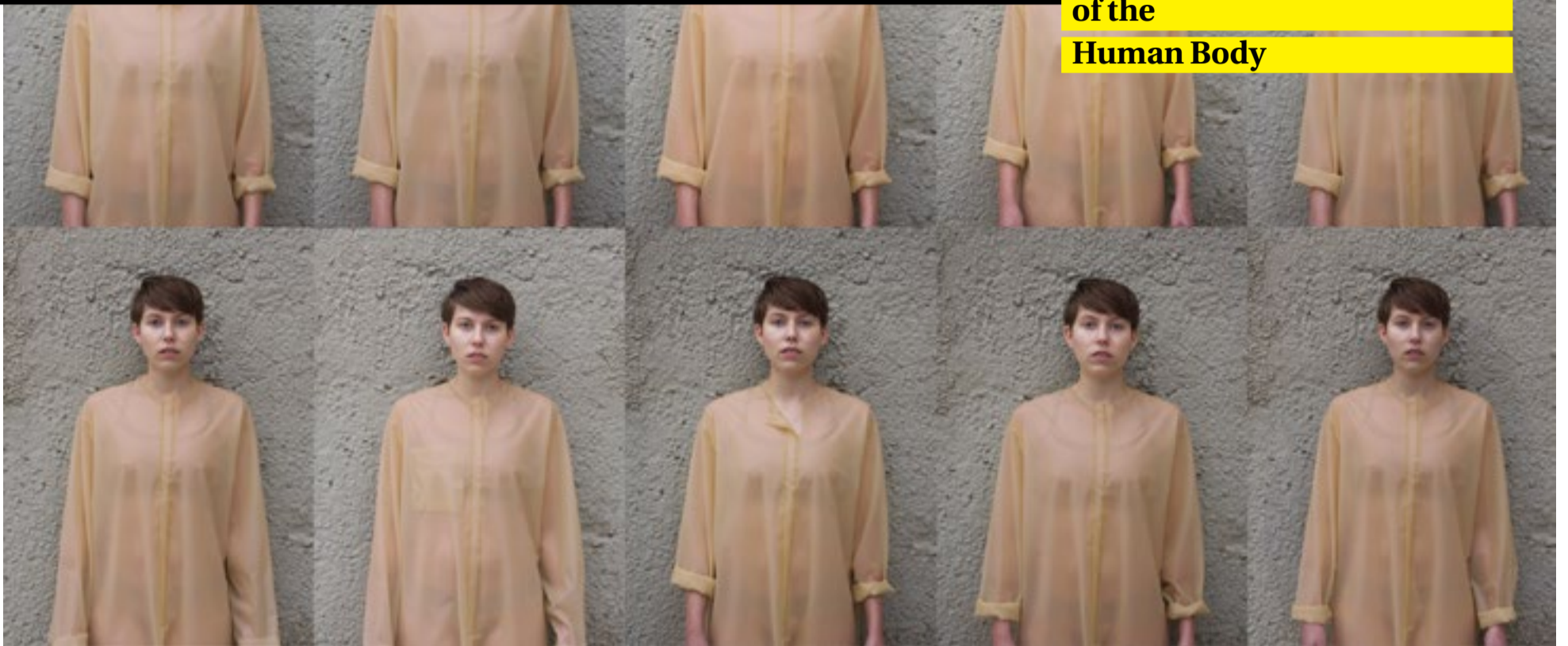


DREAD & DESIRE

**Urban Futures
at the Scale
of the
Human Body**



above DNA-generated biotextile garments with micro-modifications. From the project 46 by Katherine Allen. Hyper-customized clothing proposed for exploding populations seeking unique identities. [see pg 07](#)

Hitchhiking through Dystopia

by Matthew Wizinsky

→ It was late on a Friday evening. A great time to avoid crowds. Most people were dining and drinking, absorbing the city's capacity for pleasure, or maybe relaxing at home. That left the supermarket to me and others whose lives are synchronized differently. But as I stumbled my way through those harshly lit corridors of obscene American consumption, I realized I was among some highly unusual company. In every aisle, there were people—*people?*—clad in blue uniforms with devices attached to their forearms and fingertips, cables and wires dangling, each methodically filling large specialized carts. These were not shoppers like me. They were employees of the grocery chain operating—*operated by?*—new software for online ordering and curbside pickup. Surely, this wasn't such a strange scene in contemporary stores around the world. Yet, it did raise strange—radical?—possibilities: a specter of “before” for an unforeseeable and potentially unpleasant “after.” The unity of the human and the machine, not implanted but merged in the operation, made me wonder: Are they cyborgs? Incipient cyborgs? Is this still a supermarket? Or an altogether different kind of space? One in the process of becoming? But becoming what?

The image that flashed to mind was that of an Amazon fulfillment center: a million acres of non-stop conveyor belts with robots finding and retrieving machine-labeled products and filling yellow bins under the supervision of a handful of humans. Robotic automation creating efficiency while eliminating the unpredictable and unproductive complexities of human labor and interactions. Perhaps, supermarkets are undergoing a transformation from spaces where humans browse, compare, select, and purchase to cyborg-operated warehouses. Perhaps this rapid and fundamental revision of function is an inevitable result of the increasing rate of technical reformation of everyday life.

Then again, perhaps my lucid vision of this scene as a new-reality-becoming is an example of what has been called “dystopian imagination”—an imaginary projection of “ethical and political concern” [Baccolini & Moylan, 2]. Or maybe it's only a personal paranoia about the brave new world unfolding.

**The Squishy Spaces
of the Real, the Possible,
and the Desirable**

Regardless, I believe similar scenes—and in particular the objects, environments, interfaces, and social rituals that constitute them—can surely be productive if read as weak signals of change to come. What we do with these shadows of the future—how we weigh their merits or risks, how we transform them from predictions into questions about desirability or its inverse—is up to us in the present. Every proposition, explicit or implicit, should be read as an opportunity for discourse. Otherwise, we just might deserve the passive acceptance of the lives we will soon lead. Or, as the classic line from the film *Terminator 2* goes: “No fate but what we make!” [CAMERON, ET AL]

**What do we worry about
when we talk about the future?**

In the fall of 2015, I began teaching a new course in the School of Design at the University of Cincinnati, called *Speculative City*. In this seminar-studio hybrid, I work with undergraduate students in fashion, industrial, and communication design to apply research and practice methods toward the production of design proposals that postulate new ways of living in the near future. Proposals that are critically speculative. They aim to suggest alternate ways of living in such a way to provoke questions about contemporary material culture and where it might take us. By probing the future, we critique the present. In the spring of 2017, I extended these methods and subjects to a graduate studio called *Urban Future Re-Mix*. The particular thrust of the graduate version was to construct new configurations of urban futures (often informed by that social imaginary the “smart city”) with existing and relentless urban problems.

In the classroom, we engage not only in diverse readings but expansive—and sometimes contentious—dialogue over a vast range of unfolding trajectories in our society: cultural trends, political concerns, economic shifts, [continued on pg 03](#)

**Hitchhiking
through Dystopia** pgs. 1–7

Lead essay by Matthew Wizinsky
Assistant Professor, School of Design, University of Cincinnati

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Exhibition Catalog

Student design proposals for urban futures
from the studios *Speculative City* and *Urban Futures Re-Mix*
School of Design, University of Cincinnati

**Visual Meditation on
the Entangled Futures
of Design + Medicine** pg. 8

Feature illustration by Christopher Jackson, MD

**Sources, Bibliography,
& Credits** pg. 16

What is this publication? Who is behind it?
And... *Why?*

S.I.A. Sensory Interaction Aid

by Joe Frankl

The use of screen-based devices for information, social interaction, and entertainment has skyrocketed over the last decade. Research suggests that when these activities replace the sensory rich experiences of face-to-face interpersonal communication, the capacity to read body language, nonverbal cues, or even decipher emotions is diminished. This is especially detrimental for children and young adults who are still in the stages of critical social development. As the use of screen-based devices reaches an average of seven hours per day for some children today, the impact this will have on the future is yet to be understood.

SIA is a multi-sensory system designed for a generation unable to interpret the emotions of others. An eyeglass-like armature serves as a platform to support various modules that gather sensory information on the subject and relay their meaning to the user through sensory translations. As animals, we have evolved to subconsciously project our emotional states by adjusting our visual disposition, emitting micro-fluctuations in facial features, and manipulating our vocal presence. Each SIA module uses a different sensory input-output combination—such as visual-to-smell or smell-to-audio—to translate nonverbal communicative capacities for those unable to read them.

Removed

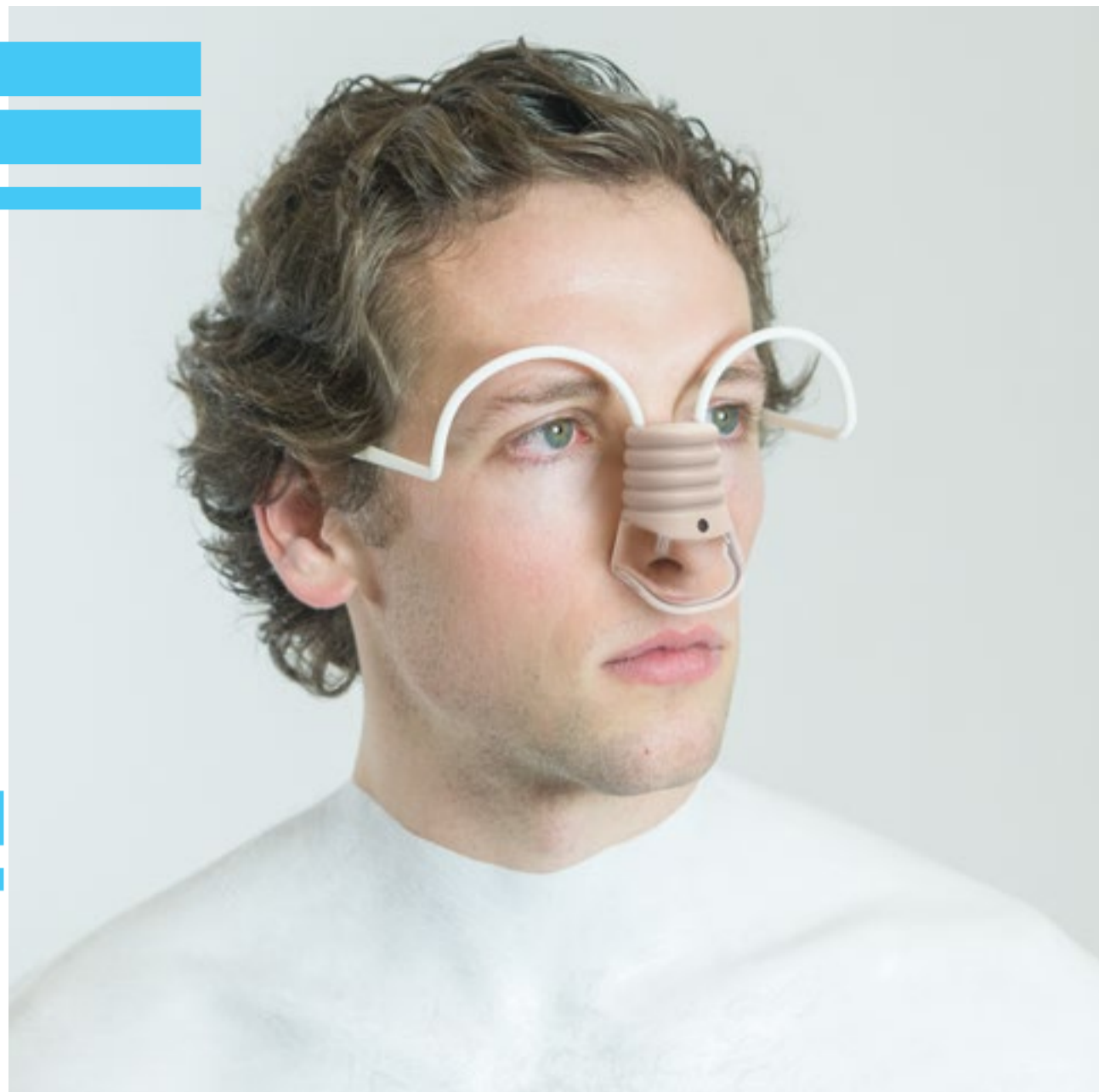
by Nikolia Nicholas

While mediated forms of communication have expanded the reach of personal networks, most urban inhabitants are still surrounded by millions of strangers daily. People with social anxieties are confronted with endless challenges related to their sense of appropriately “performing” the right emotional state or properly reacting to others. Meanwhile, the widespread use of short-hand internet jargon (LOL) and emojis seem to be limiting the vocabulary we use for emotional self-expression.

