

BROKEN STARS

Contemporary Chinese Science Fiction in Translation

Translated and edited by KEN LIU

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This is a collection of fiction and nonfiction. All of the characters, organizations, and events portrayed in these stories are either products of the authors' imaginations or are used fictitiously.

BROKEN STARS: CONTEMPORARY CHINESE SCIENCE FICTION
IN TRANSLATION

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A HISTORY OF
FUTURE ILLNESSES



Call me Stanley. I come from your future.

Let me begin with what's already familiar to you, and by following the flow of the river of time, explore the diseases, both physical and mental, that have plagued the humanity of tomorrow, until the end of history.

IPAD SYNDROME

It began with the iPad 3, with its Retina Display whose subpixel rendering technology achieved a resolution in excess of 300 PPI, higher than conventional print. The display quality of electronic books could finally compete with paper. Pundits hailed it as another Gutenberg revolution and predicted the death of the traditional print industry. Humanity was about to enter a new era of reading.

As usual, the pundits were as myopic as bats hanging in a dark cave.

Apple first pushed for a revolution in education. They gave every child an iPad, and invested vast resources in making textbooks that were electronic, multimedia-enhanced, and integrated with social media. Schoolchildren, especially those in East Asia, said goodbye to their heavy backpacks. Their spines straightened; their shoulder and neck muscles relaxed; the deformation fatigue of the lenses in

their eyes slowed due to broader viewing angles, sharper, more detailed images, and light sensors that automatically adjusted screen brightness.

The future seemed bright, until parents began handing the magic tablets to even younger children.

The youngest recorded iPad user was aged four months and thirteen days. The iPad's direct manipulation interaction model allowed even babies to slip into fingertip adventures and become seamlessly immersed in them. Many uploaded YouTube clips of babies playing with iPads, and their pure, undisguised delight garnered millions of hits and likes. The amused audience did not quite realize the danger hidden behind the joyous scenes.

The first confirmed case came out of South Korea. Six-year-old Park Sung-hwan was diagnosed with autism, though fMRI and PET scans revealed no unusual neural variations. His symptoms included flat affect, language impairment, and lack of muscular coordination. He did not respond to the emotional states of his parents in an age-appropriate manner and showed a lack of interest in the world. In fact, the only thing he was interested in was the iPad. But all he did was repeatedly open and close apps, unable to actually browse the web, play a game, or otherwise engage with the functionality of those apps.

It seemed that the world, for him, consisted solely of the force feedback vibrations generated by fingers sliding across the screen.

An astute clinical child psychologist observed Park and compared him against other similar cases before announcing the shocking concept of "iPad syndrome." The discovery struck a chord around the world, and soon tens of thousands were diagnosed with it.

The academic consensus was that this special type of perceptual dysfunction occurred because babies were exposed to the intense visual and tactile feedback of the iPad before their sensory neural connections were fully developed. Aimless hand movements led to an overabundance of concentrated visual and tactile sensory information, which had to be adequately integrated and coordinated

with the rest of the body to form a solid foundation for the development of bodily self-image. This was precisely the key step missing in the development of those afflicted with iPad syndrome.

To them, the regular world was dim, blurry, low-resolution, unresponsive to the sliding finger and utterly devoid of wonder. Trained by early and long exposure to the iPad, their vestibular systems developed a special sensory signal filter that only permitted the intense signals of the iPad to enter the cortex and stimulate the neurons. Other signal sources, on the other hand, were simply shut out.

Parents of children with iPad syndrome filed a class-action lawsuit demanding tens of billions in compensation since Apple had not disclosed the serious side effects of iPad use on young children with prominent labeling. The case slowly wound through the courts until the two sides finally settled. Besides an undisclosed amount paid to the plaintiffs, Apple also agreed to invest significant resources into researching rehabilitation for the disorder.

As the impacted children grew up, they learned, through therapy, a unique way of life. iPads became extensions of their bodies. Through the tablets, they spoke, expressed emotions, and exchanged thoughts. Besides text and voice, they also transmitted information via vibrations as though they were sharks in the abyss or worms deep underground, by holding fingers or palms against one another's iPads, experiencing sensations that outsiders could never know.

They were like extraterrestrials concealed in human society and, other than the minimal exchanges required to survive in a human economy, refused to interact with regular humans at all.

They formed family-like structures. Following rules and rituals unknown to others, they found each other, copulated, had children. After offers of large sums of money failed to produce results, some journalists tried to surreptitiously film the family lives of those with iPad syndrome. The result? The offending journalists disappeared.

Don't worry; the worst was still to come.

There was a one-in-eight chance that their children would also inherit this more-than-pathological love for the iPad.

DISEASE-IMITATION AESTHETICS

As changing beauty standards gradually decentered the straight male gaze, plastic surgery reached a peak of inventiveness in the mid-twenty-first century. But modification of the body's external characteristics was no longer sufficient to satisfy the shifting tastes of a diverse population. A new—or more accurately, ancient—aesthetic trend came back into fashion spectacularly.

It was possible to trace this trend all the way back to the Three Kingdoms and Jin Dynasty period (220 to 420 CE). He Yan, the founder of the Xuanxue school of Daoism, developed a new medicinal formula called "Five Minerals Powder," which was based on the famed Eastern Han Dynasty doctor Zhang Zhongjing's cure for typhoid fever and made from a mixture of stalactite, sulfur, quartz, fluorite, and red bole clay.

