

After that, she stopped talking about it. But it got her interested in the development of ways for people to sense the information flows around them – between matter and matter, inanimate and otherwise. Eventually, this led her to the work that would make her famous: the development of embedded intelligence agents in the inanimate world, the creation of the modern, sensate city.

But in her undergraduate years, those were distant visions. She was determined to stay on the path she had chosen for herself: to study engineering, to make a mark in the world, to make her grandmother proud of her. She would go out sometimes with her friends to movies or to parties, but always kept herself aloof from close relationships – until she fell in love with a fellow student called Vikas. They were interested in the same things and had started studying together. He was good-looking and treated her with respect. She had never thought of herself as pretty but in his company, she felt beautiful. One night, while studying late for an exam, they went out for a drink. In the crowded, noisy bar, they touched glasses, grasped hands and kissed.

To her, the kiss was the promise of the companionship she had never had, of both mind and body. The next day she felt alive in an entirely new way, exquisitely aware of her body's language, the stirrings of desire. So when Vikas asked her to spend the night, she nodded shyly. 'It's not like we can be serious or anything,' he said the next morning as they lay in bed. 'You know, my family and all. But we can have a little fun, can't we?'

Her blood ran cold. 'Never speak to me again,' she told him as she left.

After that, she became wary of intimate relationships. When she met Raghu at a conference, she was open to the possibility of a friendship, nothing more. Domesticity, in any case, was not for her. Other people had families and children; she had ideas. That was the way it was meant to be.

Raghu had been a student of time. A scion of a well-off family, he had walked away from his old life, divorced himself from his past to study the possibilities of the future. His talents took him to climatology and eventually, to creating virtual reality renditions of possible futures. His simulator mapped out paths to the future based on climate models, and a continually adjustable jiggle matrix allowed for incoming data to change future predictions. One could sit in the simulator dome and have a full-on sensory experience of a chosen future.

His immersion in one possible future for Delhi had nearly killed him. He had violated his own safety protocols and conducted the experiment alone. He had begun by following the brightest thread of probability and falling into that future. The first time they met, he described it to Mahua so vividly, she could see it in her mind's eye.

He's lying in the sand, in the relentless heat. The sand half buries his old home in Lajpat Nagar. Everyone who could leave has left on the Great Migration north. His walk through the abandoned city has filled him with horror – he has seen the shattered remains of once-tall buildings, windows of buried houses peering out of sand dunes, an emaciated corpse leaning against the wall, holding a bundle in its arms that could be a child. He was supposed to join the great exodus – why is he here? The heat is terrible: 37 °C but made fatal by the humidity. Above 35 °C, too much humidity makes it impossible for the body to cool by sweating. There is no getting around the laws of thermodynamics. Death is less than five hours away. He lies on his side, weak with exhaustion, and he sees a lizard on the window sill of the house in front of him. How is it something is still alive here? Oh Dilli, that has existed for 5,000 years to end like this!

'I looked up and saw the flyover, the arches of roadways, against the sky ending in mid-air,' he told Mahua. 'Around me were the relics of our era – the Age of Kuber – abandoned cars, toppled statues of prime ministers. Everything was destroyed, everything abandoned. I knew I was going to die there. I kept looking at the lizard. Magnificent creature, it had a crest going down its back. I thought maybe it was a weird, surreal manifestation of the jiggle matrix. But I desperately wanted it to be real – the only other thing in that devastation that was alive.'

'What happened then?' Mahua said, her eyes round with wonder. They had been talking for two hours straight in the conference reception room,

oblivious to the conversations around them, the clinking of wine glasses and the waiters carrying tiny samosas on trays. For both of them this first meeting felt like coming home.

'Well, my friend Vincent happened to come to the lab because he had forgotten his notes for a presentation the next day. Saw me twitching in the sim dome. Pulled the plug. I was in hospital for a week.'

'But why? You weren't really experiencing a heat stroke.'

'Ah, but it felt so real that my body sweated out a lot of water. I was cold, I was dehydrated, going into some kind of shock. Learned my lesson. We've just integrated the entire system with safety nets so thick not even an ant could fall through them. But it takes too much energy to run. So I'm not sure anyone's actually going to invest in it.'

'What's your motivation for the VR immersion? Why not stick to the usual data visualizations?'