Removed proposes a solution for urban residents coping with a lack of confidence in interpersonal skills. When wearing the mask, your current emotional state is sensed through facial detection, and that information conveyed on the mask's exterior. Based on Facebook's “what's on your mind?,” emotional communication is simplified via an emoticon language. Studies have shown these emojis can still cause confusion due to multiple interpretations. To correct for this, you can overwrite the mask's emotional detection feature to choose which you would prefer the world to see—whether it's your true emotional self or not. How are you feeling?



above Removed's emoji-mask lets the user communicate a simplified emotional state—whether or not it's true.



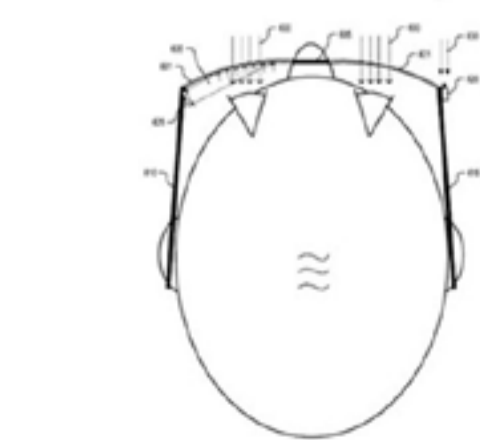
above SIA's SmSe module uses a small camera to read facial ticks, body posture, and other visual body language. Emotions such as fear, dishonesty, or simply a sense of discomfort are then translated into a language of scents.

How Pay-Per-Gaze Advertising Could Work

by Nick Bilton and Claire Cain Miller
excerpted from “BITS Blog,” *New York Times*, 20 August 2013.

Google wants to see what you see. And then, of course, make money from those images. The company was recently awarded a patent that puts forth an idea for pay-per-gaze advertising—a way in which people interacting with ads in the real world could be analyzed in the digital world. In the patent, which was filed in May 2011 and granted last week, Google claims that “a head-mounted gaze tracking device”—presumably Google Glass—would send images and the direction the person wearing the device was looking to a server. The system would then identify real-world ads that the person wearing the gadget had seen, allowing Google to then charge the advertiser.

“Pay-per-gaze advertising need not be limited to online advertisements, but rather can be extended to conventional advertisement media including billboards, magazines, newspapers and other forms of conventional print media,” states the patent, which was discovered by Fast Company.



above Patent for a system to track and analyze the precise target of a Google Glass user's gaze. [patents.google.com]

Are Young People Losing the Ability to Read Emotions?

by Stuart Wolpert
excerpted from *UCLA Newsroom*, 21 August 2014.

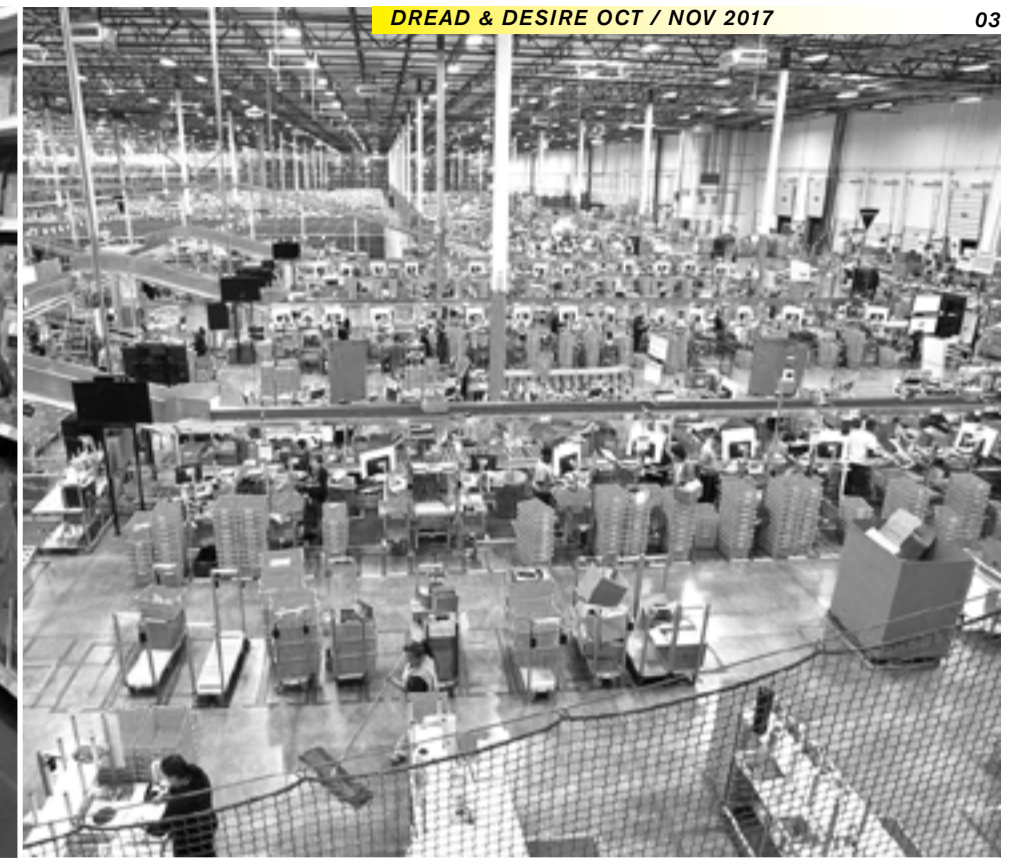
Children's social skills may be declining as they have less time for face-to-face interaction due to their increased use of digital media, according to a UCLA psychology study. UCLA scientists found that sixth-graders who went five days without even glancing at a smartphone, television or other digital screen did substantially better at reading human emotions than sixth-graders from the same school who continued to spend hours each day looking at their electronic devices.

“Many people are looking at the benefits of digital media in education, and not many are looking at the costs,” said Patricia Greenfield, a distinguished professor of psychology in the UCLA College and senior author of the study. “Decreased sensitivity to emotional cues—losing the ability to understand the emotions of other people—is one of the costs. The displacement of in-person social interaction by screen interaction seems to be reducing social skills.”

You can't learn nonverbal emotional cues from a screen in the way you can learn it from face-to-face communication,” said lead author Yalda Uhls, a senior researcher with the UCLA's Children's Digital Media Center, Los Angeles. “If you're not practicing face-to-face communication, you could be losing important social skills.” Students participating in the study reported that they text, watch television and play video games for an average of four-and-a-half hours on a typical school day. Some surveys have found that the figure is even higher nationally, said Uhls, who also is the Southern California regional director of Common Sense Media, a national nonprofit organization.

She said the implications of the research are that people need more face-to-face interaction, and that even when people use digital media for social interaction, they're spending less time developing social skills and learning to read nonverbal cues.

Uhls said that emoticons are a poor substitute for face-to-face communication: “We've shown a model of what more face-to-face interaction can do,” Greenfield said. “Social interaction is needed to develop skills in understanding the emotions of other people.”



left Supermarket employees equipped with wearable scanning technology fulfill grocery orders for online shoppers. At certain times of day, the number of “shopper-bots” in the store outnumber customers. [thecityinfluencer.com]

above Amazon fulfillment center. [Seattle Times]

HITCHHIKING...

the impacts of new and emerging technologies, and all forms of social oddities such as dating in the age of Tinder and the myriad forms of “identity” produced, rehearsed, and modified in the lifeworld of social media. We pay particular attention to challenging the promises of new technologies—those specters on the horizon that do not yet inhabit everyday life but certainly may transform it, no doubt with unintended consequences.¹

To describe this activity as “hitchhiking” is to admit that while we may have a destination in mind (the future), we are at the will and whim of a variety of vehicles, paths, and detours to get us there. In our process of investigation, we latch onto new and unfolding cultural trajectories to challenge where they might lead. These range from the faux-altruism of the “sharing economy,” in which we see regulated industries such as transportation or hospitality upended by instantly-wealthy tech companies like Uber and AirBnB, to the possibilities of targeted genetic editing as proposed by CRISPR-CAS9, a genetic technology currently proposed to eradicate specific hereditary diseases. In our process of imagining, projecting, and then making material proposals, we sometimes have to “jump rides” from one trajectory or domain to another. For example, we might merge technological risks or promises with political concerns to produce a cohesive destination for our journey. Unfortunately, there is no complete map of Dystopia. There are many roads both in and out of the territory.

Our destination is a plausible future world. To name the territory we move through “Dystopia” simply means that we are willing to admit the value of negative thinking. Like scientists, technologists, engineers—for that matter, most other human beings²—designers tend to suffer from an optimism bias (Sharot). In many ways, this affliction is a requirement. As an activity whose primary function is to transform the human experience, hope is necessary for design. Design at the scale of the human body—as in the work of fashion, industrial, and communication design—normalizes the experiences of everyday life, continually shaping the next-near-future. Designers must imagine not

just *that* things can be different and better, but *how* things can be different—and hopefully—better. In doing so, designers must assume their role in mediating everyday life for unknown and countless others. This includes accepting the risks for potentially negative outcomes. As the shadowy contours of uncertain futures blip onto the radar of our everyday lives, the whispers of many possible futures—some more or less Dystopian—echo all around us.

“As the shadowy contours of uncertain futures blip onto the radar of our everyday lives, the whispers of many possibilities—some more or less Dystopian—echo all around us.”

By projecting design at the scale of the human body into a fuzzier future space (for example, 20 years into the future), we can challenge our own optimism biases while also challenging our discipline to become increasingly self-critical. Critique is not necessarily a negative activity. Critique can also reveal new opportunities hidden behind assumptions. It can be also tremendously valuable for articulating the tradeoffs we continuously make between the conveniences, efficiencies, or pleasures of objects and interfaces that constitute everyday life and the risks or fears of their social detriments. Reality is seldom as utopian as technology companies promise nor as dystopian as the most terrifying sci-fi.

