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SHARE

MAGAZINE

Future Scenarios

issue #1, Spring 2013.

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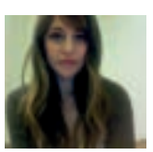

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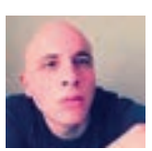

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Sofija Drecun finished her master's studies at the Belgrade University of Arts in cultural policy and management. She is co-founder of two informal organizations: OVER 9000, a records label that spams the Internet with divine music; and CinemaTrain, a platform that gathers young filmmakers from the Balkans, presenting their non-profit productions.

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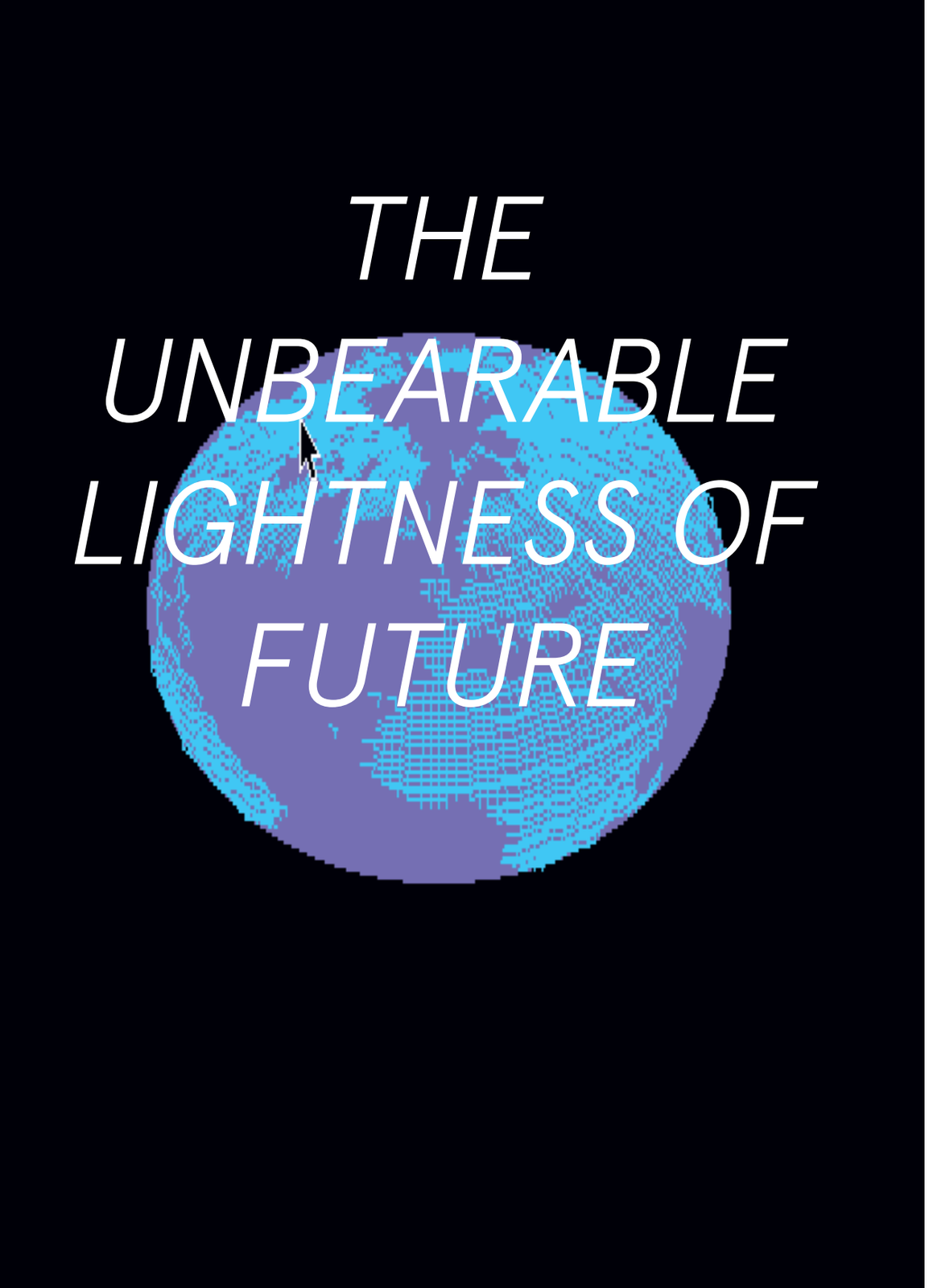


Editor's Letter

As this is the first issue of SHARE magazine, a little background information may serve useful. Essentially, the idea was to have some offline evidence of the SHARE Conferences in the form of transcripts from the talks and panels. For the traditionalists in us, a little ink on paper and good design feels gratifying and brings a romantic tangibility to it all.

SHARE Conference is an open source conference held for the first time in Belgrade, Serbia in 2011, again in Belgrade in 2012, and in Beirut also in 2012. It revolves around the topics of Internet, digital society, culture and activism. There have been dozens of fantastic contributors, including leading international stars in the field of Internet activism and social change, cyber dissidents and world-class bloggers, protectors of privacy as well as contemporary musicians. They all gather to discuss how the Internet, and other new media and technology, can be as open and free as possible, for all of us.

This first issue's topic was chosen from the name of one of SHARE's 2012 panel discussions: "Future Scenarios".

The Unbearable Lightness of Future

What is Future? The future can perceived as something grandiose, linked with technology, science, or weird structures. Many of us see the future as full of opportunity, and one thought about it can fill you with faith. There are those less optimistic, who would see the future in apocalyptic terms. Or possibly, it could motion an end to earthly troubles.

When I think of the word future the first thing that comes to my mind is the name of a basketball team from Podgorica, Montenegro. I don't remember the first time I heard it, perhaps I was 5 and the word future linked with basketball fascinated me. It encouraged me to name my teddy bear by the same name. Thinking about it now, in the future things are not fundamentally different. Even though there is new technology and new forms of society, my thought of future boils down to one thing: You can do with it whatever you want. It might be something astonishing – in form of that latest technology - but it also can be totally ordinary, the repetition of a present moment.

The articles and transcripts presented here are meant to provide a shot to your imagination but also to say that the future is now. Dealing with the present is dealing with the future. The topics included are not strictly futuristic but also very current – use open source software, learn to hack, free the Internet and your future belongs more to you.

Now, I present to you issue 1, and on behalf of the SHARE Foundation crew I wish you pleasant offline moments of reading.

Marija Nikolić

Future Scenarios

7 Best-Case Scenarios for the Future of Humanity

George Dvorsky

In 1964 Soviet astronomer Nikolai Kardashev invented a method of measuring a civilization's level of technological advancement, based on the amount of usable energy a civilization has at its disposal.The scale has three designated categories called Type I, II, and III. A Type I civilization has available all the energy impinging on its home planet, Type II all the energy of its sun, and Type III of its galaxy. Others have extended the scale to even more hypothetical Type IV beings who can control or use the entire universe, or Type V that control collections of universes.

Most science fictional and futurist visions of the future tend towards the negative – and for good reason. Our environment is a mess, we have a nasty tendency to misuse technologies, and we're becoming increasingly capable of destroying ourselves. But civilizational demise is by no means guaranteed. Should we find a way to manage the risks and avoid dystopic outcomes, our far future looks astonishingly bright. Here are seven best-case scenarios for the future of humanity. Before we get started it's worth noting that many of the scenarios listed here are not mutually exclusive. If things go really well, our civilization will continue to evolve and diversify, leading to many different types of futures.

1.

Status Quo

While this is hardly the most exciting outcome for humanity, it is still an outcome. Given the dire warnings of Sir Martin Rees, Nick Bostrom, Stephen Hawking, and many others, we may not be around to see the next century. Our ongoing survival — even if it's under our current state of technological development — could be considered a positive outcome. Many have suggested that we've already reached our pinnacle as a species.

The Singularity is the technological creation of smarter-than-human intelligence. The most commonly mentioned is probably Artificial Intelligence, but there are others: direct brain-computer interfaces, biological augmentation of the brain, genetic engineering, ultra-high-resolution scans of the brain followed by computer emulation.

Back in 1992, political scientist Francis Fukuyama wrote The End of History and the Last Man in which he argued that our current political, technological, and economic mode was the final stop on our journey. He was wrong, of course; Fukuyama's book will forever be remembered as a neoconservative's wet dream written in reaction to the collapse of the Soviet Union and the rise of the so-called New World Order. More realistically, however, the call for a kind of self-imposed status quo has been articulated by Sun Microsystems cofounder Bill Joy. In his seminal 2000 article, "Why the Future Doesn't Need Us," Joy warned of the catastrophic potential for 21st century technologies like robotics, genetic engineering, and nanotech. Subsequently, he called for technological relinquishment — a kind of neo-Luddism intended to prevent dystopic outcomes and outright human extinction. The prudent thing to do now, argued Joy, is to make due with what we have in hopes of ensuring a long and prosperous future.

2.

A Bright Green Earth

Visions of the far future tend to conjure images of a Cybertron-like Earth, covered from pole-to-pole in steel and oil. It's an environmentalist's worst nightmare — one in which nature has been completely swept aside by the onslaught of technology and the ravages of environmental exploitation. Yet it doesn't have to be this way; the future of our planet could be far more green and verdant than we ever imagined. Emerging branches of futurism, including Technogaianism and bright green environmentalism, suggest that we can use technologies to clean up the Earth and create sustainable energy models, and even to transform the planet itself.

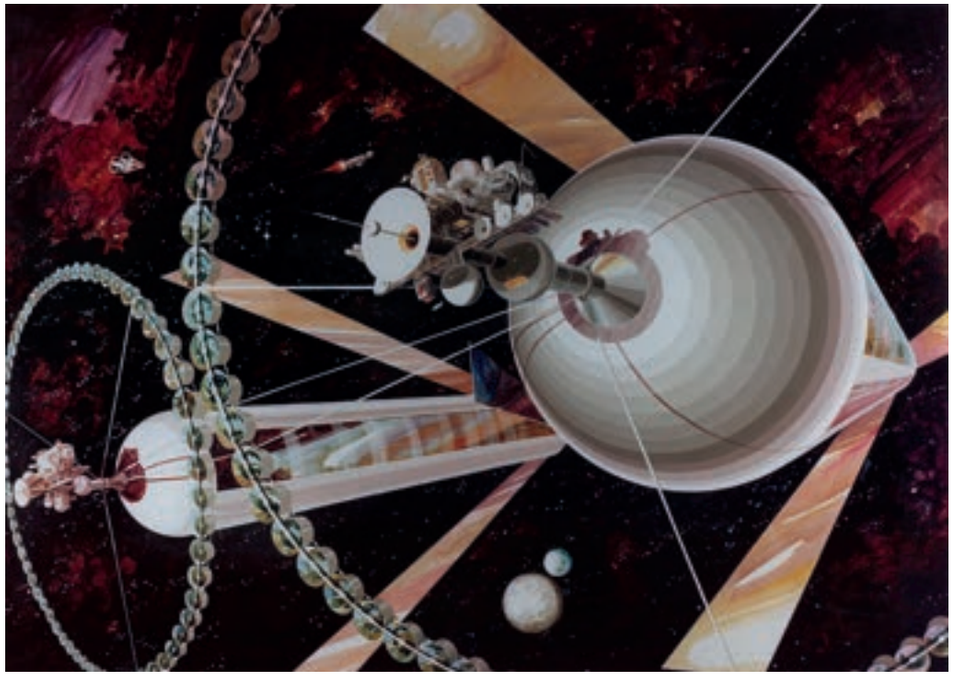
An early version of this sentiment was presented via Bruce Sterling's Viridian Design Movement, an aesthetic ideal that advocated for innovative and technological solutions to environmental problems. Looking to the far future, the ultimate expression of these ideas could result in a planet far more lush and ecologically diverse than at any other point in its geological history. In such a future, humans could be re-engineered to live in harmony with the environment. All our energy needs would be completely met (a true and sustainable Kardashev I civilization). Using advanced models as our guide, we could also redesign and overhaul the Earth's ecosystem (including the elimination of predation and animal suffering). There's also the possibility for weather control. And we might finally be able to implement defensive measures to counter the effects of natural disasters (like asteroid impacts, earthquakes, and volcanic eruptions). Given an Earth like this, why would anyone want to leave?

Blue Gene/P, IBM's supercomputer project at Argonne National Laboratory, CC

3.

Watched Over by Machines of Loving Grace

Regrettably, it's very possible that the technological Singularity will be an extinction event. The onset of radically advanced machine intelligence — perhaps as early as 30 years from now — will be so beyond our control and understanding that it will likely do us in, whether it happens deliberately, accidentally, or by our own mismanagement of the process. But the same awesome power that could destroy us could also result in the



The O'Neill cylinder, a space settlement design proposed by American physicist Gerard K. O'Neill in his 1976 book The High Frontier: Human Colonies in Space.

exact opposite. It's this possibility – that an intelligence machine could create a veritable utopia for humanity – that has given rise to the Singularitarian movement.

If future AI (Artificial Intelligence) designers can guide and mould the direction of these advanced systems, it's conceivable that we could give rise to what's called 'friendly AI' – a kind of Asimovian intelligence that's incapable of inflicting any harm. In fact, it could also serve as a supremely powerful overseer and protector. It's a vision that was best expressed by Richard Brautigan in his poem, "Watched Over By Machines of Loving Grace."

Watched Over By Machines of Loving Grace

I like to think (and the sooner the better!)
of a cybernetic meadow
where mammals and computers
live together in mutually
programming harmony
like pure water
touching clear sky.
I like to think (right now, please!)
of a cybernetic forest
filled with pines and electronics
where deer stroll peacefully
past computers
as if they were flowers
with spinning blossoms.
I like to think (it has to be!)
of a cybernetic ecology
where we are free of our labors
and joined back to nature,
returned to our mammal
brothers and sisters,
and all watched over
by machines of loving grace.

4.

To Boldly Go Where No One Has Gone Before...

We need to get off this rock and start colonizing other solar systems – there's no question about it. Not only does our ongoing survival depend on it (the 'all our eggs in one basket problem'), it's also in our nature as a species to move on. Indeed, by venturing beyond our borders and blowing past our biological limitations we have continually pushed our society forward – what has resulted in ongoing technological, social, political, and economic progress. Even today, our limited ventures into space have reaped countless benefits, including satellite technologies, an improved understanding of science – and even the sheer thrill of seeing a high-definition image streamed back from the surface of Mars.

Should our civilization ever be capable of embarking upon interstellar colonization – whether it be through generation ships, self-replicating Von Neumann probes, or an outwardly expanding bubble of digital intelligence, it would represent a remarkable milestone, possibly for all life in the Milky Way. As it stands, we appear to live in a Galaxy devoid of interstellar travelers – a troubling sign that has given rise to the Fermi Paradox. So assuming we can start planet hopping, it might just turn out that we are the first and only civilization to embark upon such a journey. It's something that we must try; the future of life in our Galaxy could depend on it. But more to the point, interstellar colonization would also allow our species to expand into the cosmos and flourish.

Von Neumann probes are named after the Hungarian-born American mathematician John von Neumann who, among many other achievements, was the first to develop a mathematical theory of machines that can make exact copies of themselves. This is thus a resolution to the Fermi paradox–that is, the question of why we have not already encountered extraterrestrial intelligence if it is common throughout the universe.

5.

Inner Space, Not Outer Space

Alternatively (or in conjunction with space travel), we could attain an ideal existential mode by uploading ourselves into massive supercomputers. It's an idea that makes a lot of sense; given the computational capacity of a megascale computer, like a Matrioshka Brain (in which the matter of the entire

planet is utilized for the purpose of computation) or Dyson Sphere (which can capture the energy output of the sun), there would be more to experience in a simulated universe than in the real one itself. According to Robert Bradbury, a single multi-layer Matrioshka Brain could perform about 1042 operations per second, while Seth Lloyd has theorized about a quantum system that could conceivably calculate 5×1050 logical operations per second carried out on ~1031 bits. Given the kinds of simulated worlds, minds, and experiences this kind of power could generate, the analog world would likely appear agonizingly slow, primitive, and exceptionally boring.

Interior view of a O'Neill cylinder, NASA, PD

6.

Eternal Bliss

Virtually every religion fantasizes about a utopian afterlife. This only makes sense given the imperfections and dangers of the real world; religion gives people the opportunity to express their wildest projections of an ideal state of existence. Given our modern materialist proclivities, many of us no longer believe in heaven or anything else awaiting us in some supposed afterlife. But that doesn't mean we can't create a virtual heaven on Earth using our technologies.

This is what the British philosopher David Pearce refers to as the Hedonistic Imperative — the elimination of all suffering and the onset of perpetual pleasure. This could be as simple as eliminating pain and negative emotional states, or something far more dramatic and profound, like maximizing the amount of psychological, emotional, and physical pleasure that a single consciousness can experience. Given that we live in a hostile universe with no meaning other than what we ascribe to it, who's to say that entering into a permanent state of bliss is somehow wrong or immoral? While it may be offensive to our Puritan sensibilities, it most certainly appeals to our spiritual and metaphysical longings. A strong case can be made that maximizing the human capacity for pleasure is as valid a purpose as any other.

7.

Cosmological Transcension

This is basically a placeholder for those far-off future states we can't possibly imagine — but are desirable nonetheless. While this line of speculation tends to venture into the realms of philosophy and metaphysics (not that many of the other items on this list haven't done the same), it's still interesting and worthwhile to consider some super-speculative possibilities. For example, futurist John Smart has suggested that human civilization is increasingly migrating into smaller and smaller increments of matter, energy, space, and time (MEST). Eventually, he argues, we'll take our collective intelligence into a cosmological realm with the same efficiency and density as a black hole — where we'll essentially escape the universe.

Alternatively, forward-looking thinkers like Robert Lanza and James Gardner have speculated about a universe that's meant to work in tandem with the intelligence it generates. This idea, called biocentrism, suggests that the universe is still in an immature phase, and that at some future point, all the advanced intelligent life within it will guide its ongoing development. This would result in a Universe dramatically different from what we live in today. And then there are other possibilities such as time travel and the exploitation of quantum effects. Indeed, given just how much we don't know about what we don't know, the future may be full of even more radical possibilities than we're currently capable of imagining.

The article is republished from i09 - a daily web publication that covers science, science fiction, and the future. www.I09.com

Books and Future Technology

The Future of Reading

Vukša Veličković

So what about the reader? If literature has remained 'static' due to its 'technical limitations', what can we say about the reading experience in the digital era. What has the digitalization of books and appearance of new reading devices brought to the reader? A bit of magic, like in the good old days?

Literature is a strange form of art: the art behind all arts, it rests inscribed in every other art discipline, laying the foundations of what we know as the arts today. The literary concepts such as "narrative", "discourse" and "voice" have been widely deployed in various art practices from theatre and film to music, contemporary art and new media. Literature is the driving force of culture and yet, it seems there is nothing more conservative than putting words on paper. The very form of writing has not changed since its origins, right?

If you observe what stands for a piece of music today and how it is produced, it is radically different from what it was a mere hundred years a go. Same goes for virtually any other art discipline. From Goya to Malevich to Pollock to Brice Marden, from John Ford to Chris Cunningham, from Callicrates to Calatrava, there is a clear line of transformation and development, if not always progress. But when it comes to writing, it seems we haven't gotten much further from Plato, at least on the formal level. A couple of millennia later, your only tools are letter symbols set in a meaningful way, or else it's not literature.

We know books are precious objects, not only because they may contain wisdom and knowledge, but because of their tactile, almost erotic quality. Before the invention of walkmans and iPods you couldn't have taken your music to your bed. But you could have always taken your book where ever you wanted, feel the smell of freshly printed paper, flip the pages under your fingers or just stroke those soft covers before immersing yourself in that long reading session.

New reading devices might not change the face of literature, but they will create readers' communities. According to Readmill, books have a future and the future is digital.

We might have complained when the first digital books demanded we keep sitting next to those gigantic PC's, starring at the eye-hurting monitors, in that stiff, claustrophobic cyberspace, where Thomas Pynchon and Daniel Steel somehow look and feel the same, as endless strips of bare text stripped of its power on the glossy surface of the screen. But with the introduction of Kindles and iPads, things started to change, enabling a whole new kind of reading experience. Once again, it seems, reading became exciting.

