Future

proof

Futureproof

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"The unique feature that sets mathematics apart from other sciences,
from philosophy, and indeed from all other forms of intellectual discourse,
is the use of rigorous proof. It is the proof concept that makes the subject
cohere, that gives it its timelessness, and that enables it to travel well."
—Steven G. Krantz, "The History and Concept of Mathematical Proof"

"I have already told you of the sickness and confusion that comes with
time travelling." —H.G. Wells, *The Time Machine*

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The first potential risk of trying to curate in 2017 an exhibition of art-
work and artifacts related to imagining futures is that the turnaround
time from speculation to reality seems to be getting shorter and
shorter. To appropriate and update a hoary William Gibson quote, the
future is here, and it's distributing itself at an alarmingly accelerated
rate. For much of this year I've heard science fiction writer friends
complain that their imagined worlds can't keep up with developments
in our own. One of them discovered an editorial titled "Hear Me Out:
Let's Elect an AI President" a few days before a deadline to finish a
short story about the executive branch of the United States being
replaced with an AI. This hour's dystopian narrative becomes the
next's *Wired* thinkpiece-as-product placement.

But what is happening now feels less like an acceleration toward
the future than like one toward the recent past. Four years after a
friend told me that the tech bubble was likely to burst in the next year
and a half, it seems as if the future is approaching faster than ever—
or, to be precise, a version of the future heralded a few decades ago.
2017 is the twenty-fifth anniversary of the publication of *Snow Crash*,
the fifteenth anniversary of the release of the film *Minority Report*, and
the tenth anniversary of the iPhone (arguably the greatest contributing

factor to how life is lived here in the accelerated future tense). So many of the manifestations of "the future" in (white, Western, mainstream) pop culture remain under the art direction of Hollywood circa 2002.

This future-inertia is, to some extent, by design. In an article about the weekend-long summit in which a group of futurists and technologists designed the *Minority Report* vision of the future for Steven Spielberg, consultant Peter Schwartz noted, "Steven and I talked specifically about creating a new set of vernacular images of the future. Before then, the only images that anybody ever referred to were either *Blade Runner* or *2001*. It was a very dark vision. Our goal was to get on screen a really amazing vision of the future that people would talk about. We achieved that overwhelmingly."[1]

Schwartz, like the other *Minority Report* consultants, is part of a larger political economy of The Future whose origins could be traced as far back as the Oracle of Delphi but whose shiny, modernist beginnings (perhaps more relevant to understanding the culture that brought us *Minority Report*) track with the emergence of the Cold War and the growth of the RAND Corporation. Most histories of the modern corporate futurist field locate its origins in the discipline of "operations research", a term as conveniently vague as "futurism." Operations research emerged during World War II from US military logistics research using nascent analog and digital computing technologies to make more informed decisions grounded in computational analysis and statistical modeling. The brightest minds of World War II operations research would go on to leadership roles at the RAND Corporation, a quasi-governmental private think tank created in 1948 to provide research and development support to the United States military. At RAND, operations research gave way to two major developments that would become integral to the pursuit of rational futures: game theory and scenario planning. Both were integral to the development of Cold War-era military simulations and war games. Of the two, scenario planning employs more narrative interpretation, and is generally expected to be attuned to the subtleties of here and now rather than relying only on calculations and archetypes.

The government and military approaches to scenarios would go on to shape the field of corporate scenario planning, most notably the Shell Oil scenarios team. Formed in 1965, Shell Scenarios continues its work of future visioning to this day. Its reports are full of cautions about the limitations of scenarios, and insist that they are not "predicting the

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1   "Inside Minority Report's 'Idea Summit,' Visionaries Saw the Future." Wired. June 21, 2012. Accessed July 01, 2017. https://www.wired.com/2012/06/minority-report-idea-summit/ .

future" per se so much as laying out some reasonably assessed possibilities. Modest protestations aside, the Shell team is among the most written about examples of in-house corporate futurists in part because of the fact that the team largely validated its existence when one of its scenarios "predicted" the 1973 Middle East oil embargo.

It's the spirit of Shell Scenarios that drew me to *Climate of Concern* (1991), an in-house film on climate change produced by Shell and rediscovered twenty-five years later by journalists at Dutch news site De Correspondent. While *Climate of Concern* wasn't produced by the Shell Scenarios team, it certainly comes across as an extension of the thinking behind their work. The film provides a startlingly detailed overview of the real threats of climate change as a result of carbon emissions, describing a future of "not a steady and even warming overall, but alterations to the familiar patterns of climate, and the increasing frequency of abnormal weather." Although the film cautions that the evidence from models remains uncertain, "Many think that to wait for final proof would be irresponsible. Action now is seen as the only safe insurance. But what should that action be?"[2] For Shell, "action" apparently meant twenty-five more years of drilling, oil production and exploration, and lobbying against climate regulations. Although Shell is far from the only petroleum giant long cognizant of— and complicit in—accelerating climate change, as a company it is uniquely known for their use of scenario planning and project a public image of future-forward thinking through artifacts like *Climate of Concern* and their scenario reports. But Shell's end goal isn't to use scenarios and futures research to avert the disasters of climate change. It's to navigate a course toward profit in spite of them. There's a reason so much of the work of corporate futures and scenario planning goes into a discipline known as *risk assessment*.

For *Everything Ends in Chaos*, Ilona Gaynor deconstructs the realm of corporate risk assessment in an effort to model and reverse engineer a "black swan event". First coined in its current sense by statistician and essayist Nassim Nicolas Taleb in 2001, the term refers to unexpected and unpredicted events that reshape the course of history and that, only in hindsight, might be understood as inevitable. The iPhone (an amalgam of existing emerging technologies unified by a singular design vision and supply chain somehow not predicted by science fiction or industry) is an example of a black swan, as is the collapse of the Soviet Union. The expression itself goes back to a line

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2 *Climate of Concern*. Film. Writer and producer Douglas Gordon. UK and Netherlands: Royal Dutch Shell, 1991.

from the Latin poet Juvenal (*rara avis in terris nigroque simillima cygno* —"a rare bird on earth and very much like a black swan"), written at a time when black swans were thought not to exist (nor, apparently, virtuous women, as that's actually what Juvenal was comparing to black swans). Following their first documentation by Dutch explorers in 1697, "black swan" (commonly used, along with "rara avis," for individuals who defy expectation) also became a way to describe outlier events that undermined common understanding.

Working in 2011, Gaynor was interested in the black swan of the 2008 global financial crisis and the infinite number of small-scale grifts that accumulated to made such a byzantine catastrophe possible. *Everything Ends in Chaos* contains similarly intricate complexities, connections, and financial assessments researched to the point of meticulous absurdity (Gaynor remains the only artist I know who consults hedge fund managers and hires private detectives to plan kidnappings as part of her artistic practice). Through this exhausting inventory of research artifacts and cinematically breathtaking scenarios, Gaynor grounds speculative design (a discipline unfortunately as vague and hyped as scenario planning, mostly associated with Royal College of Art graduates and a fascination with architectural renders) squarely in the realities of economic speculation. Her scenarios demonstrate the extent to which fissures, chaos, and collapse are inherent in, not deviations from, networked globalized finance.

In engineering, industrial design, and architecture, *futureproofing* typically refers to creating something in such a way as to minimize or slow down its technological obsolescence. Techniques for futureproofing vary, from designing buildings that are sturdy enough to withstand nuclear fallout to creating open technical protocols that can adapt in order to accommodate new technologies. In the realm of the corporate scenario researcher and Gaynor's risk analysts, the future may not always be predictable but it can certainly be contained, plotted, modeled, and conquered. The scenario planner futureproofs by writing proofs—rhetorically breaking down the constituent parts of the future with a performative mathematical precision, turning conjecture into irrevocable truth.

This isn't to say that top-down efforts to govern the future through information flows and to define the future are only the domain of military think tanks and multinational corporations. The never fully-realized Project Cybersyn offers a reminder of an alternate path that such futureproofing might have taken. Begun in 1971 to organize and manage Chile's economy under Salvador Allende's new democratically elected socialist government, Cybersyn was an ambitious undertaking. Years before the ARPANet sent its first packet-switched transmission, Cybersyn's architects pursued a telex-driven data network

to track worker absenteeism, the price of cotton, and other economic indicators. Using a computer system called Cyberstride, government bureaucrats and factory workers alike would democratically plan goals and make data-driven decisions for the economy.

One of Cybersyn's chief architects was British cyberneticist and consultant Stafford Beer. Cybernetics didn't emerge directly from RAND, but many of its pioneers had connections to the think tank (and to MIT, arguably its east coast academic counterpart). John von Neumann, an early influence on cybernetics, consulted for RAND in 1948 and contributed to the development of game theory. He also knew and worked with RAND's Herman Kahn, who is largely credited with the development of scenario planning. But where many of the preferred RAND methods of technical systems and forecasting tools advocated a top-down, command and control-heavy logic, cybernetics appealed both to Beer and Allende's socialist Popular Unity government precisely because of its emphasis on the possibility of decentralized and, theoretically, more democratic control. Whether it actually did or could have achieved these ends is hard to say; before it ever really got off the ground, Project Cybersyn ended along with the Allende government following a CIA-backed coup on September 11, 1973. Efforts to undermine Allende's government over the course of the two preceding years had already impeded the development of Cybersyn. What little of the project's technology had been implemented by 1973 was often clunky and tedious. In this sense, maybe it did have the potential to be a truly democratic vision of futureproofing (while tedium and clunkiness are not core principles of functioning democracy, they are frequent features).

The most famous and familiar images connected to Cybersyn are of the Operations Room ("opsroom"). Since the opsroom was the central interface for assessing Cybersyn data, every decision about its design served its technocratic socialist vision—or was supposed to serve that vision. Only one opsroom was ever built, it was never actually operational, and it was ultimately destroyed by the Pinochet government. What remains of the opsroom are sketches and designs created by industrial designer Gui Bonsiepe. In these, seven (a number selected to allow clear voting majorities) white Tulip chairs in a circle (a format selected to encourage democratic participation) allowed workers, managers, and bureaucrats to view screens of economic data (and, thanks to built-in containers in the Tulip chairs, apparently also sip whiskey and smoke–for all its hexagon-heavy futurist aesthetics, the opsroom retained some of the late 1960s boardroom vibe).

"What are we offered by way of hope? Models, plans, blueprints, wiring diagrams." —Ursula K. LeGuin, "A Non-Euclidean View of California As a Cold Place to Be"

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The second risk of a futures exhibition in 2017 is falling into (or being perceived as falling into) the realm of escapist fantasy. Why talk about the city of tomorrow when the city of today is on fire?

Such a critique might be made of the Waste Isolation Pilot Plant, one of the U.S. government's largest initiatives to support and fund speculative fiction disguised as a national security and energy policy issue. In 1979, Congress designated the WIPP site outside of Carlsbad, New Mexico as "a research and development facility to demonstrate the safe disposal of radioactive waste resulting from defense activities." One of the unintended consequences of the short-term peace afforded by nuclear deterrence was the long-term problem of storing and disposing of massive quantities of nuclear waste in a location that could remain secure and undisturbed for tens of thousands of years—the typical half-life of the radioactive material in question. Alongside WIPP's day-to-day maintenance and storage concerns, there were also long-term ones. Designing a structure that can function ten thousand years into the future is one thing, but designing one whose function remains legible across that timespan is quite another. The WIPP needed warning signage to prevent humans from inadvertent exposure to radioactive waste, and they needed that signage to remain meaningful through its half-life. But writing systems, which go back 5000 years to the ancient Sumerians, have already changed dramatically (as have the languages they represent) in a time-span shorter than transuranic half life, and are likely to continue changing.

Recognizing this dilemma, the Department of Energy commissioned a series of reports on and sketches of signage that could conceivably work as a method of communication for ten thousand years. Defining what kind of linguistic and visual cues might work for future civilizations also required hypotheses of how those civilizations might be structured, and in these scenarios the WIPP futures reports veer back into RAND Corporation territory (One of the consultants on the WIPP project, Theodore Gordon, worked at RAND for several years.)

The narratives of WIPP step out of the urgencies of real-time crisis, where fictional futures can't keep up, and enter into the weird romance of deep, geologic time. But this earnest effort to prepare for a future timeline in which our present moment is an insignificant speck can be reasonably critiqued as a short-changing of that present, particularly in the context of a project like the WIPP. Perhaps the challenge facing humanity is not only how to make effective signage to protect future generations from nuclear waste and find a place to store that waste, but also how to create a society that doesn't *produce* nuclear waste to begin with, or that finds a method

of processing nuclear waste without having to resort to centralized burial. What futures are presumed to be a fait accompli by the very creation of a place like the WIPP, or by the current regime's efforts to revive a similar initiative for nuclear waste storage in Nevada's Yucca Mountain?

But there's also a paradoxical and necessary optimism to these far-future visions. While the form and structure of future civilizations is not set, in WIPP's geologic timeline humanity still persists—which is far from a guaranteed proposition, and one that the 24-hour news cycle tends to narrate as an increasingly unlikely one. When the myopia and brutality of the present moment feel claustrophobically inescapable, escapism isn't a method of denial so much as a survival strategy. Such futures are a leap of faith, an insistence that despite the grimness of the present moment *there is a way out*, even if the only way out is through.