Utopias: Between the Real and the Speculative

Since Thomas More's introduction to the concept, we generally understand *Utopia* to be an imaginative projection of a non-existent social reality [MORE]. These *no-places* may take on a positive or negative atmosphere (positive utopias or dystopias, respectively). They can function as beacons of desire or cautionary

tales. In either case, a utopia clearly espouses a system of values and desires, typically drawn in contrast to the social reality of its author. In this way, utopias are almost always critical forms of speculation. The “other-ness” of the proposed scenario (which need not be in the future) creates an inherent friction with the realities of here-and-now.

All forms of design begin as utopian—or at least speculative—in that they start by postulating a different version of reality that re-configures known elements of the present with newly introduced objects, systems, interfaces, etc. In the words of Daniel Burnham: “Make no little plans; they have no magic to stir men's blood and probably themselves will not be realized.”³ After the plan or the proposal, the designer typically works in an iterative and rigorous problem-solving mode to make that proposal into a material reality. Prototyping, user-testing, and gathering qualitative input on a proposal have long been integral to this process.

At the start of the 21st century, we are witnessing a broad shift in focus across the design disciplines from artifacts to systems—material, production, social, economic, political, and technical systems, plus the countless intersections among them. Designers today are positioned to make increasingly broader social impacts through such systems thinking and planning. Putting grand proposals “out there” for public reaction is as critical as ever. Designers of material culture—such as fashion, industrial, and communication—are crafting bigger and bolder visions for the future of contemporary life. How might critical speculations serve to both stir the blood and set the compass for new destinations?

There is no shortage of utopian ideas to be found in the more imaginative works of political, economic, and social theory, or in the history of utopian literature and cinema. Design too has a rich history of utopian and speculative projects, particularly in the realm of the built environment: highly imaginative and fantastic proposals for megastructures, modular cities, and self-contained living environments, such as the proposals of Archigram, Superstudio, or Archizoom. The term “visionary architecture”⁴ (sometimes “paper architecture,” as in projects that never leave the page) describes such architectural or infrastructural proposals that are too idealistic or too fantastic for realization. Instead, they serve to provoke thought or discourse on different forms of social organization in

continued on pg 05

Unbound Uniform: Safety Hood

by Maggie Raterman

Urban inhabitants are confronted everyday with interactions that both create and challenge their personal and social spaces. Physical anxiety can be triggered by the violation of personal space or aggressive social behaviors. Status anxiety can be triggered by the comparative view of those with more. While we can't always see the boundaries of our everyday lives, we notice when those boundaries are transgressed.

The *Unbound Uniform* series transforms personal boundaries into physical expressions. These accessories manipulate their forms as they read and emit various social cues. Embedded technology translates personal data—such as sense of personal safety, economic security, social anxiety or status—into visible forms on the body. The wearable devices interact with one another so users can read the social circumstances of other within their proximity. By changing states in response to monitored social data, the accessories create a visible field of personal space. For example, *Safety Hood* collects physical data to determine the user's sense of physical safety as he moves through the city. As anxiety levels increase, the hood transforms to cover more and more of the face. This transformation reveals a visual pattern on the hood which communicates to others that the user is afraid. This holds everyone accountable for recognition of invisible social boundaries—an opportunity for increased awareness of the vulnerabilities of others or a risk for for increase exploitation of any kind.



above Unbound Uniform: Safety Hood reads and emits the wearer's state of comfort related to physical safety. When the user feels safe, the hood retracts to reveal more of the face. In areas perceived as dangerous, the hood covers more of the face, revealing colored bands that communicate the user's anxiety to others.



UMBCL

by Dominic DiCarlo

As digital communication platforms have opened up seemingly infinite space for discussion, dissenting perspectives on all topics can now unfold without any opposition. Filtered news sources and in-group discussions generate “echo chambers” of like-minded dialog, erasing the friction of true political discourse. Vicious, anonymous, and hateful speech now seems unavoidable online. The conflicts of “free speech” and “safe speech” are now encroaching into the physical realm.

UMBCL speculates a scenario in which the in-group nature of virtual communications is made manifest in direct interpersonal communications. In order to ensure that negative speech acts are never imposed upon unwilling subjects, personal input devices with ported cables draw clear lines of communication between individuals and groups. This new method of physical control allows speech to be delivered directly and discretely to the intended recipient. This ensures that all input for an individual can be moderated and protected to remain safe, reassuring, and nurturing. Is this social progress or regression?

Safe Space vs Free Speech?

by Leah Shafer

excerpted from *Usable Knowledge, Harvard Graduate School of Education*, 18 May 2016.

As protests have erupted this year at colleges across the country, the concepts of “safe space” and “free speech” have often seemed at odds. If students call for their campus to be a safe space—a place where racist, sexist, and any kind of discriminatory words and actions are not tolerated—are they infringing on the First Amendment rights of other students, faculty, and staff to say and do as they are legally allowed?

In the words of three scholars who think a lot about the cultural, ethical, and moral lives of universities: It's complicated. But it is possible to foster safe spaces and free speech—and for schools at every level to use both to address some of the most morally pressing issues of our times.

“What college students want is to support cross-racial dialogue in an authentic, honest, but also risky way,” said sociologist Natasha Kumar Warikoo in a recent panel discussion at the Harvard Graduate School of Education (HGSE). But that kind of rich dialogue can't be conjured instantly.

Many students arrive simply unequipped to have these tough conversations. Both in civics lessons and in everyday interactions, K-12 schools “don't treat free speech as the preeminent protected right that it is,” said legal scholar Catherine J. Ross,

Elon Musk leads 116 experts calling for outright ban of killer robots

by Samuel Gibbs

excerpted from *the Guardian*, 20 Aug 2017.

Some of the world's leading robotics and artificial intelligence pioneers are calling on the United Nations to ban the development and use of killer robots. Tesla's Elon Musk and Alphabet's Mustafa Suleyman are leading a group of 116 specialists from across 26 countries who are calling for the ban on autonomous weapons. In their letter, the founders warn the review conference of the convention on conventional weapons that this arms race threatens to usher in the “third revolution in warfare” after gunpowder and nuclear arms. “Once developed, lethal autonomous weapons will permit armed conflict to be fought at a scale greater than ever, and at timescales faster than humans can comprehend. These can be weapons of terror, weapons that despots and terrorists use against innocent populations, and weapons hacked to behave in undesirable ways. We do not have long to act. Once this Pandora's box is opened, it will be hard to close.”

who explores this issue in a new book, *Lessons in Censorship: How Schools and Courts Subvert Students' First Amendment Rights*. Too many children don't fully learn what it means to have the constitutional right of free speech—which means that they also don't learn how to communicate with a peer when they are offended by what she says.

Some students are also uncertain about how to begin authentic conversations. In conducting interviews for her new book, *The Diversity Bargain: And Other Dilemmas of Race, Admissions, and Meritocracy at Elite Universities*, Warikoo found that students of color largely want honest dialogue, saying that without it, there will be no change in the status quo. But many white college students, Warikoo found, may be hesitant to discuss racial issues because they worry their comments will come off as racist or unsubstantiated. Some white students do not comprehend the significance of racial discrimination or understand that their own experiences of race are different from those of students of color, leading them to discount feelings of exclusion by their non-white peers.

And as political philosopher Meira Levinson explained, schools themselves may not always be perceived as safe spaces. Students of color may feel racially identified in a negative way by teachers with low expectations or by institutions named after racist figures. These students may feel uncomfortable speaking out—or conclude that a respectful conversation about their concerns is not possible.



HITCHHIKING...

spatial and material terms. While such projects are sometimes criticized for not offering any “real” solutions to complex urban problems, the space between the “real” and the “speculative” appears to me to be much more complex and variegated. Let's look at two examples.

In the 1980s, a billionaire real estate developer hired the architect Philip Johnson to create a “castle” for the super wealthy on New York City's Upper West Side (GIBST). At the time, New York was notorious for its high crime rate and trend of “urban decay.” This vision for a castle—complete with fortified masonry walls, moat, and drawbridge—was intended to become a fortress of protection and isolation for the city's chic elite. The project was never built; however, this was not meant as an exercise in discourse. The project was definitely intended for construction, it just encountered the practical shortcomings of many real estate projects. It fell short of the necessary early investments and approvals. In the context of 1980s New York, it's hard to imagine a more pure example of ideology made manifest in architectural form: rich people living luxuriously in a castle to protect themselves from the vile and dangerous mobs in the streets. That real estate developer is now the President of the United States.

Following this history, perhaps the most dystopian architecture today is manifest in a very different speculative manner. The Survival Condo project is transforming demilitarized Atlas F Missile Silos across the United States into “luxury bunkers” (GARCIA-NAVARRO). Situated 100 feet underground and encased in 9-foot-thick epoxy-hardened concrete, these Cold War era structures were built to withstand a direct nuclear strike. Today, the bunkers are being renovated into exclusive (and very expensive) luxury shelters equipped with redundant water and electrical supply and air filtration (including redundant nuclear, biological, and chemical filtration). Even better, there's an indoor pool & spa, custom theater, bar & lounge, and the latest in residential entertainment and kitchen technologies. Bunkers are supplied with enough food for inhabitants to survive “in a luxury 'resort setting' for as long as five years without having any concern for being able to sustain our community” (SURVIVAL CONDO PROJECT). Not a bad place for the super wealthy to comfortably wait out a nuclear winter or ecological collapse. While these luxury bunkers are situated in the physical here-and-now, their value can only be fulfilled through speculation—in a yet-to-be-realized (and hopefully avoidable) future. Sure, if you buy one today, you can move in before an existential disaster. Yet their mere existence raises serious ethico-political questions about where we are, what we're doing, and where it may lead.

These two examples tend to complicate the space between the real and the speculative—at the scale of architecture. We'll need to zoom in a bit to get to the scale of the human body. But, when we get there, we'll likely face the same questions: Are utopian proposals for a radically egalitarian urban life doomed forever to the realm of fantasy? Can design proposals for possible future realities offer critical insights to improve the human condition—even when not explicitly solving problems?

5 See BBC News, “Intelligent machines: Call for a ban on robots designed as sex toys” (2015, September 15).

Personal Interlude: A Hometown Transformed on the Big Screen

Growing up in the suburban sprawl of greater Detroit in the 1980s, my personal notions of “the city” were infused by many stereotypical negative connotations. The Detroit I witnessed first-hand as a child—most certainly sheltered, as a white suburbanite whose ventures into the city generally fell under the auspices of “going shopping with grandma” or “going to work with dad”—looked pretty bad. Nonetheless, this was where my dad and his siblings grew up. Within our family, there was still affection for the city they had once abandoned. Only later did I become aware that my family's move to the suburbs a generation before I was born was actually part of an historically traceable exodus. However, even my perception of Detroit—crafted as it was by both first-hand experience and the nostalgia of my family—was altered dramatically by a cinematic dystopia.

