

HOW TO DO THINGS WITH WORLDS, 26a („notes towards a geometry of post-Fordism“, 2008)

27 (+1) clipboards, slightly interwoven micro-narratives; laminated glass, stainless steel, organic material in various stages of decay; sweat in sealed florence flasks; dimensions variable
Courtesy Ralo Mayer and multiplex fiction

Sie hatten sich bis hier oben vorgearbeitet. Jetzt, in der äussersten Zirkuskuppel,
wussten sie nicht, was weiter. Sich Mühe geben allein nützt gar nicht.

(ebenda)

A PSYCHIC CHERNOBYL. In early 2006, an exceptionally gifted psychic medium reportedly named „W. Tobler“ was hosting a séance for a small group of Science Fiction aficionados. The subject of the invocation was 19th century occultism; more specifically, the group wanted to get in touch with the spirit of Edwin A. Abbott, author of the novella „Flatland“, both introduction to geometrical dimensions and social critique of Victorian culture. (The book had been eagerly received and incorporated by many occultist circles looking for an answer to the social transformations taking place in the wake of the industrial revolution.)

While Tobler was partially on the ethereal plane, the Chengdou disaster struck. No one knows the details, but it involved an ancient terra cotta model layout in the care of the Chinese government. The event caused a two-fold micro-apocalypse: Everyone within 3.1 miles of the disaster itself had their souls „consumed“, reducing them to mindless husks. On the ethereal plane, however, the disaster was much greater; everyone not physically in their body (during factory work, for instance) within three thousand miles of the incident was instantly incinerated. The only self-acclaimed survivor was Tobler, and some would argue that he died as well. The result of the Chengdou event was essentially a psychic Chernobyl. (source: Wikipedia)

WORKERS ENTERING THE NEW FACTORY. Palo Alto, California, 1872: Eadweard Muybridge tries to capture time and motion with his serial array of photographic cameras around a cartesian backdrop. At about the same time Étienne-Jules Marey and Ottomar Anschütz undertake similar experiments in France and Germany. „Their studies preceded the invention of the movie apparatus and influenced cubism and futurism,“ Tobler continues. „A less established fact: these images also helped Frederick Winslow Taylor to research ‚The Principles of Scientific Management‘, which were used at the conveyor belts of Henry Ford and other companies. A grid to optimize time and space.“ The auditorium is a mockup of a greenscreen studio, the walls covered with distinct symbols marking an unknown grid, register marks for a future digital scenery of which neither Tobler nor the audience (if any present) have one hell of a clue. Tobler: haunted by a fever.

SCREWED BALLS OF PAPER. „Like, not an easy start, „ he says, lost in a formats, letters, scraüps, models, crashed on a table fallen of, grtapping ahnds, spilled liquidy, mixed gases, but - please - gon on, or „skip this ratp“, i mean yes, aggregate staes = unkownn, freeze frame of explosion, bullet time shot of a this freeze frame, 360 degree visoon, Qu'est Que C'est, animation of interior of a calabi yau manifold, palimptests of texts inside, cheap 3d rendering, inventory displays, lists of projects past prensset future, patience, go on, not my languae, you start a converstaion but you can't even finish it, ah, yes modle.s

A PERFORMATIVE RESEARCH INTO MODELS AND MINIATURES. This year's lecture series features a Tour de Force through performative aspects of model worlds, based on the eponymous (slightly idiotic, Tobler adds with an air of nonchalance) „art project“; i.e.: scrutinizing countless settings, in which people are building models to scrutinize and manipulate them. And finally one has to simplify these investigations again, focus on few elements that can depict the whole, so you can scrutinize it, like from above. Recursivity is a main feature of models, as we know not only since Rutherford and Bohr depicted the atom als miniature solar system. And every model is a sketch: abstracted, produced, interpreted. Tobler sports a white lab coat, projection screen to numerous non-completed experimental threads.