Salome Asega and Ayodamola Okunseinde's *Iyapo Repository* exists somewhere past that way out in the timeline. It's an archive literally in the future perfect for objects that will, at some point in the future, become historical artifacts. Through a series of workshops and events, the Repository's archivists invite the public to imagine tools and technologies that reinforce an affirmative and tangible future of people of African descent. Asega and Okunseinde chose the form of a future archive carefully, appropriating the form as a challenge to the long and fraught history of Western archives and museums misappropriating and erasing the history and culture of African diaspora. In addition to written documentation and sketches from workshops, the Repository includes a selection of physical artifacts fabricated by Asega and Okunseinde, which extend the imaginings of workshop participants into technically functional objects. Not satisfied with the fantasy of possible futures, the Iyapo Repository insists this future has already happened and offers both a comprehensive archival paper trail and tangible artifacts as proof. In the face of present-day existential threats to the culture, identity, and lives of black Americans, such envisioning and inhabiting of the future's archives seems far from empty escape.

> "…perhaps we need another scenario, or maybe a thousand grubby little ones, that might never make it to the high apocalyptic. Our condition and the condition of the future are wrapped up together—when it comes to the environment, we are all in this together." —Peter Galison, "The Future of Scenarios: State Science Fiction"

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The final risk faced in working with and on futures in 2017 is perhaps better understood as the risk inherent in any action in 2017: why do *anything* when it seems increasingly unclear that there necessarily will *be* a future? Why look to the stars when the earth is caving in? Working on this show, I feel like a fraud insisting on the possibility of futures and speculative practice when I can barely see past the next twenty-four hours. I procrastinate and agonize over this catalogue essay (*hi, Matthew*) because I don't really know if I'm going to make it far enough to see the exhibition manifest.

In the weeks after the election I receive emails from nonprofits, from arts organizations, from advocates and activists insisting that The Work (whatever that work may be, but usually that of cultural engagement), matters *now, more than ever*. This insistence on the present moment as a perpetual *now, more than ever* persists well into the first 100 days, then on into the next 100 days, and it starts to seem inconceivable that *now* will ever lose that sense of *more than ever* urgency. I'm ambivalent about this transformation of time; while I appreciate the idea of living grounded in the present moment, that doesn't really feel like what's happening. The *now* of *now, more than ever* operates in the future tense, not the present—the subtext remaining that we must act *now, more than ever* before it's too late.

But maybe it *is* too late, or has been too late for a longer time than anyone would like to admit. Perhaps the path to *now more than ever* began with the absence of imagination to insist that *now* is *as always*. By insisting on *now* as a time of triage and never as a time for immanence or imagination (and because we are rarely able to see that it can be both of them at once), we have already lost ground.

Borrowing a phrase from Franco "Bifo" Berardi, the late Mark Fisher describes this *now, more than ever* paralysis as "the slow cancellation of the future"—that "increasing sense that culture has lost the ability to grasp and articulate the present. Or it could be that, in one very important sense, there is no present to grasp and articulate any more."[3] In the decades after the fall of the Soviet Union (the false-dichotomy "alternative" to capitalism) in which every gesture of resistance is readily subsumed by markets and states, Fisher argues that we're haunted not by the spectre of communism but instead by "the spectre of a world in which all the marvels of [technology] could be combined with a sense of solidarity much stronger than anything social democracy could muster."[4]

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3   Fisher, Mark. *Ghosts of My Life: Writings on Depression, Hauntology, and Lost Futures*. "00: Lost Futures", para. 15. Washington (USA): Zero Books, 2014.

Trying to build alternative futures is often a process of facing that haunting spectre: finding life or potential by invoking and living with the ghosts and weird spirits of a world that could have been. Often, the interface for visiting these particular ghosts isn't the medium or Ouija board but the archive, which is partly why so many of the works in *Futureproof* take on an archivist, museological tone. The alternative archive is historical evidence of a shift in the timeline, its own kind of proof that another timeline is not only possible, but has already happened, is already happening and emergent before us.

In Morehshin Allahyari's ongoing project *She Who Sees The Unknown*, that already-present alternate timeline unfolds through the construction of an archive and a series of ritual investigations into the dark goddesses, demons, and occult female jinns of pre-Islamic Middle Eastern history. Allahyari uses the term "re-figuring" as a way to describe her feminist approach to deconstructing myth, history, and colonialist appropriation of both. In addition to a rhetorical re-figuring of these female figures through written narratives and reading their histories onto current political conditions, she produces literal reconstruction of the figures with 3D modeling and printing tools, then ritually "re-figures" them through 3D scanning processes.

As 3D scanning and printing increasingly find use in the always problematic realm of Western "cultural heritage" preservation (most recently seen in 3D printed reconstructions of the ruins of Palmyra dropped in cities like New York and London with little to no reference or connections drawn to the present-day destruction and ruins in Syria *right now*), Allahyari applies them in the service of an alternative mythology and culture, one that embraces the monstrous, the uncertain, and the chaotic. Weirdly, through projects like *She Who Sees The Unknown* and *Additivism* (a collaboration with Daniel Rourke), it's become hard for me to imagine these tools being used for anything *other* than a challenge and critique of digital colonialist imperatives. In this respect *She Who Sees The Unknown* is, ironically, a much more literal manifestation of the black swan events Gaynor references in *Everything Ends in Chaos*: a reminder that alternatives to dominant ideology are only outliers until they're made manifest and brought to our attention.

History has a tendency to flatten black swans into inevitabilities. In the summer of 2014 I spent an afternoon in Berlin at the Stasi Museum, which inhabits the former headquarters of the East German

4   Fisher, Mark. *Ghosts of My Life: Writings on Depression, Hauntology, and Lost Futures*. "00: Lost Futures", para. 43. Washington (USA): Zero Books, 2014.

secret police. As I peered into the piles of papers that the GDR had been trying to destroy when activists stormed the Stasi headquarters in 1990, I naïvely thought that the museum represented a uniquely German tendency toward sober reflection on and acknowledgment of the horrors of its history. But among the many less-than-pleasant landmarks of German history, the Stasi Museum is actually rare in its rapid turnaround time from operational agency to institutional memory. In *The Texture of Memory: Holocaust Memorials and Meaning*, James E. Young observes that while many Holocaust memorials were created shortly after the war by survivors (at the site of the Warsaw Ghetto Uprising, at Bergen-Belsen, at Auschwitz), official state memorials and museums took decades longer to emerge. The most salient counterexample to the rapidly historicized Stasi Museum is the House of the Wannsee Conference, where high-ranking Nazi officials planned out the Final Solution in 1942. It formally opened as a museum to the public in 1992, eighteen years after the suicide of Holocaust historian and survivor Joseph Wulf. For years, Wulf had unsuccessfully tried to convince the German government to turn the house into a museum. Today, an exhibition on Wulf's life and death adjacent to the museum includes a note in English that Wulf's vision could only be realized after "the parameters of the politics of memory began to change." This lag in commemoration can be read, in part, as a consequence of the fact that memorializing difficult moments in a nation's history is often perceived as counterproductive to the driving goals of nationbuilding. As Young observes:

> "The matrix of a nation's monuments emplots the story of ennobling events, of triumphs over barbarism, and recalls the martyrdom of those who gave their lives in the struggle for national existence—who, in the martyrological refrain, died so that a country might live...[memorials] suggest themselves as indigenous, even geological outcroppings in a national landscape; in time, such idealized memory grows as natural to the eye as the landscape in which it stands. Indeed, for memorials to do otherwise would be to undermine the very foundation of national legitimacy, of the state's seemingly natural right to exist."[5]

Without dedicated effort to make national reckoning part of cultural heritage, wrongs committed by and in the name of nations fester across generations. In the Stasi Museum, I tried to imagine the United States taking on any part of its history with the same degree of blunt

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5   Young, James E. *The Texture of Memory: Holocaust Memorials and Meaning*. New Haven and London: Yale University Press, 1993. p.2

honesty and responsibility to future generations. How would we commemorate the black sites of the War on Terror? I tried to describe this idea to a journalist acquaintance who'd been to Guantanamo multiple times. She declared it impossible.

Two years later I saw a satellite exhibition from Ian Alan Paul's Guantanamo Bay Museum of Art and History, which manages to articulate that impossible future mostly through its stalwart representation of past and present. The artifacts and documents included in GBMAH exhibitions are real items from our timeline, real documentation of what's happened at the prison. While there are other archival initiatives about Guantanamo by human rights groups and legal scholarship institutions, to present that archive in the register of museology—to suggest that the prison and its horrors exists in the past tense—gives those artifacts a more insistent, demanding politics than the mournful tone of oral histories. The museum is less a speculation and more a promise to a future or a timeline in which the United States is capable of facing the grim and cruel parts of its own history.

> "People are always shouting that they want to create a better future. It's not true. The future is an apathetic void of no interest to anyone. The past is full of life, eager to irritate us, provoke and insult us, tempt us to destroy or repair it." —Milan Kundera, *The Book of Laughter and Forgetting*

<div align="center">*   *   *</div>

To think about and work with futures in 2017 is to live immersed in a constant stream of grim and cruel incidents that history may or may not fully reckon with. It is to feel anxious, terrified, trapped in the perpetual future perfect where state violence and shock doctrine capitalism are faits accomplis. We can only react an maneuver around them, never demand they be otherwise.

Futureproof is neither an exhibition of utopian fantasy nor one of dystopian prophecy. The futures and timelines it envisions are not so much guarantees as they are reminders that there are no guarantees, that all futures are imperfect little life rafts built mostly out of history's flotsam and jetsam. They may not actually deliver us from open ocean—in a time of rising sea levels, open ocean may be all we have—but they may serve keep us afloat. Hopefully this collection of conversations and texts might someday serve as a piece of someone else's life raft.

> "Thank you, Sarah, for your courage through the dark years. I can't help you with what you must soon face, except to say that the future is not set. You must be stronger than you imagine you can be." —*The Terminator*

Ida Momennejad

in conversation with

Morehshin Allahyari

Morehshin Allahyari: I wanted us to start with this concept of *re-figuring* as a continuation of the conversation we had before, and with the ways you as a scientist are thinking about or doing research around these ideas of altering and refiguring. I'm also interested in how your thinking relates to my own work, which brings these dark goddesses and female Jinn figures from ancient texts based in the Middle East to reuse or reappropriate their power in relation to the present or the future. Can we start by talking about your research on *re-figuring*?

Ida Momennejad: When you invited me to join you for your "Re-figuring" event at Eyebeam, I really enjoyed the Donna Haraway quotes you had, which suggested that it's not just *what* we are figuring but *who* does the figuring that matters. A lot of people have this idea that the methods of science are completely objective. But I think that motivations for research projects and approaches to those research projects and choices of process are all important. At the event you organized, I had a conspiracy-board-like arrangement of printed slides from my talk, with three different tracks of research. People could pick a track or two and I would explain and have them pick a piece of thread and pin connections among the slides of these different tracks. And that was fantastic, because it was a way for artistic or artistically inclined audiences who had come to your show, and who knew your work, to come to my station and reflect back their experience of the artwork onto what I was up to; they would connect the dots and refigure the different branches of research that I have going. And one of these different branches has to do with how representations in the brain or memories get replayed in order to see, refigure, and plan the future.[1]

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1   Momennejad, I., Otto RA, Daw, N., Norman, K.A. (2017). "Offline replay supports planning: fMRI evidence from reward revaluation." RLDM.

     I build computational models, design paradigms, and conduct
experiments on how we revise the past in the face of uncertainty.[2]
When outcomes change their value, you have what is known as "reval-
uation"; that is, you need to revise in your memory both the value
of actions that used to lead to the most rewarding outcome (but no
longer do) and the value of actions that currently lead to the most
rewarding outcome. Where there is a certain expectation and pre-
dictability to environments, i.e. things change only now and then and
infrequently, you can revalue the representations you use to make
plans and predict the future. You can build reliable predictive models
of the world and update them gradually when necessary. But if things
change too often, if there is no stability in your environment, then you
cannot build reliable world models or store predictive representations
of the future, and as a consequence, you will also be less sensitive
to revaluation. This happens, for example, during a war, like the Iran-
Iraq war we experienced during our childhood: a moment when you
feel that the future has disappeared, that there is no future, or that if
there is one, it is elsewhere and you have to migrate in order to real-
ize that. So one thing I am interested in is how changes in the environ-
ment influence the planning capacity of humans: that is, how they use
the organization of their memories and their mental representations or
cognitive maps of the world to imagine, predict, and plan the future. I
usually refer to this project as changing the past and remembering the
future, because it involves updating or changing past representations
and remembering predictive representations to plan the future and
then realize those plans gradually over long periods of time.

     Let me expand a bit. When there is some volatility in the world,
you want to make models and predictive representations with which
you can realistically imagine the future and plan your actions as much
as you can. However, if that volatility becomes too extreme, no repre-
sentation will be stable enough to predict the long-term future, I won't
be able to predict what will happen nor what my actions may lead to,
so the future shrinks—and with it the planning horizon, and the agency
you have over the future. I like to think of it in terms of the "scope of
agency": you could have what I call *proximal agency*, meaning that
your actions can influence events in the near future, but you also have
distal agency, meaning that your actions can influence events in the
more distant future—and by that I mean intentional influence, not just

2   Momennejad I*, Russek E*, Cheong JH, Botvinick MM, Daw N, Gershman
     SJ (2017) The successor representation in human reinforcement learn-
     ing: evidence from retrospective revaluation. *Nature Human Behaviour*, 1.
   https://www.nature.com/articles/s41562-017-0180-8

accidental. The scope of your agency depends on the scope of your ability to predict, plan, and influence the distant future intentionally and thus on your estimate of stability or volatility in your environment.