He Yan himself had this to say of his invention: "Not only does it cure disease, but it also opens up and enlivens the mind." Consuming Five Minerals Powder for its psychoactive properties became the fashion among scholar-officials. After ingesting the powder, the typical user became restless, anxious, flushed, and had to walk about in loose clothing to cool down as their mind wandered a different plane. Habitual use led to irritability, explosive temper, and a proclivity for trances—not unlike the man of legend who reacted to a nettlesome fly by chasing after the insect with an unsheathed sword.

The fashion for taking Five Minerals Powder in China lasted for almost six centuries, until the Tang Dynasty. "Rambling Powder" became a poetic marker for those of an elevated social class—a metonymic process similar to the social signals attached to marijuana or LSD use later.

Similarly, in order to satisfy the pursuit of morbid beauty standards, Medieval European nobles contracted tuberculosis or even consumed arsenic to give their skins that unique, white glow. The elevation of the symptoms of illness to signs of beauty was certainly not limited to any one time or place.

And now, technology could help.

Ligament tightening agents temporarily reduced the joints' range of motion; combined with trace amounts of tetrodotoxin injected into facial muscles, the result was a simulation of the stiff poses and expressions associated with classical East Asian beauty standards. In the Roppongi district of Tokyo, one might often encounter tall Caucasian women whose hair had been dyed pure black, shuffling along with rigid smiles that carefully concealed their teeth. In fact, they were the executive assistants of multinationals who had decided to undergo periodic cosmetic treatments to induce partial paralysis in the face and a constrained gait in order to satisfy the demands of "cultural integration," the morbid fashion of the social elite, as well as the fetishistic needs of their Asian bosses.

And then there were the Blinkers, whose name came from a neurological tic that caused them to blink irregularly as their orbicularis oculi and levator palpebrae superioris muscles twitched. People suffering from social anxiety disorder implanted under their eyes chips that could control muscle movement by stimulating the nerves. They formed a complicated, intricate read-decipher-feedback system, capable of communicating by blinking their eyes alone, without any need for spoken language or facial expressions. At Blinker gatherings, one could see a group of silent, blank-faced individuals gazing into one another's eyes like lighthouses broadcasting Morse code at high frequency. Indeed, some could communicate with two interlocutors at the same time, blinking with each eye separately.

Aesthetics has always been inseparable from politics. Against the fractured background of a multipolar world, humanity could not come to a consensus regarding the definition of "beauty." In the seams and amid struggles, those who imitated sickness flourished.

At the mass parade in Saigon to celebrate the one-hundredth anniversary of the end of the Vietnam War, the "Agent Orange Phalanx" gathered in Ho Chi Minh Square put on a show based on the aesthetics of illnesses, an event that attracted the attention of media from around the globe.

During the Vietnam War, the Americans dispatched low-flying aircraft to spray seventy-six million liters of dioxin-containing defoliant over ten percent of the forests, rivers, and soil of South Vietnam in order to eliminate the hideouts of the Viet Cong. Agent Orange—named after the orange-striped barrels in which the poisonous brew was shipped—contained extremely toxic 2,4-dichlorophenoxyacetic acid and 2,4,5-trichlorophenoxyacetic acid and was very stable chemically. Once released into the environment, it took more than nine years for fifty percent of the compounds to break down, and they persisted for more than fourteen years in the human body. The chemicals also could cycle through the food chain without being destroyed.

The marchers who made up the phalanx came from all over the world and were well prepared. In the front were what appeared to be a group of deformed children. Some were curled up in electric wheelchairs, their limbs flopping uselessly as though made of rubber—indeed, a few had no limbs at all; some showed smooth skin where eyes should be; some had swollen heads with bulges that resembled the lobes of a heart; some had legs fused together like the lower body of a mermaid.

In fact, they were not really people at all, but genetically modified pets who wore synthetic human skin. Speakers on their bodies played loops of prerecorded political slogans chanted in eerie voices.

Behind them stood the “festering detachment”: Hodgkin’s lymphoma, chloracne, scarlet warriors who looked as if their skin had been stripped off. As the marchers moved, the sarcomas and swellings covering their bodies quivered, and fluids of various colors seeped from bursting boils and sacs to paint symbols of peace on the ground. They embraced each other, kissed each other, spat and smeared and sprayed bodily fluids at the camera, and shouted in indistinct voices. The time and resources they must have invested to pull off such a stunt were unimaginable.

Then came the “crawlers,” who had to march very slowly because they had lost the use of arms or legs. Most of them were truly physically disabled, but enhanced their deformity through prosthetics

connected to their bodies with loose flaps of synthetic skin, or by exaggerating the unnatural angles at which their limbs were twisted. They resembled creeping creatures with segmented bodies and limbs from horror movies, and the more they exposed their bodies, the more they attracted the gaze of the cameras.

The climax of their performance was a re-creation of *V-J Day in Times Square*, except that Ho Chi Minh Square replaced Times Square, and a deformed child and a patient covered in tumors kissed instead of the nurse and the sailor. Magnesium bulbs flashed, satellites beamed the scene live, and billions witnessed the juicy *Kiss of Agent Orange*.

Who was to say it wasn’t beautiful?

CONTROLLED PERSONALITY SHATTERING

If you could choose to become a different self, would you?

Don’t mistake this for some self-help platitude, a sip of chicken soup for the soul. I mean literally a different self.