Raghu's eyes lit up. 'That's a much longer conversation. Shall we flee this farce and go find a restaurant? I'm hungry.' In the restaurant, over biryani and kebabs, he explained. 'See, the trouble with climate modelling, actually, with any kind of complex systems modelling is that the modeller – that's me – is always on the outside, looking in. That's fine if you are trying to figure out future trends for a company or something that's really outside yourself. But climate is not outside us, we are part of the earth's system, we influence and are influenced by climate. I think if we only look at data at a remove, we will miss something.'

Looking at his eager, earnest face, his hands gesticulating, Mahua had the realization that here, at last, was somebody she could really talk to.

Raghu was as social and friendly as Mahua was quiet and reserved, and he liked frequent, uncomplicated, honest sex with willing partners without strings on either side. His partners always talked well of him, often with nostalgic smiles. But he never treated Mahua with anything other than a friendly regard. As she got close to him, she assumed that she was outside his range of choices, just as she had been for Vikas. Once, they stayed up all night on the steps of the university library, sharing their life histories, and she told him about Vikas. 'I know now that I don't want to marry,' she said. 'My work is my life. But it was the way he assumed that I was not – I could not – be a serious contender for a relationship. Ever since, if somebody gets too close to me, I want to tear his throat out.'

Raghu didn't laugh. 'You've been hurt,' he said gently. 'Give it time. Not everyone is like Vikas.'

Later, she realized that he was attracted to her, but knowing her history, he did not want to push her in any way. He was waiting for her to make the first move. When she first went to him, filled with a great deal of trepidation and terror, it was not easy. For her, it would never come easy to surrender her last refuge, her body, to another person. Raghu's gentleness, the way he looked at her as an equal, a fellow human being with desires and vulnerabilities, slowly took the edge off her rage and confusion, but it didn't feel right. It was always too much of an effort for her to be comfortable with the body's desires. It was easier, in those days, to swear off such intimate relationships. So, they parted as lovers, but their friendship deepened.

Raghu would delight her grandmother by coming home and cooking for them. He learned songs from the old lady in her native tongue, and they would laugh and sing in the kitchen. Mahua's grandmother had been a traditional healer in her village, and he would bring illustrated botanical tomes to her and ask her about this plant or that one. He would break dates with lovers to be with them. Not since Kalpana di had lived with them had the household felt so joyful.

Raghu's restless mind stimulated Mahua's own. He brought her whatever excited him at the moment – research papers, science fiction novels and tomes on radical urban design. Modern industrial civilization had been battling nature for nearly three centuries now, he said, and look at the result – the unravelling of the very systems that provided us with oxygen, fresh air, water, and a liveable temperature range. How could you call such a system a success? The hubris of the Age of Kuber, as he termed the madness of the mid-twenty-first century, lay in the assumption of humans being outside of nature. 'Yet we breathe, sweat, shit, fuck. What a delusion! Mainstream economics – the greatest of scams!' And he would raise a glass of beer, or a cup of tea, in mock salutation.

Outside the citadels of power, uprisings and disturbances were sweeping the countryside. In Bihar and Jharkhand, a network of Santhali women's cooperatives had stopped in its tracks a major project that involved replacing forests with photosynthesis-enhancing artificial trees. In Odisha and Andhra Pradesh, transport workers had declared the largest strike in

history when the first robot train made its inaugural run. In Karnataka, fields of experimental crops managed by Ultracorp were set on fire by thousands of farmers.

By this time Mahua thought of herself as a progressive urbanite, a scientist and technologist entirely at home in Delhi. She had garnered some respect for her ideas. Her straight, swift-paced, challenging walk, which she had developed as a defence against the classmates who had teased her in school, could part crowds and silence lecture halls as she strode in. When Raghu talked about the increasing importance of traditional ecological knowledge, she agreed, read the papers on the subject, but felt unable to own her origins. Her grandmother had never forced her to do so, and nor had Mahua ever taken advantage of the reservation system. Even being a woman had become parenthetical to her existence. She was an engineer, full stop.

'For heaven's sake, woman, you're human!'

'Shut up, Raghu, please! Can we go back to looking at the energy distribution simulations –'

Mahua was obsessed with the problem of scale. To move civilization away from self-destruction required massive changes – one small, experimental zero-carbon *basti* was not going to make one whit of difference in a world facing biosphere failure on a global scale. At the same time, extreme weather was driving local conflicts – mass migrations were already beginning from areas that were now uninhabitable due to extreme temperature and rising sea levels.