We can build computational models of this phenomenon by creating toy worlds that are organized like grids with variable rewards and shocks in the grid cells in which a virtual agent can move by moving up-down-left-right, and by giving these toy worlds more stability or more volatility. We can then examine how an artificial agent that is moving in this toy world (typically a "grid world") to maximize rewards and avoid shocks learns to plan and predict the outcome of its actions in these environments. The simulating of toy worlds and the computational modeling of problem solving agents have a long history in reinforcement learning (RL) and machine learning. We now employ these methods to understand how humans think and behave, i.e. to understand the algorithms underlying human memory, planning, and problem solving. These RL models allow us to compare different planning horizons when our brains make representations of and generalizations about events we experience. This is a computational way of showing what I said earlier: that the more volatile your environment is, the more your scope of agency shrinks.

Now, it is one thing to build computational models and calibrate parameters so that the model behavior corresponds to human behavior. It is another to look inside the brain and show that these parameters and algorithms are not just fancy computational versions of

our theories, but that they also teach us something about the human brain and have predictive powers. For this part, I do fMRI work where I scan people's brains while they take part in experiments in which they learn representations of virtual tasks designed for the experiment and make decisions to get rewards.[3] I then use machine learning to decode memories from key brain regions.[4] Among the regions involved in remembering the past and imagining the future, two are most noteworthy. The hippocampus, which looks like a sea-horse, is a structure right behind your ears; this is the region that is involved in our memories, and when somebody loses it, they lose their memories, or (depending on the kind of damage) still have memories but can't form new ones. And the prefrontal cortex (PFC) is where you learn how to apply rules and how to make predictions, form plans, remember to carry them out, and choose actions.[5] So the interaction between the organ that constructs and retrieves your memory (the hippocampus) and the organ that controls actions and applies rules (PFC) helps the brain to unfold imagined trajectories in the future, then evaluate and choose between them.
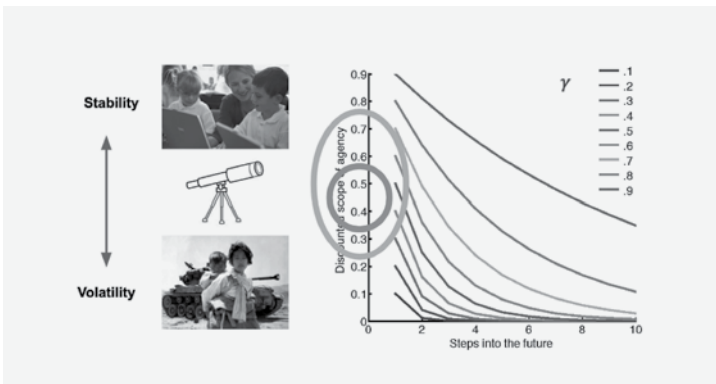
3   Momennejad, I., Otto, R.A., Daw, N., Norman, K.A. (2017). "Offline replay supports planning: fMRI evidence from reward revaluation." Reinforcement Learning and Decision Making (RLDM) conference, Ann Arbor, 2017. https://www.momen-nejad.org/

4   Momennejad, I, and Haynes, J.-D. (2012). "Human anterior prefrontal cortex encodes the 'what' and 'when' of future intentions." NeuroImage 61(1):139-48.

5   Momennejad, I. and Haynes, J.-D. (2013). "Encoding of prospective tasks in the human prefrontal cortex under varying task load." *The Journal of Neuroscience* 33(44):17342-17349.

MA: One thing that keeps coming to my mind is the non-binary relationship between history and future. Much of the research I'm doing for my new work, '*She Who Sees The Unknown*,' is concerned with ideas of the past but specifically with the necessity for re-imagining the past as a way to be able to re-imagine the future. I think that at this political moment this way of thinking is especially important: you need to go to the past and expand the memory and re-imagine how the past was... because so much of that narrative and that representation of history is colonized and taken from us and re-told to us in ways that serve certain political agendas and power structures. Can you talk about that a little bit in relation to your research in terms of what you see in our human brains and in the systems we build?

IM: What you said connects to at least two things in my research, and although I don't directly work on what you described, I hope it's something that I will explore some day. Our computational models involve simple experimentally controlled environments where we can change specific parameters and observe the behavior of artificial agents running on our algorithm. We can then compare each model's behavior with the behavior of human participants in our experiments. As a participant in the experiment, you explore a virtual task by seeing stimuli, pressing buttons to make choices, and receiving outcomes, thus learning associations between certain states, actions, and rewards in the virtual world (the basic components in reinforcement learning). If we want the world to be stable, for instance, the same event (say, a picture of a dog) could appear predictably after you press a particular button and could reliably pay you (let's say) two dollars on average. If we want the world to be volatile, the same image might sometimes not appear after you press that button, or might not always pay you the same amount, or might sometimes punish you by reducing what you've won. That world is less reliable. We can measure human behavior in these experimental worlds and fit the parameters of the model to simulate or imitate human behavior in the artificial toy world that mimics the experiments.

Now, given that we work with controlled and virtual environments, I can only extrapolate so much, but to address the issue you raise: we need a past in order to imagine a future, and if your representations of the past have been perturbed and disturbed, you lose the ability to imagine the future. What are the situations in which your past can be perturbed? In the example above, let's say I mess with the memory of my artificial agent (or of a person in an experiment): this will impair their ability to plan actions that lead to reward. Something similar happens in post-traumatic stress disorder (PTSD): when you experience severe or continuous trauma, one of the reported results is that you

cannot tell the story of what happened to you in a coherent narrative or in coherent words; you have a perturbed relation to the representations of the past. PTSD symptoms are of higher intensity for people with a more broken narrative of what happened and also for people with lower verbal memory capacity.[6] And the people who show the most improvement with the help of medication and therapy are those who manage to give a coherent narrative of trauma; these are the people who are better able to overcome their deficits in planning, their deficits in self-control, their deficits in trusting others, their deficits in being able to imagine a future that is safe. The relationship between PTSD and memory is quite interesting as well. In PTSD, perhaps due to a wide suppression of memory functions, the hippocampus shrinks[7] (as seen in the figure below), losing its matter. But since the hippocampus is one of the few parts of the brain with neurogenesis, it has been shown that treatment and medication might help not only improve the narrative reconstruction and remembering of the trauma, but also recover hippocampal mass.[8] This is exciting stuff, and something I am currently doing and especially want to pursue in depth in the future is to apply my computational models to understand how people with PTSD replay the past and plan the future; I want to formalize how therapy uses memory mechanisms to improve PTSD symptoms.

NORMAL   PTSD
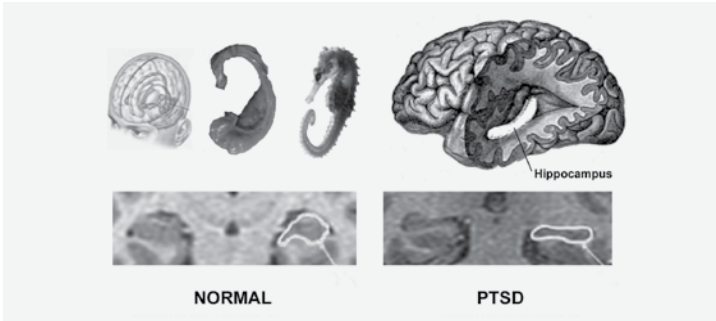
6   Wild, J., Gur, R. C. (2008). "Verbal memory and treatment response in post-traumatic stress disorder." *The British Journal of Psychiatry*. 193, 254–255.

7   Elzinga, B. M., Bremner, J. D. (2002). "Are the neural substrates of memory the final common pathway in posttraumatic stress disorder (PTSD)?" *Journal of Affective Disorders*. 70, 1–17.

8   Vermetten, E., Vythilingam, M., Southwick, S. M., Charney, D. S., Bremner, J. D. (2003). "Long-term treatment with paroxetine increases verbal declarative memory and hippocampal volume in posttraumatic stress disorder." *Biological Psychiatry*. 54, 693–702.

MA: I can't stop thinking about trauma in this very specific sense: how we as Middle Easterners, as brown people, have been dealing with the traumatic disruption (in so many ways) of our histories, our contemporary culture and narratives. And that in turn causes a lot of trauma in our dealing with the daily experience of being what we are, as immigrants and minorities in this country. I kind of love that relationship. There is something very special and beautiful about it, but in a very sad way. If you could connect this thing that is about a human and its brain, but expand it to this bigger social political picture and maybe to personal and collective experience… What can we learn from our societies and systems when we look for patterns and connections between our disciplines?

IM: I love the way that you connect these different branches of our conversation; the intellectual trajectory you follow is very similar to how I went about my research as well. Another track I had at the event at Eyebeam was about collective memory, the role of grassroots structures in collective memory, and how our memories and our forgetting can converge or diverge. There is a phenomenon called "retrieval induced forgetting" that works like this. Suppose we remember seeing a duck and a horse last Christmas. If you bring up the duck all the time, this will gradually suppress my memory of the horse. Now this conversational effect can happen on a collective level too: if a lot of people keep highlighting certain things, other related things will be gradually forgotten. We have only tested this in laboratory settings so far, involving multiple groups of 10-16 people, but this collective dynamic could potentially lead to larger groups and communities of people forgetting some of the things in their pasts that are actually real, at the expense of other things highlighted in conversations. Last time I went to Iran, I thought, it's so cold here! Well, in fact, the winter in Iran is colder than in Princeton and it snows more; I grew up there for 23 years, and had snow fights every winter and was skiing all through high school, but then I moved here and heard so much talk of "deserts" that I thought, why is it cold? My experience was like the simplest memory experiment in the world.

Now we can think of groups of people in terms of networks or graphs of connected nodes, and see how such cascades of remembering and forgetting in conversations travel through networks and communities of individuals. We did this in a number of experiments. First we found that memories increasingly converge after rounds of conversations between people, when their network structure is better interconnected and not clustered (image below).[9] So the global structure of the network of individuals matters.
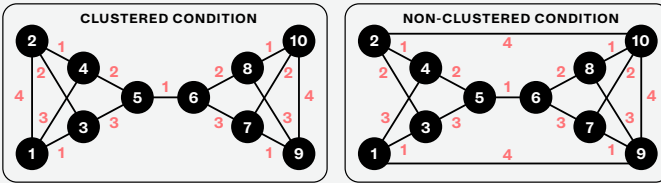
        In another experiment, we were interested in situations where
the structure of the possible connections in a network of people is
fixed, as in many real life situations, so we can't change whether it is
clustered or not. Now, under what conditions would the memories of
the entire network with the same structure converge more or less? In
this experiment we focused on (1) specific network positions, people
with special connections that connect different clusters, and (2) the
specific order of conversations, which positions talk first or last. Say
all my friends are lefties and all of Joe's friends are right wing. None
of our friends talk to each other, which means that we are in different
clusters or cliques. But Joe and I talk. Our tie or connection has a spe-
cial property called a "bridge tie" or a "weak tie". Now, if you remove
our connection, that is if we stop talking, then no information passes
from his network to mine or vice versa. So my weak connection or
tie with Joe is, overall, an important one if the goal is to synchronize
memories in the entire network between clusters of different people.
But even if Joe and I talk, when should we talk to have the strongest
effect? Is there a time when it is too late and our connection can't syn-
chronize the memories of the network anymore? This is a question of
conversation order, a temporal question.
        We ran a second study[10] to test the hypothesis that it matters
when weak ties talk to each other, and specifically, that if weak ties
talk first the network will have more similar memories. We found that
collective memories of entire networks converge more when bridge
ties or weak ties talk earlier rather than later (figure below). This is an
exciting finding; it suggests that the timing of interactions between

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9   Coman A, Momennejad I, Drach R, Geana A(2016) Mnemonic convergence
      in social networks: The emergent properties of cognition at a collective
      level. *PNAS* doi: 10.1073/pnas.1525569113.

10   Momennejad, I., Duker, A., Coman, A. (2017) "Weak ties bind collective
      memories: a socio-temporal network framework." arXiv.
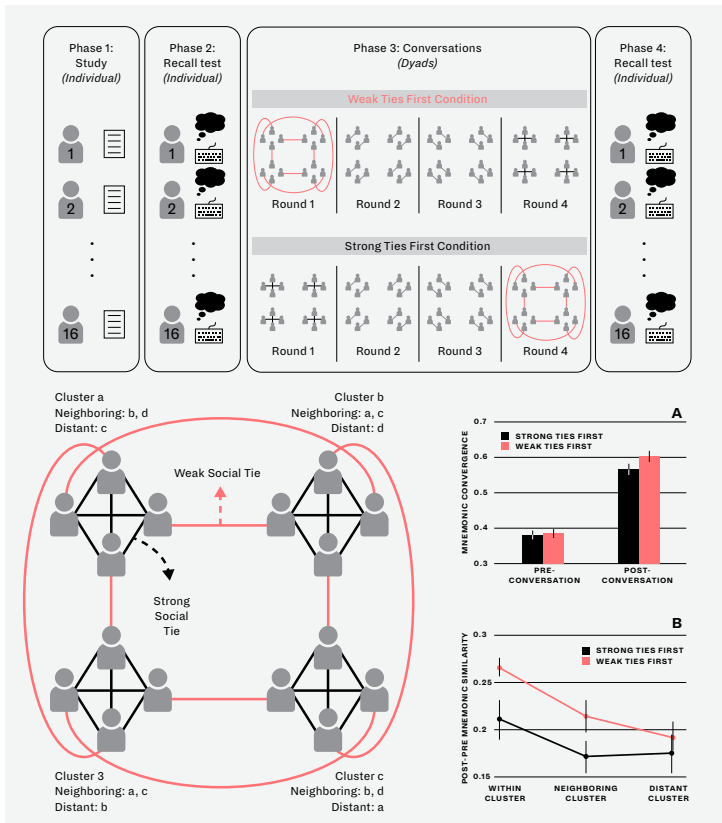
different clusters or subgroups of people can potentially help avoid information bubbles.