Jung, the disciple who rebelled against his master Freud, once said, “I simply believe that some part of the human Self or Soul is not subject to the laws of space and time.” The quote might appear as an attempt at footnoting his concept of archetypes, but in reality it came about after Jung was struck by the ideas of the *I Ching*, as introduced by Richard Wilhelm, a German sinologist.

Together, Wilhelm and Jung were responsible for *The Secret of the Golden Flower: A Chinese Book of Life*, which had been described as a practical guide for using ancient Daoist philosophy to integrate personality. The 1962 publication turned out to be a visionary prediction of humanity’s increasingly fractured lifestyle.

Sociologists speak of the “role set” as a competitive strategy humans developed over the course of their evolution. A role set refers to the collection of roles and behaviors associated with one’s social status, an adaptation for social interactions under specific environmental conditions. Still, the role set is about controlled role

shifts because it is limited to the Freudian ego and does not influence the unconscious id.

Technology accelerated evolution.

Many early Internet users seemed to experience a mild form of dissociative identity disorder which allowed them to easily switch personalities between different windows. One second and an Alt-Tab were all it took to change from a hardworking single career woman to a seductive sex-starved minx. As time spent on the net became fragmented, pervasive, and nonlinear, many surplus personalities were created without being handled appropriately. Like fragments of an operating system, these personalities accumulated in the subconscious, where they silently eroded the foundation of all personalities and erupted from time to time in the form of harrowing news stories about murderous rampages committed by the mentally ill.

At the beginning of the twenty-second century, the brain-computer interface became a viable commercial product. Developers created many brain-network apps that allowed users to consciously operate datalinks. As parallel programming proliferated, an operating system called "Sliding Windows" was developed, which gave users the ability to smoothly switch between cognitive processes. Predictably, the Far East fundamentalist terrorist organization SHAJI released a trojan called the Window-Breaker, engineered specifically to attack Sliding Windows. The malware spread through social networks and embedded itself in the innermost part of the user's installation of Sliding Windows, where it proceeded to sow complete chaos in the operating system's process-switching mechanism.

When an infected user flirted with her lover, the personality for dealing with the boss came to the front; when she endured a tongue-lashing by the boss, the personality for caressing a pet became active; and when the puppy rubbed itself against her legs, begging to play, the user instead panted with sexual desire.

Over three billion were infected with multiple-personalities switching disorder (MPSD), the great plague of the cyberpunk age.

To halt the spread of the malware, social networks were partitioned into quarantine zones. A twenty-second-century version of medieval witch hunts played out on the net as AI network officers, disguised as random programs, interacted with users on social networks to evaluate whether they had been infected by the trojan. And if the answer was yes, the user was forcibly cut off from the network and placed into off-grid rehabilitation. After completing the treatment process, patients were evaluated on their ability to control multiple personalities, which determined whether they would be allowed to return to the beautiful new digital world.

Overnight, the valuation of the brain-computer industry fell to a low not seen in twenty years.

Amazingly, mainland China was scarcely affected by this network storm. On the map tracking the malware's progress across the globe, China remained the only patch of healthy dark green, a fact that attracted worldwide interest. After extensive analysis, experts came to the conclusion that China was spared because of three reasons: one, the highly regulated nature of China's Internet industry; two, the latest version of China's Great Firewall; and three, a surprising discovery made after a detailed comparison of the fMRI and ECoG data from Chinese users and a control group, which showed that Chinese users' subconscious was already fundamentally fragmented and could seamlessly switch between different egos. Most important, each fragmentary personality was absolutely and sincerely convinced that it was the true self.

The discovery shocked the world. People dug up Wilhelm's forgotten dusty tome, hoping to find inspiration within. They discovered the secret of personality management from the mysterious ancient East, and by integrating the newest neural language programming (NLP) techniques, they hoped to rescue a world on the verge of total breakdown.

Several schools of Eastern mystical philosophy became trendy, including traditional Tantric Buddhist techniques for integrating mudras and poses to indicate the anchoring of personalities, *I Ching*-derived methods for using military-grade software to stimulate the

cortex in order to integrate yin-yang neural patterns, and so on and so forth. But the most influential school of philosophy was without a doubt spread by the Chinese government's army of retired government cadres, who went overseas to set up "Lao Tzu Institutes."

The Lao Tzu Institutes taught a whole systematic curriculum that helped MPSD-sufferers find the way back by the Daoist Path, utilizing techniques such as traditional mystical exercises and Chan Buddhist-style meditation to help the practitioner achieve enlightenment on the nature of life, until the spiritual universe had been rearranged to the harmonious, yin-yang-balanced state of the primeval Innocent Babe.

I'm not going to tell you the result of this effort—the known Path is not the True Path, as Lao Tzu would say.

But suffice it to say that the Chinese nation, for the first time since the thirteenth-century *Il Milione* composed by Marco Polo, had once again managed to export its wondrous values to the world.

TWIN ELEGIES

It all began with the discovery of a woody perennial in the Amazon called *Duoliquotica*. Native legends claimed that the plant was made of the blood and essence of an ancient god, who appeared as a single head atop two bodies. This was reflected in the biology of the plant, which was dioecious. The male and female plants grew side by side, and entwined around each other as they reached maturity. After fertilization, large fruits grew atop pairs of plants, not unlike an outsized head on top of two slender bodies.