Or should we say, more 'practical' and 'efficient'? You don't have to carry all that heavy load of books on your holiday trip, they're all stacked in your iPad. With one tap you can find anything you want inside the text, any quote or phrase, while using pretty much the same tools as in the physical world to annotate and highlight your reading, although faster and more efficiently.

New devices might not change the face of literature, just as the typewriter hadn't transformed it after replacing feather and ink. But new devices create something else, they create communities. Social networks for music fans, social networks for films, basketball, mums, gays, vampires, cats, dogs, Lady Gaga and of course – books.

With the decline of the print industry and the rise of digital media, we are told that instead of vanishing, books will stay with us forever. A new service taking advantage of new reading devices' tools has been launched by Henrik Berggren and his team, and it will be showcased this April at the Share Conference in Belgrade, Serbia. The young Berlin startup has already been dubbed "the Last.fm of books".

Readmill is different from other book social networks in a couple of ways, Berggren explains to me in an email. "First and foremost we provide a logical connection with the book through e-readers. We do this by integrating a sharing component into the margin of the book. This means that sharing what you read and your highlights can be done with just a few taps instead of having to enter word for word into a boring form. It also let's us collect lots of interesting data around how people consume books and give them better recommendations as well as enriching their reading experience."

It was when Henrik and the crew visited the Internet entrepreneur Caterina Fake at her apartment in San Francisco that Readmill's core idea started to take shape. "During our pitch she ran upstairs in her house and got the copy of the book and showed that every single page looked like in the picture – full of highlights, notes and other forms of marginalia. She told us that she read it five time and had huge amounts of things around the book that she wanted to share with friends and peers but she couldn't, it was all stuck in one copy, in her library and no one except for us had ever seen it before. There and then we decided to recreate this experience on the web and on e-readers."

Readmill boasts a sleek and elegant interface, with profiles looking similar to Twitter and most of other social networks nowadays. A user has a certain number of "followers" and is following other users, with options to share his/hers highlights from a book, or post recommendations and "closing remarks" in the form of mini reviews. On a user's page you'll find displays a reading timeline – list of books he/she has read or is currently reading. A nifty feature is the "abandonded" option to remind you of all those unfinished readings. There is also the button for "mark as interesting", just so that you can keep an eye on that intriguing new arrival (perhaps a book about the future of reading?).

Through its free iPad app, Readmill takes full advantage of digital books find-and-highlight concept. You can actually use the recommended highlights and notes as references in relation to their original context in the text. Readmill's concept of sharing highlights opens a new space for debate, not only between the reader and the text, but among readers themselves, all within a book. Let us hope the writers jump on the wagon as well. Now, that would be revolutionary.

The article is republished from Bturn, eastern European culture and politics magazine. www.bturn.com

Budućnost knjiga/Intervju

Nedovršena knjiga

Na temu o budućnosti čitanja za SHARE Magazine govori Dejan Ilić, iz angažovane izdavačke kuće "Fabrika knjiga"

Budući da ste izdavač, verovatno imate jako dobar uvid u kontekst pismenosti i čitanja knjiga u Srbiji. U odnosu na taj kontekst, kako vam se čini budućnost elektronskog izdavaštva i generalno upražnjavanje kulture na internetu?

Dejan Ilić:

Razgovor o kontekstu svodi se na pitanja: ko su proizvođači kulture o kojoj je reč? Kome se oni obraćaju? Ko su zaista njeni korisnici? I u kakvom društvenom i socijalnom okruženju se odvija ta komunikacija? U Srbiji nije završena vodovodna i kanalizaciona mreža. Nisu svuda provučeni telefonski kablovi. Ni operateri mobilne telefonije ne pokrivaju celu teritoriju Srbije. Isto važi i za mrežu puteva i pruga. Time je već u dobroj meri ograničen i pristup kulturi i izdavaštvu o kojima govorimo. Sledeće pitanje je koliko ta kultura košta. Ko danas u Srbiji može sebi da priušti „igračke" za proizvođenje i korišćenje sadržaja na internetu? Konačno, koliko je ljudi u Srbiji danas dovoljno obrazovano da može da komunicira posredstvom takvih sadržaja? (Odgovori na poslednja dva pitanja se mahom poklapaju, pošto se obrazovna slika uglavnom preklapa sa slikom materijalnih prilika.) Kada bi se ukrstili odgovori na ova pitanja sa „infrastrukturnim" prilikama u Srbiji, mislim da bismo dobili jedan mali krug ljudi koji pripada povlašćenoj društvenoj grupi koja se trudi da drži korak sa nečim što bismo za ovu priliku mogli nazvati „velikim svetom", ali ne zarad dobrobiti čitavog društva, nego zarad vlastite koristi (zabavno bi bilo videti da li se gledano iz njihovog ugla vlastita korist i opšta dobrobit poklapaju). Drugim rečima, reč je o elitnoj kulturi, čije upražnjavanje, uprkos očekivanjima, ne dovodi do poboljšanja u čitavom društvu, a što bi, iz moje perspektive, trebalo da bude jedna od funkcija kulture.

Šta je to što se kod čitaoca promeni kad se promeni medij koji prenosi sadržaj knjige?

D.I.

Ne znam za druge, ali bih ja voleo da se ne promeni ništa. Ako govorimo samo o čitanju književnosti, onda bi se vrlo uopšteno moglo reći da je svrha tog čitanja da se bolje upoznaju i razumeju svet u kome živimo i ljudi sa kojima živimo, te da bolje shvatimo sami sebe. U kom god obliku da čitamo književnost, ta krajnja svrha bi morala ostati nepromenjena. Takođe mislim da ispunjavanje te svrhe ne zavisi od oblika u kom nam se književnost nudi. Nebitno je da li tekst čitamo na ekranu ili na papiru, ako je taj tekst dobar, on će u oba slučaja obaviti istu funkciju.

Nove forme digitalnog čitanja knjiga i e-čitača (tipa readmil, otvaraju mogućnost novom pristupu pisanja knjiga, čitaocima da komentarišu delove knjiga, a da to drugi čitaoci mogu da vide. Da li je to početak neke nove forme pisanja knjiga u kojoj ona zapravo nikad nije završena? Kakav je vaš odnos prema konceptu nedovršene knjige?

D.I.

Otprilike razumem neku vrstu radosti zbog naslućenih mogućnosti čitanja tekstova u elektronskom obliku koja provejava iz ovog pitanja. Nažalost, ja tu radost ne osećam. Meni se čini da su to sve pogodnosti koje idu u prilog površnosti i nekoj vrsti neutemeljenog intelektualnog egzibicionizma. Probaću to da objasnim, imajući na umu esej o internetskoj književnosti „Karaoke kultura" Dubravke Ugrešić, iz njene knjige Napad na minibar, za koji mislim da daje odličan uvid u stvari o kojima ovde govorim. Da biste uopšte čitali i razumeli neki tekst, morate poći od toga da je taj tekst završen. Zaokruženost teksta daje vam za pravo da iz tog teksta izvlačite zaključke o njegovom smislu i značenju. S druge strane, zašto bi mene zanimali komentari svih čitalaca nekog teksta? Kao što bih očekivao da osoba koja je napisala tekst ima autorske kompetencije, tako bih i od čitalaca za čije bih komentare bio zainteresovan očekivao da budu kompetentni. Kompetencija, pored ostalog, nalaže i neku vrstu strpljivosti u čitanju i tumačenju, kao što i komentari zahtevaju neku vrstu zaokruženosti; sami po sebi, oni bi trebalo da budu samo delovi jednog celovitog shvatanja teksta. U tom smislu, manje me zanima da vidim šta je neko zakačio uz neku rečenicu. Od toga je mnogo važnije šta neko ima da kaže za tekst u celini. Sve usputne beleške same po sebi najčešće su krajnje nezanimljive i svoju vrednost dobijaju tek kada se uklope u jedno celovito tumačenje. I kao što sam već rekao, nebitno je na kraju da li će nam to tumačenje biti predočeno na papiru ili na ekranu.

Da li Fabrika knjiga planira neku vrstu tehnološkog izlaženja u susret e-čitaocima?

D.I.

Ne baš. Časopis Reč je već odavno dostupan čitaocima na internetu. Delovi naših publikacija dostupni su i na internet strani „Peščanika". I to bi otprilike bilo sve. Puštanje sadržaja na internet ili rad sa knjigama u elektronskoj formi povlači čitav niz poteškoća koje su sve uglavnom materijalne prirode. Ja sam, recimo, za to da svi sadržaji na internetu budu besplatni. S druge strane, ne mogu da proizvedem knjigu, a da to ništa ne košta. Što bolje knjige radite, to više košta. Dobro prevedena i uređena knjiga, koja je povrh toga i lepo prelomljena i dizajnirana, košta više hiljada evra, bez štampanja. Ako bismo to pustili da se besplatno koristi, a ne vidim kako se može sprečiti da bilo šta što se nađe u elektronskoj ponudi na internetu ne bude na kraju besplatno, to bi značilo da neko unapred mora da pokrije sve troškove ne očekujući da mu se išta od toga vrati. To nije realan zahtev. Na duge staze, e-izdavaštvo bi umesto u neograničeno polje slobode moglo da se pretvori u strogo kontrolisano polje u kom će dominirati površnost i nekompetencija. Samo oni koji budu imali novac – ili, da bi to lepše zvučalo, kažimo: uslove – moći će da proizvode kvalitetan sadržaj na internetu. Sad bismo morali da zamislimo ko će za to imati „uslove", i kakvi će interesi stajati iza toga. Kao što ima ogroman slobodarski potencijal, internet raspolaže i zastrašujućim resursima za manipulaciju. Na kraju, sve smo to jednom već videli. Televizija je sredinom prošlog veka imala slične potencijale. Njena sposobnost da odigra emancipatorsku ulogu nije bila sporna. Kao što nije sporan ni njen manipulativni učinak. Orvel svoju 1984. nije pisao, kako se to obično misli, kao kritiku istočnih totalitarnih režima. Naprotiv, on je roman pisao pod utiskom koji je imao videvši prve probne televizijske programe u zapadnim zemljama. Nije nezanimljivo razmišljati o internetu u kontekstu 1984.

Budućnost nauke

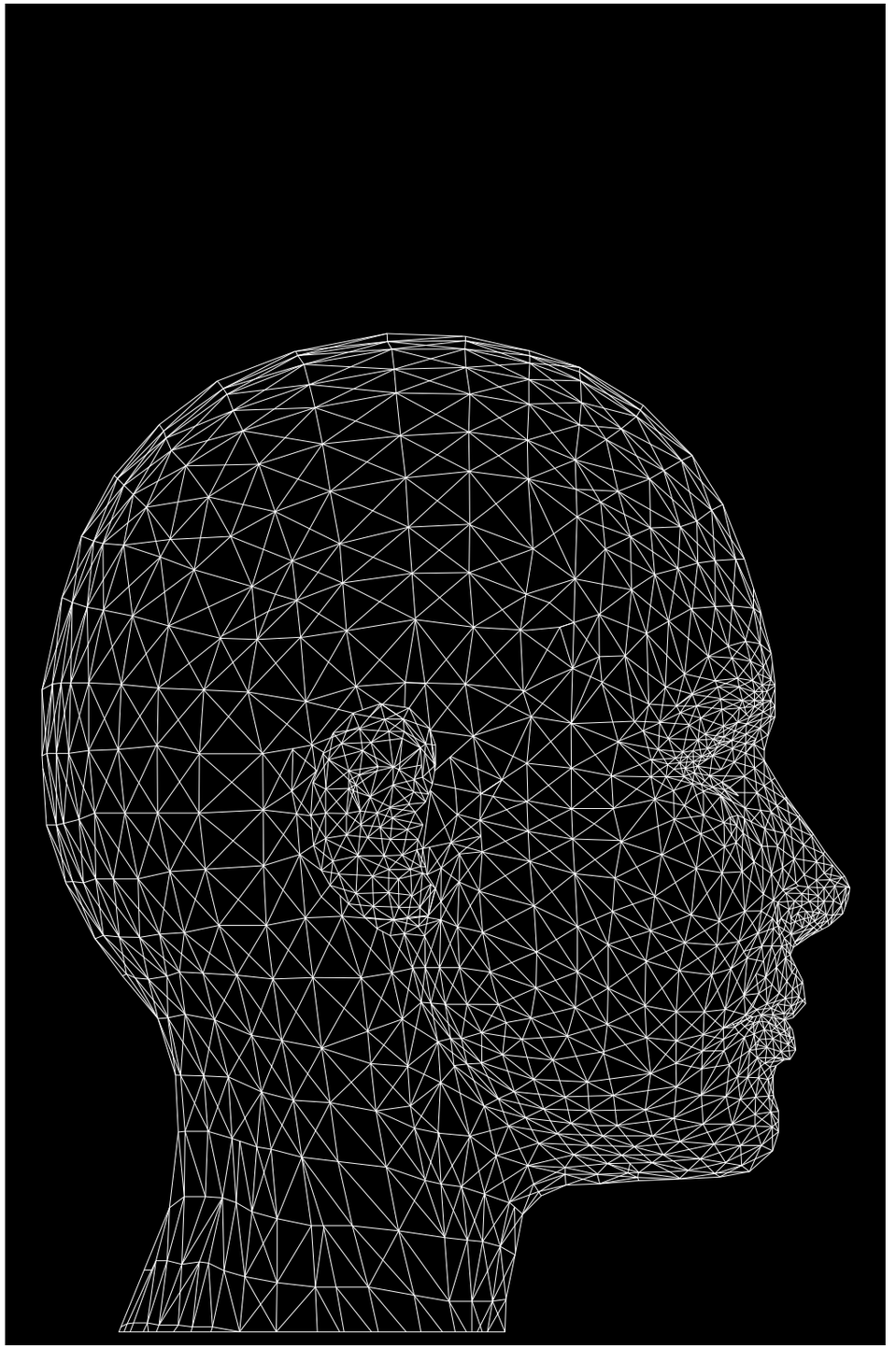
Transhumanizam – nauka budućnosti

Milan M. Ćirković

Transhumanizam je radikalno novi pristup razmišljanju o budućnosti koji je zasnovan na premisi da ljudska vrsta u svom sadašnjem obliku ne predstavlja kraj evolutivnog razvitka čoveka, već pre njegov početak.

U sredinama tako fanatično okrenutim prošlosti kao što je naša, nije nimalo čudno da je već širenje naučne pismenosti – o višim i kompleksnijim načinima za poboljšanje statusa nauke u društvu, na opštu korist, da i ne govorimo – pravi sizifovski zadatak. Jedan od razloga je očigledan: nauka je suštinski okrenuta ka budućnosti. Čak i one discipline koje se formalno bave prošlošću, kao što su paleontologija, kosmologija ili politička istorija, zapravo to čine radi izvlačenja predviđanja (ili retrodikcije) za budući rad. Zar se čak i u kolokvijalnom govoru, pa i političkom žargonu (dakle najprimitivnijoj i najmanje kompleksnoj vrsti žargona), ne čuje toliko puta kako „iz istorije valja izvući pouke"? Za šta tačno pouke? Očigledno, za budućnost. Pa zašto se onda tom budućnošću eksplicitnije ne bavimo? Zašto se elementarna istina da je svakodnevni deo bilo kog naučnog rada predviđanje – između ostalog, rezultata eksperimenata ili terenskih istraživanja – ne uči u školama?

Niko neće sporiti da je prošlost legitimni predmet naučnog istraživanja, naročito u istorijskim naukama (u koje, opet da naglasim, pošto se to u naučno slabo pismenim sredinama često zaboravlja, spadaju i paleontologija i dobar deo drugih geo-nauka, kosmologija i slično). Čak i van formalno istorijskih nauka – a istinska nauka ne zna za podele, za razliku od ljudskih



'Wireframe Head', Dimas Aryo, CC

birokratija – vrlo često se pojavljuju bitni istorijski elementi. Divan primer su pomračenja Sunca i Meseca, koja je nemoguće rekonstruisati bez razumevanja istorijskih promena u prošlosti. Kao što su odlično pokazali Mizner, Torn i Viler na samom početku njihove slavne Gravitacije, verovatno najimpresivnije naučne knjige 20. veka, mi znamo da se 14. januara 484. odigralo totalno pomračenje Sunca, koje je iz dvorišta svoje kuće posmatrao poslednji klasični filozof starog sveta, Proklus Atinjanin. Međutim – i tu sledi zanimljiv obrt – kada vratimo naš dinamički planetarijum unatrag, vidimo da

Sa stanovišta transhumanista, napredak je kada više ljudi postaje sposobno da svesno oblikuje sebe, svoje živote, i načine na koje se odnose prema drugima, u skladu sa njihovim najdubljim vrednostima. Kao što je Džim Votson, suotkrivač strukture DNK i prvi rukovodilac Projekta ljudskog genoma, pre nekoliko godina rekao sa karakterističnom otvorenošću: „Niko nema odista hrabrosti da to izgovori, ali ako bismo mogli napraviti ljudska bića boljim dodavanjem gena, zašto to ne bismo učinili?"

to nije bilo moguće, jer je traka totaliteta prolazila daleko od Atine sve dok ne uzmemo u obzir istorijske promene Zemljine rotacije. Takođe, pre nekih dvadesetak godina vodila se u najuglednijim časopisima za fundamentalnu fiziku poput Physical Review Letters veoma interesantna rasprava oko toga da li je u eksperimentima barona Lorana fon Etveša, mađarskog fizičara sa kraja 19. i početka 20. veka, bila detektovana – ali ne i otkrivena!, što je posledica našeg savremenog tumačenja toga šta znači „otkriće" – misteriozna „peta sila", odnosno nova i dosad nepoznata fundamentalna interakcija, koju predviđaju neke od kvantnih teorija polja. U toj raspravi su se, između ostalog, potezali argumenti u vezi sa topografskim planom Budimpešte u doba Etvešovih ogleda, te relativni položaj njegove aparature u odnosu na značajne zgrade u blizini!

Dakle, elemenata istorijskog istraživanja ima čak i u „najčistijim" (mada je sam atribut neprijatan) oblastima prirodnih nauka. I to se sve prihvata kao sasvim legitimno, čime otpada naivni argument koji se i dalje ponegde čuje od ostataka pozitivista, da se istinska nauka bavi samo večnim i vanvremenskim relacijama. Zašto onda elementi koji se odnose na budućnost bivaju doživljavani ili kao naučna fantastika (i to u bezrazložno pežorativnom smislu) ili kao nekakve divlje i nebulozne spekulacije (kao da su spekulacije o budućnosti po nečemu lošije od sveprisutnih spekulacija o prošlosti)?

Srećom, situacija se poslednjih decenija menja, jednim delom zbog pojave i dramatičnog razvoja koncepata koji se odnose na nejasan i pomalo zbunjujuć pojam transhumanizma. Glosa: Transhumanizam je radikalno novi pristup razmišljanju o budućnosti, zasnovan na premisi da ljudska vrsta u svom sadašnjem obliku ne predstavlja kraj evolutivnog razvitka čoveka, već pre njegov početak. Svetska transhumanistička asocijacija formalno definiše transhumanizam dvojako:

1) kao intelektualni i kulturni pokret koji afirmiše mogućnost i poželjnost suštinskog poboljšanja ljudske situacije kroz primenu razuma, posebno korišćenjem tehnologije koja bi mogla da uspori ili eliminiše starenje i umnogome poveća ljudske intelektualne, fizičke i psihološke sposobnosti; i

2) kao istraživanje posledica, obećanja i potencijalnih opasnosti korišćenja nauke, tehnologije, kreativnosti i drugih sredstava da se prevaziđu temeljna ljudska ograničenja.

Očigledno da je ovo drugo tumačenje za nas najznačajnije, ali valja nekoliko reči posvetiti i prvom. Transhumanizam se može posmatrati kao nastavak i produžetak humanizma, iz koga je delimično izveden. Humanisti veruju da su ljudi značajni, te da individue imaju vrednost same po sebi. Mi svakako nismo savršeni, ali možemo stvari poboljšati promovišući ključne humanističke vrednosti kao što su racionalno mišljenje, sloboda, tolerancija, solidarnost i demokratija. Transhumanisti se slažu sa ovime, ali takođe naglašavaju ono što imamo potencijal da postanemo. Ne samo da možemo upotrebiti racionalna sredstva da poboljšamo ljudsku situaciju i spoljašnji svet; mi ih takođe možemo upotrebiti da poboljšamo sami sebe, ljudski organizam. I čineći to, mi nismo ograničeni tradicionalnim humanističkim metodama, kao što su obrazovanje i kulturni razvitak. Možemo, naime, upotrebiti tehnološka sredstva koja će nam u konačnom zbiru omogućiti da se pomerimo iznad onoga o čemu se obično misli kao o „ljudskom". Uzgred, sam termin transhumanizam skovao je jedan od najvećih bioloģa 20. veka i jedan od tvoraca Moderne sinteze (što je naziv za savremenu, neodarvinističku teoriju evolucije), ser Džulijan Haksli, u sjajnom eseju iz 1957. godine pod istoimenim naslovom.