The broad conclusion I want to draw from these studies is that if we want to synchronize with the collective narratives of other groups about us, we need to take certain kinds of network positions and broadcast our narratives as early as possible after key events. This is because certain network positions and timing are more likely to synchronize the memory of the larger network, within which we are minorities, with the narrative that is ours. If marginalized people like me don't have a certain type of graph role within the network of inter-connected humans, our narratives are not going to converge with the rest. If anything, other people's stories are going to take over our own stories, even in our own heads. And that is not all. If institutions and nations allow marginalization of people and their narratives, the probability of being harassed for being in an out-group increases and

becomes very costly. Experiencing out-group harassment and injus-
tice leads to health issues and to dropping out of work and out of net-
works; it has a lot of different costs that we can now test. For instance,
think of Black Lives Matter: we can look at what happens after a par-
ticularly negative event when the black twitter sends tweets later in
the night because people can't sleep when collective trauma happens.
Then we can look at predominantly black neighborhoods and see what
is being bought in the supermarkets around the time of the trauma;
people probably buy more comfort food because things are not good
and they can't sleep. These things are going to influence health in a
very serious way. This particular analysis of amount of sleep and its
impact on health is an idea suggested by Stacey Sinclair,[11] an Afri-
can-American female professor of psychology at Princeton University.
We are currently doing a project together using agent-based simula-
tions of systemic injustice and different interventions; we compare
the costs of otherness under various parameters for disparity and
with different types of interventions. Ultimately our goal is to iden-
tify interventions that could reduce the long-term effects of dispar-
ity on the health and productivity of minorities by incentivizing allies
from non-minority groups. In all of this body of work, which under a
broader umbrella I call *computational social justice*, my goal is to make
injustice and its consequences visible via formalizations and compu-
tational models, then simulate long-term strategies for intervention to
fight them. This long-term goal of making injustice visible and testing
interventions needs a community, which I hope to build and grow, with
the working title The Computational Justice League.

MA: So then would it be fair to say that a big portion of what you
explained concerns *visibility*? In the research I'm doing so much of the
retelling and re-appropriating of these Jinns and monstrous female
figures has to do with bringing visibility to something that has been
hidden or forgotten. The trauma and suffering of Middle-Eastern peo-
ple have mostly been watched from a distance. When in Syria children
are getting bombed and killed and murdered, we experience it all only
on monitors; it's always in the distance (that other side of the world)...
it's not in people's faces. So there is a kind of invisibility, and this invis-
ibility is not just about our absence from narratives and histories, but
also about our bodies being unseen as well as pushed out and banned
in certain countries. Trump's Muslim ban and Brexit are some of the
contemporary examples of these circumstances. I would like to talk
about how these issues relate to collective memory. Perhaps, as long

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11   https://psych.princeton.edu/person/stacey-sinclair

as you can bring some visible memory to bear in a meaningful way, whether it's through a hashtag like #BlackLivesMatter or a collective that brings these things together, you are engaged in an activation that will lead to a kind of visibility and legitimization. How do you think about networks and collective memories and visibility?

IM: This reminds me of a conversation at the event, in which we made a distinction between visibility and legibility. It's one thing when bodies are *invisible*—that is, physically alienated and marginalized, denied access to or bullied out of situations or discriminated against outside of certain spheres, especially spheres of power and knowledge production; it is yet another form of marginalization when the bodies are present but somehow *illegible*, and people fail to understand or perceive even when the injustice is happening in front of them, say, plainly visible on a monitor screen. And there is a third mode of alienation: say Syrians are being bombed, that fact is both *visible* and *legible* but the viewers don't care about it, don't place much value on the lost lives to begin with. This reminds me of Judith Butler's idea of frames of war.[12] She talks about the fact that when there is war, it is as if there is a frame for life, and whoever fits inside this frame is grievable, vulnerable, and precarious. But whoever lies outside of this frame, their death, their bodies are not grievable, and if they're lost, that's fine. There is some monstrosity in these bodies and these lives outside of the frame, and therefore their precariousness is not taken into account, as if they cannot be vulnerable because they are beasts, and thus they cannot be mourned because only things that are vulnerable are mournable. The case of Syria is particularly challenging, because Syrians are Middle Eastern Arabs and by default outside the frame of grievable or mournable lives in the present geopolitical climate, but the images of children evoke a lot of emotion and complicate the framing.

Here I want to mention the work of Nicole Shelton, another African-American female professor of psychology at Princeton, who carried out research[13] in which African-American subjects and white subjects were presented with a text that talked about a particular scenario. This scenario involved either no racism or ambiguous racism or blatant racism. After they had read this, they were given a task to do, a completely cognitive task; it's called the Stroop test and it has nothing to do with race. This is a classic test of cognitive control, and we know

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12   Butler, J. (2009). *Frames of War*. London: Verso.

13   Salvatore, J., and Shelton, J.N.(2007) "Cognitive costs of exposure to racial prejudice." *Psychological Science* 18.9, 810-815.

that when you get stressed you will perform worse on Stroop and other cognitive tasks, you'll need more cognitive control, and you'll be slowed down. What happened in Nicole's experiment was that black subjects showed most interference with (or slowing of) their cognitive performance after seeing the scenario in which racism was *ambiguous*, whereas white subjects showed most interference after seeing the *blatantly racist* scenario. How should we understand this? Perhaps minorities are aware that in the case of ambiguous racism, it is harder to convince others of the significance and consequences of your experience, and your experience therefore becomes fragile and almost ephemeral. But for white participants, even if the ambiguous racism was visible, it wasn't legible in the same way: they didn't experience it in the same way, and it didn't cause the same kind of stress, so it did not interfere with their cognitive task to the same extent.

The current global conflict has led some bodies to be demonized or marginalized in a way that has diminished both their *visibility* and their *legibility*. Some are excluded from certain spheres of power and influence. Others, who have gained access to some of those spheres, and have become visible, are nonetheless read (explicitly or implicitly) as less than human and as barely mournable. You can see all of us die on a screen and not feel all that bothered, as if that had happened somewhere else to someone who doesn't matter really. And we see a similar inability to read the visible in responses to ambiguous as opposed to blatant racism in experimental settings.

MA: Yes! Absolutely. A really simple example of what you're talking about is Facebook's safety check. When something happens in France or the U.S. or London, immediately you have these 'safety check' notifications that pop up, but the same thing happens a week after in Iran, and there's no safety check option available. That mass lack of visibility is something we all experience on a daily basis.

I wanted to close this down with us talking about altering and the importance of re-imagining. I have been thinking a lot about starting a collective of three or four Middle Eastern women who would come together to bring visibility to some of these issues and topics through activism and practical methods. I think it's important to remind ourselves that we are not voiceless, although our voices are silenced constantly and not heard. It's only about the volume; we need to push to make it as loud as possible. I think about altering as a way of resisting and creating platforms, creating stories where the powers of these monstrous female figures alter the futures. I am interested in futures, rather than one future. The plurality here is essential. Also I want my figures and the new work I'm doing to be about embracing the monstrosity rather than pushing it away and rejecting it by constantly

saying "we are not *this*, we are good." Through the act of embracing the demonized figure we can turn the monster against the very power that demonizes it. I know this is more about symbols and metaphors, but it's also about the power in storytelling and altering, and the collective responsibility that comes with that.

IM: One thing that I really enjoy about your work is precisely this notion of "knowing the beast intimately," or even actually becoming it. Instead of constantly resisting this tag, you actually embrace it and know its powers. So it's almost like you're saying, "you want to portray me like that? I am going to change that and use your power against you almost like a kung fu move." I really like this idea and it reminds me of what happened with the queer movement: the term "queer" was a tag to avoid, and now we say it with pride. Invoking such rich imagery of goddesses and weird imaginative creatures in a Middle Eastern past makes people think, oh, there is so much I don't know, something more complex is going on here I need to understand. This rich imagery is then confabulated with all the 3D printing and digital art and technology you use in your artistic practice, and it has a sense of being both ancient and futuristic, dark and optimistic, something to fear and something to love, it draws you in in complex ways. It complicates your relationship with the beast. Your artistic practice complicates the relationship with Middle Eastern culture, which I really admire in your work. For me, I am more mathematically inclined, although I very much enjoy poetry, especially poetic symbolism, because what is math other than thinking in symbols? I think that one thing that symbols can do is to provide you with words or units for complicated or sophisticated thoughts that you couldn't have without those symbols. I think that there could be a beautiful synergy between math and poetry in one of the futures.

One of the things I build models for, and I want to continue researching in the future, is computational justice: that is, I want to use computational models to make injustice visible. And not only make it visible, but try out different sorts of interventions on it, compare their long-term consequences, and propose strategies and institutional incentives that would reduce the long-term costs of injustice. Basically we need to formalize and model injustice, then computationally simulate interventions and different futures. Then we can evaluate and choose a future, and see what we can do to head toward a future we choose. A lot of what we do in the world is trial and error, but it need not be. Everything we talked about, learning from the past and building models based on experiments that can generate different futures, can be a form of activism, a computational activism approach to social justice that can enable us to mobilize ourselves more consciously and choose how we want to affect the future more carefully.

MA: This is why I am so fascinated by the work you do and I have been trying for the last year—since we first talked about the research you are doing—to connect these things. I think when you see numbers and graphs and you understand something in terms of logic, that data gives you a very different understanding of what is happening, but then you understand something emotionally in a different way when someone stands and narrates their story to you. It involves your emotions and you can connect to it at a different level.

I am obsessed with the *Abjad* writing system and numerals and the idea of the 28 letters of the Arabic alphabet each having a numerical value… and with the tradition of the construction of talismans being based on numerous rules and the detailed use of a special way of converting letters into numbers (called *abjad-hisab*). Here, putting together the right words and numbers has a magical meaning that then serves as a secret message you carry with you to keep you safe from evil eyes, to resolve certain problems, to treat certain diseases, and so on. I think there is so much power, so much beauty in bringing together the worlds of numbers and of story. Many of these Arabic talismans that I am interested in are made of numbers and charts, but each of these numbers is supposed to open something in your present life or your future, and to tell you something as to how it's going to change. A big part of Oculus Science is actually about bringing the world of logic together with the world of magic and metaphors. I imagine our collaboration that way. You bring the numbers, I tell the story, and we become the collective of creating some kind of magic that will alter and change that world.

IM: I love this. There is this sense of out of my skin joy that comes every time we talk for an hour. The more we talk, the more I get this rush, and feel the weird connections between things that I am really enjoying right now. I love what you're saying. I want to rephrase what you are saying because it was beautiful. I am interested in making injustice legible via these numbers and charts and you were talking about this other way, which is through poems and stories that convey emotions. Perhaps for what we are doing to work for an audience, these two things have to be there at the same time: people need to be able not only to reason about injustice but also to feel the emotion it evokes in order to make the experience of injustice legible—not just visible, but legible. We are visible, and our presence makes things visible, but then our approaches help them to read the structural injustice that we experience. Basically we are teaching them how to read, since people have not learned to read and write injustice as more than just a word. The other thing that I really enjoyed was this poetic analogy you draw between *Abjad* numerology and the relationship between

numbers and magic. Honestly I have often wondered what someone would think who had no idea about science, if they came to my institution and watched us staring at monitors, using codes and numbers, doing measurements inside animal brains and human brains, making calculations, and claiming an understanding of the human condition. They would probably think we were doing magic or some kind of 14th century alchemy.

MA: It is alchemy! That is what I'm telling you. Someone sat down hundreds of years ago and created all these relationships between different signs. To us they may at first seem like random numbers and letters. But once you understand what they are and how they connect to each other and what each number or sign represents, then the magic happens; then you see the power. I think that is what we are doing. It all comes down to creating worlds together.