One evening, Mahua and Raghu met at their usual café, at the corner of Aurobindo Marg and Ring Road. Mahua had an idea that she wanted to share – working non-stop for days, she had missed the news about the elections. She and Raghu had not met for some weeks – sometimes, he would disappear into the heart of the city, not replying to texts or calls. His friends had become used to this. But today, he was here, full of news about the election results. She didn't want to hear about corporation battles. The glass window of the café looked out on Ring Road; there was the muted roar of traffic, the neon trails of cars and other vehicles flashing by. Skyscrapers glittered with lit windows and advertisements, and Ultracorp's lightning bolt icon flashed from a hundred walls and signboards with headache-inducing persistence. On the footpath outside the café, a throng of haggard people returning from work walked stoop-shouldered

in the unrelenting evening heat. A group of day labourers, their headcloths stained with sweat, looked enviously into the unreachable cool comfort of the air-conditioned café as they passed.

A long, low sound like a foghorn announced the victory parade, and everyone in the café stopped talking to look. On the main road appeared a flotilla of long, sleek buses, moving slowly. From the video screens along the sides of the vehicles, the prime minister smiled at the public with folded hands. Atop each bus was the ubiquitous global symbol of Gaiacorp, the planet rendered in blue and green, with the word *Gaia* branded in white, glowing letters across it. Gaiacorp had just won the bidding war to run the Indian government – they already ran the New States of America and the Arctic Union. They had roundly defeated the incumbents, Ultracorp, in this election. Victory music blared from the buses as they went past, making the café's glass wall shake. A cartoon of the Gaia icon trouncing a lightning bolt – the symbol of Ultracorp – flashed on the sides of buildings as the triumphant procession went past. All at once, the Ultracorp icons that had decorated the walls of skyscrapers and apartment complexes went dark, and in their place glowed hundreds of little earths. *Gaia wins, India wins! Bringing you prosperity and comfort beyond your wildest dreams.* Enormous waves of blue light swept the canyons between the roadways. Blue was the official colour of Gaiacorp.

It was a spectacle of such magnitude and power that Raghu and Mahua couldn't speak for a few minutes. They sat sipping their drinks, staring into the night, while the café buzzed with excited conversations.

'Who are we?' Raghu said after a while, in a depressed monotone. 'We are nothing. Nothing at all in front of these bastards.'

It occurred to Mahua that the problem of isolated resistance to their political overlords was maybe, and maybe not, connected with her idea about cities and scale.

'Listen,' she said. 'You know that disused road near the hostel? There's a large tree growing there – I think it's diseased or something because it keeps dropping leaves, small leaves. Yesterday, the wind was blowing, and I noticed how some of the leaves were caught in little cracks in the road. I went to take a look. The leaves must have been there for a while, because bits of soil had collected in them, and little weeds had come up. The road was filled with these little tufts of leaves with soil and weeds growing out of them like a bunch of islands in a sea.'

'And your point is?'

'Well, there were places along the side of the road that had already become overrun with weeds by the same process. And some of the islands were connected to other islands through cracks. So it occurred to me – well, the road is so much stronger than a leaf. But when a leaf settles in a crack, it starts a process. Soil accumulates, plants start to grow, and you know what plant roots can do.'

'Split rock,' Raghu said slowly. 'Split the road.'

'Yes. Eventually, if there's no interference, the road will be completely broken up and overwhelmed by vegetation. It's like how biofilms develop or crystals.'

'So small things –'

'If they are the *right* small things, but also if they have the right kind of connectivity –'

'– can topple a monster!' Raghu raised his glass into the air and finished his drink in a gulp. 'But we already know this – just look at history, look at how the mega-corporations insinuated themselves into national governments in the first place – the biggest global coup d'etat in human history, all through the application of network theory and hired muscle –'

'But what I'm saying is more than that! I think, maybe, that the city isn't the right idea for what we're trying to do. You know? All your pestering me about re-thinking the city? So I did. Why would we want to live in the city as it is now – when people don't have time for anything but work? There's constant stress, people don't know each other, don't care either, where democracy is a sham? What kind of way is that to live? A megapolis is beyond the scale of human social adaptation. So, instead, we could have smaller *bastis* like Ashapur, maybe a thousand of them in a cluster, but connected through the Sensornet as well as a physical network of roads and green corridors –'

'Wait. Let's explore your metaphor a bit more, Mahu – the leaves at the sides of the road – positive social change always comes from the margins, but islets of resistance in the mainstream are also important –'

'Can we think about future cities instead of politics just for a minute?'