NEXT SLIDE: LHC. In its issue of June 30th, 2008, German weekly Der Spiegel covers a background-story on the Large Hadron Collider, a giant particle accelerator about to be opened in Geneve. Every second 30 million proton packages will clash, producing 600 million crashes. „Every second the computers generate enough data to fill up all German university libraries.“ Who will be able to analyze this? „The biggest surprise to me is that this works at all,“ says Karin Knorr-Cetina, a sociologist of science. „It comes at no surprise,“ Tobler adds, „that this is the place where HTML was invented in the 1990s. The model language for most information on the WorldWideWeb“ The projection screens are illuminated with animations of black holes and everyday activities of the local scientific community: in fitness rooms, drinking beer, making love in shag-like dorms and lumber-rooms. „Ladies and gentlemen, may we present: the black hole, the singularity, emerging.“

SEISMOGRAPHIC SHOWCASE OF ILLUSTRATIONS ON BADIOU'S CONCEPT OF EVENT. Later Tobler returns to the 6th floor and watches the smooth surface of the olympic pool below. No sun disturbs the perfect grey. Over the past days he had installed photographic prosumer equipment monitoring the water plane from different angles. Other home-grown pseudo-scientific hardware is scattered in and around the pool: the equipment and the deserted area are reminiscent of the playground of an exiled dictator's only child. In the makeshift racks beside him Tobler has lined up several conceptual models of his quirks of the past three years: architectural maquettes (mostly of monumental buildings), relicts of an abandoned film set, miniature spacecraft (among them: Apollo 1, Soyuz 11, Skylab, the Challenger, the Columbia, Shenzhou 7, as well as: the Mars rovers, Venera IV, the Huygens probe, Voyager 1), geometrical mockups, dead bonsai, decoration materials for model train layouts, clipboards, laboratory glassware (partly broken), pills, printouts of governmental disaster reviews, a set of action-figures marketed along the re-release of films by Alexander Kluge, worn out copies of Science Fiction and coffeetable books. Late at night he will watch for hours the slow-motion footage of the model specimen crashing onto the liquid seismograph, analyzing wave patterns, displacement rhythms, shades of distorted streaks of ectoplasmic grey.

THE SKY IS MADE OF STEEL. Various b/w shots of clouded skies. A flock of birds gets startled by an event outside the frame. The body of the swarm is made of single aliased dots on the screen, a high-resolution polytope just before the final rendering process. The bird-nodes appear and disappear in a complex polyrhythm which could be only superficially considered to be structured by the algorithms of the file's divX-codex. More substantially, the whole figure runs through a cycle of higherdimensional objects which Tobler expertly identifies as geometrical mournings of the untimely death of the actress Solveig Dommartin. Cocaine, film business, post-relationship blues. Other sequences turn out to be time-lapse, a fact also covered by the compression artifacts; the screen wobbles like a pool of heavy water mirroring the darkish sky, stirred by the weak interactions between events beyond the scope of this article. Or is it god, breathing?

PHILIP GLASS, NEGRI/HARDT, YOU. Back in the studio an arrangement of exquisite corpses of Science Fiction literature has been applied as a giant pinboard on which Tobler displays another

diagram of his futile attempts. His studio is situated on one of the deserted floors of this defunct museum. The rooms next door house temporary shelters for survivors of the Chengdou disaster. Tobler often sees them gambling in the hallway, using an enigmatic wooden carrier box as table-and-board combination. Also scattered around the hallway and the staircase: empty cabinets made of a rare blue-ish glass variant; graphic leftovers of past exhibitions, mostly unidentifiable; a miniature mockup of an outdoor playground for *Ailuropoda melanoleuca*; 7 or 8 architecture maquettes in sealed glass containers. (At the beginning of his stay, Tobler published a critically acclaimed picture book, showing views through these models in front of the background of the deserted hallway and the urban periphery landscape.) Much to the annoyance of his neighbors, a 5.1 surround speaker system in Tobler's studio constantly loops excerpts from J.L. Austin's influential lecture series „How To Do Things With Words“. A speech act in itself, „– but what again did you want to tell me?“ Speak up, I can't hear you.