Amidst a scene of urban rubble and decay, two surly street hooligans accost and attempt to sexually assault a young woman. Behind this action, a billboard blazons “Delta City: The Future has a Silver Lining,” just in the nick of time, the new face of law enforcement intervenes. “Let the woman go. You are under arrest,” is uttered with no human inflection. When the would-be rapists resist arrest, one of the assailants is shot directly in the groin by a police officer with almost impossible precision. The next line became an instant classic in American cinema: “Your move, creep!” (DAVISON, et al)

In 1987, this dystopian urban vision was sprung upon the world by Paul Verhoeven in his film *Robocop*. The violent, crime-riddled city of Detroit sets the stage for a satirical thriller through the dark underside of 1980s American excess as projected into a not-too-distant-future: intractable political corruption, corrosively distracting media influence, explicit authoritarianism, unbridled greed and privatization, technology companies (literally) getting away with murder, and absurd expansions of all the tropes of capitalism. The film cruelly but singularly “poked fun at an imagined Reagan-era-on-steroids version of twenty-first-century America” (TURSE).

It's hard to blame the filmmakers for choosing Detroit. In reality, Detroit in the 1980s was an excellent place to observe the worst effects of late 20th century American culture. The utter stripping of the inner city by decades of lost employment as automotive manufacturing dwindled, white flight, wholesale divestment of all things public, militarized local police pitted against rising crime (organized and disorganized), and the resulting disenfranchisement of its citizens of every kind produced a city that became an inverted shadow of the once gleaming capital of American industry.

The image of Detroit that *Robocop* depicted wasn't exactly the one I would wish to have plastered all over the world. However, I have to admit that it has formed a small fragment of my internal perception of my hometown. All over the world, people have an image of Detroit, fueled by diverse cultural narratives ranging from automobiles, Motown, race riots, the post-apocalyptic urban environment, and since 1987, *killer robots!*



left While the film *Robocop* was intended as a dystopian satire, the image of highly militarized police forces turned against citizens has become all too common in recent years in the United States. (Davison, et al; Jeff Roberson / AP Photo)

above Ubiquitous computing research agendas are often explicitly shaped by science fiction films (Dourish & Bell). Above top, what is now called a Heads-Up-Display, allows Robocop to scan facial recognition, interpretation and relevant data of anyone he sees; above bottom, a location-tracking device, surprisingly similar to the one's carried on most smartphones today. (Davison, et al)

While discussion of *Robocop* may seem an indulgent and anecdotal diversion, ethical questions related to the morality designed into robots and other forms of artificial intelligence remain significant—maybe more so today. These are questions facing designers as they continue to implement or domesticate these new technologies—big and small—into everyday life. Many thorny issues unravel when considering all the complex relationships humans are now entering with artificial intelligences: from racial and gender biases ingrained into AI based on their language recognition (DEVLIN) to robots designed as sexual servants.⁵ In fact, a group of more than 100 tech experts from around the world recently sent a plea to the United Nations to implement an outright ban “killer robots.” (GIBBS)

One more point is worth mentioning. Beyond their ability to portray new technologically induced ethical dilemmas, science fiction films are also instrumental in setting the course for technical research. For example, Paul Dourish & Genevieve Bell have made explicit the ways in which specific ideas from science fiction have shaped research agendas in the territory of ubiquitous computing (DOURISH & BELL).

From shock value to ethical reflection, *Robocop* turns out to be an excellent—if personal—lesson in the cultural powers of dystopian imagination. While cinema is known for its compelling potential to transcend the here-and-now, what power does design wield in situating future proposals in the material reality of everyday life?

Dread & Desire: Between the Possible and the Desirable

What do we desire when we talk about the future? What do we dread? Visions of where we might be headed—collectively and individually—are not produced in an ahistorical, apolitical vacuum. Designers live in the present but must work in the future. They imagine then work toward the production of things that don't yet exist. For urban planners and architects, the scales and timelines for their projects are both large and highly varied. Planning projects may range from the scale of a neighborhood to a multi-city region, while architectural projects may range from a single home to a megastructure. The timelines for such work may put these projects 5, 10, 20, 30, or maybe 50 years into the future—necessarily taking on risks and all kinds of uncertainties.

Meanwhile, designers of material culture—such as fashion designers, product designers, and communication designers—tend to operate within a tightly defined scale of time and physical space. The scale is roughly that of the human body, and the timeline is typically one or two years, maybe up to five years into the future. As such, these designers are often bound to very tight deadlines—typically commanded by market forces and competitiveness—thus limiting exploration of the broader potential and systemic implications of their work. By extending the time-horizon of design at the scale of the human body, designers need to suspend judgment of what is *probable* in order to create a more expansive view of what is *possible* **continued on pg 7**

Algorithmic Citizenship

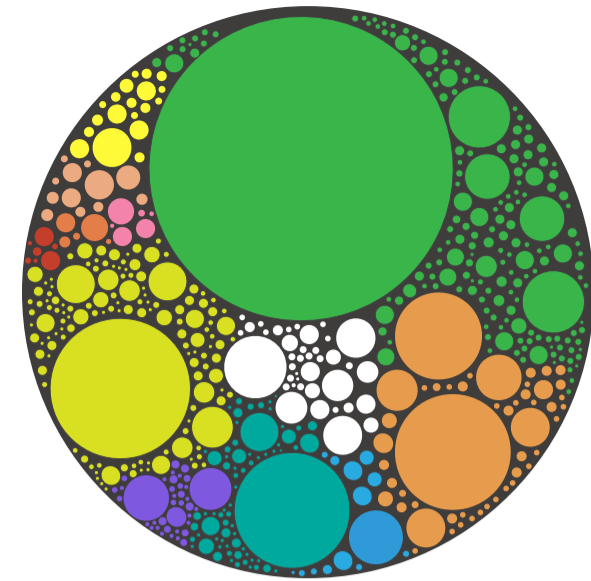
by Sloan Sypher & Vitor Nogueira

The United States tax code is stunningly complex and regularly the source of political debate. Tax revenue spending is largely controlled by Congress but under intense pressure from political lobbying groups. There are 13 general categories for revenue expenditures, from health care to energy, from infrastructure to military spending. The balancing of those categories feels entirely out of the control of citizens. Meanwhile, models of participatory budgeting have been piloted in some cities, such as Porto Alegre, Brazil.

Algorithmic Citizenship proposes a participatory restructuring of the United States federal tax system. To remediate massive governmental distrust and pacify social unrest, this new system gives citizens direct control over government spending and services. A flat tax rate of 20% applies to everyone. Each citizen has total control over how her taxes are divided amongst categories, reflecting which government departments are supported. The caveat is citizens can only access services which they have supported with their taxes. For example, if parents choose not to fund public education, their children are ineligible to receive free public schooling. This new model becomes a new means of political identity. A data image of each citizen's allocation visually identifies political values. This promotes self-organization of nuanced political alignments within a highly diverse population.



above & right The tax model proposed by Algorithmic Citizenship invites citizens to allocate how their taxes are spent, based on the 13 categories of the US tax system. These allocations create new "data-images," communicating social values via expenditure.

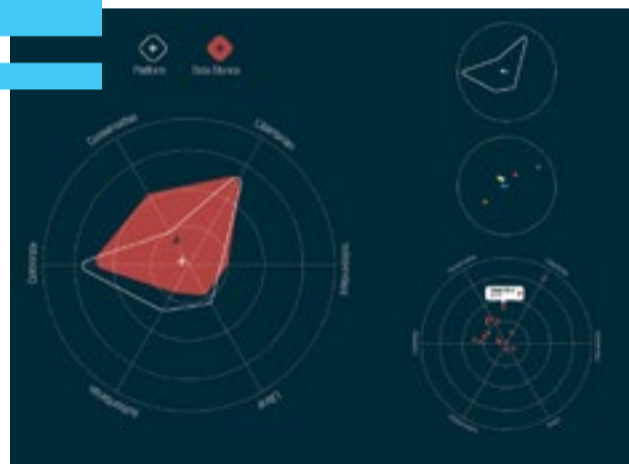


PollWatch

by Evan Hoffman

Since the 2010 Citizens United ruling in the United States, corporations are allowed nearly free reign to financially support causes or politicians that best represent their interests. This gives a tremendous political advantage to corporations over the voting potential of citizens. In many ways, shopping is already more powerful than voting.

PollWatch proposes a corporate democracy in which citizens no longer cast vote. Political decisions are determined by each citizen's spending habits. In other words, you actually vote with your wallet! All purchases are tracked and linked to a citizen's identity. This data determines the citizen's political position based on the corporations she supports. For example, daily purchases at Chik-Fil-A translate into strong support for the opposition of marriage equality legislation and candidates. By creating a "platform," the user sets a political position. This platform is regularly tracked against spending habits. As the two drift apart over time, the user is prompted to make a difficult decision: do you change your political position or actually change your behavior?



right The PollWatch interface regularly tracks a user's political stance against indirect political support for causes via making purchases from politically-aligned corporations.

“Someone once said that it is easier to imagine the end of the world than to imagine the end of capitalism.”

Frederic Jameson (2003), p.76

Survival Condo Project

excerpted from www.survivalcondo.com

The fact is, you can find other solutions for "survival living." Though none of the options today offer the peace of mind that comes with our state-of-the-art technologies, combined with the comfort and luxury that is offered through our Survival Condo ownership opportunity. Nothing even comes close.

"People's fears and the people that have the financial resources to purchase these, you know, run the spectrum. There is no preponderance of one group over another. We've got Republicans and Democrats. And we've got people that are very much fearful of global climate change. And the big difference there is they argue about what causes it. You know, some people, you know, believe that it's a man-made event and other people believe that it's a natural phenomenon. But neither group disagrees that it's happening." (Larry Hall, CEO)

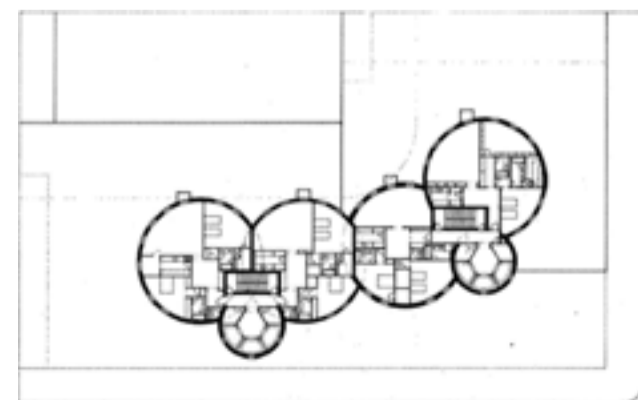
The Expanding Empire of Donald Trump

by William E. Geist
excerpted from *New York Times Magazine*, 8 April 1984

His next appointment is with Philip Johnson and John Burgee, the eminent architects. "These guys are hot," Mr. Trump declares as he breezes into their office. Models are brought in of Mr. Trump's next—*can it be!*—proposed building, a 60-story castle, Trump Castle, six cylinders of varying heights with gold-leafed, coned and crenelated tops to be built at 60th Street and Madison Avenue. There is to be a moat and a drawbridge. "My idea," says Mr. Johnson with a mischievous grin. "Very Trumpish."

"Trump is mad and wonderful," says Mr. Johnson. The 77-year-old architect proclaimed the castle his "most exciting project" ever. "Other developers come in with sober faces, carrying their market-research studies on what the public will like." The combination of Mr. Johnson, who is leading the architectural charge out of the era of glassbox modernism with such unusual buildings as the 'Chippendale'-topped A.T.&T. building, and Donald Trump, who is excited about putting up the most distinctive buildings imaginable, seems positively dangerous. One can almost imagine this: "Phil, I'd like to build a 135-story cheeseburger on Park Avenue." "Lettuce and tomato on that, Don?"