Scientists extracted from the plant a previously unknown compound with mysterious properties, also named "*duoliquotica*." After accidental exposure to the compound during a trial, a pregnant subject, Julia Kristeva, found herself the mother of a pair of identical twins. Thus did the mystery of the compound begin to be unveiled. In subsequent trials, twenty-three more pairs of identical twins were

born. Later, researchers would refer to them as the "Duo 24," though the media preferred the more sensational B-movie moniker "Twinning God's 24."

The first pair of twins, Adam and Eva, were famous around the world even before they had learned to talk. The babies' laughter and cries were completely in sync. No matter how far apart they were placed from each other, their expressions mirrored each other's within 0.3 seconds. As their vocabulary grew, their strange talent developed into an intolerably eerie performance.

They seemed to always speak simultaneously, and stopped and started again in perfect sync. At first, an observer might think they were just speaking their own thoughts, but recording the twins' speech and playing it back showed that it was a highly efficient dialog. There was no delay introduced by the need to comprehend the other; the two sentences, overlaying the same segment of time, were statement and response.

Indeed, electroencephalograms showed that they could understand each other without any speech. The simultaneous speech was nothing more than a parlor trick for showing off.

Scientists were excited by this first verifiable example of telepathy in history. Shortly, the other twins also displayed various degrees of psychic connection. Bafflingly, the connections did not seem to depend on any kind of detectable signal exchange: electromagnetic waves, biochemical signals, vibrations through the air. . . . Even when each member of a pair was enclosed in a separate full-isolation chamber, they still could sense the other's emotions and thoughts.

Everything indicated the power of the ancient god, similar to quantum entanglement. No matter how far the particles were separated, as soon as one member of an entangled pair changed state, the other changed the same way.

Back then, humanity's understanding of basic theory had not yet advanced to the point where this phenomenon was seen as innate to nature. Thus, after the initial explosive media coverage died down, the research project, unable to make any real progress, became

classified. All the research subjects were drafted into military service to act as long-distance communication devices, far more sensitive and secure than any cryptographic equipment.

The American military relied on the twins to gather a great deal of intelligence. Russia, the Middle East, East Asia, the EU—in each area the Americans first relied on bribes to open key doors, and then deployed the twins to transmit intelligence without fear of detection. This method worked well until a rather unexpected romance exposed the whole plot.

The ninth pair of twins, David and Peter, fell in love with the same Japanese woman—more precisely, it was Peter who, through long-distance entanglement with David, fell in love with Minako Noda, a Self-Defense Forces officer. Unfortunately, Peter could only experience this love secondhand through his brother. Peter requested David swap places with him multiple times, but David refused. Driven by jealousy, Peter sought revenge in a manner befitting a member of Duo 24.

Night and day, Peter transmitted paranoid delusions to David without cease, even when they were asleep. David was powerless to resist the torrent and sank into delirium, at which point Peter directed him to kill his lover, turn himself in, and confess his role in the American plot.

After recovering his senses, David committed suicide. At the moment that he stopped breathing, the smiling Peter, three thousand kilometers away, tumbled from a park bench and lay motionless in the fallen leaves, as though he had expected this fate for himself.

The tragedy sent shock waves through the remaining members of Duo 24. All their lives, they had lived as the mirror of each other's souls, but never faced the fact that each of them was also an individual; with his or her own desires, fears, and death. Some, in despair, saw their gift as a divine curse, a genetic defect in the guise of a benefit. The twins were tragic puppets entangled in one life, powerless to dissolve the invisible bonds of fate and doomed to die at any moment to accompany the other.

Five pairs of twins chose to commit suicide. Their bodies were buried in double coffins, sunken deep in cement graves.

The military offered the rest of the twins a way out: they could choose to enter long-term cryogenic storage and await a solution for their curse in the far future.

Six pairs chose to continue to live in the world and support each other; another six pairs chose to enter the cryogenic chamber, placing their faith in the future; and the remaining six pairs were mired in conflict: one member of each pair wanted to be frozen to escape their unknown fate, while the other member would not let go of the life they already had. If only one twin were frozen, he or she was very likely to die in hibernation when the other one expired.

In the end, the conflict-riven pairs reached a compromise: they would swap places once every ten years. As each entered cryogenic sleep, they placed their life in the hands of their identical twin, trusting they would treat their twin with benevolence. It was like the words of the Gospel of John: “A new commandment I give unto you, That ye love one another.”

THE NEW MOON

Scientists told us that 4.4 billion years ago, a body about the size of Mars slammed into the Earth, and the resulting fragments coalesced into the moon. Sixty-five million years ago, a large asteroid impacted the Earth, causing the extinction of the dinosaurs. Twelve thousand and nine hundred years ago, fragments from a comet breaking apart fell on the frozen tundra of North America, leading to the deaths of the mammoths and other mammalian megafauna as well as the collapse of the ancient Clovis civilization. Thereafter, an extremely frigid climate reigned for a thousand years.

Archaeologists told us that the cataclysmic end of the world prophesied by the ancient Maya to occur in 2012 would be brought about by Planet X, the legendary Nibiru—meaning “ferry boat” in

Sumerian—which would cross the orbit of the Earth once every 3,630 years as it careened along its long elliptical journey around the sun. Its intense gravity would lead to shifting tectonic plates, deviation in the Earth's magnetic poles, earthquakes and tsunamis, climate change, and volcanic eruptions. Humanity would thus be ferried into a new era.