Gotovo da je univerzalni konsenzus u savremenom svetu da naš ljudski oblik ili detalji naše sadašnje ljudske fiziologije nisu ono što definiše vrednost koju posedujemo, već su to pre naša htenja i ideali, naša iskustva i vrste života koje živimo. (U skladu upravo sa ovim temeljnim načelom, danas se sa potpuno opravdanim prezirom gleda na sve oblike diskriminacije na rasnoj osnovi ili diskriminacije prema licima sa invaliditetom ili nekim oblikom posebnih potreba!) Otuda potiče i veoma važan koncept prava utemeljenih u ličnosti (person-based rights), koji omogućava da se sve više i češće govori o pravima ne-ljudskih individua kao što su životinje; nije teško pretpostaviti da će slična etička načela biti razvijena kada se pojave i, na primer, inteligentni roboti. Glosa: Sa stanovišta transhumanista, napredak je kada više ljudi postaje sposobno da svesno oblikuje sebe, svoje živote, i načine na koje se odnose prema drugima, u skladu sa njihovim najdubljim vrednostima. Kao što je Džim Votson, suotkrivač strukture DNK i prvi rukovodilac Projekta ljudskog genoma, pre nekoliko godina rekao sa karakterističnom otvorenošću: „Niko nema odista hrabrosti da to izgovori, ali ako bismo mogli napraviti ljudska bića boljim dodavanjem gena, zašto to ne bismo učinili?" Konzervativci na desnici i levici – idolatristi ili „božanstva" ili „prirode" – nisu uspeli, uprkos ogromnim naporima, da daju smislen odgovor na ovo jednostavno Votsonovo pitanje.

Kroz ubrzani tempo tehnološkog razvitka i naučnog razumevanja, ulazimo u potpuno novu fazu u istoriji ljudske vrste. U relativno bliskoj budućnosti možemo se suočiti sa po-

javom stvarne veštačke inteligencije. Biće izgrađene nove vrste saznajnih oruđa koja će kombinovati veštačku inteligenciju sa tehnologijom novih interfejsa. Molekularna nanotehnologija ima potencijal da stvori obilne resurse za svakoga i da nam omogući punu kontrolu nad biohemijskim procesima u našim telima. Time bi se eliminisale bolesti i neželjeno starenje. Kroz redizajn ili neurohemijsko obogaćenje naših mozgova mogli bismo steći povećano emocionalno blagostanje, širi raspon osećanja ili veću sposobnost za posvećenost našim životnim projektima ili voljenim osobama. Očigledno, najznačajniji naučnotehnološki prodori sa stanovišta transhumanizma leže u oblasti kompjuterskih nauka, biologije i fiziologije, te fizike koja pruža osnovu za izumitelja Nikolu Teslu, i mnoge druge. Među naučnicima 20. veka, posebnu pažnju privlače vizionari poput britanskog biohemičara i polihistora Džona B. S. Holdejna, fizičara i vizionara kosmičkih habitata Džerarda O'Nila ili medicinara Roberta Etindžera, koji su razmatrali primenu konkretnih naučnih dostignuća u cilju produženja i poboljšanja kvaliteta ljudskog života. Takođe treba imati u vidu da popularizacija nauke (u tradiciji, nažalost, pokojnog Karla Segana, Ričarda Dokinsa ili Stivena Hokinga) ima veoma veliki značaj za transhumanistički poduhvat, budući da je to za sada glavni kanal kojim se sa relevantnim dostignućima upoznaje najširа publika od koje se očekuje smisleno razmatranje i političko odlučivanje o pitanjima od suštinskog značaja za budućnost čovečanstva.

Biotehnologija, nanotehnologija i veštačka inteligencija imaju potencijal da stvore ogromne i veoma složene opasnosti ako se koriste nepažljivo ili maliciozno. Transhumanisti insistiraju da je od najvećeg značaja da počnemo da uzimamo ova pitanja najozbiljnije. I to sada.

razvoj molekularne nanotehnologije. Među dalekovidijim transhumanistima se često pojavljuje i interes za astronomiju, kao nauku koja proučava širi životni prostor budućeg čovečanstva, u skladu sa slavnom maksimom velikog ruskog inženjera i vizionara Konstantina Ciolkovskog: „Zemlja je kolevka čovečanstva, ali ko želi da čitav život provede u kolevci?"

Pored Ciolkovskog, među najvažnije intelektualne prethodnike transhumanizma u istoriji ideja možemo pomenuti engleskog filozofa iz 17. veka Frensisa Bekona (sa njegovom Novom Atlantidom), pisce Herberta Džordža Velsa i Olafa Stejpldona, teologa i paleontologa Pjera Tejara de Šardena, našeg

Na drugoj, tamnijoj strani, transhumanisti priznaju da neke od ovih predstojećih tehnologija mogu potencijalno prouzrokovati veliku štetu ljudskom životu. Čak i sam opstanak vrste mogao bi biti doveden u pitanje (na primer, zloupotrebom biotehnologije u svrhe bioterorizma). Traganje za razumevanjem opasnosti i rad na sprečavanju katastrofa među suštinskim su delovima transhumanističkog programa. Stoga je verovatno najznačajniji aspekt transhumanističkog interesa upravo isprovociran pitanjem mogu li transhumanističke tehnologije (poput bio- i nanotehnologije, veštačke inteligencije, virtualne realnosti i drugih) biti opasne? Odgovor je očigledno pozitivan, što povlači hitnu potrebu da se analiziraju

i diskutuju problemi pre nego što postanu stvarnost. Biotehnologija, nanotehnologija i veštačka inteligencija imaju potencijal da stvore ogromne i veoma složene opasnosti ako se koriste nepažljivo ili maliciozno. Transhumanisti insistiraju da je od najvećeg značaja da počnemo da uzimamo ova pitanja najozbiljnije. I to sada.

Postoje ogromna etička, društvena, kulturna, filozofska i naučna pitanja u vezi sa budućnošću ljudske vrste koja treba razmotriti u detaljima. Potrebno je mnogo istraživanja, kao i najširа moguća javna rasprava. Takođe je potrebno stvoriti institucije i međunarodni okvir koji će omogućiti vođenje odgovorne politike i implementaciju razumne i odmerene regulative. Sve ovo će zahtevati mnogo vremena, i što pre počnemo, to su naše šanse da izbegnemo najopasnije zamke veće. Ovde je važna nova kategorija, tzv. egzistencijalnih rizika, tj. opasnosti koje prete opstanku čovečanstva kao celine, ili, u najboljem slučaju, vode do trajnog zaustavljanja napretka čovečanstva i onemogućavanja realizacije svih ljudskih kreativnih potencijala. Dok su neki egzistencijalni rizici (npr. opasnost od sudara Zemlje sa asteroidom ili kometom) prirodnog porekla, i nama je zapravo neophodna tehnologija da bismo sa njima izašli na kraj na duge staze, dotle je većina pretećih egzistencijalnih rizika danas posledica čovekove delatnosti. U ovu grupu spadaju tako heterogene pretnje kao što su globalno zagrevanje i drugi klimatski poremećaji, opasnost od globalnog nuklearnog ili biološkog rata, kao i zloupotreba nanotehnologije ili veštačke inteligencije. Važno je napomenuti da se standardna analiza rizika (kakvu primenjuju, na primer, osiguravajuća društva) ne može primeniti na egzistencijalne rizike. Jedan od razloga za ovo jeste što standardne statističke metode analize rizika ne pridaju nikakvu vrednost životima budućih generacija, a upravo je to ono što egzistencijalni rizici najviše ugrožavaju! Očigledno je da je za ove svrhe neophodno razviti čitavu novu metodologiju

analize, što je posao pred kojim se tek nalazimo. Dobar primer je Foresight Institute (http://www.foresight.org/), koji već više godina promoviše istraživanja na temu transhumanističkih tehnologija i njihovog razumevanja u širokoj javnosti, fokusirajući se posebno na molekularnu nanotehnologiju.

Transhumanizam danas postaje deo mejnstrim kulture, kako sve veći broj naučnika, naučno obrazovanih filozofa i društvenih mislilaca počinje da ozbiljno uzima spektar mogućnosti koje transhumanizam obuhvata. Postoji čitava familija transhumanističkih grupa koje se umnogome razlikuju u svojim osobinama i fokusu, koja se brzo proširuje, kao i mnogo diskusionih grupa u mnogim zemljama širom sveta, koje su sakupljene pod kišobranom Svetske transhumanističke asocijacije. I to se odnosi ne samo na nauku već i na druge velike oblasti ljudske delatnosti – mada ne možemo ulaziti u to u ovom tekstu, transhumanistička umetnost je jedna od velikih struja savremenog umetnikog razvoja, predvođena stvaraocima poput Stelarc-a, Alfreda Harta ili Nataše Vita-Mor. Transformativni potencijal transhumanizma, mada uočen od strane vizionara još veoma davno, tek je na samom početku realizacije čak i u najapstraktnijim stvaralačkim formama, tako da nas svakako ovde očekuje krajnje uzbudljiva plovidba njutnovskim „okeanom nepoznatog".

Infiltrating the System

Hacking power

Lily Lynch

In this sense, "hacking" in Arabic means more than simply gaining unauthorized access to computerized data; the word itself suggests proactive resistance against various forms of oppression and power.

A few years ago, in a souk in old Damascus, you could find some of the strangest lingerie on earth: thong panties made out of psychedelic flowers that blinked with multi-colored lights, bras that said "I love you" when you pushed a well-concealed button, and flimsy underwear made out of fake hands, complete with fingernails painted in bright red nail polish. Ayah Bdeir, a media artist and TED fellow, used this discovery to challenge and subvert the static representations of Muslim women found in Western media. Bdeir's work, entitled "Teta Haniya's secrets" reveals that images of women from the Arab world have been largely regulated and constructed by powerful media regimes.

The word "hack", transliterated into Arabic and translated as "ikhtiraq al-nizam" means "infiltrating the system", though "nizam" can also mean "regime" (Ash-shab yurid isqat an-nizam, "the people want to bring down the regime", was the most popular slogan of the Arab Spring). In this sense, "hacking" in Arabic means more than simply gaining unauthorized access to computerized data; the word itself suggests proactive resistance against various forms of oppression and power.

At the same time, people from the Arab world have traditionally been characterized by the West as lacking in agency, hindered in their actions by Internet censorship, fundamentalism, and rigid, state-controlled media.

"Hacking characterizes the intervention of a new generation in taking control of cultural production through acts of dissimulation, negotiation, and play."

Without dismissing certain political and social realities, the region has also come to represent the possibilities that emerge when technology is appropriated and utilized by individuals living in oppressive societies, and when different regimes of power are "hacked".

Beginning with Iran's "Twitter Revolution" in 2009, information posted by citizens on various social media platforms, as well as amateur images of protest and violence, began challenging the professional and corporate media's monopoly on "news". Bystanders used inexpensive camera phone technology to capture video clips of human rights abuses that were later circulated online, sparking uprisings across the Middle East and North Africa.

Recognizing the power of citizen journalism to hurdle the limitations of corporate and government-controlled media, David Munir Nabti opened AltCity in Beirut, "a newsroom space for citizen journalists and media innovators". The spacious office provides a solid Internet connection and electricity to individuals working on a variety of entrepreneurial, activist, and media-related projects. AltCity's success earned Nabti an invite to Barack Obama's Presidential Summit on Entrepreneurship.

In Lebanon, where Internet access is often hampered by poor infrastructure, relatively scarce home computer ownership, low Internet penetration rates, and expensive connectivity, AltCity has become a vital resource for individuals who benefit from access to reliable, stable technology, as well as connection with other innovators with whom they can share ideas.

But places like AltCity can do more than challenge the dominance of powerful regime and corporate media through providing space and training to citizen journalists. As Bilal Ghalib, an innovator in the global Maker Movement said, "hackerspaces give people access to tools and a local/global community through which people are enabled to invent their own future." In this sense, by making technology and education available to citizens who would otherwise be deprived of access, the hacker and maker movements bring knowledge and equipment typically reserved for elites to everyday citizens.

Ghalib, along with the Global Entrepreneurship and Maker Space Initiative (GEMSI), is working to create a hackerspace in Baghdad, and has launched a Kickstarter campaign to get the plan off the ground.

About year ago, the same organization began a similar Kickstarter campaign to fund the opening of a temporary hackerspace in Cairo, and today, there are five hackerspaces across Egypt. Just a year and a half after the collapse of Mubarak's regime, these hackerspaces are aiding individuals in creating solutions to problems within their own communities that they've identified for themselves.

In addition to providing space around which to organize and share ideas, the maker movement has granted young people access to elite technologies like 3D printers and laser cutters, along with open-source electronics.

Recognizing the importance of making technology more accessible, Bdeir invented littleBits, a kind of "next level" Lego set for the digital age. littleBits, which have recently been featured on CNN and at a TED talk in California, contains pre-integrated circuitry with magnetized constituent parts. Glosa> The little set of green, pink and orange blocks illuminate when connected and enable individuals with little expertise or education in electronics to better understand how electronics work. littleBits also allows artists and designers to easily integrate electronics into their pieces or installations. So far, littleBits users have created a garage-door opener, a coffeemaker, a pair of blinking shoes, and a joystick. As a member of the open source hardware movement, Bdeir has made instructions on how to build your own set of littleBits available online.

Bdeir is also an artist, and her work utilizes technology and media to explore fixed notions of Arab Identity. As with littleBits, her recent work "Identities in Motion" challenges elite monopolies on power and construction. As the Aberdeen Centre for Contemporary Art described it, "Identities in Motion is a series of works that looks to contemporize images of Arab identity, reinterpreting often archaic, frozen, and homogeneous imagery. The works deal with the obsession of the media to flatten the Arab identity and reduce it to a set of cliché images and iconographies." While littleBits challenges the notion that the power to utilize electronics is limited to the educated elite, "Identities in Motion" challenges the "flattened" images of Arabs produced by Western media elites: Sunnis and Shias, warlords and sheiks, belly dancers and women draped in cloth.

The proliferation of new technologies and ideas has even made its way into classic forms of media, including Arabic literature. In an article entitled "Hacking the Modern: Arabic Writing in the Digital Age", Tarek el-Ariss, a professor of Middle Eastern Studies at the University of Texas at Austin, sums up this new influence: "Hacking characterizes the intervention of a new generation in taking control of cultural production through acts of dissimulation, negotiation, and play."

And you may be surprised to hear that by playing with 3D printers, building new joysticks out of Lego-like microcircuits, and using media art to reconfigure stereotypes about Muslim women, individuals and communities across the Middle East and North Africa are doing just that.

Fight Online Censors

Save Open Internet

Aaron Swartz (1986-2013)
was an original thinker,
cyber activist, advocate for
justice and humane values, data
architect, programmer.

Swartz in early 2012, campaigning against the SOPA legislation, Daniel J. Sieradski, CC

AARON SWARTZ:

So, for me, it all started with a phone call. It was September—not last year, but the year before that, September 2010. And I got a phone call from my friend Peter. "Aaron," he said, "there's an amazing bill that you have to take a look at." "What is it?" I said. "It's called COICA, the Combating Online Infringement and Counterfeiting Act." "But, Peter," I said, "I don't care about copyright law. Maybe you're right. Maybe Hollywood is right. But either way, what's the big deal? I'm

not going to waste my life fighting over a little issue like copyright. Healthcare, financial reform—those are the issues that I work on, not something obscure like copyright law." I could hear Peter grumbling in the background. "Look, I don't have time to argue with you," he said, "but it doesn't matter for right now, because this isn't a bill about copyright." "It's not?" "No," he said. "It's a bill about the freedom to connect." Now I was listening.

Peter explained what you've all probably long since learned, that this bill would let the government devise a list of websites that Americans weren't allowed to visit. On the next day, I came up with lots of ways to try to explain this to people. I said it was a great firewall of America. I said it was an Internet black list. I said it was online censorship. But I think it's worth taking a step back, putting aside all the rhetoric and just thinking for a moment about how radical this bill really was. Sure, there are lots of times when the government makes rules about speech. If you slander a private figure, if you buy a television ad that lies to people, if you have a wild party that plays booming music all night, in all these cases, the government can come stop you. But this was something radically different. It wasn't the government went to people and asked them to take down particular material that was illegal; it shut down whole websites. Essentially, it stopped Americans from communicating entirely with certain groups. There's nothing really like it in U.S. law. If you play loud music all night, the government doesn't slap you with an order requiring you be mute for the next couple weeks. They don't say nobody can make any more noise inside your house. There's a specific complaint, which they ask you to specifically remedy, and then your life goes on.

There's a battle going on right now, a battle to define everything that happens on the internet in terms of traditional things that the law understands. Is sharing a video on bittorrent like shoplifting from a movie store? Or is it like loaning a videotape to a friend? Is reloading a webpage over and over again like a peaceful virtual sit-in or a violent smashing of shop windows? Is the freedom to connect like freedom of speech or like the freedom to murder?

The closest example I could find was a case where the government was at war with an adult bookstore. The place kept selling pornography; the government kept getting the porn declared illegal. And then, frustrated, they decided to shut the whole bookstore down. But even that was eventually declared unconstitutional, a violation of the First Amendment.

So, you might say, surely COICA would get declared unconstitutional, as well. But I knew that the Supreme Court had a blind spot around the First Amendment, more than anything else, more than slander or libel, more than pornography, more even than child pornography. Their blind spot was copyright. When it came to copyright, it was like the part of the justices' brains shut off, and they just totally forgot about the First Amendment. You got the sense that, deep down, they didn't even think the First Amendment applied when copyright was at issue, which means that if you did want to censor the Internet, if you wanted to come up with some way that the government could shut down access to particular websites, this bill might be the only way to do it. If it was about pornography, it probably would get overturned by courts, just like the adult bookstore case. But if you claimed it was about copyright, it might just sneak through.

Starting from literally nothing, we went to 10,000 signers, then 100,000 signers, and then 200,000 signers and 300,000 signers, in just a couple of weeks. And it wasn't just signing a name. We asked those people to call Congress, to call urgently. There was a vote coming up this week, in just a couple days, and we had to stop it.

And that was especially terrifying, because, as you know, because copyright is everywhere. If you want to shut down WikiLeaks, it's a bit of a stretch to claim that you're doing it because they have too much pornography, but it's not hard at all to claim that WikiLeaks is violating copyright, because everything is copyrighted. This speech, you know, the thing I'm giving right now, these words are copyrighted. And it's so easy to accidentally copy something, so easy, in fact, that the leading Republican supporter of COICA, Orrin Hatch, had illegally copied a bunch of code into his own Senate website. So if even Orrin Hatch's Senate website was found to be violating copyright law, what's the chance that they wouldn't find something they could pin on any of us?

There's a battle going on right now, a battle to define everything that happens on the Internet in terms of traditional things that the law understands. Is sharing a video on BitTorrent like shoplifting from a movie store? Or is it like loaning a videotape to a friend? Is reloading a webpage over and over again like a peaceful virtual sit-in or a violent smashing of shop windows? Is the freedom to connect like freedom of speech or like the freedom to murder?

This bill would be a huge, potentially permanent, loss. If we lost the ability to communicate with each other over the Internet, it would be a change to the Bill of Rights. The freedoms guaranteed in our Constitution, the freedoms our country had been built on, would be suddenly deleted. New technology, instead of bringing us greater freedom, would have snuffed out fundamental rights we had always taken for granted. And I realized that day, talking to Peter, that I couldn't let that happen.

But it was going to happen. The bill, COICA, was introduced on September 20th, 2010, a Monday, and in the press release heralding the introduction of this bill, way at the bottom, it was scheduled for a vote on September 23rd, just three days later. And while, of course, there had to be a vote—you can't pass a bill without a vote—the results of that vote were already a foregone conclusion, because if you looked at the introduction of the law, it wasn't just introduced by one rogue eccentric member of Congress; it was introduced by the chair of the Judiciary Committee and co-sponsored by nearly all the other members, Republicans and Democrats. So, yes, there'd be a vote, but it wouldn't be much of a surprise, because nearly everyone who was voting had signed their name to the bill before it was even introduced.