With castles on the drawing boards, the first tenants are moving into Mr. Trump's \$125 million Trump Plaza luxury cooperative apartment building at Third Avenue and 61st Street. His Generals are off to a winning start in their first season under his ownership. He is hovering attentively over his newly opened Xanadu of conspicuous consumption, the \$200 million Trump Tower condominium-office-retail complex on Fifth Avenue, also supervising the final touches on Harrah's at Trump Plaza, a mammoth \$220 million casino-hotel in Atlantic City set to open next month.



above Johnson Burgee Architects' blueprints for a proposed six-cylinder castle on the Upper East Side by Donald Trump in 1984.



46 & Unisuit

by Katherine Allen & Margy Groshong

The concept of an individual "self" has always been a complex social construction. Today, amid exploding populations, the blurring of identity within the expanse of social media, and new opportunities to compare oneself to the rest of the planet's billions of inhabitants, the search for individual identity seems more complicated than ever.

46 & Unisuit take two distinctly different approaches toward the same social struggle: Defining self identity. *Unisuit* imagines this path can lead inward. All value is derived from functions of the mind, and other forms of human ability are intentionally limited. Appearances are devalued to the point of extreme homogeneity. *Unisuit* is the uniform for this new social order. It obstructs the use of hands, hinders quick movements, and obscures the face. Physical distinctions are eliminated until thought is the only thing that matters.

46 proposes a line of products that both celebrate and protect each individual's most unique asset: genetic data. Clothing is constructed from skin grafts using each person's own DNA. Genetic data produce both the physical material of a garment and its unique patterning. Each piece is so marginally unique, it questions the value of difference. Skin and hair products are used to seal in and protect DNA from being sampled or stolen. A catalog of these product types navigates both worlds. Which do you prefer? Simply tear out the order form and send in your choice. Your uniform will arrive shortly.



above The Unisuit intentionally hides all distinguishable features of the human body, producing a cocoon for focused intellectual activity.

HITCHHIKING...

[VOROS, CANDY]. To produce bold visions of the future, they must also take ownership of the values embedded in their proposals—weighing any desirability with its tradeoffs.

Making future proposals materially manifest through prototypes or other experiential forms enables a designer to share visions of urban futures with potential "users" (aka *humans*). Urban futures proposals crafted at the scale of the human body are explicit invitations to imagine how people might touch the complex, intersecting, and sometimes competing system that constitutes a city. In our work, we call these "interfaces."

The work produced in these undergraduate and graduate design studios is not explicitly concerned with solving today's problems. Rather, these proposals grapple with scenarios still wrought with complex and ethical decisions to be confronted. To render thick descriptions (Latour) of new ways of being in the city, the designer's challenge resides in the ability to produce artifacts, environments, or interfaces that would be most useful in telling that world's needs, desires, challenges, etc. While prototyping is a regular function of the design process, we can take it a bit further by using the process of prototyping to suggest a different reality in which the object is proposed to exist. In this case, the prototype produces a *synecdoche* (a part-for-the-whole metaphor) of a different world.

Design also produces desire—particularly the design of those objects that exist in close and intimate proximity to the human body. This is both a powerful aphrodisiac and a danger. How is the designed object a lure, in which people willingly purchase it and integrate into their daily lives? What desires does the object fulfill? But in the spirit of making critical speculation, we also must ask how it reveals its potential negative impacts. How does it exude at least the faintest whiff of fear? If these qualities can be balanced, the resulting project—if successful—will invite a viewer into its proposed speculative space through desire, give a hint of the ramifications through fear, and confront the viewer with a sense of anxiety. That anxiety is productive if it opens an avenue for concern, consideration, and response.

We're on a Road to No-Place: Where do we go from here?

When I started teaching these courses, I had a variety of interests for doing so. I was interested in the experiment: Could I put together a curriculum that would yield intelligent, thoughtful, and provocative urban future speculations from undergraduate design students? I was interested in the argument: Could doing this work result in new platforms for questioning current or future programs of socially engaged design? Could it point toward new agendas for practice-lead design research? Certainly, an inkling of those possibilities has emerged. Yet, they will have to wait for a later publication.

However, the most rewarding aspect of this work has been the discourse. I consider myself incredibly fortunate to spend so much time talking to young people about their dreams and anxieties for the future. They're concerned about the future of basic needs, such as food and water, amid the threat of ecological collapse. They're worried about the future of politics for a generation that has lost faith in its political and economic institutions. They're deeply concerned about their multiple, deep, and

layered entanglements with social media and the "slipping away" of concrete and authentic personal identities. They wonder—regularly and aloud—who they are and what they are, outside of their various digitally constructed personae and outside the volumes of data used by corporations and advertisers to define them. They worry about relationships at a time when isolation, depression, and suicide are on the rise—all seemingly related to the digital mediation of so many human interactions [TWENGE]. They're concerned about the long-term impacts of being tethered to smartphones, to the web, and to social media. They're worried about the "attention economy" which strives to commodify their every glance, click, tweet, like, or share [MCDONALD]. More generally, they're worried about the future of humanism—their future and the future of their children—against a zeitgeist of technological heroism that seems to say, "let's do it because we can." "It" being self-driving cars, artificial intelligence, genetically modified everything, space tourism, robotic automation of labor, and so on—rather than asking what we really need.

Meanwhile, what I could not have predicted is how much the American—and, indeed, the global—political climate would change in less than two years. During this time, we witnessed an intense rise in nationalist, isolationist, and authoritarian ideological political movements—from Brexit to the 2016 American Presidential election to the Presidential referendum in Turkey to the rise of nationalist parties across Europe. If my supposition at the start of the experiment was that the drivers of widespread social change live in the territories of cultural production—where ideas and identities are produced, transformed, and create conflicts—then these movements seemed to validate that hypothesis. It was also a clear reminder that the idea "anything is possible" carries a negative potential.

Despite my argument for the value of negative thinking, design also requires hope. When making critique, we do so out of the belief that things could be better. Hope is also necessary for democracy. These recent political shifts have demonstrated how deeply divided and divisive our contemporary spaces for political dialogue have become. From the intended consequences of powerful misinformation campaigns to the unintended consequences of social media that have created so many isolated echo chambers, we are experiencing the challenges of networked life. It appears there are many perceived social realities impacting each other, yet totally incapable of interacting positively with one another.

Conducting these studios and sharing in this work with my students, we've learned that the work of creating improved or preferred ways of being is a ceaseless endeavor—a constant struggle of becoming. To keep hope alive, we need to constantly produce new visions for preferred states. To be responsible, we must continue to recognize the tradeoffs or compromises that reality demands of our visions.

Out of this milieu of discussion, ranging from contemporary politics to the social threats of technology to concerns about identity to anxieties about the environment, these students have been able to produce projects that make crisp material argumentation out of their fears and desires for future ways of living. Where will it lead? How will these explorations, conversations, material projections—dread and desire made manifest—work to shape a better tomorrow? I am confident they will show us. Hopefully soon!



Visual Meditation on the Entangled Futures of Design + Medicine

by Christopher Jackson, MD

Christopher Jackson, MD, is developing integrated collaboration between the University of Cincinnati Medical Center and College of Design, Architecture, Art, & Planning.

Through a shared co-creative environment, participants at the intersection of **Design + Medicine** are exploring ways to innovate and improve upon the healthcare system. Cross-pollination of problem-solving philosophies and methods may enable novel sensibilities and tools to emerge. By rethinking **Design + Medicine** as a unique disciplinary intersection, there is potential to reframe some of the most problematic, complex issues facing healthcare.

TruTaste

by Adetokunbo Ayoade

Everyday sensory experiences are increasingly being quantified, calculated and digitally re-presented to us by our devices: how many steps, how many calories, how many heartbeats, etc.. Sensors, data monitoring, preferences, and the mighty algorithm all work—with the promise of objectivity—to tell us all we want to know about ourselves. The sense of taste has been a holdout.

TruTaste proposes a new way to interpret food. By touching the algorithmically enhanced fork into food, embedded sensors read that food's flavor. The indicator panel provides feedback in the form of a visual flavor profile. This flavor profile can be compared and calibrated against a user's profile of preferences. Adults with food allergies or sensitive stomachs can avoid dangerous bites while choosy mothers can make more calculated decisions for their children. For the rest of us, we might learn to become more aware of our personal tastes by interpreting the data image produced by our favorite food types. Will the desire to experiment with food diminish?

right *TruTaste visualizes data profiles for different taste preferences, so you never have to take a risk on unknown flavors again.*



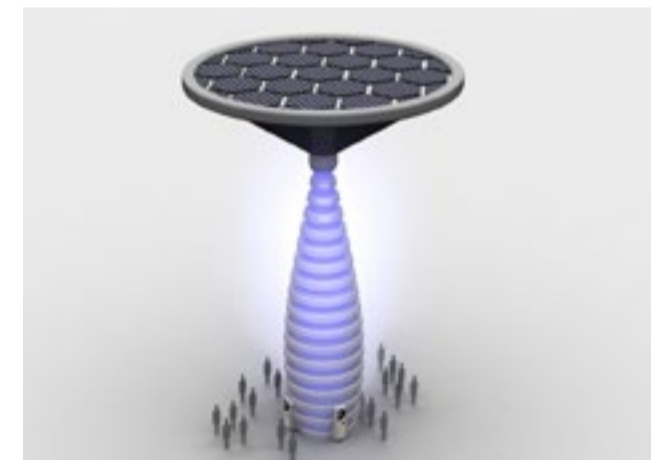
Water Towers

by Mario Cruz

Global water shortages are threatening—and in many places becoming—catastrophic due to several competing forces: rising populations, degrading infrastructures, increased privatization of aquifers, challenges to distribution systems, and more. Meanwhile, in many wealthy cities, these problems seem to take place “somewhere else.” This cultural paradigm sees many cities avoiding the true costs of responsible water stewardship, in particular, not maintaining a potentially renewable resource.

Water Towers proposes miniature water treatment plants that collect, treat, distribute, and monitor water supplies at the scale of the neighborhood. The towers communicate with in-home devices such as faucets and showerheads to connect the supply system directly to the point of use. The water towers themselves become a new site of social interaction—a reminder of the historically communal nature of water as in community wells or public fountains. Community planning on resource management becomes a local and collective activity divorced from the bureaucracies of government control or inflationary cost risks of corporate ownership.

right *Water Towers connects neighborhood water treatment plants to in-home devices, creating awareness of water quantity and quality issues at both the individual and community scale.*



Top Michigan health official, four others charged with manslaughter in Flint water crisis

by Brady Dennis, excerpted from *The Washington Post*, 14 June 2017

The Michigan attorney general's office on Wednesday charged the director of the state's health department and four other public officials with involuntary manslaughter for their roles in the Flint water crisis, which has stretched into its fourth year.

Nick Lyon, director of the Michigan Department of Health and Human Services, also faces a felony count of misconduct in office. While much of the attention in Flint has focused on the lead-tainted water that exposed thousands of young children to potential long-term health risks, the crisis also has been linked to an outbreak of Legionnaires' disease that contributed to at

least a dozen deaths. Those cases ultimately led to the charges Wednesday for Lyon, as well as for the state's chief medical executive, Eden Wells, who faces charges of obstruction of justice and lying to a police officer but is not accused of manslaughter.