'Everything is political, Mahu, you know that!'

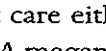
It was not clear to them at the moment in the café how this vision would grow and change with time and experience, but that was when

it first took root in their minds. Networked *bastis*, connected by green corridors, each settlement embedded with sensors, farm towers replacing conventional agriculture. Such settlements would spring up in different parts of the country and the world. Former agricultural lands would return to the wilderness, or to subsistence farming, repairing the damage done to the biosphere's life-maintaining systems.

'What I want to know,' Mahua said, returning to the present, 'is whether an eco-*basti* like I'm planning, Ashapur, can produce its own microclimate. And how many such microclimates, if networked right, can shift the climate on a larger scale? Like my leaves taking over a road? Or a bacterial biofilm forming?'

But when Ashapur had finally started becoming reality, when its buildings and green areas started producing data, Raghu left. He had helped Mahua design and embed sensors in the walls and windows, trees and byways. He had worked on the teams for the suntowers, the most efficient solar energy system ever built. One could walk the *basti* with a Shell unit and a data visor, and information from a thousand sensors would flow into their receivers. They could read energy use, temperature, humidity, carbon flows, the lot. But something had been bothering Raghu. He got moody and sullen, and Mahua realized she had to let him follow his demons. He would come back when he was ready.

Then, when Ashapur was about halfway done, she got a chance to spend six months in Mumbai on a city-sensorizing project.



In the café veranda, there was litter blowing in the wind. People were leaving with paper cups in hand, bags on shoulders. In another hour, the emergency sirens would be blaring the arrival of the great storm. Mahua had just finished talking to her grandmother in Delhi, reassuring her that she would go to a shelter soon. 'Yes, Nani, I will be all right, don't worry.' The current predictions indicated that the cyclone would make landfall about 100 kilometres north of the city, although it was well known that storms could change course near land very quickly.

On an impulse, she unhooked her Shell and removed her visor, stopping the data streams that fed into her mind every spare moment. She sat breathing, feeling naked without the sensor gear, letting the sounds and

sensations of the world waft through her, the old-fashioned way. It had been years since she had played the old game of deliberately letting go with each breath, a sense of her limited self in order to sport with clouds, waves and other beings. How strange it felt!

There was the wind, lifting dust and the folds of yesterday's newspaper, and she could see the dust motes forming shapes, like myriad tiny arms turning sheets of newspaper over and over for some invisible reader. With each unfolding, the papers sighed and whispered. The wind said, 'I'm just a breath at this moment, but in a few minutes, I will be a supercyclone.'

There was a tree near her table, leaning a little over her like a dancer caught in a slantwise twirl. The drought had taken most of its leaves, and now its bare branches rattled in the wind. Looking up, she saw the last leaf detach itself from a branch and float unhurriedly down, this way and that, landing to the left of her teacup. It seemed to glow against the dark metal table, trembling for a moment in the breeze. The tip had frayed into a fine lace of veins and branches, but the rest was intact, its very centre still green. It waited, like a gift unopened.

She remembered the leaves of another tree accumulating in the cracks of an old roadway, some years ago in Delhi. Her horoscope in the morning paper, *that* paper rolling around in the wind had said she would receive a gift from a stranger. She smiled. 'Thanks,' she said to the tree, standing up, pocketing the leaf.

She walked to the water-taxi stand, a covered ledge that had once been a first-floor veranda. The water slapped against the building with a hard, choppy rhythm. The wind was now whipping up in great gusts, and the clouds were low and dark, although it was the middle of the afternoon. Nervously, she looked around, the canal was empty; she must have missed the last of the water taxis. Just then, a small barge came into sight. There were shapes huddled on it, and a single figure was pushing a pole with long, unhurried strokes.

'*Arre*!' she called. She was surprised to find that the bargeman was a thin boy in a pair of worn shorts, his half-naked body as dark as hers. The others in the barge were children and a couple of old women who sat hunched against the wind gusts in old shawls.