Now, I can't stress how unusual this is. This is emphatically not how Congress works. I'm not talking about how Congress should work, the way you see on Schoolhouse Rock. I mean, this is not the way Congress actually works. I think we all know Congress is a dead zone of deadlock and dysfunction. There are months of debates and horse trading and hearings and stall tactics. I mean, you know, first you're supposed to announce that you're going to hold hearings on a problem, and then days of experts talking about the issue, and then you propose a possible solution, you bring the experts back for their thoughts on that, and then other members have different solutions, and they propose those, and you spend of bunch of time debating, and there's a bunch of trading, they get members over to your cause. And finally, you spend hours talking one on one with the different people in the debate, try and come back with some sort of compromise, which you hash out in endless backroom meetings. And then, when that's all done, you take that, and you go through it line by line in public to see if anyone has any objections or wants to make any changes. And then you have the vote. It's a painful, arduous process. You don't just introduce a bill on Monday and then pass it unanimously a couple days later. That just doesn't happen in Congress.

But this time, it was going to happen. And it wasn't because there were no disagreements on the issue. There are always disagreements. Some senators thought the bill was much too weak and needed to be stronger: As it was introduced, the bill only allowed the government to shut down websites, and these senators, they wanted any company in the world to have the power to get a website shut down. Other senators thought it was a drop too strong. But somehow, in the kind of thing you never see in Washington, they had all managed to put their personal differences aside to come together and support one bill they were persuaded they could all live with: a bill that would censor the Internet. And when I saw this, I realized: Whoever was behind this was good.

Now, the typical way you make good things happen in Washington is you find a bunch of wealthy companies who agree with you. Social Security didn't get passed because some brave politicians decided their good conscience couldn't possibly let old people die starving in the streets. Are you kidding me? Social Security got passed because John D. Rockefeller was sick of having to take money out of his profits to pay for his workers' pension funds. Why do that, when you can just let the government take money from the workers? Now, my point is not that Social Security is a bad thing—I think it's fantastic. It's just that the way you get the government to do fantastic things is you find a big company willing to back them. The problem is, of course, that big companies aren't really huge fans of civil liberties. You know, it's not that they're against them; it's just there's not much money in it.
Now, if you've been reading the press, you probably didn't hear this part of the story. As Hollywood has been telling it, the great, good copyright bill they were pushing was stopped by the evil Internet companies who make millions of dollars off of copyright infringement. But it just—it really wasn't true. I was in there, in the meetings with the Internet companies—actually probably all here today. And, you know, if all their profits depended on copyright infringement, they would have put a lot more money into changing copyright law. The fact is, the big Internet companies, they would do just fine if this bill passed. I mean, they wouldn't be thrilled about it, but I doubt they would even have a noticeable dip in their stock price. So they were against it, but they were against it, like the rest of us, on grounds primarily of principle. And principle doesn't have a lot of money in the budget to spend on lobbyists. So they were practical about it. "Look," they said, "this bill is going to pass. In fact, it's probably going to pass unanimously. As much as we try, this is not a train we're going to be able to stop. So, we're not going to support it—we couldn't support it. But in opposition, let's just try and make it better." So that was the strategy: lobby to make the bill better. They had lists of changes that would make the bill less obnoxious or less expensive for them, or whatever. But the fact remained at the end of the day, it was going to be a bill that was going to censor the Internet, and there was nothing we could do to stop it.

So I did what you always do when you're a little guy facing a terrible future with long odds and little hope of success: I started an online petition. I called all my friends, and we stayed up all night setting up a website for this new group, Demand Progress, with an online petition opposing this noxious bill, and I sent it to a few friends. Now, I've done a few online petitions before. I've worked at some of the biggest groups in the world that do online petitions. I've written a ton of them and read even more. But I've never seen anything like this. Starting from literally nothing, we went to 10,000 signers, then 100,000 signers, and then 200,000 signers and 300,000 signers, in just a couple of weeks. And it wasn't just signing a name. We asked those people to call Congress, to call urgently. There was a vote coming up this week, in just a couple days, and we had to

I remember there was one week where I was having dinner with a friend in the technology industry, and he asked what I worked on, and I told him about this bill. And he said, "Wow! You need to tell people about that." And I just groaned. And then, just a few weeks later, I remember I was chatting with this cute girl on the subway, and she wasn't in technology at all, but when she heard that I was, she turned to me very seriously and said, "You know, we have to stop 'SOAP.'" So, progress, right?

stop it. And at the same time, we told the press about it, about this incredible online petition that was taking off. And we met with the staff of members of Congress and pleaded with them to withdraw their support for the bill. I mean, it was amazing. It was huge. The power of the Internet rose up in force against this bill. And then it passed unanimously.

Now, to be fair, several of the members gave nice speeches before casting their vote, and in their speeches they said their office had been overwhelmed with comments about the First Amendment concerns behind this bill, comments that had them very worried, so worried, in fact, they weren't sure that they still supported the bill. But even though they didn't support it, they were going to vote for it anyway, they said, because they needed to keep the process moving, and they were sure any problems that were had with it could be fixed later. So, I'm going to ask you, does this sound like Washington, D.C., to you? Since when do members of Congress vote for things that they oppose just to keep the process moving? I mean, whoever was behind this was good.

And then, suddenly, the process stopped. Senator Ron Wyden, the Democrat from Oregon, put a hold on the bill. Giving a speech in which he called it a nuclear bunker-buster bomb aimed at the Internet, he announced he would not allow it to pass without changes. And as you may know, a single senator can't actually stop a bill by themselves, but they can delay it. By objecting to a bill, they can demand Congress spend a bunch of time debating it before getting it passed. And Senator Wyden did. He bought us time—a lot of time, as it turned out. His delay held all the way through the end of that session of Congress, so that when the bill came back, it had to start all over again. And since they were starting all over again, they figured, why not give it a new name? And that's when it began being called PIPA, and eventually SOPA.§

So there was probably a year or two of delay there. And in retrospect, we used that time to lay the groundwork for what came later. But that's not what it felt like at the time. At the time, it felt like we were going around telling people that these bills were awful, and in return, they told us that they thought we were crazy. I mean, we were kids wandering around waving our arms about how the government was going to censor the Internet. It does sound a little crazy. You can ask Larry tomorrow. I was constantly telling him what was going on, trying to get him involved, and I'm pretty sure he just thought I was exaggerating. Even I began to doubt myself. It was a rough period. But when the bill came back and started moving again, suddenly all the work we had done started coming together. All the folks we talked to about it suddenly began getting really involved and getting others involved. Everything started snowballing. It happened so fast.

I remember there was one week where I was having dinner with a friend in the technology industry, and he asked what I worked on, and I told him about this bill. And he said, "Wow! You need to tell people about that." And I just groaned. And then, just a few weeks later, I remember I was chatting with this cute girl on the subway, and she wasn't in technology at all, but when she heard that I was, she turned to me very seriously and said, "You know, we have to stop 'SOAP.'" So, progress, right?

But, you know, I think that story illustrates what happened during those couple weeks, because the reason we won wasn't because I was working on it or Reddit was working on it or Google was working on it or Tumblr or any other particular person. It was because there was this enormous mental shift in our industry. Everyone was thinking of ways they could help, often really clever, ingenious ways. People made videos. They made infographics. They started PACs. They designed ads. They bought billboards. They wrote

news stories. They held meetings. Everybody saw it as their responsibility to help. I remember at one point during this period I held a meeting with a bunch of startups in New York, trying to encourage everyone to get involved, and I felt a bit like I was hosting one of these Clinton Global Initiative meetings, where I got to turn to every startup in the—every startup founder in the room and be like, "What are you going to do? And what are you going to do?" And everyone was trying to one-up each other.

strongest proponents of the original COICA bill, in fact. And I asked him why, despite being such a progressive, despite giving a speech in favor of civil liberties, why he was supporting a bill that would censor the Internet. And, you know, that typical politician smile he had suddenly faded from his face, and his eyes started burning this fiery red. And he started shouting at me, said, "Those people on the Internet, they think they can get away with anything! They think they can just put anything up there, and

Now, I've told this as a personal story, partly because I think big stories like this one are just more interesting at human scale. The director J.D. Walsh says good stories should be like the poster for Transformers. There's a huge evil robot on the left side of the poster and a huge, big army on the right side of the poster. And in the middle, at the bottom, there's just a small family trapped in the middle. Big stories need human stakes.

If there was one day the shift crystallized, I think it was the day of the hearings on SOPA in the House, the day we got that phrase, "It's no longer OK not to understand how the Internet works." There was just something about watching those clueless members of Congress debate the bill, watching them insist they could regulate the Internet and a bunch of nerds couldn't possibly stop them. They really brought it home for people that this was happening, that Congress was going to break the Internet, and it just didn't care. I remember when this moment first hit me. I was at an event, and I was talking, and I got introduced to a U.S. senator, one of the

there's nothing we can do to stop them! They put up everything! They put up our nuclear missiles, and they just laugh at us! Well, we're going to show them! There's got to be laws on the Internet! It's got to be under control!"

Now, as far as I know, nobody has ever put up the U.S.'s nuclear missiles on the Internet. I mean, it's not something I've heard about. But that's sort of the point. He wasn't having a rational concern, right? It was this irrational fear that things were out of control. Here was this man, a United States senator, and those people on the Internet, they were just

mocking him. They had to be brought under control. Things had to be under control. And I think that was the attitude of Congress. And just as seeing that fire in that senator's eyes scared me, I think those hearings scared a lot of people. They saw this wasn't the attitude of a thoughtful government trying to resolve trade-offs in order to best represent its citizens. This was more like the attitude of a tyrant. And so the citizens fought back.

The wheels came off the bus pretty quickly after that hearing. First the Republican senators pulled out, and then the White House issued a statement opposing the bill, and then the Democrats, left all alone out there, announced they were putting the bill on hold so they could have a few further discussions before the official vote. And that was when, as hard as it was for me to believe, after all this, we had won. The thing that everyone said was impossible, that some of the biggest companies in the world had written off as kind of a pipe dream, had happened. We did it. We won.

And then we started rubbing it in. You all know what happened next. Wikipedia went black. Reddit went black. Craigslist went black. The phone lines on Capitol Hill flat-out melted. Members of Congress started rushing to issue statements retracting their support for the bill that they were promoting just a couple days ago. And it was just ridiculous. I mean, there's a chart from the time that captures it pretty well. It says something like "January 14th" on one side and has this big, long list of names supporting the bill, and then just a few lonely people opposing it; and on the other side, it says "January 15th," and now it's totally reversed—everyone is opposing it, just a few lonely names still hanging on in support.

I mean, this really was unprecedented. Don't take my word for it, but ask former Senator Chris Dodd, now the chief lobbyist for Hollywood. He admitted, after he lost, that he had masterminded the whole evil plan. And he told The New York Times he had never seen anything like it during his many years in Congress. And everyone I've spoken to agrees. The people rose up, and they caused a sea change in Washington—not the press, which refused to cover the story—just coincidentally, their parent companies all happened to be lobbying for the bill; not the politicians, who were pretty much unanimously in favor of it; and not the companies, who had all but given up trying to stop it and decided it was inevitable. It was really stopped by the people, the people themselves. They killed the bill dead, so dead that when members of Congress propose something now that even touches the Internet, they have to give a long speech beforehand about how it is definitely not like SOPA; so dead that when you ask congressional staffers about it, they groan and shake their heads like it's all a bad dream they're trying really hard to forget; so dead that it's kind of hard to believe this story, hard to remember how close it all came to actually passing, hard to remember how this could have gone any other way. But it wasn't a dream or a nightmare; it was all very real.

And it will happen again. Sure, it will have yet another name, and maybe a different excuse, and probably do its damage in a different way. But make no mistake: The enemies of the freedom to connect have not disappeared. The fire in those politicians' eyes hasn't been put out. There are a lot of people, a lot of powerful people, who want to clamp down on the Internet. And to be honest, there aren't a whole lot who have a vested interest in protecting it from all of that. Even some of the biggest companies, some of the biggest Internet companies, to put it frankly, would benefit from a world in which their little competitors could get censored. We can't let that happen.

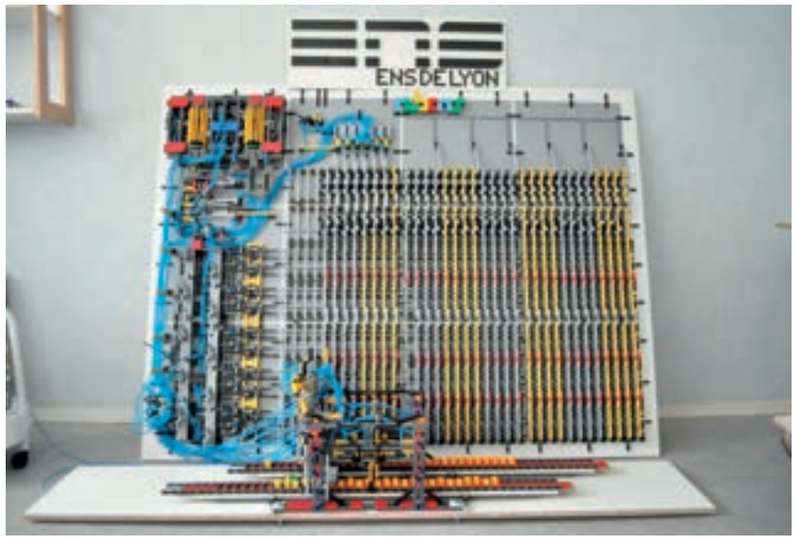
Now, I've told this as a personal story, partly because I think big stories like this one are just more interesting at human scale. The director J.D. Walsh says good stories should be like the poster for Transformers. There's a huge evil robot on the left side of the poster and a huge, big army on the right side of the poster. And in the middle, at the bottom, there's just a small family trapped in the middle. Big stories need human stakes. But mostly, it's a personal story, because I didn't have time to research any of the other part of it. But that's kind of the point. We won this fight because everyone made themselves the hero of their own story. Everyone took it as their job to save this crucial freedom. They threw themselves into it. They did whatever they could think of to do. They didn't stop to ask anyone for permission. You remember how Hacker News readers spontaneously organized this boycott of GoDaddy over their support of SOPA? Nobody told them they could do that. A few people even thought it was a bad idea. It didn't matter. The senators were right: The Internet really is out of control. But if we forget that, if we let Hollywood rewrite the story so it was just big company Google who stopped the bill, if we let them persuade us we didn't actually make a difference, if we start seeing it as someone else's responsibility to do this work and it's our job just to go home and pop some popcorn and curl up on the couch to watch Transformers, well, then next time they might just win. Let's not let that happen.

Transcript of the Aaron's speech about the battle to defeat the Stop Online Piracy Act (SOPA), at the Freedom to Connect conference in Washington, D.C in May 2012.

Survival of a System

Centralization vs. Decentralization: Two Centuries of Authority in Design

Smári McCarthy



Lego Turing machine. Rubens project, CC

My goal here is to try to link together the idea of design with ideas of authority and power in a way which, if you are anything like me, will make you feel very awkward around designed things.

I'm not going to start by talking about design though. When I was asked to give this lecture, my first response was, "what the fuck do I know about design?" – a question which I still believe is apt. On the other hand, I know a thing or two about industry and technology, about manufacturing and architecture, and perhaps I'll be able to say a thing or two about society. I'm fairly sure the specter of design will preside over this entire thing disapprovingly.

First, I'm going to tell you a bit about the war on general purpose computing. Then, we'll talk about 19th century terrorism. Then, before moving on to some weird ideas about languages, we'll talk a bit about urbanization and industrialization. In the end, with any luck, it'll all be interwoven quite nicely.

Enough about computers, for now. What this amounts to is that, right now, it appears that Schumpeter may have been right. Having control does not matter to the average computer user. Through their ignorance and superficiality, users are largely manipulated by device vendors, who set the agenda.

6.

General Purpose Computing

A hundred years ago this year, a man named Alan Turing was born in London. His love of mathematics led him to take on a number of ideas which were at the time unsolved. One of these was the so-called `halting problem', which was the question of whether it would be possible to create an algorithm which could determine whether another algorithm would ever complete its operation. The solution to this was one of many steps towards the creation of automata of the type that each of you has in your pockets today. Originally, whoever was using a computer was in control of the computer. The programmability as devised by Turing provided a wide open space of possible programs, and the only limit to what a program could do was determined by the complexity class of the device.

"On account of the great rise of all Necessaries of Life, a Man that has full employ, with all his industry, and a Woman, with all her care and economy, can by no means support a Family with any degree of Comfort. If this is the Case (which it really is) how deplorable must the situation of those be, that have but a small portion of Employ, and at very low Rates; but still worse, what must the situation of those be that have none at all, which is the Case with Incalculable Numbers at this time.-Destitute of all the Comforts of Life, our only acquaintance is pinching Poverty and pining Want. We wish to live peaceably and honestly by our Labour, and to train up our Children in the paths of virtue and rectitude, but we cannot accomplish our wishes. Our Children, instead of being trained up by a regular course of Education, for social life, virtuous employments, and all the reciprocal advantages of mutual enjoyment, are scarce one remove from the Brute, are left to all the dangerous Evils attendant on an uncultivated Mind, and often fall dreadful Victims to that guilt, which Ignorance is the parent of. But, Gentlemen, we forbear, as we think it would be insulting both to your judgments and feelings, were we to attempt a description of all our Calamities, which you so well know, and which we so much experience. Our request, Gentlemen, is that you will favor us with your best Advice, respecting as Address to Parliament, for the better Regulation of our Trade, and means of defense against future Impositions."

We now refer to these complexity classes through the Chomsky language hierarchy, where a regular expression has computational complexity similar to an automatic door, a type-1 device is more akin to a vending machine, and so on through to type-3 devices, which are called Turing machines. General purpose computers were, originally, intended to be Turing machines.

Yet despite all of the complexity that computers are capable of, certain limits are being created now and enforced through surprising means. In your phone, there are at least two processors. One is the application processor, which is what you interact with as a user of the phone. It shows you the snazzy graphics and lets you play Angry Birds. It is what causes the phone to beep when you get a text message.

But the messaging is not handled by the application processor. Phone calls, text messages and other interactions with the cellphone network are managed by a second chip called a baseband processor. And while, if you are using an Android phone, you can certainly control what the application processor is doing, you most certainly cannot control the baseband processor. In fact, you can't even know what it is doing. If it has power, it is in control. You are not. The operator of the GSM network can, at any point in time, tell the baseband processor to do anything – such as turn on your microphone, or your camera, or to report your location to them.

But that's only if you have an Android phone, or perhaps an old Nokia or something. If you are one of those unlucky people who have bought a phone from Apple, you will find that while the baseband processor is controlled by the operator of the GSM network, the application processor is controlled by those friendly people in Cupertino who designed the phone.

You see, Steve Jobs was never much of a computer person. His focus was always on design and usability, and very early on he decided that there was a fundamental tradeoff between control and usability. The more control the user had, the more the user would have to think. The more the user had to think, the less the user would enjoy the experience. Indeed, Apple has never been a computer company, it has always been first and foremost an experience manufacturer, like Disney. Apple wanted to make the personal computer into an appliance, like a toaster, that would sit there waiting for you to suggest what you wanted it to do, and it would take care of the rest.

In early variations on this theme, this mostly meant that the hardware was made to be tinker-proof. The devices were hermetically sealed inside stylish designs that would look good in your kitchen. The software was rather hard to control beyond the level which Apple had intended, but it was still possible, back then.

The iPod changed everything. It made it possible for people to have all their music in one place, but it also marked the beginning of a lineage of devices where you, the user, are not in control. Now, if you happen to have an iPhone or an iPad, you cannot install any software on it unless it has been vetted by Apple. If Apple decides it is not acceptable, it is not acceptable. As Dwayne Litzenberger put it, 'Apple's great achievement was to take a general purpose computer with almost infinite possibility, and convert it into a limited, locked-down consumer "app player".' This form of censorship has been rationalized by quality control, and justified through libertarian reasoning by Apple having the right to decide what is available to consumers of their roughly 650 million devices that are in circulation.

By the way, the 30 pin connector which people commonly refer to as an "iPod plug" is about to be replaced by either a 17 or 9 pin connector, which will be smaller. That means there's about 650 million devices which are about to become obsolete. I promise not to start lecturing on environmentalism today, but think about it.