The attorney general's office alleges that Lyon was personally briefed on the situation in Genesee County, where figures showed the number of Legionnaires' cases was more than three times the annual average. Lyon allegedly also refused an early offer of help from the federal Centers for Disease Control and Prevention and hindered scientists from researching whether the spike in Legionnaires' cases was linked to the city's switch to water from the Flint River.

Those failures, investigators claim, led to the 2015 death of Robert Skidmore, an 85-year-old man who was treated at McLaren Flint hospital.

For decades, Flint paid Detroit to have its water piped in from Lake Huron, with anti-corrosion chemicals added along the way. But in early 2014, with the city under the control of a state-appointed emergency manager, officials switched to Flint River water in an ill-fated effort to save money.

State officials failed to ensure proper corrosion-control treat-

ment of the new water source. That failure allowed rust, iron and lead to leach from aging pipes and wind up in residents' homes. The ensuing catastrophe exposed thousands of children to high levels of lead, which can cause long-term physical damage and mental impairment.

Since a task force began probing the debacle in early 2016, Schuette has filed more than 50 criminal charges against 15 state and local officials — many of whom now face multiple felonies — as well as civil suits against outside companies that worked with the Flint water system. He and his team have insisted they will continue to follow where the evidence leads.

Former Wayne County prosecutor Todd Flood, who is helping lead the Flint investigation, said the latest charges reflect a “willful disregard of duty” on the part of numerous public servants. He said that while he hopes the charges bring accountability and a sense of justice to Flint residents, there was little cause for celebration.

“There are no winners here,” he said. “We cannot bring back Mr. Skidmore. We can't bring back the lost loved ones that died from legionella. I wish we could turn back the hands of time, but we can't.”

Caravanserai

by Hank Beyer

The combination of cyber security risks and depleting supplies of materials such as rare earth metals and petroleum-based plastics (necessary ingredients for cell phones, computers, and network devices) are threatening the future of our complex global communication network. If this fragile infrastructure collapses, billions of people will be desperate for a more stable alternative to fill their need for sharing on a global scale.

Caravanserai proposes a new breed of portable, durable, and analog light-based communication devices to tap into a soon-to-be-bygone era of mass communication. Cryptography used in condensing telegraph messages throughout the 20th century now serves as a model for condensing common social phrases with this new “photophone” system. Individuals wishing to send a message can locate a network balloon floating in the sky, aim and calibrate the light emitting device, and enter the cipher. Messages must be concise and intentional, but they can still carry the whimsical banality that makes up most social communication today. *Caravanserai* serves as a reminder of the fragility and absurdity of modern communication infrastructures and ultimately questions if the information we’re sharing is worth the costs and complexities of the medium.



above Caravanserai’s proposed “photophone” device provides an analog equivalent to the smartphone—a fix for social media junkies in the wake of a global infrastructural collapse.

XØ

by Erika Frondorf & Anissa Pulcheon

Social media nurture virtual communities around common interests, cultural perspectives, and other social identifiers. While this has generated myriad platforms for bringing people together, it has also created divisive rifts. The ability to build a curated social reality also produces a social bubble, easily removing differing perspectives. As simple as it is to “like” someone else’s status or photograph, it is just as easy to delete, unfollow, and ignore.

XØ speculates a future in which people can bring social media behaviors of directly into physical reality. The project explores an augmented reality interface that allows full control to ignore (or censor) the world as any one person sees fit. The interface learns from each user’s online preferences and translates what she chooses to see or block. As the profile increases in fidelity, the system learns and blocks the people and things that the user dislikes. This warps reality into something much narrower than it is. *XØ* begs the question: what do we gain from the things that initially frighten, annoy, or anger us?

below The augmented reality system in *XØ* brings content filtering features from social media into everyday life. You only have to “dislike” someone once to never see him again.



“We are what we pretend to be, so we must be careful about what we pretend to be.”

Kurt Vonnegut, Jr., *Mother Night* (1961)

How Russian Twitter Bots Pumped Out Fake News During The 2016 Election

by Gabe O’Connor
excerpted from *All Things Considered*, NPR News, 3 April 2017

When he testified before the Senate Intelligence Committee last week, former FBI agent Clint Watts described how Russians used armies of Twitter bots to spread fake news using accounts that seem to be Midwestern swing-voter Republicans.

“So that way whenever you’re trying to socially engineer them and convince them that the information is true, it’s much more simple because you see somebody and they look exactly like you, even down to the pictures,” Watts told the panel, which is investigating Russia’s role in interfering in the U.S. elections. In an interview Monday with NPR’s Kelly McEvers, Watts, a senior fellow at the Foreign Policy Research Institute, says the Russian misinformation campaign didn’t stop with the election of President Trump.

“If you went online today, you could see these accounts—either bots or actual personas somewhere—that are trying to connect with the administration. They might broadcast stories and then follow up with another tweet that tries to gain the president’s attention, or they’ll try and answer the tweets that the president puts out,” Watts says.

Watts, a cybersecurity expert, says he’s been tracking this sort of activity by the Russians for more than three years. “It’s a circular system. Sometimes the propaganda outlets themselves will put out false or manipulated stories. Other times, the president will go with a conspiracy.”

One example, he says, is Trump’s claim that he was wiretapped at Trump Tower by the Obama administration. “When they do that, they’ll then respond to the wiretapping claim with further conspiracy theories about that claim and that just amplifies the message in the ecosystem,” Watts says.

“Every time a conspiracy is floated from the administration, it provides every outlet around the world, in fact, an opportunity to amplify that conspiracy and to add more manipulated truths or falsehoods onto it.”

Watts says the effort is being conducted by a “very diffuse network.” It involves competing efforts “even amongst hackers between different parts of Russian intelligence and propagandists—all with general guidelines about what to pursue, but doing it at different times and paces and rhythms.”

The White House has blamed Democrats for the allegations of Russian interference in the U.S. election, saying the theory is a way to shift the blame for their election loss. But Watts says “it’s way bigger” than that.

“What was being done by nation-states in the social media influence landscape was so much more significant than the other things that were being talked about,” including the Islamic State’s use of social media to recruit followers, he says.

More People Died this Year Trying to Take Selfies than from Shark Attacks

by Mary Bowerman
excerpted from *USA Today*, 23 September 2015

A Japanese tourist reportedly died of a heart attack after falling down a staircase at the Taj Mahal’s Royal Gate while attempting to take a selfie, the BBC reports. Another man recently shot himself while posing for a selfie, and in 2014, a couple fell off a cliff while trying to snap a picture of themselves.

Citing numerous selfie-related accidents, the Russian Interior Ministry launched an information campaign to teach citizens how to take safely a selfie in July.

Noticing a trend in selfie-related deaths, Mashable decided to dig a little deeper. The outlet compared selfie-related deaths to shark attacks, and found more people died while trying to take a selfie this year than were killed by sharks.

In 2015, 12 people died while attempting to take a selfie and eight people died from shark attacks, according to *Mashable*.

The selfie-related injuries and deaths have prompted many places to ban selfie sticks.

Call for a Ban on Robots Designed as Sex Toys

BBC News, 15 September 2015

A campaign has been launched calling for a ban on the development of robots that can be used for sex. Such a use of the technology is unnecessary and undesirable, said campaign leader Dr Kathleen Richardson. Sex dolls already on the market are becoming more sophisticated and some are now hoping to build artificial intelligence into their products. Those working in the field say that there is a need for such robots. Dr Richardson, a robot ethicist at De Montfort University in Leicester, wants to raise awareness of the issue and persuade those developing sex robots to rethink how their technology is used.

She believes that they reinforce traditional stereotypes of women and the view that a relationship need be nothing more than physical. “We think that the creation of such robots will contribute to detrimental relationships between men and women, adults and children, men and men and women and women,” she said.



above Autonomadic Wear’s “Citizen Uniform” is a liveable garment that documents life choices and experiences like a resumé.

Autonomadic Wear

by Aubrey Halloran

Robust physical and social mobility are currently privileges enjoyed by only a few. Born characteristics—such as gender, race, and economic status—often shape educational opportunities which, in turn, shape career paths and other factors of social mobility. At a time of widening education and income gaps, racial tensions, refugee crises, and other human rights issues, true social equity seems scarce and difficult to achieve.

Autonomadic Wear re-imagines survival uniforms as a utopian vision in contrast to a dystopian present. The project speculates on a future in which everyone is born truly equal. After being raised in parallel circumstances, bulky white coats are bestowed upon every new adult as a rite of passage. Citizens wear their choices on their live-in garments for self-reference and sharing with others. When a citizen is prepared to switch social circumstances—something everyone is capable of doing freely and without loss of social standing—they must trade in all belongings and currency for that of a new lifestyle. Each citizen’s uniform carries a unique key that tracks previous decisions and experiences. If all of life’s decisions became outwardly facing, would we still idealize material things?

Scientists can Implant False Memories into Mice

by Melissa Hogenboom
BBC News, 25 July 2013

A team was able to make the mice wrongly associate a benign environment with a previous unpleasant experience from different surroundings.

The researchers conditioned a network of neurons to respond to light, making the mice recall the unpleasant environment.

Reporting in *Science*, they say it could one day shed light into how false memories occur in humans.

The brains of genetically engineered mice were implanted with optic fibres in order to deliver pulses of light to their brain. Known as optogenetics, this technique is able to make individual neurons respond to light.

The mouse is the closest animal scientists can easily use to analyse the brain, as though simpler, its structure and basic circuitry is very similar to the human brain.

Studying neurons in a mouse’s brain could therefore help scientists further understand how similar structures in the human brain work.



Emergency Identity Kit

by Marcella Rose

The online identities people create, test, rehearse, and refine via social media platforms have complicated what it means to find/create/invent a true identity of self. The private and separate self becomes entangled into a desirable (but authentic?) digital persona. Digital personae and relationships begin to replace those in the physical world. The fluid nature of identity—one that can crisscross daily interactions in person and online—creates an interesting new paradox: the harder and more often one tries to craft a unique identity, the more it seems to slip away.

above Emergency Identity Kit provides immediate relief for identity crises induced by the relentless vortex of social media.