That was when she first met Mohsin. At the moment, he was only another street urchin, with a shock of straight hair and a gap-toothed, wide grin. The metro had been shut down, its entrances sealed against

the expected flood. After he dropped her off at the first share-a-ride on dry land, she had asked his name. She waved, never thinking she would see the kid again.

The cyclone, in defiance of meteorological predictions, made landfall that evening in the heart of the city. The winds howled all night, and there were loud crashing sounds as though a party of destructive giants had been let loose. The rain came down hard. Never had the city seen a storm such as this. The lights went out, and throughout the night the storm unleashed its power.

In the afternoon of the next day, the winds died down. Mahua stepped from her small rented room into a changed world.

The city was ravaged. There was shattered glass underfoot and broken windows in the intact buildings. The storm surges were so high that the entire lower part of the city, all the new highways and office blocks and high-rises, were under several feet of water. The sewers had backed up, and overflowing rivers carried raw sewage and tons of trash into the streets. The cyclone had not spared the rich – the opulent minarets of Billionaires' Row lay toppled, concrete blocks like felled giants, tangled with tree branches, silk curtains, and the bodies of hundreds of staff. The rich had escaped in helicopters. The city leaders returned with their mafia, cracking down on the looters and the desperate, using whatever means at hand to protect their property, but the rest of the city lay abandoned.

In the midst of the devastation, Mahua found herself volunteering with a rescue group that was an off-shoot of a local cooperative called Hilo Mumbai. They were not like other groups she had come across, a motley mix of autorickshaw drivers, some laid-off young actors, retired school teachers, street cleaners and students. How had they come together? Through a poetry workshop for Mumbai's underprivileged, one of the school teachers explained. An elderly autorickshaw driver Hemant had started it in Dharavi years ago, and it was still running with off-shoots all over the city.

Along with Hilo Mumbai, Mahua searched through the rubble for survivors, helped transport the injured to local clinics and dispensed essential supplies when they could get them. The stench of rotting corpses, the cholera outbreaks in the lower parts of the city, made daily life nearly impossible. But the members of Hilo Mumbai worked and laughed and wept together, yelled at and comforted each other – and kept working.

Something shifted in Mahua then. She had thought that getting educated and rising into the ranks of the urban middle class was the only way to bring change to the world. But here were people who didn't have half her education or means, and look at them! She remembered something Raghu had said a few years ago – that change, positive social change, came from the margins. Maybe sometimes that was true. She needed to talk to him, but he was still out of touch, wandering the country.

Months later, back in Delhi, she found the leaf from the tree near the café between the pages of a notebook. It had almost completely worn down to a fine and delicate web. The rest of the leaf matter was a brown powder that had stained the pages. She picked it up by the stem and held it against the light. *A web – the parts connected to make the whole.* Then she put it back and closed the book.

She thought of the great storm, the towers of the rich toppled by the cyclone. Poetry in the midst of the grimness of rescue work. *Maybe I'll go back there some day.*

In the meantime, there was Ashapur. It grew slowly. A marriage of ancient and modern, the buildings rounded, thick-walled, made from mud, straw and rice husk, the inner roads for people and bicycles, the outer ones for buses that connected them to the greater city. Here, there was room for groves of jamun and neem trees, for gardens on the building walls and roofs. Each domicile held families related by blood and by choice, up to 50 people under one roof, cooking together in large common kitchens.

The Sensornet connected building to building, and wearing a Shell unit or data visor allowed a person to eavesdrop on the data flow: the carbon capture rates of green corridors, fluctuations in the biodiversity index, the conversations between buildings and the energy grid. The city government had donated the space because the site was a refuse dump at the edge of a dying Yamuna, and the deal was that the *basti* would displace the slum that had grown on the dump. Mahua kept her promise by inviting the slum dwellers to be the first residents of Ashapur. They were refugees from the coastal areas of Bangladesh, West Bengal and Odisha, escaping violence and privation, as well as the rising seas and salinization of arable land. They brought to the project their survival skills, their traditions and

cultures, their ingenuity and desire to learn. Now they had become the *basti*'s first residents.

When she and her grandmother had almost given up hope of seeing Raghu again – he had been traveling the country for several years now, with hardly a message or call to break the silence – he appeared on their doorstep as abruptly as he had left. Over a vast lunch, he told them about living with rebel groups, tailing corporate mafias, living with tribals in the still-surviving forests, joining a maverick scientist's efforts to free a river trapped under a town. He looked abashed when Mahua's grandmother scolded him for his long silence.