A MESSAGE FROM OUTER SPACE: IMMATERIAL LABOR. Next day's presentation: „Since the production of services results in no material and durable good, we define the labor involved in this production as immaterial labor — that is, labor that produces an immaterial good, such as a service, a cultural product, knowledge, or communication.“ Tobler starts a silent film from the International Space Station; astronauts in various activities in micro-gravity. “In short, Negri/Hardt distinguish three types of immaterial labor that drive the service sector at the top of the informational economy. The first is involved in an industrial production that has been informationalized and has incorporated communication technologies in a way that transforms the production process itself. Manufacturing is regarded as a service, and the material labour of the production of durable goods mixes with and tends toward immaterial labor. Second is the immaterial labor of analytical and symbolic tasks, which itself breaks down into creative and intelligent manipulation on the one hand and routine symbolic tasks on the other. Finally, a third type of immaterial labor involves the production and manipulation of affect and requires (virtual or actual) human contact, labor in the bodily mode. These are three types of labor that drive the postmodernisation of the global economy.” Contrary to popular opinion, it is not artists who are the prototype of this new working class, but astronauts. Where if not on the ISS can we find a paradigmatic arrangement of flexible working hours, teamwork in a permanent state of emergency or desire as working motivation? On its perfect trajectory the space station circles the globe every 92 minutes, roughly the length of today's presentation on the deserted museum floor. Question from the audience: „Is this an ellipse?“

FINALLY AVAILABLE: CHINESE DEMOCRACY. A month ago, Tobler approached the authorities in an overly formal letter for permission to use the Beijing National Aquatics Center (the „Water Cube“) for his studies. Media-clippings attached: „It's by far the fastest pool in the world,“ says Rowdy Gaines, an Olympic medalist and swimming commentator for Olympic broadcaster NBC. „If you step into this arena, you'll see a thing of beauty. ... It's really a thing of absolute beauty.“ Handwritten insert: G. not referring to futuristic exterior. „I'm talking about deep water. It's a perfect depth because if it's too deep, you lose your sense of vision and where you're at in the pool. But it's just deep enough to where the waves dissipate (and) the turbulence dissipates down to the bottom.“ Waves churned up during races don't bounce back into the swimming lanes. Waves that reach the sides are siphoned off by perforated gutters. Christine Brennan, veteran of 13 Olympics and columnist for USA Today: „You make a deeper and a wider pool, and you ... give all of those waves and all of that splashing and all of that moving water a chance to move away from the swimmers and get out of their way, which makes them go faster. It's as simple as that.“ An indoor setting also helps, along with temperature, humidity and lighting control.

WEAIRE-PHELAN STRUCTURE. „Everything is just fantastic about this pool. I've never seen such a big facility in my life.“ In combination with the popularity of the newly introduced faster Speedo LZR Racer swim suit and some advanced biochemistry, the Water Cube (actually not a cube at all)

saw 25 world records broken in the Beijing Olympics. Obviously, this great pool should account also for a perfect study of certain objects crashing and splashing onto its smooth surface. Never has a pool been more perfect for a seismographic showcase of a new kind. On the outside, the building features a surface of a replica of molecular foam structure, once proposed by Lord Kelvin to be the substance of the ether, a decoration useless for any scientific experiments, but sure enough providing a scenic framework suitable for Tobler's bubbles. Unfortunately the Chinese authorities, despite his humble formulations quite aware of the political dimensions of this proposal, declined it in a one-line reply, itself a perfect example of equally metaphoric language unsuitable for any translation whatsoever. Tobler grumblingly accepts. A new plan takes shape in his distorted mindscape, involving the scientific community of the LHC and perfectly useless machinery in the Southern Austrian countryside...