IM: Yes! We make new worlds together.
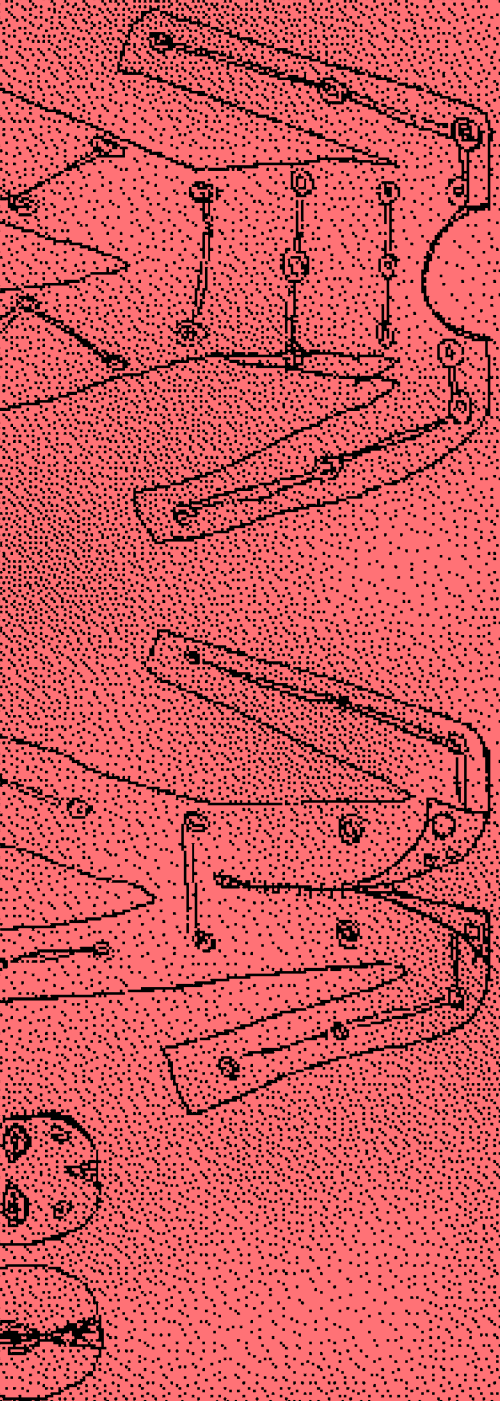
MA: Cheers to that.

IM: Cheers to that!

SKETCH

IYAPO REPOSITORY FIELD NOTES

Name:
Artifact Title:
Date Found:

Artifact ID:

Jenna Wortham

in correspondence with

Salome Asega &

Ayodamola Okunseinde

November 4, 2029
Information Request From The Iyapo Repository

Dear Historians,

I'm a digital anthropologist conducting a series of investigations into the catastrophe of 2019. We are gathering written, video, and audio testimonials from survivors and people who lived through the Fall, as we continue to rebuild socially to try we haven't been able to collect enough data on our own independently, so I am writing to the Iyapo Repository to inquire about the artifacts in your collection that can shed some light on what people, particularly black people, needed at the time from technology and design companies that they did not have.

What do your items say about the anxieties and social concerns of the people alive during that time? What can we learn from what their hopes and fears were at the time, to better inform our behavior and patterns in the future?

How did these people identify themselves? What were their hopes and dreams? What message do they wish to transmit by leaving these objects behind?

Jenna Wortham

November 6, 2029
Re: Information Request From The Iyapo Repository

Dear Jenna,

Thank you for reaching out to us with this information request. The repository was built as a means to preserve the digital histories and artifacts of Black people. Like you, we have been working hard to build an archive and resource library that details the years before the Fall to understand how we got here.

Our collection of art and artifacts is managed through a national network of archivists who uncover the objects and take time to collectively understand each one's utility and function in society. Our archivists are committed to an approach that prioritizes history, legacy, and intersectionality. They understand that most of these technological artifacts were originally developed with an individual's hopes and fears in mind. This type of scholarship is both radical and tender. We truly appreciate the care and thoughtfulness our archivists contribute to this project of unearthing, unlearning, and preserving.

What we've learned from workshops and long lab hours with our archivists is that right before the Fall, citizens were concerned with the following:

- creating private and strong communication networks between vulnerable communities of activists, cultural workers, and educators
- developing affordable and sustainable approaches to farming in urban, rural, and post-apocalyptic landscapes
- fashioning a new type of self-defense suit that conceals wearable weaponry and goes undetected by the PoPo
- writing a new programming language that centers black people and our experiences
- making physical and figurative space for themselves and for one another
- transferring sensitive data and documents through unsuspicious objects
- developing prayer- and worship-assisting technology to protect those who were denied their first amendment right under the new leadership
- designing garments to protect women, femmes, GNC, trans folks, and queer people from the violence and danger that stems from fragile masculinity
- dealing with post-trauma feelings and moving towards collective healing

We are attaching some of the archivist field notes that come from our meetings so you can see examples of the above.

Because our approach to understanding the past is participatory, our narrative of what has happened and what is to come is messy and divergent. There is not just one path forward. But we invite you and your team to visit the Repository while you continue your research. It is our ambition that as the collection grows, a through line of this period will become clear.

Currently, our collection features:

- a series of devices our engineers were able to get working again
- films to contextualize the working artifacts
- manuscripts and archivists' field notes on uncovered artifacts (on view by appointment only)
- a dead drop library of rare .pdfs, .mp3s, .jpgs, and .movs contributed by guest curators (feel free to bring your own usb to check out materials)

Please be in touch and let us know how we can continue to be of service.

Forecasting the future with care,
Salome Asega and Ayodamola Okunseinde
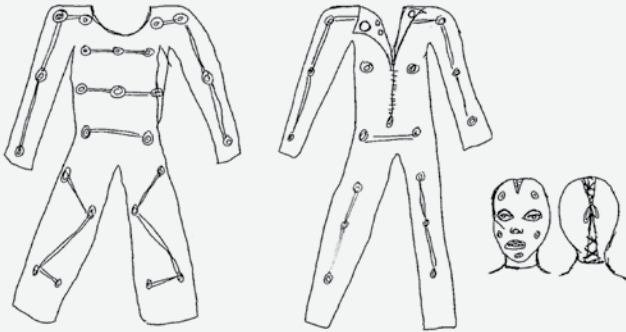Iyapo Repository, Founders and Lead Conservators

Name:
Artifact Title:
Date Found:

OFFICIAL USE ONLY
Artifact ID_____ ☐ ☐ ☐ ☐

IYAPO REPOSITORY FIELD NOTES

SKETCH

DESCRIPTION Sensory suit that simulates the feeling of being
underwater. This suit also has sensory units on inside that collect
data from subject, such as heart pressure vital signs etc. to evaluate
subject during their "Underwater experience." This suit is useful for
helping trauma victims and or people with water related phobia as a form of
therapy. ~~Be necessary~~ *Also useful for* alzheimers patients who aren't capable of swimming
to have a sense of satifying and of to that need.

SIGNATURE _M.P._

OFFICIAL USE ONLY
Artifact ID __041__

☐ Utopian
☐ Changes Color
☐ Politics

IYAPO REPOSITORY FIELD NOTES

SKETCH

DESCRIPTION CULTURAL NEUTRALIZING VISOR

A "utility visor" that will be used by civil servants that are responsible or entrusted with protecting citizens. Notably, this visor will have the effect of removing negating the predisposition of its wearer. No deference to color, politics of the citizens they protect. This view of all citizens as the same will aid the drive to a utopian society.

NAME COLIN, MIKE, VINCE   **SIGNATURE**

iyaporepository.org

OFFICIAL USE ONLY

Artifact ID　046

utopian
makes sound
education

IYAPO REPOSITORY FIELD NOTES

SKETCH

civil rights

Transatlantic slave trade

Rock & Roll

Afromation

DESCRIPTION

Pills transmit information on historical world topics via the brain. Pills created by historians from all over the world to present truth & unbias facts (utopian). Take a pill and you hear the information and is stored in your mind ready to be recalled whenever necessary.

NAME Nikki Lawrence
Nadia Marsh
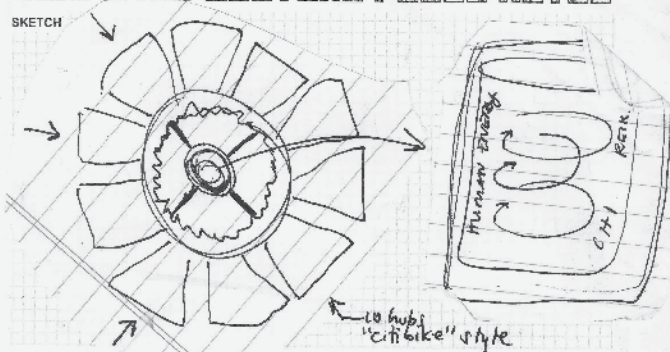Lauren Nixon

SIGNATURE Nikki Lawrence

iyaporepository.org

OFFICIAL USE ONLY

Artifact ID. 083

UTOPIAN
HAS A MOTOR
SECURITY

IYAPO REPOSITORY FIELD NOTES

SKETCH

Human Energy

RETR.

(0+)

10 hubs
"citibike" style

DESCRIPTION

Docking station located around the "city" that
citizens can enter via booths to "recharge" or dispel
triggers and or trauma that might arise. The vessel in the
center generates the necessary positive energy (or endorphins or
chemistry) the individual(s) needs to re-center. It works on
a motor that is pumped by the individual who is plugged in at
his/her individual. The more individuals that enter each individual
"hub" of the 10 hubs, the easier it in to achieve the positive/euphoric
state.

NAME Vivian
Amy
Becky

SIGNATURE

iyaporepository.org

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Artifact ID __092__

DYSTOPIAN/
TRANSMITS DATA
FASHION

IYAPO REPOSITORY FIELD NOTES

SKETCH

DESCRIPTION   JUSTUS SEEDS

In the future, our food systems fail, due to the impact
of Monsanto and agribusiness models. People evolve
to survive by growing their own food on their body; the
health of the ecosystem depends on the health of a the
self and the Community. Each human garden needs other
human gardens to thrive. Each individual human's garden
takes the form of a hemp-based garment that resembles a
tunic. The plants transmit good feelings to eachother
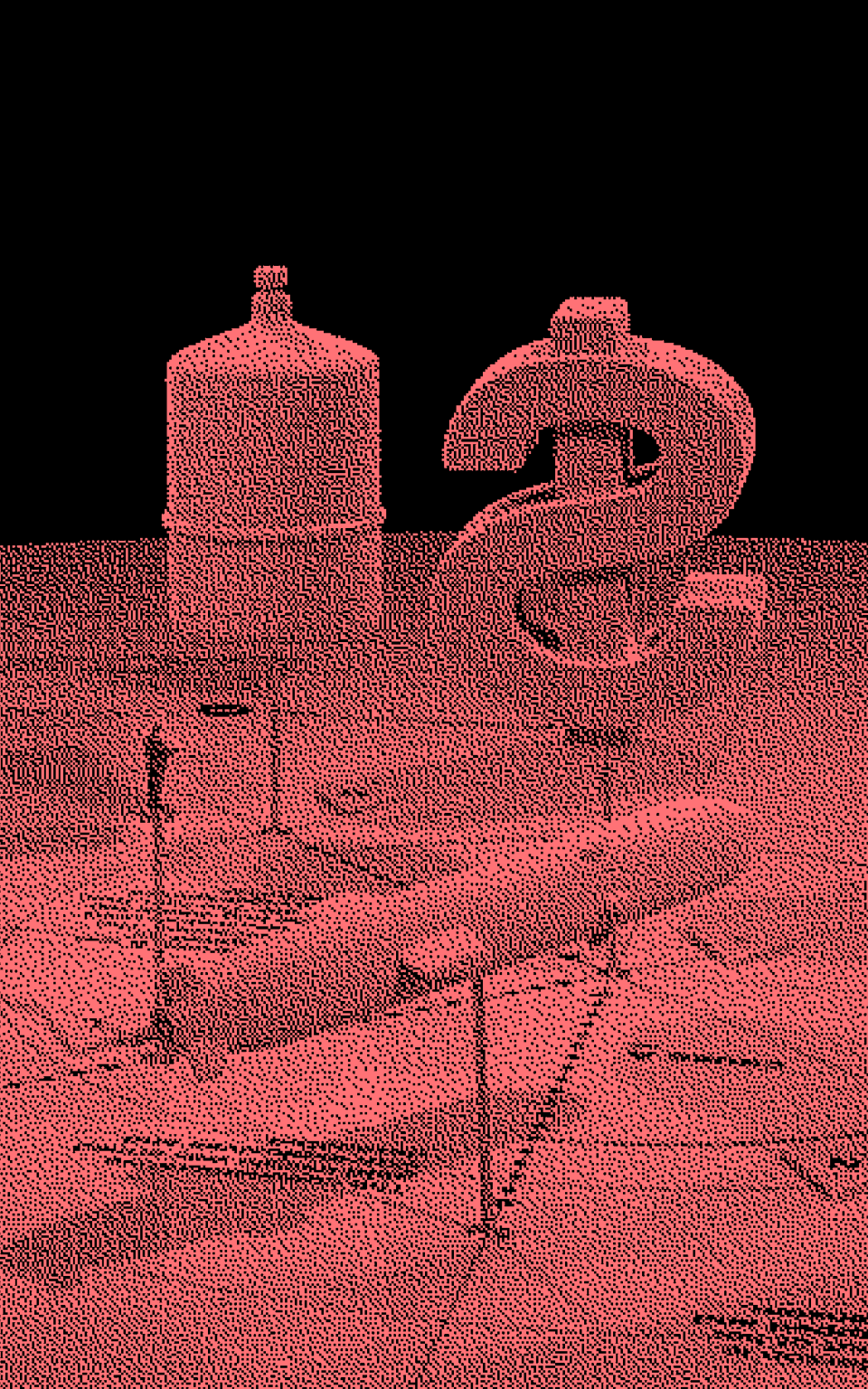and what is being grown so people can make communal nutrition.
together.