'Nani-ji, I'm going to do better from now on. I'll ask your forgiveness first, then commit the crime!'

'What mischief are you planning now, you reckless boy?'

'I'm going on an even greater journey, Nani-ji! Across the world – to Brazil!'

He took Mahua out for a drink and explained. 'Mahua, you've done fantastic work here in Ashapur. But in my travels, I kept thinking – there is one gap we haven't jumped, between the Sensornet and the web of life itself. Then, an idea came to me in a Gond village in Madhya Pradesh. I want to sensorize an entire forest. Not just sensors in trees, measuring carbon capture, but sensors measuring a hundred things in a whole forest. The biggest remaining forest on earth is the best place to start. That's why I'm going to the Amazon.'

She stared at him, stunned. He grinned at her. 'The thing is, Gaia theorists – I mean the old idea of earth as an organism, not fucking Gaiacorp – Gaia theorists have long maintained that the earth is like a superorganism. That the fungal network through which trees in a forest communicate – which you talked about sensorizing in Ashapur last week – might result in an emergent large-scale intelligence, a thinking forest, that we can't yet recognize because we can't conceptualize it. So, sitting in that Gond village, I got the idea that sensorizing a forest is only the first step. Maybe if the sensors are networked right, we can get the forest to become *aware* of the Sensornet, to communicate with it, and therefore with us!'

His eyes shone. 'Imagine, Mahua, the forests of the Sahyadris, the Terai, the Amazon, they're all in trouble because of climate change. Droughts and species extinction. The web of life is collapsing. If we could only communicate with a forest! If it could tell us what was happening in time for us to save it –'

'But we can already figure that out from the sensor data, Raghu! And we still haven't solved the problem of scaling up the *bastis*, and I think that's more important at the moment –'

That was the last she had seen of him. There had been a few letters from Rio de Janeiro and Manaus, but they had got more and more infrequent until she stopped expecting them. After that, silence. More than 40 years of it.

In that time, she had seen most of the old megapolises die through the combined machinations of extreme weather and human greed. She had seen hundreds of Ashapurs rise on the ruins, each adapted to its local ecology, yet linked together via the large-scale Sensornet. She had wanted to tell Raghu that despite a decade of killer heatwaves in Delhi, the *basti* clusters might just have shifted the regional climate in the right direction. *Maybe we averted that future you saw in the simulator.* There was so much she had wanted to share with him! The subcontinent had gone through a long period of chaos and even now, there were mass starvations, violent conflicts, in towns and provinces ruled by brutal mafias where life was precarious. But everywhere else, she could see the fruits of a million mutinies, experiments in alternative ways of living and being, the work and sweat and tears that had resulted in the Great Turning.

She was grateful she had lived to see the change. That she had been a part of it, a catalyst, should have been a source of satisfaction to her now in her old age. But for a few years she had become disenchanted with her work. Not that it hadn't been important, but she was dissatisfied, impatient with her own thoughts and ideas. She would look at her fine, dark hands, see the lines on her face, feel the ache in her knees and she would be filled with wonder. The muscles of her heart, her limbs and sinews, had served her without many complaints through the long arc of her life. Now, with these aches and tremors, lines and wrinkles, her body was telling her something. A reminder of mortality, yes, but something else. For some time now, she had stopped wearing her Shell or her data visor, wanting to listen without intermediaries to the subtle speeches of her physical self.

And now a journalist was coming to interview her with 'some information' about her old friend, Raghu.

Upon arriving, the journalist, a thin, earnest man called Rafael Silva, handed her a carved wooden box, one that she immediately recognized as a gift she had given Raghu before his trip to Brazil. It was meant to hold odds and ends and, in fact, it contained a couple of broken Shells, a small wooden peg, an abstract wooden carving, several sensor cells and optical wires, and a sheet of paper filled with Raghu's handwriting. Wrapped in a leaf, secured with twine, was a five-centimetre long lock of grey hair with a few black strands.

Mr Silva had been covering a gathering of Amazonian tribal leaders near the city of Manaus, he said. The recent droughts in the Amazon and changing water and weather patterns had caused the tribes to come together to share knowledge. He had struck up a conversation with an elder of the local Dessana tribe. Upon learning that Mr Silva was a well-travelled journalist, the elder had produced the box. It had been handed to him by a member of a remote tribe in the Amazon's interior over a year ago, who told them of a stranger and foreigner living with them for several years. The stranger had died from a gunshot wound inflicted during a raid by a gold mining company about two years before that. Thirteen people from the tribe had also been killed. Dying, the stranger's last wish had been that the box be delivered to a city so that somebody could send it to his people in a far country.