The Little Astrology Prince of Hong Kong told us, in his dulcet voice, that Venus retrograde was over. The key thing to understand about Venus retrograde was that *it was always going to be over*. It gave you a chance to think about relationships that no longer had meaning, and to stop maintaining them out of habit.

Of course, humanity did not enter a new era in 2012—at least not on my timeline. Instead, the human race experienced a transformative event in the twenty-third century. A large asteroid nicknamed “the Wanderer” (about the size of Shanghai), after a long journey through the vastness of space, was captured by the gravity well of the Earth-Moon system and eventually stabilized itself at one of the Lagrange points. The Earth, from then on, had a second moon, which was called the New Moon.

Humans, a species prone to romanticism, began to contemplate subtle changes in themselves once they had become habituated to new tidal patterns and new heavenly sights. Women's monthly cycles grew chaotic, and moods swung to extremes. Tens of thousands of fetuses stopped developing due to hormonal imbalances induced by the New Moon—a phenomenon described as “the dark side effects of the New Moon.” An invisible force began to influence the development of the human race.

Some people exhibited strange allergic reactions on nights when the New Moon was full. Eerie patterns appeared on their skin, muscle fibers tensed, pupils dilated, and their minds became confused and extremely aggressive. They would tear off their clothes, and run naked on all fours through city streets or the wilderness, as though returning to primitive worship of totemic animals. Subsequent examination of these individuals revealed that branches of their Y chromosomes still retained vestiges from the earliest stages of human

evolution. After filtering for such signs in the DNA profiles of the population, a classified marker was added to the files of individuals with such genes.

Due to antidiscrimination legislation, their identities were kept secret; however, they were required to take suppressant medication and to wear special light-filtering contact lenses to counter the awakening effects of the New Moon. Some urban youths saw this as a new trend, and held transformation parties on full New Moon nights, where they turned into beasts with the aid of drugs and machinery and engaged in mass orgies.

The growth cycles of crops and livestock also changed, and astronomers had to work hard to devise new months, solar terms, and calendars. They became so complicated that it was impossible for anyone to understand or to derive based on simple astronomical observations; instead, farmers and farming machines had to rely on constant official updates.

The truly shocking new phenomenon involved those who were conceived during the full New Moon, known as the “New Mooners.”

Scientists never could explain the specific role played by the light of the New Moon at the moment when the sperm fertilized the egg or during cell division. No satisfying explanation emerged through analysis of the light spectrum, gravity, magnetic field, or any other possible factor. The only thing scientists knew was that the fetuses in the womb were developing into a new population distinct from all known human populations. A terrified humanity came to the conclusion that the normal fetuses whose development had been halted by the New Moon previously had perhaps been the victims of evolutionary competition against this new race.

Still, over 97.52 percent of the parents of such fetuses chose to carry them to full term, regardless of whether they would turn out to be angels or demons.

The New Mooners were not too different from normal humans in physical appearance, other than a change in the refractive index of the epidermis that gave their skin the sheen of plastic or thin

membranes. Their metabolism, however, was three to five times slower than normal humans, which meant that they were also exceptionally long-lived. Most suffered mild depression, which caused many parents to worry that they would commit suicide. But after long observation and understanding, people came to realize that the depression-like symptoms were really the effects of a mental barrier that allowed them to filter out the information overload of the external world and to reduce cognitive load and mental stress. The New Mooners needed to focus their attention on a far more important problem, a problem that would require the efforts of thousands of generations.

The problem was this: the New Moon, which they viewed as a creation god, was going to be inexorably worn down by the passage of time. As the stability of the gravitational system decayed, the New Moon would depart from the Lagrange point and, pulled by gravity, fall onto the surface of the Earth, slowly and poetically destroying everything.

They wanted to save the New Moon.

NEOTENY

At the beginning of the twenty-first century, people thought of it as a mental illness, and specialists called it "Peter Pan syndrome." Though these individuals were in their thirties and forties, they refused to grow up, instead speaking and behaving immaturely as though they were living the fantasy of Neverland. They were terrified of reality, shied away from competition, avoided responsibility and duty, fled from commitment by constantly changing partners, and sought refuge in the illusory joys of drugs and alcohol.

They attributed all these symptoms to overly protective families, and some even resented their parents for how much they'd indulged them in childhood.

Like our age-old pursuit of beauty and eternal youth, this development was but another tiny step on the ladder to the next stage.

In the middle of the twenty-second century, a developmental disorder that slowed down growth began to spread. Patients' biological clocks seemed to tick at a pace many times slower than normal, and secondary sexual characteristics did not develop until they were in their thirties. Menopause and andropause were correspondingly delayed. Scientists came up with the explanation that since human lifespans had been extended by various technical measures to exceed 150 years, it was not surprising that youth would also last longer. Numerous literary and multimedia works celebrated the long youth, and patients with the developmental disorder became models for the future direction of human evolution. Many sociologists and anthropologists offered arguments as to why the disorder had the potential to reshape culture and redefine what was "normal," and the "normals" of the past would be abandoned by Darwinian progress.

But they saw only a part of the problem.

Compared to other animals, humans remain in their juvenile state for a proportionally much longer time period. Among primates, the juvenile stages of lemurs, rhesus monkeys, gorillas, and humans last 2.5 years, 7.5 years, 10 years, and 20 years, respectively. The sexual maturation of humans comes five years later than chimpanzees, and similarly with the replacement of baby teeth. Why do we need such a disproportionately long childhood?