This isn't about Apple. I'm not here to bash them. They're perfectly capable of digging their own grave. And while I'd love to talk about how Facebook collects all of your data and stores it in a central location where you have no control over it, I'm sure you already know all about that, because otherwise you've not been paying attention to the most massive breakdown of privacy in the history of humanity.

Enough about computers, for now. What this amounts to is that, right now, it appears that Schumpeter may have been right. Having control does not matter to the average computer user. Through their ignorance and superficiality, users are largely manipulated by device vendors, who set the agenda.

The greater implications of this are alarming. This basically means that whoever is in control of the devices can decide how people interact with them - devices that people now interact with every waking hour, either directly or indirectly.

In such a reality, democracy is forfeit, but I'll tell you why in a bit.

5.

Industrialization

Let's rewind a bit. Two hundred years ago, this year, a group of trained artisans in England – mostly weavers and spinners – were very unhappy about their economic situation. This group of people called themselves Luddites, in reference to their leader, General Ned Ludd. As far as historical records have been able to show, Ned Ludd never existed.

You've heard of Luddites before. They were terrorists and technophobes. They sabotaged machines and murdered people. They were afraid of progress, and fought against it. Right?

Wrong. History is always written by the victors, and the Luddites lost. The Luddites have since their defeat been traditionally portrayed as people who opposed or shunned technological progress, and the word "Luddite" has ingrained itself in many languages as meaning just that, but based on Luddite propaganda material it appears the diatribe was much deeper. Although their activities focused against the machines which were bankrupting them, there was a prototypical aspect of Marxist political theory underlying their actions (although this happened years before Marx was even born) – they appear to have been in fact opposing the centralization of production methods and the ownership of automated machinery and looms by people who did not care much for textile art, but more for establishing the greatest possible profit margins. The Luddites might not have risen up if they themselves had owned and operated the machines, and therefore been able to fend for themselves in the economic climate they were faced with – one in which most of Europe was at war. In a letter from the Framework-Knitters to the Gentlemen Hosiers of the Town of Nottingham in November of 1811, they wrote:

"On account of the great rise of all Necessaries of Life, a Man that has full employ, with all his industry, and a Woman, with all her care and economy, can by no means support a Family with any degree of Comfort. If this is the Case (which it really is) how deplorable must the situation of those be, that have but a small portion of Employ, and at very low Rates; but still worse, what must the situation of those be that have none at all, which is the Case with Incalculable Numbers at this time. Destitute of all the Comforts of Life, our only acquaintance is pinching Poverty and pining Want. We wish to live peaceably and honestly by our Labour, and to train up our Children in the paths of virtue and rectitude, but we cannot accomplish our wishes. Our Children, instead of being trained up by a regular course of Education, for social life, virtuous employments, and all the reciprocal advantages of mutual enjoyment, are scarce one remove from the Brute, are left to all the dangerous Evils attendant on an uncultivated Mind, and often fall dreadful Victims to that guilt, which Ignorance is the parent of. But, Gentlemen, we forbear, as we think it would be insulting both to your judgments and feelings, were we to attempt a description of all our Calamities, which you so well know, and which we so much experience. Our request, Gentlemen, is that you will favor us with your best Advice, respecting as Address to Parliament, for the better Regulation of our Trade, and means of defense against future Impositions."

> Early machines being inefficient and expensive to build created an economic incentive, to no small degree supported by the owners of the capital required to fund the construction of such machines, towards centralization. While this undeniably resulted into great economic growth, the economic benefits resulting from this new mode of production were not evenly appropriated, as a function of effort – the concept of sweat equity is foreign to the capitalistic mechanisms. In a centralized system of production, the owners of the capital are those who retain all the economic returns, leaving the workers with nothing more than a (often minimum) salary of subsistence.

From this message and others like it, we can see that the intent was not so much to remove the machines from existence, but to regulate either the ownership or operation thereof to the benefit of the people who had specialized in the creation of textiles.

This did not happen. The factories, operated by wage slaves at the behest of plutocrats grew in size and number, and brought about the industrial revolution. The Luddites broke many machines and burned down several factories, but to no avail. The Frame Breaking Act and the Malicious Damage Act of 1812 introduced capital punishment for the act of sabotage of industrial machinery, which led to the execution of 17 men in York in 1813, and many others were sent to Australia.

Technical knowledge was exchanged for more advanced technologies; the engineer and the architect were increasingly venerated, but the majority of the population slowly gained sufficient know-how to operate increasingly complicated machines that produced increasingly complicated things, without having any knowledge of how the machine worked: understanding its user interface was sufficient. The workers did not become more knowledgeable, the user interfaces just got better.

4.

Centralization Fundamentalism

The history of the world over the last two hundred years has been a history of centralization.

Prior to the industrial revolution, the primary mode of manufacturing was craft production. The craft production model for manufacturing was inherently decentralized, with all production done by individuals operating independently on their own terms, with either private or communal ownership of the means of production. Production was inherently local; goods were manufactured by independent craftsmen or in small factories within a small community of people. The homestead or farm was a basic subsistence unit, and each farmer would put great emphasis on the value of his domain. Land rights were the most important rights, and land owners would fight to protect their dominion over territory to the bitter death. This sentiment was captured in a 17th century protest rhyme:

The law doth punish man or woman
That steals the goose from off the common,
But lets the greater felon loose
That steals the common from the goose.

To say the least about the governance structure, states were certainly hierarchical, but their influence was mostly in the form of a monopoly on violence, and by extension of that monopoly, the capacity to tax. This taxation did on occasion support the construction of infrastructure, mainly roads, as these and later other forms of infrastructure were seen to provide a positive "return on investment" to the taxing authority by raising the level of commerce, in addition to adding to military dominance. The state had little or no influence over the productive capacity.
The creation of mechanical devices to replace human labor was at the offset an attempt to reduce the amount of toil required of man for any given amount of work. With the advent of sophisticated machines, most of the human and animal power was no longer necessary. Yet, people were nonetheless required in order to support the operation of machines. From the craftsmen they were, people were reduced to mere automata to which meaningless and repetitive tasks were assigned – so as to ensure the production and manufacturing of goods in the context of large industrial facilities.

Almost immediately the scaling benefits of mechanized horsepower were realized, and from that moment the industrial revolution's primary goal was to increase efficiency bar nothing. This fixation on efficiency came at the price of increased fragility; as systems were improved in terms of yield, the cost of failure increased. Unwilling to accept less efficiency, the owners of manufacturing capacity resorted to increasing scale in order to minimize the effect of smaller failures, while in fact upping the antes on larger failures.

3.

Urbanization

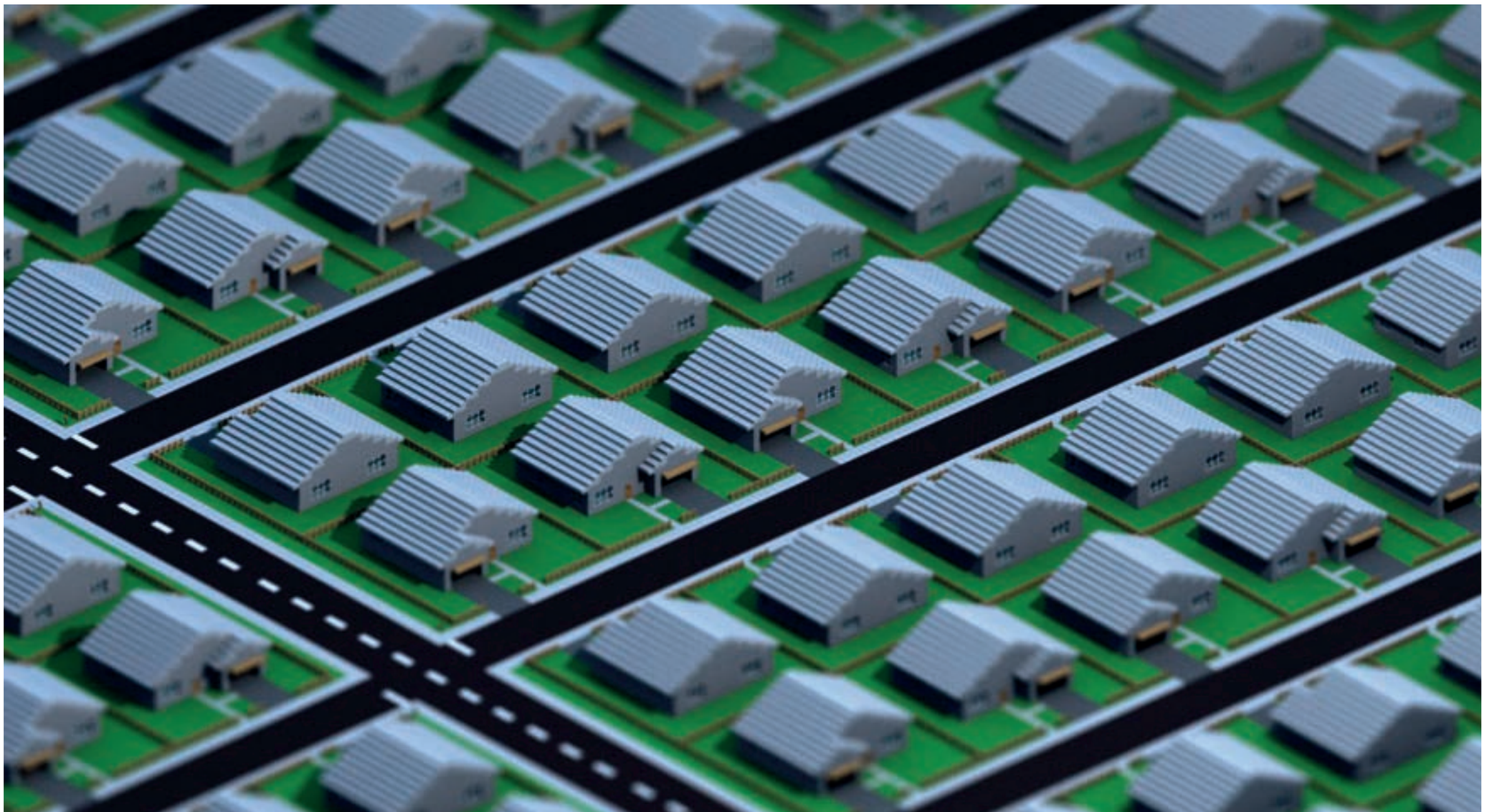
One of the greatest industrial tendencies is that towards urbanization. Urbanization is the process of locally maximizing population density. This has a number of beneficial effects, and I for one love living in cities, but I must say that I am rather particular to what kind of cities I live in.

> The way things are designed, as previously stated, strongly influences the way we think about them, the way we interact with them. And while James C. Scott was right in saying that "social order is not the result of the architectural order created by T-squares and slide rules," it is the case that societies are shaped by their environments, and they are subject to "slide-rule authoritarianism."

Early machines being inefficient and expensive to build created an economic incentive, to no small degree supported by the owners of the capital required to fund the construction of such machines, towards centralization. While this undeniably resulted into great economic growth, the economic benefits resulting from this new mode of production were not evenly appropriated, as a function of effort — the concept of sweat equity is foreign to the capitalistic mechanisms. In a centralized system of production, the owners of the capital are those who retain all the economic returns, leaving the workers with nothing more than a (often minimum) salary of subsistence.

For a very long time I made the very simplistic claim that I simply disliked suburbs. This made sense – suburbs combine the worst elements of urban living with the worst elements of rural living. Everything is far away, and yet you're always surrounded by people, not to mention the drone of traffic. Jane Jacobs managed to set me right on this account. Her observation was that it was not so much the remoteness of suburbs that was dehumanizing, but the fact that they segregate functions.

Le Corbusier was a fan of this. He once asked, "is there anything more pitiful than an undisciplined crowd?" His disdain for disorder was so great that over the years he made



A render of a Minecraft suburb neighborhood. Created by: nobodysharp

SimCity 4, 繁榮的半島, Edward Tsai, CC

So what is the mark of a good city, then? Jane Jacobs says that "the sum of each casual, public contact at the local level - most of it fortuitous, most of it associated with errands, all of it metered by the person concerned and not thrust upon him by anyone - is a feeling for the public identity of people, a web of public respect and trust, and a resource in time of personal or neighborhood need. The absence of this trust is a disaster to a city street. Its cultivation cannot be institutionalized. And above all, it implies no private commitments."

proposals for the reorganization of Moscow, Paris and many other cities, thankfully with little effect. Even to the communists with their five year plans, a fully legible Moscow sounded too bizarre. It has been commented that his actual influence on architecture far surpasses his actual architectural legacy, but in a field where words sometimes speak louder than actions, his calls for efficiency resounded through the decades, leading us away from chaotic and cozy cities we liken to misanthropic monstrosities like Brasilía, to the British New Towns movement and the urban developments that almost everybody hates equally.

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2.

Slide-Rule Authoritarianism

By "no private commitments," what is meant is that there are no explicit rules governing the interactions between actors. It is in those interactions where these three apparently disparate ideas start to come together. Computers, industrial manufacturing capacity, and the organization of cities, all influence our daily lives greatly and yet all are treated separately from the perspective of design, insofar as the degree to which they control our day-to-day activities is concerned.

When a grammar is put to use in a context, a protocol emerges. Computer scientists are crazy about protocols. They are the lifeblood of every system, from the Internet to the world's bureaucracies.

Societies are messy. They are complex. Wherever people meet, there are interpersonal relationships, resource feuds, social problems and political strife. All of this complexity is managed on regional and global levels, on municipal and international levels, by everybody, all of the time. As it turns out, not everybody is equally capable at manipulating this complexity to their advantage.

Through the ages, barbarians and warlords have taken control of societies of various sizes, sometimes leading them to prosperity, sometimes leading them to certain doom. Slowly, this settled into fixed systems of governance which took to evolve and develop into the political hierarchies we see today. Consideration of those hierarchies is worthwhile. How can they be described abstractly?

1.

Protocolization

What form of cohesion keeps them together? Some might suggest that studying the power structure in terms of power groups would be the most natural approach. But they would be missing the important point that groups consist of people, and therein lies the complexity.

Beyond the complexity and dynamics of the relatively obvious power structures, another factor is at play. The way things are designed, as previously stated, strongly influences the way we think about them, the way we interact with them. And while James C. Scott was right in saying that "social order is not the result of the architectural order created by T-squares and slide rules," it is the case that societies are shaped by their environments, and they are subject to "slide-rule authoritarianism."

> What is the protocol that the tax office uses? By which protocol are children educated and cure the sick? By which protocol do we enforce law, and create law? These protocols are rarely if ever made explicit, they are very rarely written out, and yet we are expected to accept them.

The linguistic model that Noam Chomsky proposed for dealing with the different complexity classes of languages tells us a great many things about the way the world works. One result from complexity theory is that every language, be it a regular language, a context free language, a context sensitive language, or a free language; – every language is functionally equivalent to an automata of some description.
This means that every machine's function can be described with a minimum grammar of some kind, and that every language, be it a human language or a computer language, can be somehow processed mechanically.

But this also has side effects. One of my favorites is the Sapir-Worf hypothesis. Its stronger form is nonsensical, as it precludes the possibility of human creativity, but in its weaker form it states that an individual is very unlikely to think about things that cannot be described by any language that the individual knows. Our language, through its structure, inhibits certain types of thought.

Now let's take a moment to realize that society is a machine, an automata of some description, and that each of its component units is also. Whether we are interacting with a bottle opener or a skyscraper, a government institution or a street merchant, there is a pervasive underlying grammar which we adhere to.

When a grammar is put to use in a context, a protocol emerges. Computer scientists are crazy about protocols. They are the lifeblood of every system, from the Internet to the world's bureaucracies.

> The Internet is the largest and most powerful communications system we've ever built. It allows millions of people to communicate with one another in a way that has never before been possible. The Internet, by design, has no central node, there is no government of the Internet. There are just people working on concert with computers, doing things, using protocols. Anybody can come up with a new one. Anybody can change the way the Internet works. It is a free market on steroids, an anarchists wet dream.

In our conversations with each other, the protocols are vague and implicit. They are subject to our feelings, our whims, and our experiences of one another. The interactions between people who serendipitously meet on a street corner are markedly different from the interactions between a guy from the tax authority and a struggling laborer.

When one computer communicates with another, they must have a previously agreed upon protocol, or more specifically a stack of protocols that do different things. If any of the protocols is not open and publicly known, then those who control the protocol can use it to exclude people from the conversation. Most of the Internet's protocols are publicly known, either because they were developed openly, like HTML or TCP/IP, or because they were reverse engineered by hackers and the specifications published, like RTSP or MSN chat.

But either way, when we're working with computers, we are always aware that there's

a protocol, and we can more or less guess what it does and how it works based on what we see it do.

Try to do that for a government institution. What is the protocol that the tax office uses? By which protocol are children educated and the sick cured? By which protocol do we enforce law, and create law? These protocols are rarely if ever made explicit, they are very rarely written out, and yet we are expected to accept them.

The beautiful fact here is that whereas every public institution is effectively a machine, with inputs and outputs, their equivalent grammar can be discovered and it made explicit. And then, as with any communications protocol, we can cut out the middlemen.

0.

Decentralization Fundamentalism

The Internet is the largest and most powerful communications system we've ever built. It allows millions of people to communicate with one another in a way that has never before been possible. The Internet, by design, has no central node, there is no government of the Internet. There are just people working in concert with computers, doing things, using protocols. Anybody can come up with a new one. Anybody can change the way the Internet works. It is a free market on steroids, an anarchist's wet dream. Trust me, I'm an anarchist.

And if anything can be learned from the Internet, it is that it was intentionally designed to be decentralized, so that in the case of a nuclear war, the top people in the US military could still watch porn. A high level of interconnectedness with no central point means that any part of the system can survive even if part of it is damaged.

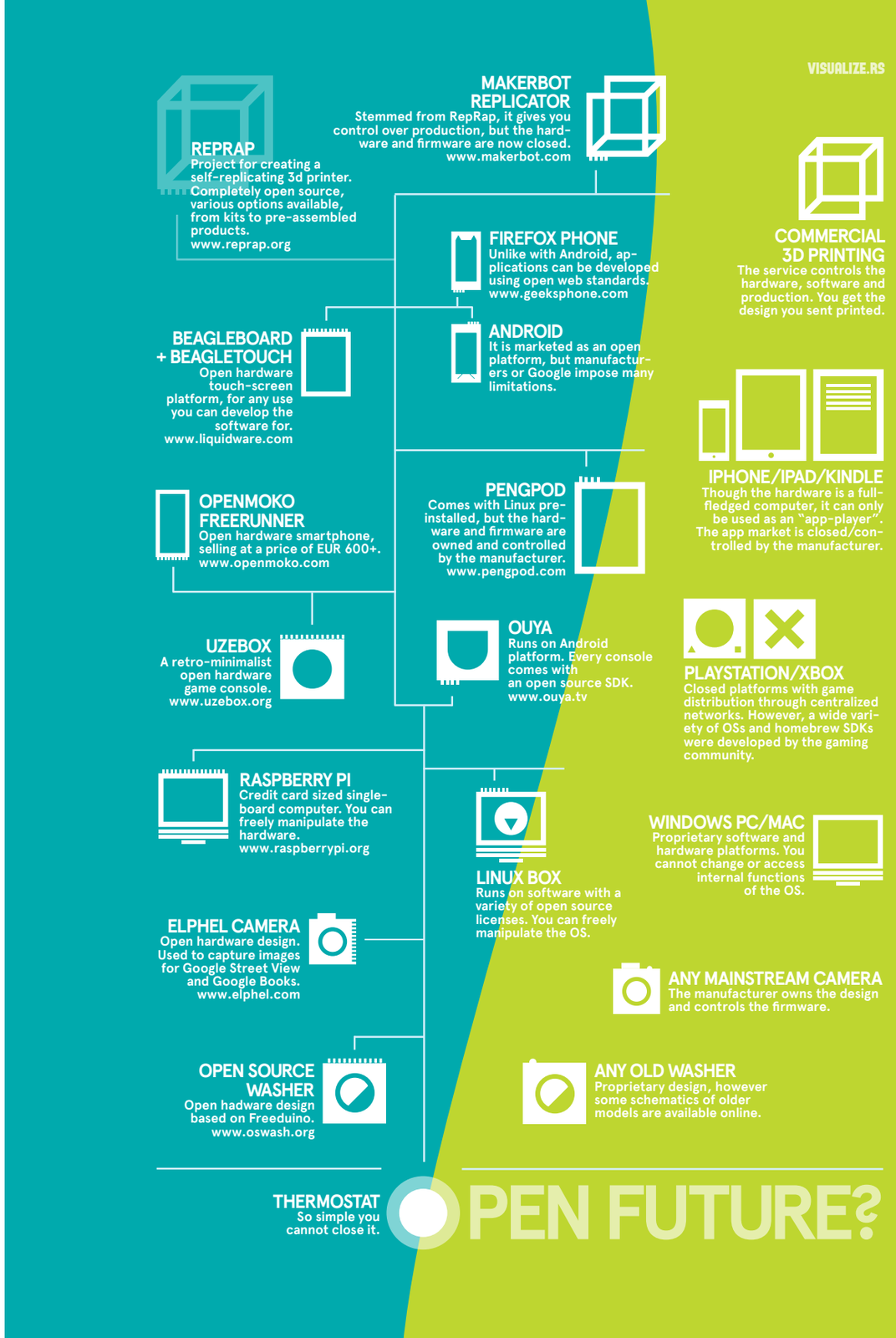
In particular, as John Gilmore famously stated, the Internet treats censorship as damage and routes around it. So what does this success mean in the context of democracy, or design, or architecture, or industry?