The name scrawled on the box was Mahua's, and the address was her old one in Ashapur. The box had taken two years to travel from the interior of the rainforest to the city. Mr Silva had been so intrigued that he had added India to his itinerary of a trip to South East Asia. He wanted to deliver the box in person.

'I am so grateful,' Mahua said when Mr Silva had finished. She wiped her tears. 'Thank you for coming all this way.'

'My pleasure,' Rafael Silva said. After that, she was glad to answer his questions about her life and work, and her association with Raghu. The household gave him a meal, a place to stay the night and then he left the next morning.

All of the next day, Mahua read and re-read the writing on the sheet of paper, held the broken Shell, the lock of his hair in its package of leaf and twine. She thought of the leaf falling from some great Amazonian tree, of the hands that would have picked it up. She caressed the leaf, which was dark green and waxy.

Dear Mahu,

I have forgotten how to communicate in this language, so forgive me.

I came to the Amazon with our technology because I wanted to know the language of the leaves and the animals. I wanted to talk to the forest itself. But after a few years, I realized that the sensors only answer the questions you already know to ask. How do you know what other questions are there? I have lived in the forest with my guides and companions, and through them I have learned that there is a language before language that the earth speaks.

The Amazon once had great settlements along the river, civilizations that never forgot their relationship to the whole, and so they existed for millennia without collapsing – until the Europeans came. No trace was left of them after their destruction except for a few shards of pottery because everything they made was from the forest, and the ruins were absorbed into it. How did they know how to live like this, without modern technology? To learn the answer, I had to learn what the forest had to tell me, merely as human, as an earthling. I came intending to save it, but it saved me instead. Now, I repay my debt by giving myself back to the Amazon. But I was raised by the air and water and soil of my first home, and so some part of me should return there. Will you take this lock of hair, burn or bury it in a forest somewhere near you? Forgive me for not being there for you these many years.

I hope Nani-ji lived a long life. There has never been a day I have not thought of you. I am at peace now.

Raghu

It would have taken him enormous effort to write this missive. From the shapes of the letters, she knew that his fingers had trembled. There was a faint rust-coloured stain in one corner of the page. In the evening she told the family she lived with, 'Call Ikram. I want to go out tomorrow.'

The sense of waiting for something that had come upon her some time ago was turning into a feeling of impending arrival.

Ikram's boat edges away from the river toward the sea. He is a lanky youth with a serious mien, Mohsin's grandson. She sits in the middle of the boat under the canopy, Raghu's box on her knees. The day is suffused with a silver light, the sun is behind the clouds. There will be no

rain today, but perhaps the monsoon will build up again tomorrow. The steep, wind-battered slopes of the Mumbai Archipelago are covered with the faintest purple blush. The *karvi* flowers are starting to bloom, obeying their eight-year cycle.

Mahua feels as though Raghu is with her, in this boat. She is showing him the drowned city, the towers like slender pencils over a smudge of old, squat, shorter buildings. It is hot and humid. *Look, the sea lanes are busy with the boats of the fisherfolk and water taxis bringing people and goods from the southern coast.* Ahead and to their right, a skyscraper is slowly tilting into the water. Wagers have been made on when the whole structure will succumb to the sea, but the sea keeps its secrets.

The hills of the five islands of Mumbai rise to her left. As they turn into a channel, hugging the shore, she sees the shrine of Baba Khizr on the rooftop of an old building, only a metre above the water's surface. It is surrounded by boatloads of people seeking his blessings. From here she can see all the way up the slope to where Billionaire's Row had once been. The trees, vines and wild animals have taken over the concrete rubble and, at the very top, there stands a shrine to Samudra Devi, the goddess of the ocean.

This is the age of the small gods, she tells Raghu. *Local deities, long-forgotten pirs. Even Ram is the Ram of the vanvaas.*

Domiciles covered with vines of vegetables and flowers cluster on the hills of the islands. At the water's edge, boats and rafts rock against their moorings. As the boat glides through the watery thoroughfares, they are greeted with waves and shouts, delayed every few metres by conversation because she hasn't been out here in a long time, and everyone knows her and Ikram.