As early as the mid-twentieth century, scientists had discovered physiological correspondences between human children and young chimpanzees, such as small jaws, flat faces, and sparse body hair. Humans and chimpanzees share 99.4 percent of their genes, but almost 40 percent of the genes whose expression changed over time activated far later in humans than in chimpanzees, especially those responsible for growth of the gray matter in the brain responsible for higher thinking.

Most child development authorities informed parents that brains in the process of maturation, while synapses were still in their formative stages, were most receptive to new information and held enormous potential for future capacity.

Homo sapiens, with its long juvenile stage, pulled ahead in the primate evolutionary race and achieved first place. We retain our juvenile features, such as the lack of body hair and a disproportionately large head, into adulthood. Similarly, we hold on to childish cognitive characteristics such as curiosity and a desire to learn throughout our lives. Some people even have a genetic mutation that allows them to keep generating all through adulthood the lactase necessary to digest milk, an ability generally lost once children are weaned—indeed, they call other humans without the mutation the “lactose-intolerant,” as though they have a disorder.

Neoteny was critical to our species; was it time for a second wave?

The scientific world wished to take advantage of this opportunity to push human evolution forward, but they were faced with a legal problem. Patients affected by the developmental disorder were legally adults, but their physiology and psychology remained childish. Controversy erupted over whether the patients had the capacity to agree to be experimental subjects on their own, or whether it was necessary to secure the permission of guardians. As the issue dragged out in the courts, online mobs exposed the personal information of the patients’ relatives and derisively criticized them as “selfish monkeys.” The online mobs argued that those who, out of concern for their own security, ignored the far greater mission of advancing the human race did not deserve to be called *sapiens*. Historically, of course, such arguments had been raised again and again, like recurring waves in the river of time.

In the end, logic won over emotion. States assumed responsibility as guardians of the patients. After signing human experimentation agreements on behalf of their wards, the governments purchased expensive insurance and named the patients’ relatives as beneficiaries, by way of compensation. Everyone shut up, and the experiments could finally proceed.

Like an upgraded version of the therapists in *A Clockwork Orange*, scientists prodded and poked and stimulated the patients in various ways, injecting them with torrents of information. They

couldn’t wait to expose the experimental subjects to the entirety of human knowledge and history during their long-but-still-all-too-brief periods of plasticity, hoping to stimulate the formation of more complex synaptic connections in the human brain, which had not evolved in ages, and thereby push back the frontiers of knowledge and derive solutions for the many complicated problems plaguing humanity. Subconsciously, the researchers thought of themselves as God, hoping to create a new race of Man on the sixth day.

They ended up with bedlamites, imbeciles, depressives, sex addicts, and vegetables.

The arrogant researchers didn’t even know where they had gone wrong. They did not understand the secret of the genetic switches; they were not the ones who had set the trap.

Humans had once tamed wolves into dogs. They tried to breed canid adults to retain juvenile features such as floppy ears, short snouts, large eyes, playfulness, the desire to please people, and to eliminate the bloodthirst and ferocity of the mature wolf. Humans did this not because they wanted to help wolves evolve into *Canis sapiens*; they simply wanted to bend the wolves to human aesthetics.

It was a misunderstanding over a subtle—if rather sick—preference for cuteness.

RITUAL DEPENDENCY/WITHDRAWAL

You walk a long way to the newsstand and ask for the magazine; you pay for it, put it in your bag, and after a long journey involving various forms of transportation, return to a secluded space; you turn on the light, orange or pale white, and rip open the nonbiodegradable plastic wrap; you pour yourself a cup of tea, or open a can of diet soda; you caress the pattern in the paper and, deliberately or randomly, open the magazine to this page.

You start to read. When you’re done, you’re thoughtful or weary; you tell others to read or not read this story.

You have completed one insignificant ritual out of the millions in your life.

Humans are ritualistic animals. From the ancient past to the present, from cradle to grave. Rituals solidify in our minds, glue together groups and cultures, chase away the terror of death, help us find our places, define the meaning of existence. The powerful in every culture have used rituals to assemble multitudes, to extract wealth, to form parties and factions, to consolidate rule. Rituals give endless labels to people, in addition to their names, telling them where they belong, but in the end there was no label for the self.

In my era, technology allows ritual to become an indivisible part of everyday life. It's implanted into you and becomes part of your genetic heritage to be passed on to your children and their children, multiplying and mutating, more vigorous than its host.

Maybe it's true in your age as well?

You cannot control the impulse to refresh the page. Information explosion brings anxiety, but can fill your husk of a soul. Every fifteen seconds, you move the mouse, open up your social networking profile, browse the comments, retweet and reblog, close the page, and do it all over again fifteen seconds later. You can't stop.

You can no longer talk to people in real life. Air has lost its role as the medium for transmitting voice. You sit in a ring, your eyes glued to the latest mobile device in your hand as though worshipping the talisman of some ancient god. Your thoughts flow into virtual platforms through the tips of your fingers. You're arguing, laughing, flirting, joking. But reality around you is a silent desert.