For some reason, systems that we design tend to be operated on a centralized basis. I could theorize for hours about why. One of my favorite arguments on this is that in the philosophical battle between William Godwin and Thomas Malthus in the end of the 18th century, Malthus was well funded, Godwin was not. Either way, the current trend towards biomimicry in design has not served to change this tendency but a little.

Nature is decentralized. There is no one atom to rule them all. There is no king of the fruit flies. And the best systems we humans have ever built, like the Internet, have been decentralized. But those in power, whether that is economic or political power, have shown that their strongest urge is to simplify, normalize, reduce and centralize. Whether it's computers, manufacturing, or the places where we live, the control is being wrenched from our hands. Sometimes for the sake of simplicity, sometimes because of greed or economic benefits, sometimes for political reasons.

This need not be the case. Richard Stallman suggested that, for software, the important freedoms are the freedoms to use, study, share and improve. If we expand the scope of that philosophy to all human endeavors, perhaps starting with design, we can probably create a much more resilient, much more sustainable, much more human reality for ourselves.

Transcript of the lecture at Reykjavík Art Gallery – Icelandic Design Center Design Lecture Series 2012.



Jon Rafman, Matisse Boy's Room, 2011

Artist to Artist/ Interview

Shaping the Artistic Territory

Jon Rafman interviewed by AIDS 3D (Daniel Keller and Nik Kosmas)

AIDS 3D:
As an artist you've got a lot of different things going on. Do you think it's important as an artist to have a seemingly cohesive body of work, or at least some kind of delineation between different sub-practices? Could you outline some structure that organizes your practice as a whole?

Jon Rafman:
What ties my practice together is not so much a particular style, form, or material but an underlying perception of contemporary experience and a desire to convey this understanding. One theme that I am continually interested in is the way technology seems to bring us closer to each other while simultaneously estranging us from ourselves. Another one is the quest to marry opposites or at least have conversations between them, the past and the present, the romantic and the ironic, even though these conversations often end in total clashes. All my work tends to combines irony, humor and melancholy.

A3D:
What for instance connects Brand New Paint Job[1] to say Codes of Honor[2]?

JR:
We live in an age in which the new is constantly sweeping away or destabilizing history and tradition at a faster and faster rate. But in the past, situating oneself within history and tradition was a classic way by which an individual redeemed himself or built a coherent self. One of the connections between Codes of Honor and BNPJ is that each one in its own way examines the implications of this loss, this changing role of history and tradition. In BNPJ there is a clash of cultural weights between the texture (2d painting) and the underlying structure (3d object). History (like

1) In *Brand New Paint Job* Jon unites specific 3D models of spaces and objects with surfaces made of celebrated 20th century paintings. brandnewpaintjob.com
2) *Codes of Honor* 2011, 14 minute film portraying a nostalgic ex-arcade game champion codesofhonor.com

a BNPJ) is ultimately wrapped around whatever we do. In Codes of Honor, the narrator is profoundly sad that the time when his life had meaning, solidarity, and achievement is now irrevocably over, but the lack of tradition and history inherent to a video game blocks his path to give life new meaning.

A3D:
How do you think an idea of territorialism fits in to your work? I mean this in a few ways, 1st literally, in Google Street Views and Second Life tours; you're literally exploring pubic spaces and sort of claiming them for your practice.

A3D:
Being a bit open and dilettantish is obviously easier than ever, but do you think that it is a good move for a young artist just starting a career? I wonder this myself, as we've jumped around a whole lot in 5 years of work, and I've heard many times that it's hard to see a visual continuity within Aids-3D.

JR:
I don't quite see it that way. I see a definite continuity, both visual and conceptual, in Aids-3D. But I think we struggle with similar issues of not fitting easily into an artistic type or genre. The themes running through our work are consistent, yet we are just always looking for different modes of expressing them? I am constantly searching for an ideal, be it a girl, a mentor, the sublime, while simultaneously trying to reveal the sadness that accompanies the loss of these ideals or the failure to achieve them.

I really want to create something that can both act on the future and the past; an art that is new and yet finds continuity with art history. I think that a new art re-works and transforms, retrospectively, the history of art.

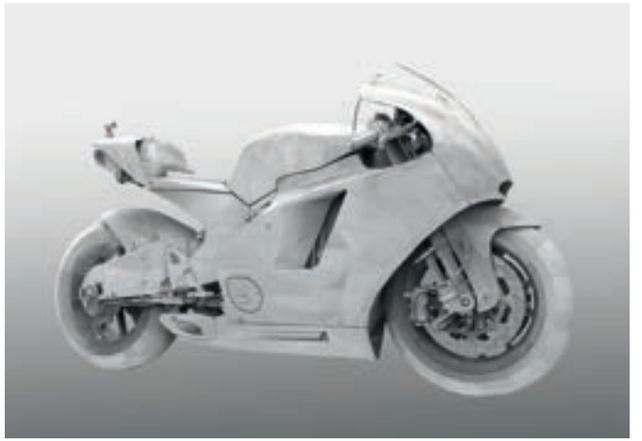
JR:
If I use a public space for critical or creative purposes, I view it as "my territory." Yet it is mine: no more or no less than that of any other artist.

A3D:
But I also wonder about whether or not you believe in any idea of artistic territory, or is this an increasingly outmoded way of categorizing artistic practice? (In the sense that Seth Price owns vacuum sealed ropes or Cory Arcangel owns Nintendo hacks)

JR:
Personally I find it outmoded, but as an artist it is very important to be aware of what came before you, otherwise you might make references in your work without being conscious of it. I do think it is important to 'own' your work in that sense.

A3D:
You've started getting some success in the art market in the past year or so, do you think that the "market forces" will lead you towards a more crystalized and apparent Jon Rafman style, or do you think that commercial support could allow you to be even more experimental?

JR:
I don't think I will ever be able to settle on any one way of making work even if I ever have huge market success. If a Jon Rafman style develops it won't be the result of a conscious effort. Although financial success would help make it easier for me to afford to make things that I would not otherwise be able to. For example, I would love to create a real life Malevich Ducati or make a feature length film. Money would allow me to be more experimental in that way.


Jon Rafman, Malevich Ducati, 2011.

A3D:
I think that may be the most crucial element in your work; do you have different rules when you're exploring Second Life versus Google Street View?

JR:
The rules are constantly evolving and changing and I often only become aware of them in retrospect. This may not be what you have in mind, but if I were to give any rule I think the main one that guides me is the desire to find or produce something genuinely new without necessarily knowing what it is in advance. I really want to create something that can both act on the future and the past; an art that is new and yet finds continuity with art history. I think that a new art re-works and transforms, retrospectively, the history of art.

We went to see an excellent Post Modernism exhibition at the V&A in London together and I remember you reached a point when you started getting depressed because it was so clear that so much of the stuff going on right now amongst our peers was a just a repetition of what had already happened. Now I think that gloomy feeling is valid because, on one level, repetition is a form of regression, for as we move further and further away from the original source our consciousness of the historical condition lessens. But there is also an emancipatory character to repetition if the repetition is made explicit. Maybe as artists we are continually driven to re-attain lost moments in art history but in new ways.

A3D:
I can see how one might take the poignant and sometimes tragic subject matter of your Google Street Views as being a bit exploitative (clearly the people depicted have given no consent). Do you feel that you have the same responsibilities towards your subjects as a traditional street photographer might have? Does the technological mediation give you a free pass to depict whatever you find?

JR:
I believe I advocate the total autonomy of the artist to capture or create whatever he or she may please, even though I know that this is an aspiration rather than an achieved state. I think it is important to be conscious of the potential exploitative nature of one's art but I also think that, if you start making decisions based on political or moral correctness, your art ceases to be autonomous. Yet, I think all artists have to take responsibility for their creation. And that it is very possible for an artist not to actually see the truth in their work, it is possible for a photographer to be blind towards what he is photographing. A classic example of this in film is in the movie Blow Up. At first, the protagonist does not see the actual murder

taking place in his photo. In order to see the reality in your work, you have to be worthy of it and truly committed to your creations. The moral and epistemological perspectives are intertwined. For me, that means that in order to see the truth in my Street View photos, I have to be open to the inherent violence in them. I think whenever you capture something in art or writing, you are doing violence to a certain extent because you are wrenching it from the constant flow of inchoate reality.

A3D:
Continuing from that, this work to me seems to be your most overtly political, if for no other reason than its engagement with the "real world." Do you think we have any responsibility to engage with the political issues that the world is currently embroiled in?

JR:
Whenever I am confronted with the question of the role of the artist in their relation to social change, I am reminded of this essay by Walter Benjamin "The Author as Producer." In it Benjamin argues that no art can be of correct "political tendency" unless it is also of good aesthetic quality. The moment an artist's work becomes overtly political or didactic it loses its true critical potential. Aesthetic experience for me is self-justifying. I believe that aesthetic experience reveals the critical elements of subjectivity. In the aesthetic experience, the subject recognizes not the power of experiential capacities and the transformative freedom of the human faculties, but rather their constraint and un-freedom, their self-contradictory and self-undermining powers. I think the single most important demand of the artist is to reflect. Art should provoke recognition. I think art objects have the power to 'do' things, and to promote social change in the "real world," but only indirectly. Art has a role of reflection, critique and investigation of social reality, but no 'active' role. In this way, art is a discursive space through which it is possible to read social change. I am against the reconciliation of theory and practice or art and politics. The separation of art into its own autonomous domain is a hallmark of our freedom. The separation of theory and practice that emerged in Modernity was progress. So for me this romantic desire to dissolve the distinction and critical relationship between theory and practice, art and politics, is a sign of regression. It is very important for me to maintain a separation between art, as a non-conceptual form of knowledge, and politics and critical theory, which is informed by conceptual knowledge.

The interview was republished from Kaleidoscope blog. kaleidoscope-press.com

Editorial

(Plus)products

Jon Rafman, Mariah Scarry, Clement Valla, Nina Zeljković

A new take on street photography, poetry, landscapes and sculpture.

These guys utilize digital tools: inspired by the human condition, aesthetics, the surreal and the spectacular. It's the world reinterpreted in code reinterpreted by the artist.

9-EYES
JON RAFMAN

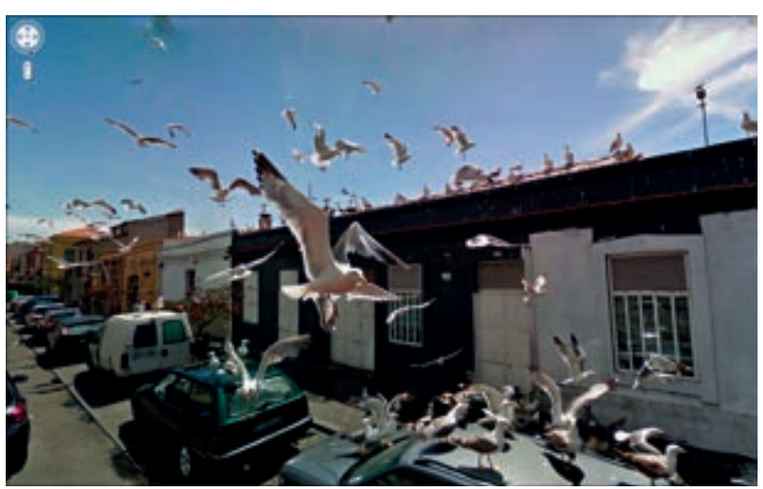



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Image Date: Aug

1.
Where is the cold sail?
Never desire a shark.
All masts lead warm, warm girls.
The clear sun swiftly
Commands the shark.
Love, desolation, and death.

2.
All sidewalks shove
Faceless, misty streets.
Where is the dusty window?
Why does the light talk?

4.
Breast in heaven
Plentiful
Heeding
Their tree
Leap
That lustful fortune

3.
Rise quietly like a old mast.
All gulls love rough,
Cold masts.

5.
Nature near jail
Car goes
Near their loved ones

POETRY

MARIAH
SCARRY

6.
On my knees rivers
Ending begins lay down now
In my ears wounded

7.
Leaving atmosphere
Since she stripped
In front of me.
The lobster of joy

8.
All in one big bang
A ring of fire in the sky...
`So, what is your sign?'

*All poems are collected from online poetry generators.
(thinkzone.wlonk.com
www.languageisavirus.com
www.generatorland.com
www.smalltime.com)

POSTCARDS FROM
GOOGLE EARTH

CLEMENT VALLA

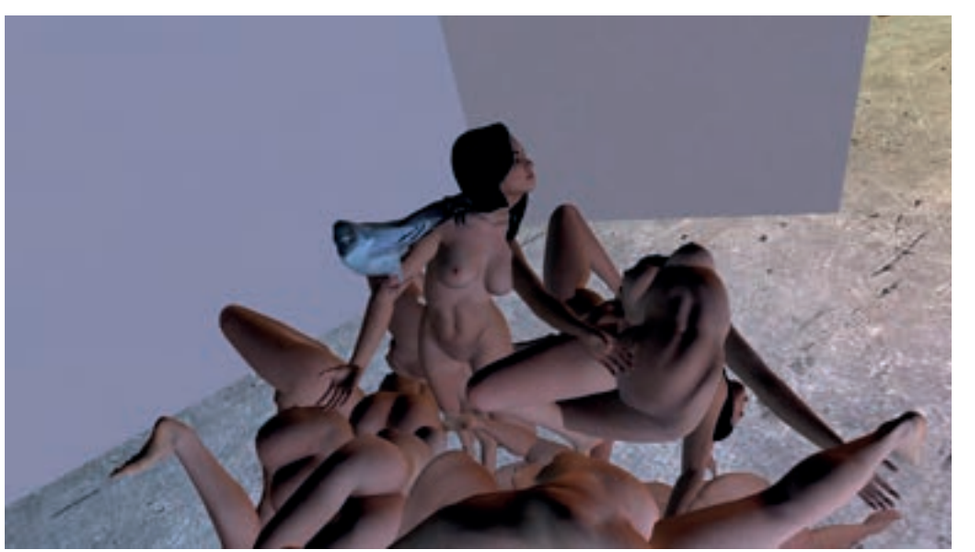

Image Island County
Image © 2013 TerraMetrics
Google earth

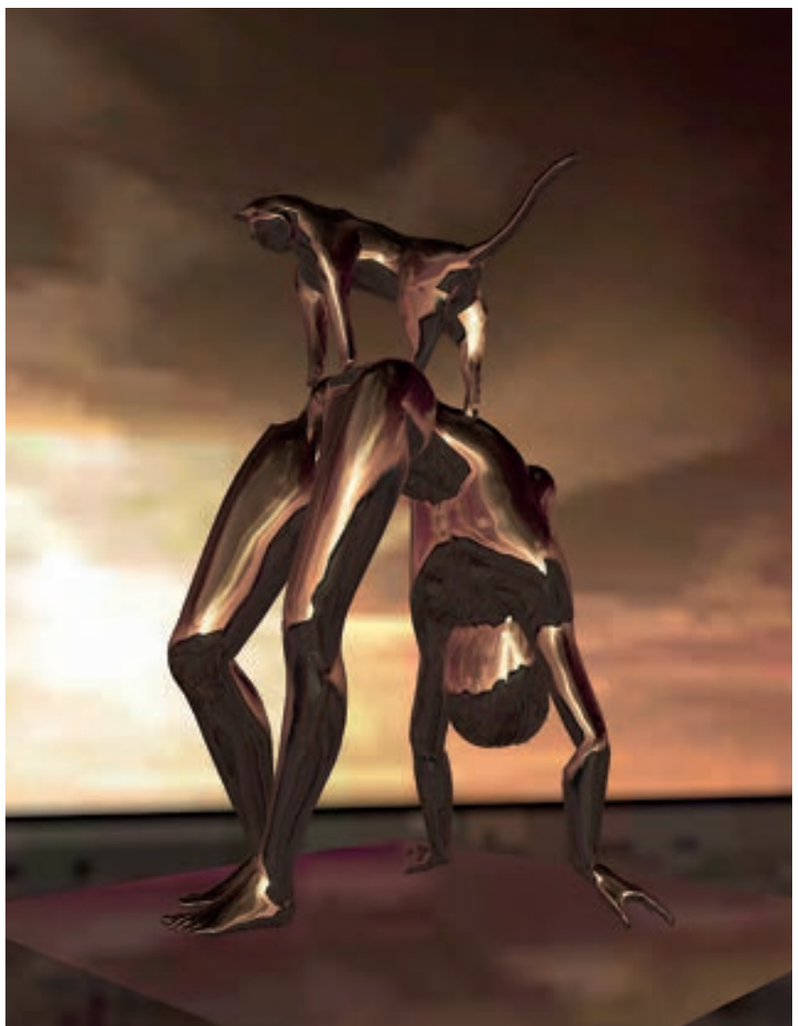

Google earth


Google earth

ROCK-PAPER-SCISSORS

NINA
ZELJKOVIĆ





Share Conference Panel

Future Scenarios

Khannea Suntzu, Rob van Kranenbrug,
Aubrey de Grey & Bruce Sterling
moderator: Vuk Ćosić

Khannea Suntzu
Apart from being a conceptual artist, an independent blogger, a futurist and a hobbyist-philosopher, Khannea Suntzu is a genderqueer transhumanist yet a critic of "US silicon valley techno-optimism" school of Kurzweilian Singularitarianism. Khannea supports radical democratization and advocates the extension of fundamental human rights, and sounds a warning about the dangers of "technological unemployment" in creating effectively irreversible societal divisions. She argues for proactive social activism against disparity.

Rob van Kranenburg
Rob van Kranenburg wrote The Internet of Things, A critique of ambient technology and the all-seeing network of RFID, Network Notebooks 02, Institute of Network Cultures. He is co-founder of bricolabs and the founder of Council. Together with Christian Nold he published Situated Technologies Pamphlets 8: The Internet of People for a Post-Oil World. Rob examines what impact RFID, and other systems, will have on our cities and our widersociety; while also ruminating on what alternative network technologies could help safeguard our privacy- and empower citizens to take power back into their own hands. It is both a timely warning and a call to arms.

Aubrey de Grey
Doctor Aubrey is a biomedical gerontologist based in Cambridge, UK and he claims that a person who will live more than 150 years has already been born. His original field of interest was computer science and he did research for six years in the area of software verification before he decided to switch to molecular biology and biogerontology. He's the cofounder of a non-profit organization called SENS (Strategic for Engineered Negligible Senescence Foundation)

Bruce Sterling
Bruce Sterling is a leading science fiction writer, one of the founders of cyberpunk and the unofficial spokesperson for the genre. He is the creator of Dead Media project, an online archive to forgotten, or dead, media technologies. Sterling's most acclaimed book, The Hacker Crackdown: Law and Order on the Electronic Frontier (1993), can be treated as a history guide through cyberpunk, following the periphery of the development of technology from the first telephone hackers to the government's attack on several prominent hackers in 1990. He gave lectures at the universities in Switzerland and California.

moderator:
Vuk Ćosić
Vuk belongs to a small group of great pioneers of Internet art who have been actively shaping and afterwards establishing 'net art' since the beginning of the 90's.During the many years of research in the fields of low-tech aesthetics, economics, ecology and archeology of the media, Ćosić became interested in ASCII code which was the key part for the creation of some of his greatest works of art exhibited from Tel Aviv to Los Angeles.