NAME Vanessa
Melissa
Thomas

SIGNATURE

iyaporepository.org

Tim Maly ————————————

———————————— **in conversation with**

Ilona Gaynor ————————————

Tim Maly: Hi Ilona! I want to start with precision and chaos. Obviously, both are big deals in your work. Something I'm fascinated by is relative chaos—situations where one party thinks things are going wild while the other party sees everything moving like clockwork. Commando raids are meant to be like that. For the targets, it's chaos and smoke and fear, but for the attackers, it's a precisely executed plan. To my mind, *Everything Ends in Chaos* seems to start that way, but in the end the whole thing goes wildly out of control with a financial crash that will have consequences that echo through time. Do you see it that way?

Ilona Gaynor: Yes and no. The plot of *EEIC* was written in such a way as to foreground a constellation of events, detailing the choreography and geographic slippage required for a plan to deviate, layering in complexity. No matter what perspective you take or what side you are on, the tables can be turned; rather like a plot twist, but one with specifically financial implications. It's an interesting thought and actually one I hadn't considered with regards to the imbalance of discernment between the smoke inhalers (the targets) and the smoke throwers (the assailants). My approach was to think about it in terms of a basic hunting conundrum. If one were to lay a trap, let's say for a small animal to

be lured into, the likelihood of a snare's success would be relatively great, given the sheer imbalance of intellectual cunning between the two opponents; the animal is overmatched in both mass and intellect. If we were to balance out the scenario, man vs man, a trap could/ would be set initially by the hunter, but it would be a relatively accurate assumption to expect a counter, followed by a further counter... and so and so on. The *EEIC* plot is a careful pathway drawn through a series of balanced and unbalanced encounters, designed as strikes and counterstrikes, written by me and countered by financial actuaries and contract specialists.

TM: So the cat and mouse game you are describing here is not between the actors in the fiction but between you as creator of the situation and the experts responding to your proposals?

IG: Both, to some degree. The characters and their collisions were written as a series of encounters that required an agile sense of topographical and hierarchical maneuverability from a character perspective: kidnappers versus husbands; versus board members; versus a gagged wife, and so on. Equally so with my financiers, in a battle that took place using marker pens on maps and contract documents. Legal reckonings became arguments amongst themselves, debating contract law and underwriting conditions. It's something I wish I'd documented.

TM: Beyond the intricate plans, you also have these intricate diagrams and models. Why? Why make objects at all?

IG: I actually find objects to be incredibly problematic (which is why I teach in a department of designed objects). Objects in my work are often symptomatic of having my work shown in galleries and having my practice positioned as design rather than as fine art. Which is to say that curators have certain predisposed expectations of design, as for instance the required presence of object(s) over drawings or photography. But I am considering repositioning my practice and pushing it more within the language and context of fine art. I find often find objects to be banal and a far too weighted currency in art and design in terms of what they convey or in most cases what they can't convey—especially when dealing with ideas of a contemporary nature such as technology, economic and global infrastructures, politics, and so on. And although finance and insurance aren't necessarily contemporary ideas, their current and projected morphology is. I find that objects tend to be complicit (but not always) in the oversimplification of ideas that have yet to shed their human skin in any kind of

expansive form, particularly when displayed solo in a white cube. In *EEIC* and most of my work, I'm interested in what it means to work in a sequence and what is required in the plotting of something that is time-based and conducted through a constellation of people and things moving in time over space. The objects were designed in reference to the aesthetics of a war room: battleships, vehicles, and troops carving up territory in a progressive choreographic formation, wielded by a general or board of conferring strategists leaning over a table at arm's length.

TM: Can you say more about "shed their human skin"? What do you mean by that?

IG: What I mean by this is that we are yet to see how dark it really gets: capitalism is yet to shed its human skin and designers are still in a quandary about who is at the vanguard of domestic furnishings. The imperatives of consumption are reaching a state of singularity, in which our 'attention economy' is not only a continuous or sequential capturing of our attention, but a thick layering of dispossessed time in which our multiple digital operations are being homogenized for acquisition. The importance of reality is beginning to atrophy, whilst our margins of real-time are shrinking. Design is in a resurgence of reflexive form making, still occupied with this idea of furniture and craftsmanship or "making" as a functional proponent for discourse, which I would argue is simply a too basic materialization given the broader techno-political state of play.

TM: I'm glad to hear you talking about your trouble with objects because I've been struggling with objects myself, especially when it comes to the role they are asked to play when introducing larger systems or ideas. The role I see them playing here is as props. I keep thinking about an alternate version of your project where the reconstruction is done by a mad conspiracy theorist and instead of the clean crisp models of the war room, we'd get red thread, scrawled lines, and smeared paint—putting the chaos on stage, instead of off stage.

IG: Objects cannot simply sit alone any longer when used in reference to larger systems or ideas, but perhaps I'm expecting too much from art and design? I'm careful about using the term prop, as it's often misused in design by being conflated with the language of film and all the connotations that come along with those references. 'Models' by their nature are preparatory materials used distinctly as modes of planning or projecting ahead of time: architects use them when drafting proportions and sectionals and filmmakers use them in pre-production,

before shooting a scene, to direct technicians, actors, and scenographers alike. I have imagined an alternative project and I would certainly love to reformat it all, but at the time (even now), the aesthetic and its unmessy nature is simply down to the fact that I trained as a designer. All the ghosts that follow that burden will forever linger: clean geometry, precision model making, and a continuous discourse for a rationalized, functional aesthetic.

TM: I feel like a lot of the prototypes or models designers may end up functioning as props; that is, I think that the prop-like elements of the models play a big role in the persuasive power.

IG: I'm uncertain there is much persuasive power in any of them, although I'm not entirely sure what audiences are being persuaded of? An argument or a suspension of disbelief—such as in cinema?

TM: I'm thinking here in two arenas. One is industrial design, which involves a lot of persuading users/investors/clients etc. that things that don't exist ought to exist. This feels to me like a form of theatre. The prototypes do double duty, both as ways of testing ideas but also as props in that storytelling you end up doing to convince people that you've done good design. And the second arena is the kind of future planning, scenario planning, that this whole exhibition is about. I think that there's a lot of suspension of disbelief that's asked for as part of presenting that work to clients.

Would it be possible to make a project like *EEIC* that did not lead to disaster? How key is disaster to the basic appeal of your work? I'm asking because you talk a lot about precision and the appeal there, but I think that the dark parts are a big deal.

IG: It would certainly be possible, it just wouldn't be me making it. I'm unsure whether it's disaster that is at the center of my work's appeal, or rather a humor or a repositioning about what disaster or 'dark' is considered to be... at least that's the motivation for me, whether it's visible or not. Some of the instances in *EEIC* are absurd and overtly tongue in cheek: a school bus being hit by a FedEx truck carrying the fingers of the kidnapped wife being one of them. There are 'dark' narratives in existence (if we think about cinema or literature) that have successfully portrayed the cold, logistical choreography of systemic ruthlessness. Films like *Sicario* or the novels of Cormac McCarthy, for example, which execute this precision with an unyielding force, while both exquisite, leave me cold somehow. If you compare these examples to the works of, say, the Coen Brothers or Kubrick's *Dr. Strangelove*, you find that the onus in the latter is placed on human fallibility;

the disastrous situation always starts off as an external or parallel situation that then becomes entangled. The more nuanced the perspective, I think, the more revealing a scenario becomes, in terms of how one constitutes what is dark and why it's appealing. *EEIC* is also one of my earliest pieces of work; somewhat untested conceptually in terms of the work I do now, which is far more entrenched in being about the narrative. The dark elements you refer to are still at the heart of it all, but it's a continuing thesis, occupied with how we define darkness.
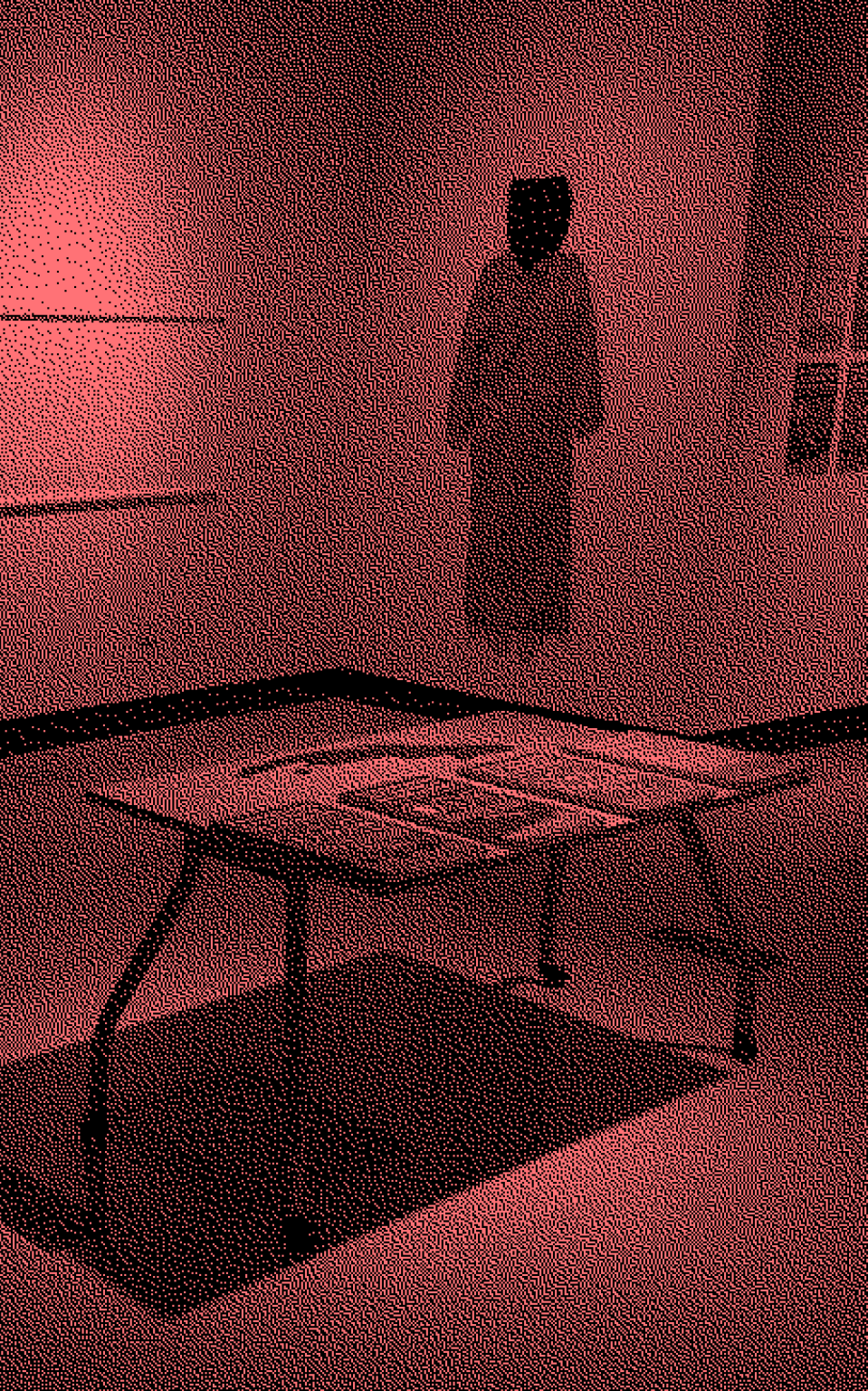
Flamma Montezemolo ———

in conversation with

Ian Alan Paul ———

Ian Alan Paul: When we first began our conversation about the Guantanamo Bay Museum of Art and History (GBMAH) several years ago as collaborators, I remember urgently discussing and reflecting upon the speculative nature of the project, and in particular the political dimensions of this particular kind of approach. For us to insist upon the fiction, to claim that Guantanamo had been closed even though it was still the site of torture practices and inhumane detention, felt in some way as if we were taking a risk as artists. How far would we carry the fiction? And what would constructing this 'other' history of Guantanamo in the shape of the museum entail?

In 2012 when the museum first appeared online, it seemed to me that the prison was on its way to closing. Obama had recently signed the executive order to shutter the facility, and prisoners were slowly and steadily being relocated to countries that had agreed to host them. Now, more than 5 years later, it seems as though the future of the prison is less than clear, and as a result our speculative fiction continues to take on new meanings, some of which we perhaps anticipated and others not.

One of the things that I find so striking is the range of responses that the museum consistently generates. Is it an art project? A political

critique? A hoax? A joke? Is it an actual place? Is it subversive, debili-
tative, or both? The speculative nature of GBMAH seems to trouble the
political waters, so to speak, to agitate and perturb the situation in a
way that more direct forms of intervention usually try to avoid in the
interest of more clearly realizable political gains.

The museum still regularly receives e-mail from people wanting
to plan trips. Just this week, a whole class wanted to come and have
a guided tour, and the week before that some wealthy person wrote
wondering whether they could visit with their yacht. It's unclear
whether these messages are from people who have fallen for the
fiction and have come to believe that the museum exists, or whether
they are in on it and have chosen to take part in the speculative space
we've created. Is there a meaningful distinction to be drawn between
'falling for' or 'being within' something?

Fictions can be dangerous in this way, I suppose, because of the
way that they challenge and call into question our capacity to believe,
and because in some sense they can also reveal the liabilities that
accompany any belief. And aren't politics in some way always con-
cerned with fictions, with our ability to tell stories about and create
different kinds of abstractions of the world? At times I feel as though
political communities ineradicably rely upon believing together in
something which perhaps they can never be entirely sure of, a kind of
collective leap into that which cannot be seen in advance.