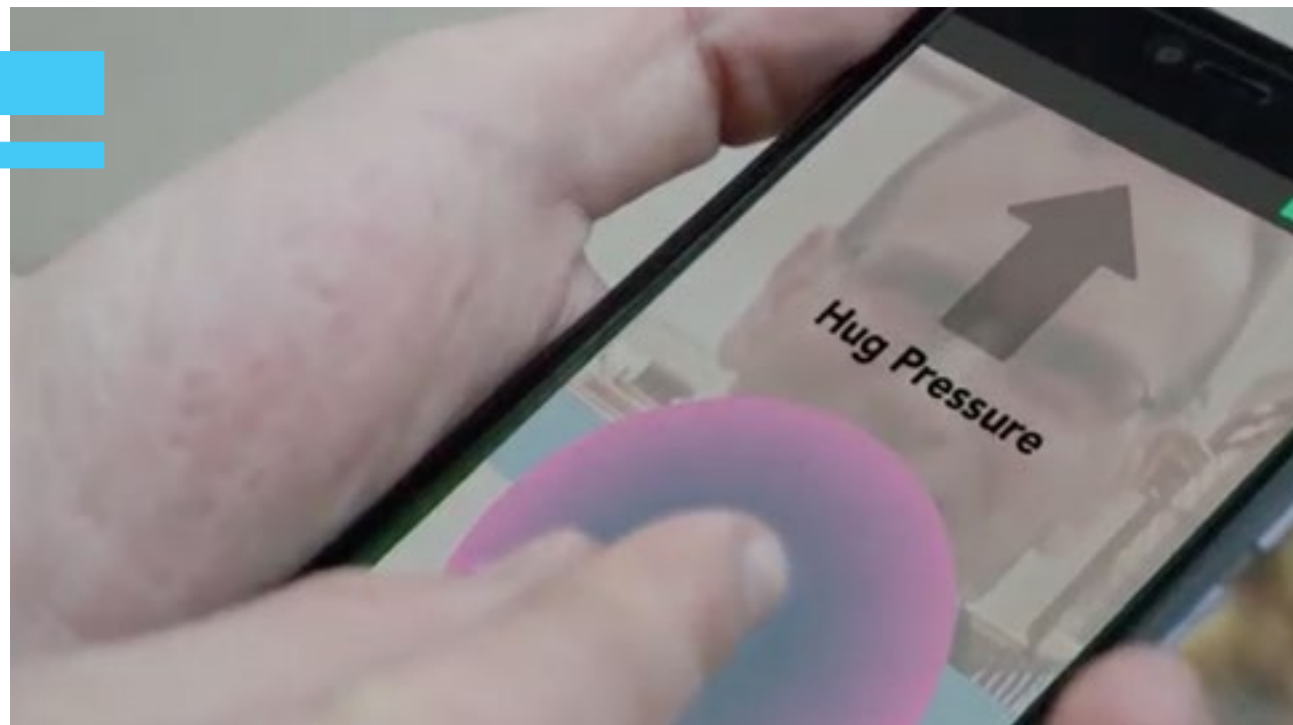
Emergency Identity Kit proposes a kit of personal intervention tools in the event of an identity crisis. These tools prompt a return to and reappraisal of the things that make each of us unique: memories of the past via audio or images, a connection to family or genetic makeup, the sound of one’s own beating heart. This kit intends to revive a sense of self quickly in the event of panic or the need to make an important decision.

Rain Check

by Zachary Nicholas

The invention of the smartphone has changed the nature of everyday experiences, particularly related to interpersonal communications. Over the past decade, we've come to depend so heavily on communication technologies that live in such a close proximity to our bodies that it's hard to imagine life without them.

Rain Check proposes a world in which physical interactions are replicated by a system of haptic technologies that create new modes of remote physical communication. At its core is the idea of Personified Space: an immersive haptic system that provides physical feedback from other people communicating via digital devices. Send a physical touch to remind someone that you're thinking of them. If you can't make it to a loved one's birthday party, just "send a hug" through the haptic interface. Set just the right pressure with your fingertips.



above Within the new tax model of Algorithmic Citizenship, each citizen's selected allocations of tax revenue are used to create a custom "data-image," communicating social values via expenditure.

Project Arcadia

by Alex Bowman

Recent advances in neuroscience are hinting at the possibility of "whole brain emulation." This means mapping the unique arrangement of neurons and synapses that store human memories, then reproducing those memories within a computer. Proponents of whole brain emulation see the potential for the human mind to outlive the human body. Like any massive technological breakthrough, there will surely be complications and concerns until it is safe and secure enough to be open for public consumption.

Project Arcadia speculates on an application of whole brain emulation in which this technology could be simultaneously scaled up and commodified. In this proposal, Google creates a subsidiary called "Project Arcadia" which creates a digital afterlife for your mind to continue after your body has failed. Following an economic model similar to many of today's service subscriptions, the base package can be expanded and customized for additional cost. From custom design of the environment to selecting the quantity of friends (real or virtual) you want to keep around—you decide how you want your mind to spend eternity. But, what kind of commitment are you willing to make in this life for the digital environment your emulated brain will occupy in the next?

Project Arcadia



You will have the option to change these out throughout your life

above Within the new tax model of Algorithmic Citizenship, each citizen's selected allocations of tax revenue are used...

“Even when designers do not explicitly reflect morally on their work, the artifacts they design will inevitably play mediating roles in people’s lives... Designers cannot help but to shape moral decisions and practices. Designing is ‘materializing morality.’”

Peter-Paul Verbeek, *Moralizing Technology* (90)

How Facebook's Tentacles Reach Further than You Think

by Joe Miller

excerpted from *BBC News* online. 26 May 2017

One map shows how everything - from the links we post on Facebook, to the pages we like, to our online behaviour in many other corners of cyber-space that are owned or interact with the company (Instagram, WhatsApp or sites that merely use your Facebook log-in)—could all be entering a giant algorithmic process. And that process allows Facebook to target users with terrifying accuracy, with the ability to determine whether they like Korean food, the length of their commute to work, or their baby's age.

Another map details the permissions many of us willingly give Facebook via its many smartphone apps, including the ability to read all text messages, download files without permission, and access our precise location.

Individually, these are powerful tools; combined they amount to a data collection engine that, Mr Joler argues, is ripe for exploitation.

“If you think just about cookies, just about mobile phone permissions, or just about the retention of metadata - each of those things, from the perspective of data analysis, are really intrusive.”

Facebook, argues Dr Powles, “plays to our base psychological impulses” by valuing popularity above all else.

“What is most striking is the sense of resignation, the impotence of regulation, the lack of options, the public apathy,” says Dr Powles. “What an extraordinary situation for an entity that has power over information - there is no greater power really.”

Carboncopies

excerpted from *carboncopies.org*

Your brain contains the most important thing about you: your mind. We seek to enable your mind to outlive your brain. Advances in neuroscience may make it possible within our lifetimes to record the unique arrangement of neurons and synapses that contain your memories, and back up that information to a computer. While this may sound like science fiction, we believe the road to whole brain emulation is composed of difficult, but tractable, engineering challenges.

Carboncopies is a non-profit foundation that provides support to scientists in fields related to Whole Brain Emulation (WBE). We believe WBE to be the most promising approach to achieving mind uploading based on the current state of science and technology. Whole brain emulation involves accurate computational modeling of neural tissue at the scale of complete brains, as well as development of neuromorphic hardware on which to run simulations of these models. Many advances are required in neurobiology, brain imaging, computational hardware, nanotechnology, and philosophy of mind in order to reproduce the functions of a mind in an artificial substrate.

The Neuroscientist Who Wants To Upload Humanity To A Computer

by Adam Piore

excerpted from *Popular Science*. 16 May 2014

“As a species, we really only inhabit a small sliver of time and space,” Koene said when he took the stage. “We want a species that can be effective and influential and creative in a much larger sphere.”

Koene's solution was straightforward: He planned to upload his brain to a computer. By mapping the brain, reducing its activity to computations, and reproducing those computations in code, Koene argued, humans could live indefinitely, emulated by silicon. “When I say emulation, you should think of it, for example, in the same sense as emulating a Macintosh on a PC,” he said. “It's kind of like platform-independent code.”

The concept of brain emulation has a long, colorful history in science fiction, but it's also deeply rooted in computer science. An entire subfield known as neural networking is based on the physical architecture and biological rules that underpin neuroscience.

Koene, the son of a particle physicist, first discovered mind uploading at age 13 when he read the 1956 Arthur C. Clarke classic *The City and the Stars*. Clarke's book describes a city one billion years in the future. Its residents live multiple lives and spend the time between them stored in the memory banks of a central computer capable of generating new bodies. “I began to think about our limits,” Koene says. “Ultimately, it is our biology, our brain, that is mortal. But Clarke talks about a future in which people can be constructed and deconstructed, in which people are information.”

To direct and accelerate this process, our organization is focused on the following:

- » Encouraging scientific collaboration to create stepping-stone technologies
- » Reviewing scientific literature and media conversations
- » Maintaining technology roadmaps to address engineering challenges
- » Increasing awareness of the Substrate-Independent Mind concept among the general public
- » Hosting conferences and providing informational material

Over the past few years, Whole Brain Emulation has been widely accepted as a valid and important research goal in neuroscience labs, and as a consequence, steady progress towards mind uploading is being made today. If you share our vision and would like to get involved, we encourage you to join our volunteer team!



New American Democracy

by Josh Chamberlain

The financial crisis of 2008 provided the most recent evidence of the destructive and dispossessing forces immanent in the American political economy. In the decade since, the United States has witnessed increased—and rising—disparities of wealth and health. Those at the very bottom of economic and social hierarchies are the most vulnerable. In particular, poverty and homelessness are often treated as criminal behavior.

New American Democracy imagines a future scenario in which millions of disillusioned, disenfranchised Americans undertake a massive urban exodus. They flee the cities to create smaller and more egalitarian communities in which they can practice direct democracy—free from the political oligarchy and corporate influence of the system they left behind. This new social model requires new tools to ensure all voices can be heard. The “rhetoric neutralization device” is a natural language translator. It transforms the speaker's words by removing any language that suggests social hierarchy or dominance. Meanwhile, without representatives, every political issue requires a direct vote. Each citizen uses a device to collect and tabulate the constant and real-time voting necessary for truly collective decision-making



above New American Democracy's voting tool proposes a constant real-time feedback system for citizens to engage in direct democracy for every collective decision to be made, every single day.

Notes on Federalism

by James Madison

excerpted from *The Federalist Papers*

To a people as little blinded by prejudice or corrupted by flattery as those whom I address, I shall not scruple to add, that such an institution may be sometimes necessary as a defense to the people against their own temporary errors and delusions. As the cool and deliberate sense of the community ought, in all governments, and actually will, in all free governments, ultimately prevail over the views of its rulers; so there are particular moments in public affairs when the people, stimulated by some irregular passion, or some illicit advantage, or misled by the artful misrepresentations of interested men, may call for measures which they themselves will afterwards be the most ready to lament and condemn. In these critical moments, how salutary will be the interference of some temperate and respectable body of citizens, in order to check the misguided career, and to suspend the blow mediated by the people against themselves, until reason, justice, and truth can regain their authority over the public mind? What bitter anguish would not the people of Athens have often escaped if their government had contained so provident a safeguard against the tyranny of their own passions? Popular liberty might then have escaped the indelible reproach of decreeing to the same citizens the hemlock on one day and the statues on the next.

Hood Politics

by Kendrick Lamar

excerpted from the song *Hood Politics*

The streets don't fail me now, they tell me it's a new gang in town From Compton to Congress, it's set trippin' all around Ain't nothin' new but a flow of new *DemoCrips* and *ReBloodlicans* Red state versus a blue state, which one you governin'? They give us guns and drugs, call us thugs Make it they promise to fuck with you No condom they fuck with you, Obama say, "What it do?" ...

above New American Democracy's "Rhetoric Neutralization Device" breaks down verbal rhetoric previously identifiable as the jargon of a stratified social hierarchy. Finally, you can talk to—and understand—people different from you.

“... if design is merely an inducement to consume, then we must reject design; if architecture is merely the codifying of bourgeois models of ownership and society, then we must reject architecture; if architecture and town planning is merely the formalization of present unjust social divisions, then we must reject town planning and its cities... until all design activities are aimed towards meeting primary needs. Until then, design must disappear. We can live without architecture.”