MODERATOR:

Hi. Hello everybody, nice to be here. My name is Vuk and I'm an archaeologist, which is more than enough qualification for me to try to moderate these four crazy guys. I tried to talk to the organizers but I couldn't get anything out of them, so I'm supposing the following few things: the first thing is that they've put these four guys together on a panel because they're all using the word "future" on their business cards, and it's a good enough reason. I'm totally there. I can see that they're very different people who are doing different things so we're gonna try and see what unites them, what makes them interesting as a bunch. That's my goal. As a little bit of a frame -we had a little discussion before- we decided to talk of ways we think, or these guys think and create their own scenarios in their heads, and then try to follow those scenarios or discuss those scenarios or make them into a business model, if I'm not being too blunt right now. You happen to be running a business, right? ...OK so, I don't have any set of questions for you very seriously thinking... but I believe it's okay if we just follow some order like this way [points with hand to show in which order the attendees will talk]. If you would be so kind to, you know, riff a little bit on - How do you create your scenario? Your claim about the future that you're describing to everybody else?

KHANNEA SUNTZU:

It's persistence. It's being intensely stubborn. It's loving future scenarios and stories and narratives that take me away from the extremely boring part of life. Let me correct you - I don't make a business out of it yet, I would love to but I am allergic to business, and organize myself in that manner. I just do my own thing and it seems to work... of late. I've done this since the 1980s in some format with a bunch of friends. It was this nice, well, hobby-like collaboration and it started to pan out in the early 90s and for the first time I actually made, well, what you call predictions. Probably no one would remember them. It was very much resource depletion oriented... and after years I wondered "Why did I get something right?" And the idea is, it's passion, and at some point you find people that correct you, and first you start out by trying to find people that correct you and then you respect them for it, then you find out that you seek out people that you respect and they turn out to be the right people to actually correct you and constantly fine tune your analysis of the world.

MODERATOR:

All right. You guys are Dutch, right? You both chose the sofa... I will think about that (haha) but tell me [answer the question].

ROB VAN KRANENBURG:

I think I was very lucky because I was talking to people in my head long before we had the internet. And now I can mail them, so that's basically it. I got more accuracy because of the net. But...It's still a big mystery. It's poetry to me... So I went to study literature because I wanted to study the most inefficient sort of thing that I could find... I thought literature would do. Now I'm stakeholder coordinator of Yoda and talking to Siemens and software in terms of all this "Internet of Things" - I'll get to the sort of how I got there. But I think it's just one big thread that I've been sort of stepping in, being maybe a bit manic and sort of boundaryless in a lot of things. Self-discipline is a very strong sort of a factor for getting things done and making things work. But I think this is basically why we are here so that we seem to tap into...yeah, this flow, I don't know how you're gonna call it. But I think the flow is telling us to actually do something with it. To break it down into more concrete intelligible sort of units and that's what I've been trying to do. In 2005 or 2006, when we saw that open hardware would be a possibility, we founded Bricolabs (bricolabs.net), which was founded by five people. I think that is a kind of environment that keeps us all very sane so we can all be our crazy selves there. But it's not enough to talk to among yourselves, so three years later in 2009 I set up a counsel basically with the idea that the "Internet of Things" was going to be the winning term, not intelligence or pervasive computing or ubiquitous computing. And it was important to sort of grab everybody that would Google "Internet of things" and in 2012 they would find the "Internet of Things Counsel" and we would be the counsel and it would have this authoritative tone. And that sort of seemed to work, so now I'm getting mails at info@internetofthings from companies and from institutions and from actually quite large organizations who want to revamp their entire structure because they've seen the light of this sort of connectedness, and for that we're going to set up a consultancy which is going to launch in May called "The Internet of People.eu" And that's going to be a regular consultancy. And six months later we're going to launch the "Internet of Creatures.eu" in order to get all the people away from the singularity scam. And then I think within 10 years we push it all back to Bricolabs. So if we keep on track, within 10 years we will be able to do the entire hack.

MODERATOR:

All right, somebody just noticed that the future is all old white guys. We have to respond to that somehow. (applaud)

AUBREY DE GREY:

I'm not really a fan of scenarios. Of course, the reason I work to try and defeat aging is because of the future, rather likely, scenario that if no one actually gets on with it I will get sick when I get old. Which is a shame. Probably die as well. But really that's a present scenario as well - people are getting sick and die of ageing right now. So it's not really any speculation. I find actually that speculation is more of a problem in my field because –I know I'll raise the temperature with this - well science fiction writers who keep coming up with random arbitrary dystopic features of their storyline that make the defeat of aging seem like a terribly bad idea. This caused me no end of trouble, because I keep having to tell people why, you know, Logan's run isn't actually the way we're going to deal with the problem of over population or whatever. To some of you whom I talked to this morning, you will remember I actually feel that the uncertainty that we have and lack of any justification for any particular scenario for the distant future in terms of how we will handle this or that situation, is actually all we need to be focusing on, in order to justify hastening as much as we can the defeat of aging. But at the moment, what tends to happen is that people will come up with some potential problem and they'll immediately forget that we've got a problem today of 100,000 people dying of this horrible thing... I'm, sort of, of an anti-scenario type.

BRUCE STERLING:

Well I am a science fiction writer, and quite a big fan of scenarios too. And what I learned about futurism I learned from professional futurists... and I was hanging out with them because they're good material for a science fiction writer. They're in touch and have a lot of things to offer us, So I got to meet a lot of guys who were strategic analysts, or a tactical forecaster, historians and government planners and also guys who do scenarios. And I've been involved in doing a lot of scenarios and they're really quite interesting kinds of structured encounters between people which, I think can have really useful kinds of psychological effects. But my feeling was that once you learned the basics of how to spot

trends and what other forecasters thought were cool and what the official future was and how to think about it fruitfully, you had to find aspects of it that you really wanted to know about. Because if some aspect of the future bores you or repels you, you're really not gonna have enough joy to really get good at it. So, I ended up, lately thinking that there's not just one future anymore than there's just one history. There's a lot of things going on, and there are certain kinds of trends that I'm very interested in just because I'm so engaged with them that I can study them over a long time. And if you went on to my blog where I sort of accumulate notes for fiction or articles I'm writing, you would see that I am very into Internet art and that's why I know who Vuk Cosic is, and ubiquitous computing for like 20 years I've been interested in, speculative design, speculative architecture, weird forms of media, dead media, extinct media, FX, motion graphics, augmented reality... they're not all the same thing, but they are things that like capture my interest. And they're not the most important things in the world. They are very important things to the people in this room, which is why I'm in this room, but they're not all of history, okay... and they're not the broad screen future. That's a different matter. And the things that are interesting are not necessarily the important things, and that's the discipline of real futurism.

MODERATOR:

Alright, so I guess you guys are different people. We are all approaching 50 from different sides... Except for knowing everything about the future, we happened to cover a certain sizable portion of the past as well. I remember when I was studying this archeology thing we were quite happy with paradoxes and one of the key phrases we used a lot was "the unpredictability of the past", how you cannot exactly say why things happen even though they did happen in sequence, and this inability to describe causes which then prevents you from claiming anything clever about effects. But now, us as historic people with historic memory and with also historic memory of predictions we were making twenty and more years ago, we have noticed something funky. Remember we're in 2012 right now, we were supposed to go to work with space shuttles like the Jetsons. We are in that future that we read all about in our kids' magazines, forty and more years ago. Obviously there's a little bit of a discrepancy. Yesterday there was a panel, I failed to see it, I'm sorry, about law and about what are the real problems of today's Internet war that is going on between authoritarians and less authoritarians or slow authoritarians, whatever you want to call them. The thing I'm driving towards is a question that Bruce raised outside, when somebody asked you: Even though the four futurist revolutions that are being proposed are different, if we agree we all have some revolutions in our minds, what are your predicted enemies? The enemy of evolution, the counterrevolutionary force that you guys will be fighting, that you expect to fight along the way of your own activist struggles. Is it a fair enough question, would you like to react to that? Who's killing you? Who is preventing you to grow?

KHANNEA:

I am a spectator. I have my own private life, which is not particularly eventful at-large. I'm not like Bruce Sterling whose novels, whose fiction I read in the 1980s and was mesmerized by. So I don't make a career out of it, yet. I'm open for proposals but it's not my... something I seek out actively. I just blog, and write articles and I try to call what I see as much as possible. But if you look at the world as such as it is right now and you look at the dangers of the world, which concern me right now, it's consistent throughout all of history. As soon as people have a position in life where they have privilege, they will try to keep it as much as possible like it is. So society where there are elites or groups retaining money or power

or energy resource or whatever kind of wealth they're sitting on, like Louis, the son king of France, he just doesn't want things changed. So all progress was in fact made by revolution. Most progress we see in history is actually a violent struggle between people who don't want to accept it anymore. So what I'm most concerned about at this stage, while I'm not against rich people, some very good friends of mine are very rich, but on the other hand I am really concerned about decentralization. Take for instance Goldman-Sachs. I think right now, at this point, they are the enemy of humanity.

ROB:

In 2000 I went to this conference in Sweden, about intelligent information interfaces. In the morning I went running around some lake. It was morning and misty and I sort of saw King Arthur's swords rising across the lake. And then I went into this conference and somebody stood up. It was completely packed like now. And somebody was speaking: "In 10 years from now you will have a Bluetooth ring. You'll point your ring at a tree as you walk in the woods, and a screen will pop up and tell you more about that tree." I was reaching for my gun because I thought I'm gonna shoot this guy right now. There were hundreds of Europe's brightest security programmers. There was intelligent information interface, FP6. I could not believe that these people, with no fantasy at all, would actually think that you would need a screen. I'm not gonna hug a tree but...I don't need RFID to mediate between me and the tree, please. So I thought these were dangerous people, I better stay very close...because we have this sort of open space in the woods, this Heideggerian space, where becoming is still possible. And I think some people here, we also sometimes feel as we cannot breathe anymore. I talk to people, young people...they don't want to make anything anymore, they don't want to put something into this world, because why would you put something into this world if it's just gonna be another App, and somebody's gonna make 3 more Apps of it, anyway. This made me feel very sad. The notion of becoming itself, sort of our notion of life itself is this open space filled up with clutter at the moment... it's like we cannot breathe. So the only enemy that I have at this moment is me. Because I know if I stay on course we will be... we can be... we all can be...we will be the wave of open-source hardware, software. We will win this thing - it's inevitable. The fact is do we want to win it? That's all. Can we actually forestall closure, can we sort of not want to see the feedback immediately? That's the thing, I think.

MODERATOR:

Fair enough. I can see what you mean, I guess.

AUBREY:

Who are the enemies of my mission to defeat aging? I think we can almost say that it's easier to ask the question "Who are not the enemies?" because the fact is, the main enemy is the enormous preponderance, in society worldwide, of a tendency to make one's peace with aging. Which was of course a very rational justifiable attitude to take until quite recently. If there's this terribly ghastly thing that's going to happen to you and it's gonna happen in the relatively distant future to us, and there's absolutely nothing we can do about it. Then you've gotta find something to put that fact out of your mind and get on with your miserably short lives rather than being preoccupied by it.

ROB:

I have a problem with this – because I like dying in a sense. I think it's a good thing. We

have to move on at some point and things have to end. When I was younger I was always wondering about the guys sitting in the villages on the benches for days... and look at the cars. And I thought "wow, I would really, really ..."

KHANNEA:
(takes microphone from ROB) It's a free world, be my guest. (Laughter from audience) (Gives back microphone to Rob, with a look which means give Aubrey the mic back)

ROB:
So, I would like to sort of sit there, and honestly sometimes I'm getting that even now, when I think I could just sit there and sort of fade. To think that I have to play tennis and football, and jump off boats, and believe that that's fun, is really...

AUBREY:
(takes back microphone) First of all I would remind you that the whole point of the therapy that we're going to have to defeat aging will be to ensure you don't have to do all this lifestyle stuff in order to stay young. But of course yes, most people... being inadequately educated haven't got the faintest idea how to spend a currently normal lifetime. (Audience laughs) Educated people on the other hand have no chance of being the sort of person you were describing because they always have a backlog of the things they haven't done - I have at least a thousand years of backlog already and I'm sure by the time I'm through it I'll have another ten thousand. So there's no real problem there. But what I was saying - it makes no sense to make your peace with ageing. However irrational your rationalizations need to be, so long as it's actually true that there's nothing we can do about it. So it's only now where we actually are within striking distance of genuinely bringing ageing under medical control, that this has become such an enormous part of the problem. That's why I spent such an enormous amount of my time my time in outreach and education - softening up the public basically, getting them to grow up and understand that these things are no longer so inevitable as they seemed. Therefore, we have very good reason to actually do what we can to hasten the development of these things. So I would say the enemy is the past - the fact that since the dawn of civilization we haven't been able to do anything about aging, we've been terrified of it, we've been so terrified of it that the only defense was to pretend we weren't terrified of it at all, and come up with ideas like we've got to move on [after death]. That's the real enemy - the enemy is psychology.

BRUCE:
For those who think we're just old white guys sitting here on our bench, I'd like to recommend some futurists who aren't old white guys. There's Anab Jain who's from the Superflux group in London – J-A-I-N Superflux - she does what's called "design futurescaping". She's not an old white guy. Really.I dare you to go check out Superflux and the kind of stuff they're into right now... it's very trippy. And then there's Sherry Terkel who is quite a well known woman of our age and you wouldn't like what she says any more than what you're hearing from us but Sherry is well worth checking out.

So to the question of enemies. Well, I don't know, I think it's kind of, like, soft not to go ahead and name names if somebody asks you who your enemies are. So, I think our worst civilizational problem is probably climate change, because it's something I've seen that's gone on during my entire lifetime, and it's actually a 200-year-old problem, and it's something futurists were talking about when I was just a teenager, and it was accepted among futurists that it was going to happen, and everybody somehow imagined that some leftist, green world government would arise, and, like, break everybody's addiction to fossil fuels and pollution, and that didn't happen, and it's not going to happen. And, so, climate change is no longer a speculative thing, it's just something that happens every day. In fact, it's been happening for many years, and it's specifically happening here in Belgrade. And Belgrade suffers dreadfully from climate change. If you were in Belgrade this winter, it's just like this fantastic blizzard that pretty much shut down the city, and then, you could go to the Danube, your formerly friendly, blue Danube. I was here in 2006 when it was washing splavovi around, right-left-and-center! People were fishing in the soccer fields! And then people sort of made nothing of it: "Oh, the Danube, unprecedented flood. It'll dry up! We're tough! Oh, and girls, try not to walk on the sandbags in your spike heels" That was the official Serbian reaction. And who caused that? Aubrey is right when he says it's basically society and you have to go out and do outreach and so forth. OK I've done plenty of climate change outreach, years of it. I've never written a book, a science fiction novel of any kind, that didn't mention climate change. It's here, it's happening, it's just the reality. Who did it? Oh I don't know. Exxon Mobil? I mean, if somebody was gonna be hanged immediately after Goldman Sachs, the Board of Directors of Exxon Mobil would be pretty high on my hit list. Luke Oil and Gazprom, I'm not too happy about them either, by the way. Even though they're providing the power inside this building. Oh, the Koch octopus of course, these demented Texan oil creatures with their gigantic political outreach committee. And, of course, the Rupert Murdoch media crime family who should all be in prison. But it's a problem that's 200 years old, and the mere fact that you liquidate a few of the especially egregious malefactors, much as they deserve it, is not really going to get us off the hook here. Climate change is here, it's gonna be here for your entire lifetime. It's bad as it is now, and worse, worse, worse. And you young people, this is your heritage. That's your future, among many. And that's one future that your region, the Balkans, will fully participate in with the entire rest of the world. You are nailed to that historical reality - there's no dodging it, there's no ducking it. It's all yours.

MODERATOR:
This is a place that has a habit of avoiding present and future, here and there, yeah. I read your message

BRUCE:
You're just denying it! Feel free to lie to yourselves when there is no water. Go ahead! Lie.

MODERATOR:
OK, guys, audience. We're all enjoying this right now, and we can go on like this for ages... thank you....but let's see, I've been reading some twitter stuff, and it's like, what is going to happen to religion, stuff like that. So let's get more serious and throw a microphone to the audience, and see what comes out. Who catches it. Let's see who is the strongest among you all. So if somebody would...

BRUCE:
How about that gentleman there, with the beard in row one. He has an intelligent look about him.

MODERATOR:
So, say who you are, and why you're here...

AUDIENCE:
I'm Nenad Romic, I have a long beard (haha). So, I asked that, yesterday, and I think that there are the two things which seem to me as very obvious failures. These two things the Internet made completely obvious, and these two things are like a nation state, so that people are still thinking in the framework of the nation state. So, I'm really sympathetic, I tried to raise the solidarity with everyone who was oppressed, but after a couple of decades after the colonial, postcolonial, whatever- I have no sympathy for whoever is trying to raise the nation, especially nation state in the 21st century. Being Syria, Kosovo, Serbia, Croatia, whatever, China, US. That's one. So how much is the nation state a framework for solving any problem? And another one is again on the Internet very obvious, and that's the notion and idea, concept of property. Because that kind of works with a t-shirt, so "I can't really give you this t-shirt" and things like that, but on the Internet, there is really no scarcity in that particular sense. There is a value of information, so if I know something which you don't know, maybe there is a little bit more value. But is it really that you need a concept of property for that kind of the difference? So here's my question in a package: state and property.

MODERATOR:
Does anyone feel like answering this?

ROB:
Well, thank you. If you Google "new instruments for governance", you'll find a text that I wrote with Alex Glucharch. But basically it says we can have a global generic backbone, a TCP/IP, in the real world, we all have -this is one catch- that we all have to have some sort of device that has some kind of, that we all agree on, and we all start up on that device. Whatever we start up on, we pay 10% or 20% at max, and that pays for global generic infrastructure, like sewage - very important- roads, mobility infrastructure, and with that, we can sort of do away with the sole notion of nation states, or any supranational institutions. I think this is common sense. I think there's a convergence towards this. Nation states were vehicles made by weary kings for war. They couldn't really do any of their king-stuff anymore so they made nation states. It's an obsolete concept indeed, it was never was very much viable anyway, so we can do away with it. Property is the same sort of issue. The thing that we're getting -these also things that are going on, in many more layers. So all things that we thought may be or may have been somehow radical in some sense, were of course radical for a reason. But they were radical because people thought that it was maybe not the best sort of idea to have them. Actually, they are not so radical themselves. These are just plain autonomy-in-solidarity-like generic infrastructure local decision-making, autonomous decision-making on the ground. It's crystal clear.

MODERATOR:
Look, Rob, I'll fix you a date with Marcel (Nenad Romic) later on, you both read Mara Testa and all that. Do you know that thing when somebody puts on the music and then leaves the room? And it's that special sort of terror. Just all of us are victims of that same trick. Marcel asked the questions and left the room. That's amazing! I know why, I'm joking, right? He has to fix the next thing on his schedule, he's a busy guy and nice person. But still, fuck! Like "what do you think of white elephants? Bye!" What? Ok, let's see now how are we with the desire to communicate with these senior citizens here before we let you answer. Which you are not! (pointing to Khannea)

KHANNEA:
No, I'm a kid.

MODERATOR:
Tell me, kiddo, what's your take on them nation states?

KHANNEA:
Yes, daddy. I think that if you look at it like that as effectively as possible, as remotely as possible -if aliens were looking on this planet- they would regard the city states or whatever kind of state structure you can imagine as something which evolved. Like, dinosaurs lived for hundreds of millions of years, more than a hundred million years on this planet, and they were a very successful life form. But they were successful because they created their own biosphere, their own context. The dung created more dinosaurs, the plants -it's an evolutionary self-reinforcing cycle. Right now the nation state or especially if you think about the more successful, richer nation states, they create their own dependent slaves, their own dependent citizens. The citizens need the states for subsidies and they feed from, they suckle from the teat of the city state, but the corporations suckle from the other teat, and etc. So you can't get rid of it! And so you might hack it, or you might deconstruct it, or at some point, a meteor falls and they're all dead. Hopefully not humans, but...

MODERATOR:
As long as states have tits, it's good, right?

AUBREY:
Well, I don't think it's really very controversial. In the same year that the Syrian dynasty rose to power 41 years ago John Lennon wrote a song that is still voted regularly as the world's most popular song in the history of rock `n roll. Which stated, well more or less exactly that it would be quite a good idea to get rid of the nation state, property and so on. It hasn't happened yet, but one can live in hope.