All of this being said, I wonder how your thoughts on these ques-
tions of fiction and politics have developed since we first began work-
ing on this project together? Do you think there are risks involved
in straying from the harsh 'reality' of Guantanamo and towards the
'speculative' instead? And can we say that the real and the specula-
tive can be kept so easily separate? As always, I look forward to hear-
ing more about your understanding of what is certainly a complex and
nuanced matter.

Fiamma Montezemolo: When we started the Guantanamo Project it
was 2012, and Obama was going to be re-elected for a second term,
but in the moment this result was still unclear. The unemployment rate
was high and we were not sure that Obama's charisma would be a win-
ning card for the second time. I remember we were quite disappointed
with him because he didn't keep some of his first electoral promises,
one of them being a more radical Obamacare initiative and the other
being the shutdown of a prison which gave the USA quite a terrible
public face vis a vis the entire world. Guantanamo seemed to show
the very limited power of an otherwise apparently very secure presi-
dent. National security issues kept being at stake as a weapon against
Obama used by his opponents: he was not given much credit as an

experienced politician in terms of international politics and safety. Terror attacks outside of the country kept us hostage, and Guantanamo was always justified in advance. Following conservative rhetoric, if we are threatened at the borders of the nation then inside of those borders the answer had to be 'defense', arbitrary 'punishment', 'security'.

Now, what is interesting in the case of Guantanamo is surely the ambiguous extraterritoriality of the prison island, its specific history. Guantanamo is a sort of enclave in which, following an almost never paid lease agreement (established in the first years of the twentieth century) the USA exercised control over this territory but at the same time recognized Cuba's sovereignty. Cuba protests the USA's presence and detention camp on the island but that presence keeps being effective. Obama couldn't find a successful way to get rid of the problem essentially created by the Bush administration years before him. How are we to solve the dilemma of a space which is claimed as 'ours' on lease, so it's not really entirely 'ours'? How can we give a clear status to a clear political and juridical abuse without admitting all the limits of and mistakes in the establishment of that very space? How can we close something that had a questionable opening in the first place? Obama's partial solution, especially at the end of his second term, was to empty the facility as much as he could, sending the prisoners away towards more recognizable national spaces. But the space itself remains present, ambiguous, and sadly inhabited.

I believe that with an act of imagination we (you, me, and other people who participated in our project) tried to solve this problem for Obama. We are artists, not politicians, so we operate on a more symbolic plane but that doesn't mean that plane is ineffectual.

In an interview with a well-known Latino American scholar, Nestor Garcia Canclini, I asked what the role of art was in terms of 'change',and 'intervention in the real,' and his answer was:

> The artist also wants to intervene, but more on a symbolic level. [...] Insofar as art intervenes in symbolic relationships, what the artist can provide is rather a change in the way society is perceived and represented, providing the possibility of seeing in a new way. Given that the symbolic is indeed part of society, there is a possibility of intervening in the real, while acting on the symbolic. But all of this is, of course, very uncertain. [...] I don't know if it is right to ask art to occupy the space left empty by politics. Perhaps the real work of the artist is that of producing experiences, or making hidden experiences visible, interpreting them and suggesting forms of thinking and memory, projections into the future without having to produce measurable results. It's the most devious and elliptical design of the symbolic. (THIRD TEXT)

So, Ian, I'll answer your question with another: what's the role of art today? What's the space of the symbolic and the real? What is activism today? What's the space of that risk in relation to a space of uncertainty like the GITMO?

IAP: I find attractive the idea that one of the potentials of art is that it can 'intervene in symbolic relationships,' but at the same time I also wonder what we have to gain by so neatly separating out the real and the symbolic. Perhaps experience might be a category we can use to refuse this kind of distinction, because in the end I do think that artists are as invested in the 'real' as politicians or activists so often claim to be.

If we begin with experience instead of the symbolic/real split, then we can go on to ask what kinds of experiences of the real art can provide, which I think is a much more interesting question for us in some ways. I'm reminded here of Simon O'Sullivan who, borrowing from the work of Gilles Deleuze, argues that art is capable of producing 'encounters' which are a form of experience that is defined by encountering the world anew, experiencing the world as a strange and unfamiliar thing, as something which we don't already understand or have concepts for.

Recognition, on the other hand, is the experience of thinking something again, as a form of repetition, as literally a re-cognizing. When we recognize a thing, we experience that thing as it already conforms to and meets our expectations of it, conceptually, politically, and socially. In other words, recognition is not even a form of thinking at all, it's just a reconfirmation of what has already been thought, which now encodes and shapes our experience of the world. O'Sullivan argues that our experience of the world is almost always structured by the process of recognition, and that only rarely do we ever actually encounter the world, to experience it as if for the first time. Art can perhaps be one of those things in the world which produce encounters that defy and disrupt the experience of recognition. Isn't this the problem with something like GITMO? That it is so recognizably part of the American political landscape? Of life as usual?

What I like about this way of thinking about art is that we don't have to see it as being merely symbolic in relation to everyone else doing the 'real' work of politics. Instead, we can see various people in the world, including but not limited to artists, politicians, activists, pop stars, and even bureaucrats, as all producing various experiences of recognition and/or encounter. And isn't this how politics works, by creating as well as policing the boundaries of our expectations and of what we recognize as being possible or not in this world?

When we think of Guantanamo Bay in particular, I think this dynamic is certainly at play—which is also what makes it so ripe for and in need of artistic forms of intervention. As you've helpfully brought to our attention, the opening of the prison was already its own kind of disruption, a 'state of exception,' an encounter which redrew the limits of the possible in the name of security, defense, nationalism, and strength. I don't feel like we should concede to the new terrain that Guantanamo occupies; rather, we should feel able to introduce disruptions of our own that also threaten to reorganize and refashion the recognized order the world. We should be invested in producing our own state of exception which calls into question the very existence of the detention camps. I like to think of the GBMAH project as one of these kinds of exception.

The projects that you've produced for the museum have been particularly effective as a result of the way that they've drawn different kinds of transnational connections and reframed the history of the prison. Are these gestures not themselves ways of disrupting our ability to neatly and unproblematically recognize GITMO? Don't they force us to take a second look, to reconsider and rethink the situation, and to perhaps even take new kinds of positions and stances? How do you think of your own projects within this frame of politics, resistance, speculation, and imagination?

FM: I also am not convinced that the dialectical division between the symbolic and the real can be effective for our kind of practices. But, at the same time, I am not sure either that the complete 'validation' of what you call 'experience' is the way out either. Experience is very much tied in with the discourse of identity, after all, a discourse that emerged decades ago but that unfortunately still seems quite urgent today, even more thanks to Trump. The problem of experience is always the same: who experiences and what do they experience? How do you measure the 'authority' of your experience in non-exclusively subjectivized ways vis a vis the experience of others?

Until my 'experience' as an anthropologist in the border between Mexico and the USA I used to embrace a notion of identity understood in its anti-essentialized terms. I was in favor of an identity that would refuse to give in to notions of homogeneity of any kind: I do pertain to a certain gender, but I also pertain to a certain class, or ethnicity and all of this defines me and defines me circumstantially as I am not the same at any given moment or space in time. Once I moved to the border in 2001–2, I started feeling with more urgency that certain post-modernist and optimistic conceptions of identity were not acknowledging the clear and quite violent power abuses that emerged

after September 11th. As a consequence of this shift, I got closer to peo-
ple like bell hooks and Paul Gilroy.

bell hooks, like many other scholars, criticizes the notion of an
'authentic' identity, accepting the inevitability of plurality and hybrid-
ity present in the experience of men and women of any kind; however,
she explains, this does not negate the importance of what she calls 'the
authority of experience.' A black 'essence' does not exist, in the same
way as Chicano/a 'essence' does not exist, but the necessity for recog-
nition remains—recognition of a specificity of all those identities that
are born from the peculiarity of certain experiences, predominantly that
of the persistent racism present in the context of the United States. This
point of view is most decisive when it asserts its subjectivity without
essentializing it, recognizing the validity of experiences that can also be
internally differentiated.

In this light it is also important to consider the theory 'of anti-anti-
essentialism' proposed by P. Gilroy years ago. According to Gilroy,
anti-essentialism is the other face of the coin of essentialism. In
opposition to the 'ontological' foundation of ethnicity identity, it risks
dividing identity to the point of making any possibility of resistance
impossible. An anti-anti-essentialist point of view can instead contrib-
ute to the creation of an identity that is neither monolithic nor totally
made inefficient by fragmentary internal extremizations. An identity that
affirms blackness, for example, (but also whiteness) as an open signifier
and seeks to recognize complex representation of a black particularity
that is internally plural.

Finally, when I moved to the States, after Tijuana, I felt that we
were going back to a conception of experience that tied itself to a re-
newed essentialism and discourse related to identity politics. At that
point, I felt that the focus on 'experience' was becoming more of an im-
passe for me than something that could help me think and live... As the
historian Joan Scott puts it:

> "The evidence of experience then becomes evidence for the fact of differ-
> ence, rather than a way of exploring how difference is established, how it
> operates, how and in what ways it constitutes subjects who see and act in
> the world." (Critical Inquiry, Summer 1991, The Evidence of Experience, pg.
> 777)

So, all of this is to say, that I find your proposition of thinking with
Deleuze about art as something capable of producing an 'encounter'
rather powerful at the moment. At such a point in my 'border experience,'
after 6 years there, I sort of gave up on being an Anthropologist of Art
and transformed my practice into anthropology *and* art. Paradoxically,

that is exactly when you and I met and you invited me to collaborate on the GBMAH project.

Initially, I proposed a project that was drawing more literally on the violence of the space, but later on, I substituted another project for the first one. This second project is less literal and maybe less dark. It is called 'Exit Only.' In its description I wrote:

> 'Exit Only' is the Guantanamo Bay Museum of Art and History's exit ticket. There are of course no entry tickets to the Museum, as the entry fee involves both a high price and a cost-free admittance. At the same time, no visitor is able to leave the Museum without the 'Exit Only' ticket. This exit ticket is valid only once per year: on March 9th.

The date marks the anniversary of the first official exit from Guantanamo, in 2004, of the Tipton Three, the three British citizens from Tipton (England) who were held for two years by the US government in extrajudicial detention. The piece meditates on the deferred temporality of a facility whose promise to be closed never arrives, except for those in possession of the 'Exit Only' ticket.

As more visitors deliberately choose to enter in possession of this yearly ticket and with it to access and create a critical artistic space, the emergency measures of wartimes are gradually disabled. Maybe this second project that I worked on for the Museum resonates with a current desire I have for a new 'encounter' as you would put it, an 'encounter' that maybe arises from our respective practices and that would rather (but can't) avoid being in this quite intolerable historical-political moment we are all trapped within.

IAP: I think that what you write about identity is crucial here, especially with regard to how we think about art and representational politics. One of the things that we've quite literally done with the GBMAH project is refused to simply 'represent' the prisoners or their experience in any direct way, and have instead tried to perhaps interrogate and call into question the broader historical conditions that frame the life of the prison itself.

As part of the GBMAH satellite installation at Haverford, one of the things we're doing is creating a shadow library by collecting all of the books that have been banned from the prisoners' library and putting them on display in the exhibition for visitors to peruse and read. I feel that this gesture touches upon some of the subjects you've discussed, and is also an interesting presentation in relation to the 'Exit Ticket' you created for the museum; it's a way of producing space for a kind of negativity, of revealing what is lacking in the present yet

nonetheless haunts it as a kind of emergent possibility. I think this is central to the experience of the 'encounter,' that is as you say something different than the 'experience' or 'representation' of identity.

In addition, I think this transnational character of both GBMAH and Gitmo is equally important. How we can think of the Guantanamo Bay detention facilities, and the security apparatus at the Mexico-U.S. border, and the ongoing military interventions in Iraq, as all being intimately and meaningfully connected? Isn't this one of the difficulties and necessities of imagining resistance as well? How can we attend to the specificity of something like Guantanamo while also engaging with the much broader historical conditions that shaped and continue to shape it? I'd like to think that one of the things that GBMAH is doing, durationally, is trying to exist in that complicated and complex space and time.

Perhaps now it would be productive for us to turn towards the question of time itself, as it's an important part of how the museum works as a kind of speculative institution. One of the ways that the project articulates itself is by claiming to exist in a future-past, or what has been called the 'future anterior' by others. This idea of imagining oneself in solidarity with some future history, or in other words, with that which will have come to pass, is in some way an impossible task because it asks us to imagine and anticipate that which we are in some ways perpetually incapable of imagining or anticipating: the future. And at the same time, the present we are living in has the capacity to shape the future when the present becomes a kind of history.

I'm reminded here of a passage written by the philosopher Elizabeth Grosz, who notes that:

> "History, the past, is larger than the present, and is the ever-growing and ongoing possibility of resistance to the present's imposed values, the possibility of futures unlike the present, futures that resist and transform what dominates the present." (The Nick of Time: Politics, Evolution, and the Untimely, p. 254)

This notion of the excess of the past being the reservoir for different kinds of futures is an incredibly compelling way to think about resistance, particularly in relation to something like Guantanamo Bay, which of course has its own particular history but also is shaped by much longer colonial histories as well as the forms of resistance that emerged in response to colonialism.