Adolfo Natalini, *Superstudio*, 1971

Unfulfilled

by Jami Miles

While most teenage risk factors—drinking, drug use, teenage pregnancy—have decreased in recent years, the first generation of internet natives is also showing sharply higher rates of depression, suicide, and isolation. The market for anti-depressant medications has skyrocketed, and neuroscientists announce new breakthrough insights on the human brain almost daily. More specifically, audio researchers are investigating sound wave patterns that can produce dopamine and serotonin—hormones that affect happiness—in human brains.

Unfulfilled proposes wearable auditory devices that generate dopamine in the brain through customized sound-waves. At first, effects are mild to ease people into using the device. But in time, they become much stronger, and people lose touch with themselves and the world around them. The devices create more than a false sense of happiness—they create a numbness. Not much will be needed in a society where people float through life, no longer worried about the clothing they wear or the food they eat. They consume whatever is offered to them. Depression is merely masked. The capacity for critical and thoughtful exchange is diminished. But who has the desire to worry about that? Conformity. But who has the time to really worry about that?



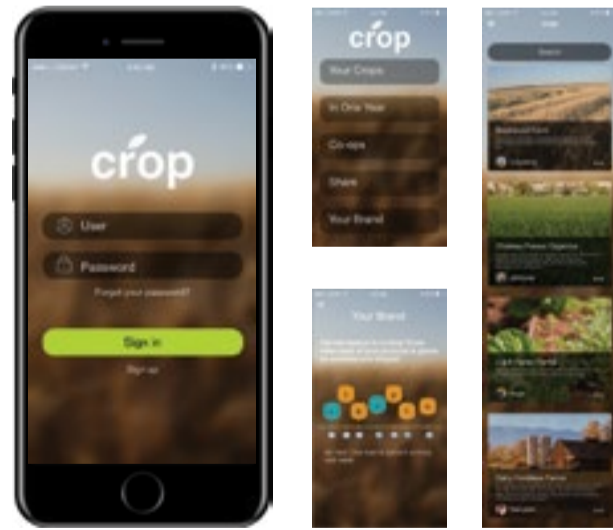
above *Unfulfilled* questions whether increasingly customized forms of anti-depressants—such as unique audio patterns that produce dopamine—will ultimately make us happier or just numb.

CROP

by Alberto de laza

Amid the digital revolution of contemporary living, the human relationship to food is being reconsidered in multiple and sometimes contradictory ways. Genetic modifications and 3d "printing" of edible materials are reshaping the very definition of food. Vertical farming, precision agriculture, and robotics are making food production processes more efficient and more automated. Meanwhile, grocery shoppers and restaurant-goers are increasingly seeking organic and locally sourced items, farmers' markets are popping up in cities everywhere, and the "slow food" movement attempts to reclaim a lost connection to the very stuff that sustains and nourishes us.

CROP proposes a new collaborative agricultural model that considers these intersections in light of the burgeoning "sharing economy." Urban customers' food needs—as well as preferences on the means of production—are crowd-funded by co-operative owners working with farmers around the country. Each member in the co-operative can shape decisions about quantities and types of crops, the use of pesticides, or more novel farming methods. This creates direct connection to the agricultural process before each harvest is delivered. Meanwhile, farmers radically decrease business risks by sharing ownership in the process and capital ownership of land and equipment.



above CROP is the smartphone solution to building long-distance, multi-stakeholder farming collectives. Work with farmers across the country (or around the world) to cooperatively determine your specific preferences for the food you'd like to have grown, harvested, and shipped to you.

Researchers Identify Brain Region that Generates Optimism Bias

by David Cornish
excerpted from *Wired*, 26 September 2012

A team of University College of London (UCL) neuroscientists and psychologists has discovered that not only does the brain produce an optimism bias for good news, but that such a bias could actually be harmful for our decision-making capabilities. "Humans form beliefs asymmetrically; we tend to discount bad news but embrace good news," the UCL report explains. "This reduced impact of unfavorable information on belief updating may have important societal implications, including the generation of financial market bubbles, ill preparedness in the face of natural disasters, and overly aggressive medical decisions."

The research was led by UCL's Dr Tali Sharot, who specializes in understanding how people form judgments and actions. In a report published in 2007, Sharot discovered that humans tend to expect positive future events, even when there is no evidence to support such expectations—if it improves your life, or just makes you feel good, you're more likely to believe it will happen despite what the statistics tell you.

Using functional magnetic resonance imaging (fMRI), Sharot identified that a region of the brain called the inferior frontal gyrus (IFG)—a frontal lobe with both left and right divisions—was crucial to a person's ability to update their beliefs with new information. The latest study set out to establish if the formation of a person's beliefs could be altered by selectively manipulating different regions of the IFG. To test the hypotheses that the IFG was involved in the formation of belief, Sharot and her research group used a transcranial magnetic stimulation (TMS) to disrupt the brain functions of three groups of volunteers. One group would have their right IFG disrupted, another their left IFG, and the final group an unrelated control area of their brain.

With the different regions of their brain effectively "shut off" by the TMS, the researchers asked the volunteers to estimate their chances of experiencing 40 different nasty fates, from Alzheimer's disease to robbery. Having recorded the test subject's responses, the researchers presented the participants with the actual likelihood of each of the 40 unpleasant events happening to them, thus modifying their knowledge of the subject. The volunteers were then asked to recalculate their estimates.

Sharot believes that her work could find clinical applications, targeting the right brain area to encourage people to be more explorative in life, or reduce a person's natural tendency to be anxious or stressed.

The UCL team are yet to speculate on the commercial aspects of such an application. *Wired.co.uk* is reminded of the Penfield mood organ of Philip K Dick's novel *Do Androids Dream of Electric Sheep?*, an electronic device that could stimulate different emotions in users by simply dialling in a number. Creating or removing an optimism bias could have interesting consequences for people taking on various activities, from assessing stock market moves to deciding on whether to go white water rafting.

Serotonin: Scientists Unmask the Dark Side of the 'Happy Hormone'

by Ian Johnston
excerpted from *The Independent*, 24 August 2016

It is known as one of the "happy hormones" and its discovery ultimately led to the development of what were hailed as depression 'wonder drugs' like Prozac. But, despite being prescribed as a treatment for anxiety, these 'SSRI' drugs designed to boost levels of serotonin in the brain had a strange and mysterious side-effect. In some cases, they initially made people feel more anxious or even suicidal. Now a new study, published in the journal *Nature*, has found that, contrary to the popular view serotonin only promotes good feelings, it also has a darker side. Artificially increasing these neurons' activity also appeared to make the mice anxious.

Professor Thomas Kash, one of the researchers, said: "More generally, this finding gives us a deeper understanding of the brain networks that drive anxiety and fear behaviour in mammals." According to the NHS website, SSRIs are "usually the first choice medication for depression" because they "generally have fewer side effects. ... These can be troublesome at first, but they'll generally improve with time," it says. It says the "common side effects" of the drugs can include: "Feeling agitated, shaky or anxious; feeling or being sick; dizziness; blurred vision; low sex drive; difficulty achieving orgasm during sex or masturbation; in men, difficulty obtaining or maintaining an erection."

“Suppose we put an end to such speculations: total stagnation would ensue. For we act only under the fascination of the impossible: which is to say that a society is incapable of generating—and of dedicating itself to—a utopia is threatened with sclerosis and collapse.”

E. M. Cioran, *History and Utopia* (80)



Alternet

by AJ Schriml

While currently relegated to a few specific use cases, Virtual Reality seems poised to succumb all current forms of media into a singular, seamless experience.

Alternet imagines a near future in which Virtual Reality offers customized and continuous media immersion to the extent that one's physical surroundings become irrelevant. There are thousands of live streams from news and entertainment sources, real-time celebrity tracking, the trending "V-Casters" (VR podcasts), sporting events and concerts to be viewed from any perspective, and fully immersive gaming. Most of these platforms offer continuous and real-time rating platforms, making your preferences and presence in these experiences all the more "real." *Alternet* positions this individually-tailored media sphere within the specific social context of a family home. Domestic scenes are radically altered as each family member's attention is drawn elsewhere through the VR system. Each room of the house becomes an invisible backdrop to countless virtual experiences—none of which are shared by the family members. Even the kiss goodnight becomes a chose that must share attention with many more engaging virtual possibilities.

P.P.T: Personalized Public Transport

by Dongxue Jia & Yutong Wu

Globally, cities are actively upgrading transit infrastructures and seeking smarter urban planning related to transportation. Increasing populations, increasing access to (and desire for) mobility, and the variety of new working-commuting models all add pressures and complexity to such planning. These forces suggest the need for increasingly modular and flexible transportation systems that allow for multiple modes (and distances) of travel without the requirement for multiple unique infrastructures.

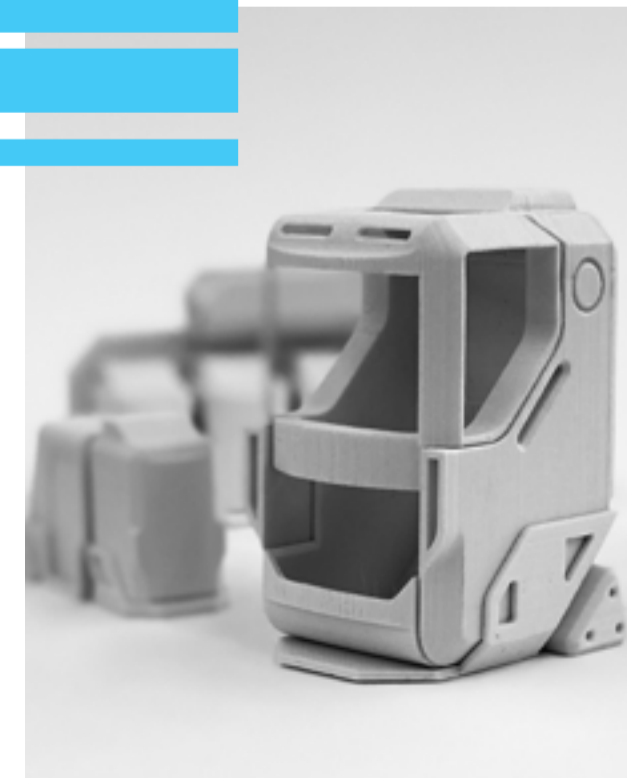
PPT proposes a highly adaptive transportation system that merges the basic desires of car owners with the interests of public transportation and energy efficiencies. *PPT* is friendly to a diversity of transit cultures as it offers several options to travel with multiple levels of social interaction in one seamless system. Each user's "pod" provides a consistent and customized personal environment that can "plug-in" to a variety of transit modes—from short-distance, intra-city individual travel to inter-city or even international group travel.

right The PPT system operates at different speeds, scales, and modes of transit with a core modular unit—a personal space you never leave.



left Uber's autonomous vehicles may still be in testing mode, but they are already a common sight in American cities.

above James Bridle's Autonomous Trap 01 brilliantly demonstrates how simply a super-sophisticated technical object like an autonomous vehicle can be tricked by a clever human. The car's sensors know it can cross a dashed line but not a solid line. Gotcha! [jamesbridle.com]



WHAT DO WE WORRY ABOUT WHEN WE TALK ABOUT THE FUTURE ?

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