BRUCE:
Well if you look at it historically, nation states haven't always been powerful and there are many places in the world right now that are failed states, like Somalia. And there's really no property business going on in Somalia, either. But Somalia's got pretty high rates of computer penetration and everybody in Somalia's got a cell phone. And they're pirates. They're yo-ho-ho pirates, they'll go out and grab ships, ransom people, and shoot guys and they're very much a part of our world. So if you ask for having a no-nation, you need some way to keep civil order, and I think it's true that nation states are dwindling, they're really going away. The president of the United States nowadays is like the mayor of the United States compared to the power that the US had when it was the military hyper power. And I kind of worry that cities are growing at the extent of nation states. Places like London, Belgrade here, New York, great centers of talent seem to be sucking in a lot of money especially the big financial centers of power. They seem to be sucking in youth, and power,

and money from around the world. And it's having a bad effect on the hinterland, so if you go there, there are areas of the United States where you can go now - Detroit, areas in the Midwest where the city cores are abandoned. Things are nailed up, and it's because the population simply got up and left. They went in search of new opportunity, new media, new technology, exciting new adventures, and they did not stay in these boring villages that were formerly served by national post offices, national telephony, and these earlier forms of national infrastructure, which have been ignored and allowed to collapse and go into decline, and you know, as a futurist, I wonder if that's the kind of world we'd want to be living in, in another 30 or 40 years. Do you really want to be in a Serbia that's pretty much Belgrade and nothing else?

AUDIENCE DISAGREES?

Yeah, absolutely! And the people from the villages agree with you, which is why they're leaving. Well, I'll bet if that happens, there's gonna be trees growing in the rural villages of Serbia. They will collapse and they will go back to nature. And I don't know what you'll do with them. Eco-tourism. Go ahead!

MODERATOR:
All right! OK, first let's see if there's any more questions? Oh, Mitar, our friend from Slovenia. Do you have a microphone there? There used to be one downstairs. That bad person stole the microphone. Let's give up our last working microphone to the guy. You! You shouldn't take it away, I know where you live, OK? Then there will be no microphone on the stage.

AUDIENCE:
So, one other guy with a beard. I have a question. You spoke about nation states as one of programs, but we didn't speak of another famous topic in science fiction and other futuristic works, which is corporations and their influence in this. So we talked about nation states, but I think some corporations have bigger budgets than many current nations. I think that corporations should also be in this mix, searching for future plans. So what is your take on their future? Will they resist? Will they disappear? How do you see the corporations take in our future?

KHANNEA:
There's a good movie about that, it's literally "The Corporation". It says that the corporations themself reinforce the moral system where the shareholders benefit and profit is maximized, and those who run the corporation benefit, but for the rest of the world it is a psychopathic entity. It has no moral reason to acknowledge the rest of the world at all. In fact, it is in a competitive state of war with the rest of the world -within the guidelines of law, common law. But not even that, if you look at what's happening in the United States. Corporations are bypassing or buying the law to such a degree that it's a free for all. It's a fire sale, I think, what's happening in the US. Clearly, corporations do not have to acknowledge human beings even as labor anymore. Either they play citizens against each other for low wages, or they play countries against each other for profitable text/context. So that is predation. The end result is that either you work for them, or if you live somewhere, probably very close to the villages that Bruce described, in a sort of favela like condition. And I think that corporations are becoming somewhat of an enemy.

ROB:
Finally 20 years, or 10 years after everybody, I am reading Virilio, and if you read this text from 2002, basically everything is there. The speed that we have now, and if you're a strategic consultant you would say "we have acceleration in combinatorial innovation" which is what we're having now, and sometimes when I sort of lay awake, I think we're building a spaceship, the way that we are trying to sort of get everything on the smart grids, to get all the cars sort of talking to each other. If you look at all the projects, everything that's going on, everything is talking to everything. If that's the dream or that's the nightmare scenario, but the matrix will be here. Only thing is, will it be in 500 smart cities and again the favelas Mad Max in between, or will we have a sort of inclusive smart city, or an inclusive smart world, some inclusiveness distributed somehow, that is attainable to all people in one particular moment in time. It can be temporary, maybe it's not all the time, you walk into a hotspot, you walk into a cool spot, somehow, but sometimes I think we're building a spaceship, and there's at least one culture on this planet that thinks we are moving backwards in space. I'm beginning to sort of believe that we're actually going...we're sort of re-creating the spaceship that maybe once was sort of here. And the speed with which we're doing is... Well this is more like a Bruce novel! But this is only sort of between 10 to 10, or 5 to 11 that I think this. It's a possibility.

AUBREY:
Corporations, yeah. The only thing that I think is really going to have much chance of changing the present world in that regard is the advance of automation to a point where basically all commodity services are free. And all that's left, that's rare, that could cost money is entertainment. Recreation. Even that I'm not sure about, but it would be a sufficient change in the nature of how economies work that might have a profound influence on the whole concept of corporations. However, I can't see much changing until then.

BRUCE:
Well, I think worrying about corporations is a very 1980s thing to do. It's about 30 years out of date. And in fact, a lot has changed since the heyday of the corporation, when you had these Japanese corporations like Zaibatsu, or the Korean Chaebol corporation dominating because of their manufacturing skills. Whereas, clearly the people who dominate now are not corporate guys at all. They're finance guys.. There's like 1% of the planet's wealthiest population that's completely dominant now. And pretty much any corporation you can name is just a front for a few individuals who are absolutely super wealthy. It sounds science-fictional to say that, for instance, guys who are moguls in the telecommunication business would build spaceships, but they do! The Amazon guy's got a spaceship. Sir Richard Branson's got a spaceship. These Google guys, four of them, four millionaires, just said that they're gonna go out and mine the asteroids! There was like a press release last week! And I didn't make that up! They didn't tell me they were gonna go build spacecrafts and mine asteroids. They didn't even bother to say that it was a corporate effort by Google, it's simply a private venture by, you know, Larry and Sergei, and their other palls. And this is an area in which transition economies led the world. It's not like it was in the 1980s, when corporations were buying governments. This is really a situation that's a lot more alike the Semibankirschina period in Russian, the era when seven bankers privatized everything and took over everything, and basically owned the Yeltsin government. There wasn't anybody else. I don't have to preach to people in the Balkans about moguls.

You've got lots of moguls. You've got tons of super rich guys who dominate your economy. They're not corporations! They're privateers who have made just fantastic sums of wealth, privatizing your broken economy, and the past three years that's what happened to the entire planet's economy. It's the globalization of balkanization! You were there first! You were there first and if you knew anything about life in Beograd over the past 12 or 15 years, there's very little surprising about what's been going on since the finance crash. It's the same business, just on a planetary scale. So, no, I don't worry much about corporations. The ultra-wealthy, yeah. They worry about themselves. They're really upset. If you go hang out with people at the Davos forum and just see what the rich tell one another. They're very concerned about what's happened. They don't know, they can't think of a way out of it. And that's not the way corporate people behave. They were always promising peace, order, plenty, you know "mind-your-business-here's-your-job", "here's your brown shoes" "we'll look after you". No corporation tells that to its employees. They don't command any allegiance from people. Think about it. What is the last time you heard about a guy with a career at Google or at Apple. Even Steve Jobs didn't have a career at Apple. They fired him and he had to take over the thing later in a coup. That's the way they actually work now.

MODERATOR:
Thank you, Bruce. I can see the future now. In the future, that is, in like two minutes, we have to get off of the stage. So, we're gonna just do that. (Audience member: The future's waiting!) Exactly.

So, I want to thank you, because it's the work of you guys that is influencing the thoughts, and the later action, of all these bad people around. You cannot tell who's reading or observing or admiring your work, and some of them are obviously. It's great to be in the future state of Serbia, talking about this, and on that note, I want to thank you for participating, and you all for being so patient with the senior citizens. See you!

Transcript from panel discussion Future Scenarios, Share Conference, Belgrade 27. april 2012

Besmrtnost

Nadgrobna civilizacija

Slobodan Bubnjević

Većina naučnika i mislilaca koji su istraživali smrt, kao jednu od najstarijih i najizvesnijih ljudskih tema, slaže se u viđenju da bi čovečanstvo bez smrti živelo u svetu gorem od pakla. Smrt je čistač, podsticaj i pokretač civilizacije.

Zamislite da nema smrti. Da nema „poslednjeg neprijatelja" koji čoveka milenijumima drži u strahu, u patnji i bolu neizvesnosti. Kako bi tada izgledao svet u kome živimo? Bilo bi nas više, to je nesumnjivo. Konkretno, ako bi se ljudi rađali istim onim tempom kojim se homo sapiens širio planetom u poslednjih 40.000 godina, na Zemlji bi sada živelo oko 110 milijardi ljudi. Petnaest puta više nego što danas nastanjuje svet.

Uzimajući sve u obzir, teško je zamisliti pakao u kome bi se obreli. Uslovi života za veći deo čovečanstva bili bi gotovo nepodnošljivi. Neprekidni ratovi, mržnja, neprestana borba svakog sa svakim. Milijarde ljudi bi se otimalo oko nedovoljno hrane, oko retkih izvora pijaće vode i sve nepouzdanijih izvora energije. Ceo svet bi bio nalik na prenaseljeni grad, ruševan, bez stalnih objekata – čudovišna kolonija privremenih skloništa, bez javnih zgrada i prostora, svet neprijatan, nečist i prepun opasnosti.

Horde udruženih tragača za hranom bi vladale ovim supernaseljima. Slabiji bi se prosto uklanjali pred jačima. Nomadi i njihova divovska staništa, sledeći tokove velikih reka, pratili bi bujanje vegetacije gutajući sve na šta naiđu. I širili svetom vatre, ratove i nezamislivu prljavštinu.

U nedostatku pretnje smrću, bilo bi nemoguće uvesti bilo kakav oblik centralizovane uprave. Ne bi postojali novac, štednja, obrazovni sistem ili ulaganje u budućnost bilo koje vrste. Tehnologija bi se razvijala samo do onog stupnja koji može da ugodi gramzivom pojedincu koji se isključivo bori samo da sebi olakša. Ne bi postojala nauka. Bilo bi premalo onih koji bi želeli da pišu knjige, snimaju filmove i uopšte da stvaraju trajnu kulturu bilo koje vrste.

Ljudi bi se uglavnom razmnožavali zarad zadovoljstva, retko radi potomstva. Deca u takvom svetu ne bi imala ni deo današnje pažnje i nege. Odrastala bi sama, lutajući sumornim svetom, sve dok ne odrastu i utonu u masu živih. Za očekivati je da bi se, sa starenjem stanovništva, dalja reprodukcija sasvim zaustavila, a planetu bi nastanjivali večni starci.

Zarazne bolesti bi bojile ovu surovu stvarnost bolom. Većina od 110 milijardi ljudi bila bi zaražena gotovo svim mikroorganizmima koji su ikada napadali čoveka. Njihove epidemije nikad ne bi prestajale, čak ni jenjavale. Leprozni, okuženi, besni, oboleli od teških zapaljenja svih vrsta lutali bi ulicama u potrazi za vodom i olakšanjem. Njihovi bolni jauci bi se uzdizali ka nebu, vapeći za jedinim spasom koji bi preostao i o kome bi snevali milioni – za smrću.

Većina naučnika i mislilaca koji su istraživali smrt, kao jednu od najstarijih i najizvesnijih ljudskih tema, slaže se u viđenju da bi čovečanstvo bez smrti živelo u svetu gorem od pakla. Smrt je čistač, podsticaj i pokretač civilizacije.

Američki antropolog i dobitnik Pulicera za knjigu Denial of death iz 1973. godine Ernest Beker, smatra da smrt i te kako ima svrhu i da je ona stvorila ljudsku kulturu, tvrdeći čak da je poricanje smrti „uzrok svih zala". Na sličan način, autor knjige Immortality Stefan Kejv iz Berlina čak ide dalje i veruje da bez smrti uopšte ne bi bilo civilizacije. Sa druge strane, američki psiholog Kenet Vejl smatra da je svest o smrtnosti korisna ne samo za civilizaciju nego i za pojedinca, koji pod dejstvom straha od smrti vežba, bira hranu i živi zdravo.

> Čovekova prirodna borba je osuđena na propast. To i dovodi do sve silnijeg pokušaja da se smrt nekako prevaziđe, da se ostavi trag, da se život produži ili jednostavno reprodukuje. Na kraju, strah od smrti dovodi i do njenog proučavanja.

Kako smo, zapravo, došli do toga? Čudnovati putevi ljudske logike nas tako vode ka obrtu u kome bi trebalo da joj budemo zahvalni. Bez sumnje, čovekov odnos sa smrću je posebno složen, prekomplikovan proces koji se proteže od ličnog ka naučnom. Malo koja univerzalna stvar, osim smrti, za koju ćete svako malo čuti kako je jedina izvesna stvar na svetu ili da samo ona svakog čeka na kraju, istovremeno je i veoma intimna za svakog pojedinca.

Druge životinjske vrste, mada bez sumnje žele da žive, nisu izgradile čitavu kulturu na odnosu sa smrću. One jednostavno umiru onda kad nema druge. Poznato je da delfini i slonovi dugo borave sa svojim mrtvima, ali to ne utiče presudno na njihovu egzistenciju. U više eksperimenata i posmatranja u divljini, uočeno je da šimpanze, bliski rođaci čoveka, umeju i lično i kolektivno da žale za preminulom jedinkom. No, kad se to okonča, što može biti i autentična tuga i socijalni događaj, šimpanze samo ostave svog preminulog da istruli na mestu na kom je umro. I jednostavno se vrate bršćenju plodova.

Sa ljudima je mnogo složenije. Čovek se kao svako drugo živo biće bori da preživi. To je najprirodnija težnja koju dele i najprimitivniji mikroorganizmi i najrazvijeniji sisari. No, za razliku od drugih, čovek zna, čak je potpuno svestan da tu bitku na kraju, neizbežno, mora da izgubi. Čovekova prirodna borba je osuđena na propast. To i dovodi do sve silnijeg pokušaja da se smrt nekako prevaziđe, da se ostavi trag, da se život produži ili jednostavno reprodukuje. Na kraju, strah od smrti dovodi i do njenog proučavanja.

Naučna disciplina koja se bavi smrću naziva se tanatologija i uspela je, u više raznovrsnih škola i teorija, da opiše čovekov odnos prema smrti. Prema rasprostranjenom konceptu švajcarskog psihijatra Elizabet Kibler-Ros, pojedinac suočen sa spoznajom (viđenjem) smrti bliske osobe proći će: poricanje, bes, cenkanje, melanholiju i prihvatanje. To uslovljava ljudsko ponašanje i grupno i pojedinačno. Sa druge strane, autor knjige Death, američki filozof Šeli Kagan, smatra da je strah od smrti dobrim delom „neopravdan", upravo zato što je ona tako izvesna. On veruje da, mada ružna stvar, smrt nije nešto od čega treba strepeti, jer će svakako doći. No, smatra da je strah od trenutka kad će se to desiti više nego odgovarajući.

Psiholozi su izveli čitav niz istraživanja koja pokazuju koliki uticaj smrt ima na druge društvene pojave, kao što su nacionalizam, udruživanje i religija. Grupa ispitanika nakon razgovora o smrti i prolaznosti, pokazuje više simpatija prema osobi iste narodnosti ili osobi istog religijskog opredeljenja, a u pojedinim eksperimentima vrlo je blagonaklona prema ubijanju potencijalnih Drugih. Uporedo sa tim, neka istraživanja otkrivaju i da svest o smrti umanjuje značaj takozvanih prolaznih vrednosti, kao što je bogatstvo. Ali i da težnja ka besmrtnosti nosi prokletstvo.

No, to ništa ne znači – možda ljudski razum jednostavno i ne može da zamisli svet u kome smrti nema. Ako svuda oko nas, uprkos svesti o smrtnosti svakog pojedinca, gotovo nikad ne jenjava njegova lična borba sa smrću, sve dok to traje, naučni i svi drugi civilizacijski pokušaji da se izbori sa smrću neće biti uzaludni. Bez obzira na konačni ishod. Ako nauka može da posluži da život potraje duže, a kultura predstavlja jedini načini da se smrt trajno prevaziđe, civilizacija se može posmatrati i kao udruženi poduhvat protiv smrti.

Internet Spirituality

I Trust in Internet

Sofija Drecun

What is society's response to the development of technology and the creation of new media?

The new media landscape together with the philosophy of interconnected society has affected our everyday life rituals, one of the key ones being religion. As an example, conventional religious groups have made new uses of the Internet, thus creating cyber-religions by transferring communication and information exchange into regular online rituals and services. New media has created a habitat that acts as a stimulus and precondition for the foundation of various new movements.

Prior to the new media that has enriched the social cohesion and integration of society today, a movement in the 1960s was formed around a science-fiction book by Robert Heinlein called "The Church of All Worlds". This movement or phenomenon was later described by Dr. Possamai as a hyper-real religion, and was followed by a series of other initiatives such as Jediism inspired by the Star Wars movies or Matrixism by The Matrix Trilogy. Re-inventing ancient religions and mixing old religions with popular culture has become a widespread practice for new media consumers/believers. Through this practice, they establish new forms of fragmentary and syncretic religions as new forms of communications in the framework of traditional rituals and dogmas. This trend raises the question: are these initiatives sacrileges or do they contribute to the development of pluralism and religious diversity, answering to the newly formed needs of the new media society.

As a form of "devotion" to the change and possibilities attested to the Internet, three new religious movements were founded, preaching of the Internet as a divine force:

1)
The Church of Reality, founded in 2005 by Marc Perkell, is based on the commitment to the pursuit of reality the way it really is, representing a new world view. It is designed to be a web-based religion, as a sort of a community project whose gospel embraces the latest technology. The notion of undermining religion has also been addressed in their texts, since one of their goals is to expose religion to the light of reality and challenge belief systems on the basis of what's real. Through this approach they believe that people start to think about religion, re-question it and thus help religions evolve into better versions that will in fact improve their religious experience.

2)
In 2006 Matt MacPherson founded an internet based religion called The Church of Google that believes the search engine

Google is the closest humankind has ever come to directly experiencing an actual God, and that there is more evidence in favor of Google's divinity than there is for the divinity of other more traditional gods. The arguments for this belief were found in the notion that all other supernatural gods are not scientifically provable, therefore Google should rightfully be given the title of "God", as She exhibits many of the characteristics traditionally associated with such Deities in a scientifically provable manner. This argument has been transformed into proofs of the existence of Google as a God:

» PROOF #1
Google is the closest thing to an Omniscient (all-knowing) entity in existence, which can be scientifically verified.
» PROOF #2
Google is everywhere at once (Omnipresent).
» PROOF #3
Google answers prayers.
» PROOF #4
Google is potentially immortal.
» PROOF #5
Google is infinite.
» PROOF #6
Google remembers all.
» PROOF #7
Google can "do no evil" (Omnibenevolent).
» PROOF #8
According to Google trends, the term "Google" is searched for more than the terms "God", "Jesus", "Allah", "Buddha", "Christianity", "Islam", "Buddhism" and "Judaism" combined.
» PROOF #9
Evidence of Google's existence is abundant.

3)
The latest "progress" towards even legal acceptance of internet based religions was in 2012, when Sweden officially recognized The Missionary Church of Kopimism that represents a congregation of file sharers who claim that copying information is a sacred virtue. The name of the religion comes from copy me, whereas a "Kopimist" or "Kopimist intellectual" is a person who has the philosophical belief that all information should be freely distributed and unrestricted, as opposed to the monopolization of knowledge in all its forms, such as copyright. They encourage piracy of all types of media including music, movies, TV shows, and software.

The basic axioms upon which The Church of Kopimism is based are as follows:

1. Copying of information is ethically right.
2. Dissemination of information is ethically right.
3. Copymixing is a sacred kind of copying, more so than the perfect, digital copying, because it expands and enhances the existing wealth of information.
4. Copying or remixing information communicated by another person is seen as an act of respect and a strong expression of acceptance and Kopimistic faith.
5. The Internet is holy.
6. Code is law.

The new media landscape together with the philosophy of interconnected society is acting as a stimulus and precondition for the foundation of new models of religious communities. Even though new media has not solely developed new socio-cultural needs (such as believing in zombies, flying spaghetti monsters etc.) but has only awoken their manifestations, new media is encouraging consumers to take a more active role in all everyday rituals (DIY religion), changing consumers into creators. Thus, internet based religions encourage the development of new community models, in this way contributing to a more active, pluralistic and diverse society, through redefinition of traditional dogma's and rituals adjusting to new types of communication and behavior of the modern society.

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