COMPULSIVE HOARDING SYNDROME. The story has it that the little old man would go up to the attic and lay down on the crop stored there, whenever his family or the neighbours laughed at this work. Weeping himself into sleep, he dreamt of all the desperate parts he did and will assemble into a machine representation of his mental world model: a christmas tree stand, a dutch miniature windmill, a toy space-capsule including four astronauts, an eagle made of china, a drying hood, five crucifixes, five spark plugs, seven dynamos, 18 ventilators, 20 V-belts, 25 motors and hula hoops, 64 bird whistles, 200 light bulbs, 242 silver screws, tubes, gears, wires, wheels, kitchen machinery, madonnas, lamps, clocks, 3 flashing blue lights, 26 glass plugs, 53 switches, 14 bells, a Mercedes star, a vacuum cleaner, fruit bowls, an infrared lamp, a blender, a six-cylinder motor, ash trays, and an oxygen bottle for all wind-driven parts. „I am the wheel I am the turning / And I will lay my love around you.“

OUTLINES TOWARDS AN IMPOSSIBLE NOVEL. Cast: a translator-medium, an author, subjects of personal relationships. Main plot line: the translation of a historical Science Fiction novel about Biosphere 2. The translator is getting more and more lost in his research about the novel, model worlds in general, post-Fordist production of subjectivity..., all of which is, ummmh, connected to the question of „How to Do Things with Worlds“ (book title?). The translation is one hell of a failure, what we get is a smorgasbord of data fragments. Critics admit they never read the whole book. Noone ever did. Most would call it an „eclectic bluff“, an „exercise in style“, etc... xerox of handwritten note on page 26 of the manuscript: need to find a publisher (sic!). Tobler tosses the clipboard and snaps a freezeframe of its distorted planes in midair, later to make the cover of the literature supplement of the Proceedings of the National Academy of Sciences.

THE ACHROMATIC GENRE BENDER LENS. Ok, so this ain't shot in black and white: a few color speckles give the whole color scheme away, and Tobler will dream tonight about the movie adaptation, aimed primarily at the Pan-Asian market. A lot of powder in this version, floating through the floors of its vacant shopping center location, another ruin of money laundry, museum of the real estate bubble. Empty stalls (if any still recognizable). Few leftovers slightly stuck to infinitely seasoning tar floors and the humid air makes them microscopic grey particles stick to your hands when you're leaving through the dust-covers for DVD bootlegs and don't mention the walking sensation. Tch-k-, tch-k, tch - K. Oh, and for sure the construction materials! The aluminium surfaces show off an exquisite range of 200+ achromatic shades; and rusty steel exudes an auxiliary odor to this alternative setting, sweet scent of inspiration. No more narrative constrictions for a post-apocalyptic tale.

NEVER SEEN THIS PICTURE BEFORE. But for the time being, Tobler plans to attend an international film festival (Rotterdam, Nyon, Duisburg, wherever). One of this year's programs focuses on „Invisibilities“ and features possible depictions of the global financial sector and the multilayered working conditions of the creative class. After the screening of another failed attempt,

he gets involved in the discussions which continue throughout the evening: Filmmakers drinking beer and exchanging contacts, later to be intensified in sanitized hotel beds. One of the attending artists tells a greasy story from his stay at the alpine fellowship of Künstlerhaus Büchsenhausen. A vital surplus to the international arts and theory community.

DIAGRAMS OF SUBJECT PRODUCTION. Notes written on a bloody pillowcase: (1) Particle traces in the cloud chamber. (2) Inviting Judith Butler for a lecture at CERN. (3) Minor scandal in local media: „Philosopher forces scientists into catholic drag!“ (3) Absolving the God particle. (4) Distribution of a questionnaire aboard the ISS, concerning the crew's leisure time activities.

THE WRECK OF THE EDMUND FITZGERALD. Sometimes the border between fog and rain becomes vague and humidity turns into some spray-like ethereal entity. It is during such an autumn day (when the skies of November turn gloomy) that Tobler has to face with the casualties of his mad pursuits. Ghosts of lost friendships and collaborations haunt him in displaced streets, rising to powerful migraine attacks in dimly lit impasses. All of a sudden (in 1200 fps, nevertheless) a certain face assumes its neon shape in this haze. Can you see the utility frequency? „The horror, the horror.“ In principle, Gordon Lightfoot would assemble news clippings into his song about the famous shipwreck on Lake Superior; the true implications of this rather personal confession remain unknown to a general public.