The Baba Khizr shrine, she tells Raghu, holding the carved box in her lap, *marks where Mohsin once saw a vision. An old man walking on water, standing on a fish that bore him through the channels of the city toward the open sea.* Mohsin had heard stories of Baba Khizr from his father, a refugee from the mouth of the Indus River in Pakistan. There are similar stories from as far as Bihar and Arabia, about a pir who was the guardian of the waters, whose feet, when they touched the ground, made flowers bloom.

The boat is moored, and Ikram has helped her off it and up the slope. They are climbing steadily, although every few minutes she needs to stop for breath. She remembers, from a book a long time ago, that the Amazon

rainforest used to produce nearly 20 per cent of the world's atmospheric oxygen. At least half came from ocean plankton, and the rest from green plants on land. She doesn't know what the numbers are now, in a climate-changed world. But it is still true that every breath she breathes, she owes to the Amazon, to the ocean, to the trees on the slope above her. 'I'm feeling grateful today,' she tells Ikram, who smiles. At long last they are at the forest's edge. The air is cooler here, and a breeze stirs the leaves. She hears, distantly, the trickle of water, and the bell-like call of a koel from deep within the trees. A muddy path runs into the forest.

Ikram is distracted by a jamun tree, heavy with fruit.

'Go on,' she says. 'Get us some jamuns. I will be all right. I will be at the clearing, where the path forks. Come and find me later.'

'You have your wristpad?' he asks.

'I didn't bring anything,' she says. 'Don't worry, I know this place.'

How strange that the river of her life, which has run sometimes parallel, sometimes away from Raghu's, has been flowing toward the same destination as his. She is walking through the forest, to the confluence, the meeting place. There is a clearing that she remembers from a trip a year or two ago, that he would like.

She walks slowly. In the clearing, a pale sunlight filters through the clouds, illuminating the *karvi* flowers. She looks at her dark brown arm holding the box, feels the heat of the day on her skin.

There is a language before language that the earth speaks, Raghu had said.

Yes, she tells him, *and you can only learn it through the body.*

An animal in a forest, that's what she is at this moment, susceptible to danger and death, but her senses are coming alive to everything. The pattern of light and shadow, the humming of an insect, the cooling of a wood dove, the distant call of a troop of monkeys. Everything about her, from her dark skin to her facial features, have been shaped by her people's particular adaptation to their environment: the slant of the sunlight, the temperature of the air. She feels the crushing weight of the centuries of abuse and exploitation. It is there in the DNA of her cells, in the stories of her grandmother, in the loss of her mother at an early age, in Kalpana di's suicide. The pain stabs her with such intensity that she thinks she might faint. She leans against the trunk of a tree and holds Raghu's box to her chest.

Mahua opens Raghu's box and takes out the folded leaf. Setting the box on a branch, she unrolls the twine, opens the leaf and strokes, once, the lock of hair. Then she ties up the bundle again, and looks for a place where the earth is soft from the last rain. With a stick from the underbrush, she digs a small hole where she places the little package. She covers it up again with earth.

Go free, she says to Raghu, and to Kalpana di. She straightens slowly. Her back aches, her legs ache. All this climbing, she'd better get used to it again. Maybe it's time this old woman learned some new lessons. She cannot own the victories of her grandmother's people – the newly formed Santhal province with its ideal of reverence for the web of life, its model of communities governing themselves through consensus – she cannot celebrate such things without owning the pain of struggle and sacrifice that are inscribed in her very own body, her people's history. And it is thus that she is able to see at last, as her people always have seen, the earth itself: as body, as mother.

At the edge of the clearing, the leaves of the trees murmur in the wind. She feels herself enlarging beyond her own awareness. She is a drop of water trembling on a leaf, she is sunlight on the branch. She doesn't know the names of the trees or the birds, except for a few, but that can come later. For that moment, she is as unselfconsciously free as a soaring bird.

Ikram is calling to her. Mahua clears her throat, takes a long breath. 'I'm coming,' she calls back.

What a privilege to exist in a universe so dynamic, so complex, that one still has something to learn at the ripe old age of 73. She will sit at the edge of the forest with Ikram and look at the sea. They will eat jamuns, stain their lips and hands with purple juice, and she will tell him about that other great forest, the Amazon, half a world away. She will tell him about Raghu.