You cannot free yourself from the control of artificial environments. Ritual is omnipresent. It is no longer restricted to sacrifice, sermon, mass, concert, or game—performed on a central stage where the classical unities hold. Ritual itself is evolving, turning into distributed cloud computing, evenly spread out into every nook and cranny of your daily life. Sensors know everything and regulate the temperature, humidity, air currents, and light around you; adjust your heart rate, hormonal balance, sexual arousal, mood. Artificial intelligence is a god: you think it's there for your welfare, bringing

you new opportunities, but you've become the egg in the incubator, the marionette attached to wires. Every second of every minute of every day, you are the sacrifice that completes this unending, grand ritual.

You are the ritual.

Radical thinkers obsess over how to withdraw from all this. The power of ritual comes from repetition, not its content. Day after day, the repetition of poses and movements gradually seeps into the depth of consciousness, like a hard drive's read-write head repeatedly tracing the pattern of an idea, until the idea becomes indistinguishable from free will itself. It's like that sci-fi flick from the beginning of the twenty-first century. Romantic love is ritual's most loyal consumer, along with patriotism.

The radicals try to imitate the Luddites of old: destroy the machines, hack into systems, awaken the people, exhort everyone to abandon technology and return to the wilderness, where everyone can sharpen their character against the grindstone of severe nature and hope to recover a primitive, pure simplicity. The media, rather mercilessly, point out that what they are advocating is a good fit for the ritualistic habits practiced by Zen Buddhists of seventh-century Japan.

The only thing that can be done is to do nothing.

Like marionettes with their strings cut, the radicals fall wherever they are: bedrooms, subways, airports, public squares, offices, beaches, assembly lines, cafeterias, streets, restrooms. . . . They do nothing, say nothing, only lying still and quietly, waiting for their bodies to waste away, waiting for their lives to be exhausted. They wield nothingness in their war against meaning, use the lack of will to dissolve freedom, employ the loss of the self to construct the self.

Sensors detect the fading of their vital signs, and artificial intelligences activate robotic helpers to take the withdrawing bodies to medical facilities via the transportation network. Like skiffs floating over the river of normal people, the bodies are gathered into clean, white, therapeutic rooms where various life-support systems

and cables are plugged into them. They are now caught in a dilemma: a new paradox rises from nothingness. They will use their bodies to complete this unmoving struggle in human history's first instance of mass suicide committed in imitation of natural death.

They have completed one of the greatest rituals.

CHAOTIC CHRONOSENSE

Time is a human illusion, said a Jewish scientist in Europe in 1915. From then on, the smooth and unchanging steel plate that was time melted, like the soft clocks draping from tree branches under Dalí's paintbrush.

Scientists attempted to control time via multiple paths: speed, gravity, entropy, quantum entanglement . . . but had to concede defeat in the end. Humanity tried everything to conquer this shapeless and colorless but omnipresent specter. It was there at the start of life, but even at the doorstep of death, the cleverest mind could not understand its secrets. Time's arrow is bound up with all human civilization's fears: it has a single direction, and once loosed it never stops, never turns back, all the way to the heat death of the universe.

Since it was impossible to change the world, the only choice was to change the self.

Researchers then focused on the sense of time in the human brain. Every day, fragments of memory surfaced in the neurochemical webs of billions of heads—wasn't this phenomenon a form of time travel? Experiments showed that by stimulating specific areas of the hippocampus, it was possible to induce the feeling of *déjà vu* in test subjects and cause them to treat the scenes they were experiencing in their lives as though they had already been previewed in childhood. It was as if a marvelous editor had cut a life into segments and then pasted them back together in a new order to create the sensation of traveling through time.

With mastery of this secret, time turned into putty in the magician's hand, capable of being stretched and sculpted into any shape. It was a fascinating paradox wherein speeding up brain activity slowed the passage of external time, and vice versa—it was the theory of relativity applied to the world of consciousness. Those truly skilled in the art could even implant a closed loop in the subject's brain so that the poor fool lived out a real-life version of *Groundhog Day*, repeating the same day over and over again, even though it was just an illusion created by manipulating memory.

Chronosense, Ltd., was formed in response to this opportunity. Based on the needs of the individual customer, they offered different levels of adjustment to their time sense and charged a fortune for such services. Of course, the fee was calculated precisely based on the passage of time in the physical world.

In East Asia, students trapped in a culture based on tests needed to make the most of the little time they had. The night before big exams, with Chronosense's help, they could stay up and swallow a semester's worth of knowledge and examination-fu, like the memory bread from *Doraemon*. There was a 0.5 percent probability that this technique would lead to a stroke, and so a drug that counteracted the effects became a popular purchase for the students as well.

Those seeking the thrill of psychoactive substances, on the other hand, wanted the exact opposite effect, which was for the subjective experience of time to slow down until it seemed to stop. They wanted to make the drug-induced high gradually expand like an explosion frozen in a glacier, each blooming firework as Zen-like as an unmoving mountain. They sat in the dark, waiting to submerge in the chemical ecstasy, until the mushroom cloud devoured the last trace of their consciousness, leaving the flesh on life-maintenance. For them, time ceased to exist, and only hallucination was reality.

The aged were the most fervent fans of memory, and they made the most meticulous demands of Chronosense, careless of what the

offerings cost. After locating the most joyful days of their lives, they edited them together into a highlight reel that they looped over and over in what little time they had left. It was the best way to squeeze the most out of the end of life, so they could die with smiles on their faces.

Human ingenuity would never go to waste. Always, evil genius knew exactly what to do with it.