NON-EUCLIDEAN GEOMETRY. Along his lecturing activities at this university of salmagundi, Tobler prepares an application for public funding: an interdisciplinary comparison of the poly-furcating smoke trails of the Challenger space shuttle at its explosion after launch, specifically of the crew compartment, and the continental debris distribution patterns of the Columbia disintegrating at re-entry. Beyond any doubt, these two iconic events (1986, 2003) do frame the socio-economic transformations of the second millennium. Weeks after the Columbia disaster investigators in Texas discovered petri dishes containing a threadworm population of *C. elegans*. 88,3 % of *C. elegans* had survived the break-up and impact. „The cells were surprisingly well-preserved, but we're analysing how useful it's going to be,“ stated Dr Sack of Ohio State University.

STRING THEORY. Waving a copy of Brian Greene's „The Elegant Universe“ over his head, Tobler once gave a short introduction to this Theory of Everything, supposedly ending the Great Schism of 20th century physics, a marriage of big and small, relativity and quantum. A mathematical and geometrical extravaganza second to none, its 9-12 dimensions got only one problem. They're way below the Planck-length and thus beyond any chance of empirical proof. Does this make string theory a philosophy rather than actual science?

CALABI-YAU AS BDSM. The smallest particles therefore shall not be particles, but strings, one-dimensional threads in constant vibration. And through their vibration they render complex spaces, in which dimensions 5-12 are, like, rolled-up. The proposed geometrical models of these spaces are Calabi-Yau manifolds. Speaking of string games: Everytime someone mentions bonding I hear bondage, and with all that networking I feel like in a giant SM-party taking place in a dungeon made of innumerable desires. Society's menace: Everyone's an artist. Forgot the safeword.

PENROSE JR, SUCCESSOR TO MUYBRIDGE. In the mid 1970s british mathematician Roger Penrose discovered geometric tilings which elements would not periodically repeat (a feature formerly thought to be necessary for the seamless covering of a plane by a set of finite elements). In April 1982 Dan Shechtman gets quite surprised during routine crystallography procedures on a new high-tech material: an unknown x-ray pattern of the atomic setup. A three-dimensional variation of a Penrose tiling. In the 2010s Penrose's son Roger Kynard (Roky) starts sociographic experiments based on video-recordings of the creative class in front of an animated version of his father's tilings.

His work turns out to be indirectly sponsored by economic singularities formed after the financial crisis of the late 2000s. Rightly so, he's being regarded as legitimate successor to Eadweard Muybridge.

THIS ISN'T ALL I SEE. Tobler's Hotchpotch of post-heroic time-lapse photography: - growth of lichen on rock - formation of fossils - becoming a ruin - continental drift - birth and death of stars - appearance of the lunar landscape - growth of Northern Swedish spruce - corrugation of the face by crinkles - colliding galaxies. Although letters of understanding have been exchanged between Tobler and David Attenborough's office at the BBC, he would still prefer coproduction by CCTV. Tete-a-tete Tobler cites their „gorgeous studio settings“ for his shadow negotiations with Chinese TV. „Attenborough's so 20th century, anyway.“ None of this would account for a depiction of the perfect emptiness in interstellar space.

TIMELAPSE / SLOW MOTION. „Another central aspect of Tobler's body of work unfolds around two shots at a busy public place, involving a performer and the sloganized populist antagonism of neoliberalism and the anti-capitalist movement of the second millenium. (1) ND-filtered Time-lapse: While she's displaying a sign stating „Another World Is Possible“, shadows whizz by. (2) Slow-motion: This time in 1200 fps, another sign, „Just In Time“, and every step of the passers-by emanates infinite pathos.“ (catalogue draft, rejected)

DO THE ARTISTS IN THE CIRCUS-TOP DREAM OF EARTHQUAKES? Arriving at the abandoned museum he unwillingly calls home, Tobler celebrates his return with a mindless laser gun shootout. In a frenzy, he maps the multiplex-like ruin in the record time of 34 minutes and goes to bed. At 8:30 ground control wakes him up with Roxy Music's Re-Make/Re-Model. Tobler goes through his usual morning ritual, a dreamlike routine of tracing reflections of his sleepy face in the steamy bathroom mirror onto chinese lantern paper printed with Calabi-Yau visualizations. A quick look on the reference index reveals an increase by 0.2 points. It is only now that he remembers last night's minor earthquake and the secret drive behind his past tour, a psychogeographic transposition of a global map of geologic transform faults. Tobler retreats under the blanket again, trying to calm down. Lids closing in 600 fps. From the darkish grey of this fake meditation suddenly a name appears: Layerson. Bedside note: author „The Ninth Biospherian“.