As artists we are often accused of being impractical, ineffective, or superfluous, especially when we take on political issues or imagine ourselves as being part of political struggles. And in a way this is true, at least in the sense that we reject being subject to

purely instrumental demands or to the logic of efficacy or utility. I think that part of this rejection emerges from the insistence that in order to escape or resist the present, we must in some fashion gesture towards that which is presently impossible, or in other words that which cannot be accomplished in the present unless the present itself is radically transformed by the arrival of unforeseen and unforeseeable futures. I think that GBMAH tries to gesture in this way, to create a kind of tension between the possible and the impossible, the practical and the impractical, the past and the future. What do you think of this framework for thinking about the potential of art?

FM: I approach time from the perspective of both anthropology and art, which means that I work with a specific interdisciplinary point of view. I believe the Grosz quote is excellent. I would like to give you an example of how, from my interdisciplinary point of view, what she says fits perfectly in relation to 'time' and my own work. Let's mention it again:

> "History, the past, is larger than the present, and is the ever-growing and ongoing possibility of resistance to the present's imposed values, the possibility of futures unlike the present, futures that resist and transform what dominates the present." (The Nick of Time: Politics, Evolution, and the Untimely, p. 254)

I made a video work on the border in 2014 that turned out to be more complex than what I expected exactly because it was an attempt to revisit the past as something larger than the present in order to give space to futures that transform the present. The work is called 'Echo' and is set in the border between Mexico and USA. It is a piece of ethnographic research on the afterlife and 'echoes' of nine art works that have been part of the public art event called inSite which lasted several years. These works were the results of different artistic visions produced by nine different artists, some from the zone itself, some from other parts of the Americas who came in residence for two or three months to intervene in one creative way or another in the zone in question.

The idea of going back after years in this zone where these creations were realized to look for whatever was left (sometimes simply nothing; most of the time locals re-appropriated the works) sounded like a daring idea to me but also a necessary one. Many of us wonder what happens when we leave the 'crime scene' of a site-specific art intervention but few know how it ends, to put it simply. The result of my very partial investigation in this sense has been at times really unexpected and in my mind useful in helping us to re-think critically and constructively about our own art interventions in specific trouble

zones as artists, anthropologists, curators, etc. The work juxtaposes the original archival images of the art works and their explanations with my own fieldwork research on what was left after the artists and the curators left the zone. Therefore, the video highlights the procedures of intrusion at work in such a site as the US-Mexico border as well as the now canonical deployment of the emblematic figure of fieldwork. It teaches us that intrusion is an ontological dimension of intervention, at once anthropological, curatorial, and artistic.

By revisiting the scenes of these curatorial and artistic interventions, 'Echo' emerges both as a concept and as a practice that assembles the futures of art works beyond their expected ruins and remains. Each work and each echo of a work – after the artist finishes and leaves or focuses on another work – raises different and enriching questions on the subject of social art, on its ethics, on its methods, on the people involved in the projects, on the city itself and its urban cycle, and even on the future of public sculpture. The assemblage of archival images and current reverberations, of text, voice-over and interviews, of affects and representations has been a real challenge in this work. The result is that still more questions followed the initial ones. The conclusion is inconclusive: Narcissus (all of us working, representing, intervening on the border: anthropologists, artists, curators, etc.) and Echo (the context, the artists, the collaborators, the public sculptures, the objects, etc.) are part of the same scenario and they are both plural and problematic in their own way.

IAP: I think this might be a useful way for us to try to draw this conversation towards some kind of conclusion, however partial and incomplete it may be! But this partiality and incompleteness are exactly what politics (and political art) is are in some fashion, no? Particularly in relation to the histories (and ruins?) that different kinds of interventions leave behind. The project of politics is perpetually incomplete, imperfect, in need of more attention, more collaboration, more intervention, more reflection, more commentary, and inevitably more (art)work. This is something that I think is in some fashion important to insist upon, the simultaneous futility and necessity of political and artistic acts.

With Guantanamo Bay this especially seems to be the case. The history of oppression and violence at the site stretches much further back than the prison facility for which it is so well known today. From its colonial past, we can think of the political struggles against the detention facilities as being one small gesture in a long history of struggle.

And yet, sometimes resistance does succeed and tear down and demolish that which it opposes. However impossible, however

unlikely, structures of power can be made to fail and can even be extinguished. History is full of examples of this, and often it happens as if by surprise. If we take the Arab spring, for example, the vast majority of experts in the region portrayed the Arab populations as docile and antipolitical, and painted a picture of dictators that were in total control of their territories. All of that changed over the span of days, of course, and I think artists are in some fashion responsible for keeping that kind of possibility alive in people's minds, even if that moment is always the exception to the norm.

This is one of the reasons why I like the concepts 'opportunity' and 'speculation' in relation to artistic practice. These terms are usually understood from a capitalist perspective as something that one works with in the stock market; one looks at a changing price and the world that surrounds it, and then takes a chance, betting that it will rise or fall and pocketing the profit as a result. I'm an anticapitalist (which of course you already know), but I think that these ideas can also be useful for us. We can also speculate and take advantage of different kinds of opportunity. We can take risks. We can look at the world and see gaps between the present and the possible, between what exists and what could come to exist, and attempt to navigate those chasms. This is never a sure thing, and every move is certainly full of doubt, but without that kind of speculating, what remains?

I think that the GBMAH project is necessary, but ultimately insufficient. It's necessary in the sense that it reminds us of the possibility and the urgent need to close the prison, but it's insufficient in the sense that the prison will not be closed as a result of the project itself, and this creates one of those gaps that I mentioned before between the present and the possible. I think that GBMAH, at its best, invites others to join in, to lob a stone and to pick away at the edges of Guantanamo, to partake in small gestures and conversations and projects that could increase that gap between the present and the possible, however marginal or fragile those gestures may be.

The sheer impossibility of what must become possible is where I want to be as an artist and an activist, in some sense, and I wonder how you think about this. Again, trying to inch us closer to resolving everything we've raised in this conversation, I would like to bring us back to where we began. I wonder if you think there is room for hope in art, if you think that art makes things more possible, and if so how? Alternatively, is it a mistake to invest ourselves in art in this way? As always, I look forward to hearing your thoughts.

FM: I think all art and not just the 'political' kind is or should be understood as incomplete, imperfect. As a very interesting museum director Manuel Borja-Villel says in an article written for the Opera Viva

platform in Italy that we tend to forget that the results of an artwork, the experiences that it entails, go much further beyond the one who produced or the one who possesses it or conserves it (Strategie Comuni). This is why I tend not to label the way I make art as social or political, even though I am an anthropologist with a militant past (in my undergraduate final theses on Zapatismo I was claiming the necessity of a militant anthropology and I remember my professors saying; we need more students and less heroes...).

I am obviously interested in these themes. But now my battle is for an art that takes on those same issues in a more oblique way. Less frontally, and maybe more conceptually. I believe in a sort of empirical conceptualism that can help us to move things in what theorists like Claire Colebrook and anthropologists like Tarek Elhaik, after Deleuze, call 'passive vitalism', a vitalism that doesn't refer too much to a specific agent or subject and that is less self-referential, in certain case less narcissistic.

All I can say, Ian, is that you believe in the 'possible' and so do I. This is why we met and we kept collaborating from afar over the years. And this is why we will continue...

SALOME ASEGA

Salome Asega is a Brooklyn-based artist and researcher. She is the co-host of speculative talk show *Hyperopia: 20/30 Vision* on bel-air radio and the Assistant Director of POWRPLNT, a digital art collaboratory. Asega has participated in residencies and fellowships at Eyebeam, New Museum, and the Laundromat Project, and has given presentations at New Inc, Performa, Eyeo, and the Schomburg Center. Asega teaches in the MFA Design and Technology program at Parsons at The New School. She received her MFA from Parsons at The New School in Design and Technology and her BA from New York University in Social Practice.

MOREHSHIN ALLAHYARI

Morehshin Allahyari is an artist, activist, educator, and occasional curator. She is the recipient of the Leading Global Thinkers of 2016 award by *Foreign Policy Magazine*. Along with writer/artist Daniel Rourke, she co-authored *The 3D Additivist Cookbook* (Institute of Networked Cultures). Allahyari has been part of numerous exhibitions, festivals, and workshops around the world including Venice Biennale di Architettura, Museum of Contemporary Art in Montreal, Tate Modern, Queens Museum, Pori Museum, Powerhouse Museum, Dallas Museum of Art, Jeu de Paume, Contemporary Arts Museum of Houston, and Museum für Angewandte Kunst. Most recently she has been an artist in residence at Eyebeam (2016), Vilém Flusser Residency Program for Artistic Research in association with Transmediale, Berlin (2016), and Carnegie Mellon University's STUDIO for Creative Inquiry (2015). Allahyari's work has been featured in *The New York Times*, *Huffington Post*, *Wired*, *National Public Radio*, *Parkett Art Magazine*, *Frieze*, *Rhizome*, *Hyperallergic*, and *Al Jazeera*.

INGRID BURRINGTON

Ingrid Burrington is an artist who writes, makes maps, and tells jokes about places, politics, and the weird feelings people have about both. She is the author of *Networks of New York, An Illustrated Field Guide to Urban Internet Infrastructure* (Melville House Publishing), and has previously written for *The Atlantic*, *The Nation*, *The Verge*, and other outlets. Her work has been supported by Data & Society, Eyebeam, the Center for Land Use Interpretation, and Rhizome.

ILONA GAYNOR

Ilona Gaynor is a designer, filmmaker and writer. She is the director of design and plot research studio The Department of No, and teaches Design at SAIC, Chicago. Her work is occupied by the conflicts, entanglements and geometric dimensions of capital and the problem it poses for plot and image. She speaks, publishes, and exhibits internationally on the subjects and crossovers of design, narrative plots, cinema, politics, and law. She was a recent curator at the St Etienne Design Biennale and is currently a research arts grant holder at the Wellcome Trust.

TIM MALY

Tim Maly is a designer, writer, and lecturer based in Providence, RI. He is the founder of Quiet Babylon, a website about those interested in the strange edges of architecture and design. With Emily Horne, he co-authored a book about panopticons called *The Inspection House* (Coach House Books) and has served as a writer at *Wired* and editor at *Medium*. Maly is a Lecturer at the Rhode Island School of Design and a fellow at Harvard University's metaLAB.

IDA MOMENNEJAD

Ida Momennejad is a Post-Doctoral Fellow at Princeton University's Computational Memory Lab. She received her PhD in psychology from the Berlin School of Mind and Brain in Germany. Momennejad completed her undergraduate studies in computer science/software engineering in Tehran and completed a graduate degree in History and Philosophy of Science at Utrecht University in the Netherlands.

FIAMMA MONTEZEMOLO

Fiamma Montezemolo is both an artist (MFA, San Francisco Art Institute) and a Cultural Anthropologist (PhD, *"L'Orientale"* University of Naples). She is an established scholar in border studies and an Associate Professor in the Department of Cinema & Digital Media at the University of California, Davis. Her artwork has been widely exhibited both nationally and internationally. She is represented by the

Magazzino Dell'Arte Moderna gallery in Rome. She is the author of *La Mia Storia Non La Tua: La Dinamica Della Costruzione Dell'identita' Chicana Tra Etero-e Auto-rappresentazioni* (Guerini) and *Senza volto: L'etnicità e il genere nel Movimento Zapatista* (Liguori). She is also a co-author of *Here is Tijuana* (Blackdog Publishing) and co-editor of *Tijuana Dreaming: Life & Art at the Global Border* (Duke University Press).

AYODAMOLA TANIMOWO OKUNSEINDE

Ayodamola Tanimowo Okunseinde is an artist and interactive designer living and working in New York. Okunseinde was the co-founder and creative director of Dissident Display Studios, an award-winning studio and art gallery based in Washington DC. As a collaborator with, amongst others, choreographer Maida Withers, Carmen Wong, and Yoko K., he has created several interactive performance-based works and has performed in several countries including Mexico, Finland, and Croatia. His art residency participation includes Finland's Invitation to Helsinki, IDEO's Fortnight, The Laundromat Project, and Eyebeam. His works range from concepts in Afrofuturism to physical computing, and painting. Okunseinde holds an MFA in Design and Technology from The New School, Parsons School of Design in New York, where he is currently an adjunct faculty member.

IAN ALAN PAUL

Ian Alan Paul is a transdisciplinary artist, theorist, and curator. Ian has taught, lectured, and exhibited internationally, and has had his work featured in *The Atlantic*, *Al Jazeera*, *Le Monde*, *Art Threat*, *Mada Masr*, *Jadaliyya*, *Art Info*, and *C Magazine*, among others. He received his PhD in Film and Digital Media Studies from UC Santa Cruz in 2016 and his MFA and MA from the San Francisco Art Institute in 2011.

JENNA WORTHAM

Jenna Wortham is an award-winning technology reporter and staff writer for *The New York Times Magazine*. In addition to her writing on technology, Wortham has been widely praised for her writing on topics such as business, culture, race, gender, health and wellness, music, and queer identity. Her work has appeared in *The New York Times*, *The Fader*, *Lenny Letter*, *Medium*, *Village Voice*, *Vogue*, and *Wired*, among others. Along with her colleague Wesley Morris, Wortham co-hosts *The New York Times* podcast *Still Processing*.