Authoritarian regimes soon discovered the vast potential of this technology. By employing a special edition of the tech, they enslaved their people and managed to squeeze twelve hours' worth of physical and mental labor from the population in every legally mandated eight-hour shift. While the ordinary people teetered on the edge of exhaustion and collapse, GDP rose and rose. In order to release some of the dangerous pressure of overwork, governments opened resorts specifically for vacationing workers where their overwound sense of time could be adjusted via technical measures to achieve some semblance of balance.

The laboring masses, kept in the dark about the truth, worked even harder to earn the right to vacation, where all they recovered was the time that had been stolen from them.

Their children, on the other hand, seemed to be born with their sense of time out of balance. As they also entered the labor force, and their sense of time was further twisted, things began to spin out of control. The next generation learned to forget, an instinctual strategy for bringing relief to the overburdened brain. Periodically—the exact length of time differed from individual to individual—the memories of these people reset themselves, and they woke up as newborns with blank slates. As those with reformatted brains imitated each other, a primitive savagery began to spread like a plague, and violence and lust broke through the barriers set up by civilization and technology.

The wild people took over the streets and cities and destroyed every machine and institution that tried to change their raw nature.

They truly possessed time. They no longer needed time.

EPILOGUE: SPEAKING IN TONGUES

In the beginning was the Word, and the Word was with God, and the Word was God.

Or, as a structural linguist would put it: language constructed thought; thought understood and transformed the world; and so language was the world's prime mover, was God.

Wherever God was, so was the Devil, just as light could not be separated from darkness.

It was language, not tools, that separated humans from apes. The bridge between the signifier and the signified connected the world of subjectivity with the physical world. Meaning was like the water of the Ganges, a wide-flowing torrent. Humans extracted drops of sensory experience, saved them, classified them, generalized them, and sublimated them until the border between the self and objective reality was defined. Then they learned to exchange thoughts between different individuals, to communicate intent, and society began to form: division of labor, work, family, power, state, war—everything was built on this foundation. Language was the measure of understanding, and every debate among humanity was based on our shared linguistic system.

The gaps and seams persisted in the places that could not be encompassed by words.

Religion, music, painting, love, pain, joy, loneliness—these words are like the tips of icebergs, concealing the unfathomable, vast, complicated feelings beneath the surface. They accompanied humanity's cultural genes from ancient times, and like the sedimentary strata of geology, folded and overlapped one another, interpenetrating and merging, evolving until today.

When you discuss these topics, you know not what you're discussing.

All societies wish to promulgate an effective set of linguistic regulations in order to rectify the thoughts of the masses. From Qin Shihuang's edict for all China to write the same way, to the Newspeak of 1984, words have vanished and new idioms have been

invented. Some expressions were usable only by certain classes in certain places, while the masses were required to avoid these formulations reserved to the noble and highborn, and so they invented slang that required the overactive associative brain to smoothly wield its store of homonyms, puns, metonyms and rhymes, a celebration of the tongue and the vocal cords.

In a certain age, even revelry was a disciplined ideological tool, realized through technology.

The government installed firewalls in the language center of the brain of every newborn, thus achieving for the first time in history a real-time language surveillance network. When what an individual wished to say triggered the filters in their firewall—which were constantly kept up to date—the firewall cut off the person's speech and punished them with an appropriate level of pain. On the other hand, when the person spoke the words that satisfied the desires of those in power, the firewall rewarded them with a pleasure similar to drugs.

A brave new world of reward and punishment.

The system worked so well that people, of their own initiative, devised a way to integrate the filters into their genes so that they could be passed on to their children, allowing them to meld with the firewall even more seamlessly. Eventually, even the merest hint of an undesirable thought would be eliminated before it could take root, maximally reducing the potential for being punished. The mechanism gradually became a part of the unconscious, assimilated into the part of the cortex that we inherited from our amphibious, piscine, reptilian ancestors, meshed with the most primitive part of human language.

Then things took a different turn.

Humanity never fully understood what happened next, not even now in the time I'm from. One theory is that humanity was indeed the creation of some higher intelligence, who implanted into the human mind a highly designed language system. The system evolved as civilization developed, but when a foreign invader threatened its fundamental principles, it would reset the system to factory defaults

and return everything to the origin. The system was also highly infectious.

Can you imagine it? A world without language. Everything collapsed.

The problem wasn't that it was impossible to talk; rather, humanity lost the very tool necessary to understand the world and the self. The universe returned to primeval chaos.

I am the product of a second system. Very few individuals showed symptoms of it—maybe in your time, it would be called "divine inspiration."

It was no longer I who spoke words, but words that spoke me.

It was as if the divine intelligence had lost patience with foolish humans. The chosen ones who brought with them a brand-new linguistic logic had to direct the unenlightened primitives to reunderstand the world and rebuild civilization. The new world did seem to be more peaceful, more enlightened, more perfect. Scientists invented time machines and discovered the theory of timelines. They dispatched envoys to parallel universes along different timelines to spread the gospel so that the humans in these other worlds could avoid their mistakes. Many of these envoys did not meet happy fates.

This is why I, Stanley, have come from the future to speak to you. For reasons that I cannot reveal, I will terminate my sojourn here shortly and leave your timeline to leap into another unknown world.

In your universe, the number nine is special, symbolizing permanence, rebirth, the supreme. I hope the nine chapters of my gospel can accompany the lost souls of this world through the door at the end of time, to achieve eternal recurrence.