SIXTYSIX THINGS BOTH PHILIP K. DICK AND J.G. BALLARD PREDICTED CORRECTLY.

Going over some basics for today's lecture helps: Science Fiction, in its most blatant form, is a documentary genre. Its two main tropes can easily be recognized: the miniature world and the time machine. Both are not only recurring themes but also mirror the genre itself. What is a text of Science Fiction but a model of this reality, placed in another time? Conservative scholars might disagree, but who could care less? Tobler jumps out of bed, getting a quick glance at a rare sun casting shadows of the fly screen on the faux wood structure of the laminate floor. Without further ado he dedicates this moiré pattern to Dick and Ballard, boxing a more hypodermic feeling of personal loss.

CODED LANGUAGE, SUBJECT: EMPTY. (An email to the editor) „Dear A., it seems almost impossible to write about HTDTWW. It's always been a hard task to sum up the vast field of issues of this research series, but right now... I sit here in a grey studio under the grey sky of Sichuan, and feel unable to focus on past and possible investigations of model worlds when in fact I am confronted with a whole new world outside, a world which I cannot even begin to understand, a language totally different from any Indo-European, texts all over the city of which I can't even read the letters. Neon signs building up ghostly bodies in the haze around the buildings. Umm, what I want to say: I can't help but to try to build mental models of this strange Asian world here, and I constantly fail. Even the occasional English texts in public space are not English as we know

it. It's Chinese structure transposed to English vocabulary. I think I will abandon my assignment (the research about online-games and gold-farming) altogether and throw myself into impossible translational studies. Or something about the Chinese space program.

This IS science fiction here. Me eyes read Blade Runner. But of course it's not. Or is it?"

The empty glass cabinets continue to shine their dusty appearance throughout the museum floor, a real world representation of the Black Mirror: I know a time is coming / All words will lose their meaning / Please show me something that isn't mine / But mine is the only kind that I relate to.

THE PERFECT COMPANY OUTING. Finally, Tobler has managed to stuff 32 CERN-scientists in a bus and off to southern Styria. The researchers (8 couples present, 6 singles) get drunk on Schilcher wine and discuss possible procedures for collaboratively being awarded the Nobel prize in 2014. Inside the farm house the machine turns and twinkles and whirls and glows and traverses and flashes and twirls and gleams and rotates and glares and spins and blinks and swings and glints and veers and shines and backs and flames and shifts and ignites and stirs and flushes and jerks and lightens and lags and blazes and roams and glistens and sweeps and glimmers and budes and irradiates and wobbles and shimmers and cringes and sparkles and moves and enlightens and goes around and around in all its idiotic glory.

GSELLMANN'S WELTMASCHINE. Did I mention Tobler was happy? He (or rather Alfred Edel, in a tongue-in-cheek reprise of his character from 1972) stands in the low doorway and his idiotic smiles slowly synchronize with both the scientists' hopeful conversations and Franz Gsellman's altar. Gsellmann built his machine after reading in a local newspaper about the Atomium and taking a train to Brussels to see it. For the next 23 years he collected electric parts, toys, gears, lights and all sorts of curiosities, assembling every tiny bit to his huge construction. The so-called Weltmaschine in the shag of his farm house had no obvious function, but daily work on it delighted Gsellmann despite the mockery of his family and the other villagers. In 1982 he declared the machine finished and died. In the doorway, Tobler consciously prepares to turn into a hinge for the fraction of a nanosecond, a hinge for these different dimensions of small and big, inner and outer space and time and affects and a couple of other things.